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Address

THE ETHICS OF SURGERY.*

CHARLES W. OVIATT, M.D.
OSHKOSH, WIS.

The evolution of surgery during the past century has kept pace with the development of science along other lines, wonderful as this has been, and we have reason for just pride in the contributions made by the surgeons of our own land during this period. If, however, none other had been made than the discovery of the use of ether in producing anesthesia, America would still be entitled to the highest mark of honor. No other discovery yet made in surgery has been so great a boon to suffering humanity. Every young physician should avail himself of the opportunity, when in Boston, to visit the Massachusetts General Hospital and ask to be conducted to the little amphitheater at the top of the old building where the first operation was performed under ether administered by Morton. This room has been left practically unchanged, and there may be seen the original apparatus used in its administration. To me this seems a sacred place.

The advent of antiseptic and aseptic measures marked an era but little less important than that of the introduction of anesthesia. Those of us who began our professional studies a quarter of a century ago, look back on some interesting events. How little, indeed, does the graduate of to-day know of the uncertain and often direful results of the surgery of preantiseptic days. The result of a given operation was unknown and unknowable. Whether to expect healing with the formation of so-called laudable pus, or whether erysipelas, pyemia or gangrene would follow, could not be determined. All this is changed, and these terrible wound complications of former days are merely facts of historic interest. History bears out the oft repeated statement that there has been more progress in surgery in the twenty-five years following the advent of antisepsis than was made in the preceding twenty-five centuries.

With the establishment of a perfected aseptic technic, it seemed that the acme of surgical effort had been reached; and yet in the light of the discoveries coming to us daily, we can prophesy greater achievements for the future than are yet dreamed of. The border-line cases of yesterday become settled surgical problems to-day; and the border-line cases of to-day will, many of them, by modern aggressive methods, be settled in the same manner to-morrow. It would, indeed, be rash to attempt to place a limit to the future of surgery.

We have reason to be thankful that it was our fortune to come on the stage of activity in this age of wonderful progress. Our opportunities have been great, but we should not be unmindful of the magnitude of our heritage. Individually, most of us can hope to do but little toward paying this great debt; collectively, as organized surgical associations like this, it seems to me we may do much by helping to mold the surgeon of the future. We can lend our aid toward the elevation of the standard of the surgeon's qualifications.

The ambitious medical student does not usually get far into his college work before he aspires to become a surgeon. He sees in the surgical clinics more definite and striking results than are discernible in other branches. Without being able to judge of his own relative fitness or whether he possesses the special aptitude so essential to success, he decides to become a surgeon. There will always be room for the young surgeon, who, fitted by nature for the work, takes the time and opportunity to properly prepare himself. There is more good surgery being done to-day than ever before, and there are more good surgeons being educated to do the work. If, however, the surgeon of the future is to hold the high and honorable position our leaders have held in the past, there must be some standard of qualification established that shall protect the people against incompetency and dishonesty in surgeons.

That there is much that passes under the name of surgery being done by ill trained, incompetent men, will not be denied. What standard, then, should be established, and what requirement should be made before one should be permitted to do surgery? In his address as chairman of the Section on Surgery and Anatomy of the American Medical Association at the Portland (1905) meeting, Dr. Maurice H. Richardson deals with this subject in such a forceful, clear-cut way, that I take the liberty to quote him[1] at some length:

> The burden of the following remarks is that those only should practice surgery who by education in the laboratory, in the dissecting room, by the bedside, and at the operating table, are qualified, first, to make reasonably correct deductions from subjective and objective signs; secondly, to give sound advice for or against operations; thirdly, to perform operations skilfully and quickly, and, fourthly, to conduct wisely the after-treatment.
>
> The task before me is a serious criticism of what is going on in every community. I do not single out any community or any man. There is in my mind no doubt whatever that surgery is being practiced by those who are incompetent to practice it—by those whose education is imperfect, who lack natural aptitude, whose environment is such that they never can gain that personal experience which alone will really fit them for what surgery means to-day. They are unable to make correct deductions from histories; to predict probable events; to perform operations skilfully, or to manage after-treatment.
>
> All surgeons are liable to error, not only in diagnosis, but in the performance of operations based on the diagnosis. Such errors must always be expected and included in the contingencies of the practice of medicine and surgery. Doubtless many of my hearers can recall cases of their own in which

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* President's Address, delivered before the Western Surgical and Gynecological Association, St. Louis, Dec. 30, 1907.

[1] THE JOURNAL A. M. A., Oct. 7, 1905.

> useless—or worse than useless—operations have been performed. If, however, serious operations are in the hands of men of large experience, such errors will be reduced to a minimum.
>
> Many physicians send patients for diagnosis and opinion as to the advisability of operation without telling the consultant that they themselves are to perform the operation. The diagnosis is made and the operation perhaps recommended, when it appears that the operation is to be in incompetent hands. His advice should be conditional that it be carried out only by the competent. Many operations, like the removal of the vermiform appendix in the period of health, the removal of fibroids which are not seriously offending, the removal of gall-stones that are not causing symptoms, are operations of choice rather than of necessity; they are operations which should never be advised unless they are to be performed by men of the greatest skill. Furthermore, many emergency operations, such as the removal of an inflamed appendix and other operations for lesions which are not necessarily fatal—should be forbidden and the patient left to the chances of spontaneous recovery, if the operation proposed is to be performed by an incompetent.
>
> And is not the surgeon, appreciating his own unfitness in spite of years of devotion, in the position to condemn those who lightly take up such burdens without preparation and too often without conscience?
>
> In view of these facts, who should perform surgery? How shall the surgeon be best fitted for these grave duties? As a matter of right and wrong, who shall, in the opinion of the medical profession, advise and perform these responsible acts and who shall not? Surgical operations should be performed only by those who are educated for that special purpose.
>
> I have no hesitation in saying that the proper fitting of a man for surgical practice requires a much longer experience as a student and assistant than the most exacting schools demand. A man should serve four, five or six years as assistant to an active surgeon. During this period of preparation, as it were, as much time as possible should be given to observing the work of the masters of surgery throughout the world.

While Dr. Richardson's ideal may seem almost utopian, there being so wide a difference between the standard he would erect and the one generally established, we must all agree that however impossible of attainment under present conditions, such an ideal is none too high and its future realization not too much to hope for.

While there is being done enough poor surgery that is honest and well intended, there is much being done that is useless, conscienceless and done for purely commercial ends. This is truly a disagreeable and painful topic and one that I would gladly pass by, did I not feel that its importance demands some word of condemnation coming through such representative surgical organizations as this.

The spirit of graft that has pervaded our ranks, especially here in the West, is doing much to lower the standard and undermine the morals and ethics of the profession. When fee-splitting and the paying of commissions for surgical work began to be heard of something like a decade ago, it seemed so palpably dishonest and wrong that it was believed that it would soon die out or be at least confined to the few in whom the inherited commercial instinct was so strong that they could not get away from it. But it did not die; on the other hand, it has grown and flourished.

In looking for an explanation for the existence of this evil, I think several factors must be taken into account, among them being certain changes in our social and economic conditions. This is an age of commercialism. We are known to the world as a nation of "dollar chasers," where nearly everything that should contribute to right living is sacrificed to the Moloch of money. The mad rush for wealth which has characterized the business world, has, in a way, induced some medical men, whether rightfully or wrongfully, to adopt the same measures in self-protection. The patient or his friends too often insist on measuring the value of our services with a commercial yard-stick, the fee to be paid being the chief consideration. In this way the public must come in for its share of responsibility for existing conditions. So long as there are people who care so little who operates on them, just so long will there be cheap surgeons, cheap in every respect, to supply the demand. The demand for better physicians and surgeons must come in part from those who employ their services.

Another source of the graft evil is the existence of low grade, irregular and stock-company medical schools. In many of these schools the entrance requirements are not in evidence outside of their catalogues. With no standard of character or ethics, these schools turn out men who have gotten the little learning they possess in the very atmosphere of graft. The existence of these schools seems less excusable when we consider that our leading medical colleges rank with the best in the world and are ample for the needs of all who should enter the profession. Their constant aim is to still further elevate the standard and to admit as students, only those who give unmistakable evidence of being morally and intellectually fit to become members of the profession.

Enough men of character, however, are entering the field through these better schools to insure the upholding of those lofty ideals that have characterized the profession in the past and which are essential to our continued progress. I think, therefore, we may take a hopeful view of the future. The demand for better prepared physicians will eventually close many of the avenues that are now open to students, greatly to the benefit of all. With the curtailing of the number of students and a less fierce competition which this will bring, there will be less temptation, less necessity, if you will, on the part of the general practitioner to ask for a division of fees. He will come to see that honest dealing on his part with the patient requiring special skill, will, in the long run, be the best policy. He will make a just, open charge for the services he has rendered and not attempt to collect a surreptitious fee through a dishonest surgeon for services he has not rendered and could not render. Then, too, there will be less inducement and less opportunity for incompetent and conscienceless men to disgrace the art of surgery.

The public mind is becoming especially active just at this time in combating graft in all forms, and is ready to aid in its destruction. The intelligent portion of the laity is becoming alive to the patent medicine evil. It is only a question of time when the people will demand that the secular papers which go into our homes shall not contain the vile, disgusting and suggestive quack advertisements that are found to-day. A campaign of reform is being instituted against dishonest politicians, financiers, railroad and insurance magnates, showing that their methods will be no longer tolerated. The moral standards set for professional men and men in public life are going to be higher in the future, and with the lime light of public opinion turned on the medical and surgical grafter, the evil will cease to exist. Hand in hand with this reform, let us hope that there will come to be established a legal and moral standard of qualification for those who assume to do surgery.

I feel sure that it is the wish of every member of this association to do everything possible to hasten the coming of this day and to aid in the uplifting of the art of surgery. Our individual effort in this direction must lie largely through the influence we exert over those who seek our advice before beginning the study of medicine, and over those who, having entered the work, are to follow in our immediate footsteps. To the young man who seeks our counsel as to the advisability of commencing the study of medicine, it is our duty to make a plain statement of what would be expected of him, of the cost in time and money and an estimate of what he might reasonably expect as a reward for a life devoted to ceaseless study, toil and responsibility. If, from our knowledge of the character, attainments and qualifications of the young man we feel that at best he could make but a modicum of success in the work, we should endeavor to divert his ambition into some other channel.

We should advise the "expectant surgeon" in his preparation to follow as nearly as possible the line of study suggested by Richardson. Then I would add the advice of Senn, viz.: "To do general practice for several years, return to laboratory work and surgical anatomy, attend the clinics of different operators and never cease to be a physician. If this advice is followed there will be less unnecessary operating done in the future, than has been the case in the past." The young man who enters special work without having had experience as a general practitioner, is seriously handicapped. In this age, when we have so frequently to deal with the so-called border-line cases, it is especially well to never cease being a physician.

We would next have the young man assure himself that he is the possessor of a well developed, healthy, working "surgical conscience." No matter how well qualified he may be, his enthusiasm, in the earlier years of his work, will lead him to do operations that he would refrain from in later life. This will be especially true of malignant disease. He knows that early and thorough radical measures alone hold out hope, and only by repeated unsuccessful efforts will he learn to temper his ambition by the judgment that comes of experience. Pirogoff, the noted surgeon, suffered from a malignant growth. Billroth refused to operate or advise operation. In writing of the case to another surgeon friend, he said: "I am not the bold operator whom you knew years ago in Zurich. Before deciding on the necessity of an operation, I always propose to myself this question: Would you permit such an operation as you intend performing on your patient, to be done on yourself? Years and experience bring in their train a certain degree of hesitancy." This coming from one, who, in his day was the most brilliant operator in the world, should be remembered by every surgeon, young and old.

The surgeon should be thoroughly trained in his aseptic technic early in his career so that it may become with him automatic. It is painful to see a man of forty or over attempt to clean up to assist at a surgical operation, unless his training began long years before. When such an emergency arrives, it is safest to relegate him to the retractors and keep him there, however much in the way.

This association has just reason to be proud of what it has accomplished. Its influence for good can not but be helpful and elevating. No better surgery is done in the world than in the geographical area from which the membership of this association is drawn. The history of surgery could not be written without enrolling the names of some of our honored members. Let us exercise due care in extending fellowship and lend our every effort to elevate the standard of our cherished art.

Original Articles

THE TREATMENT OF IRITIS.*

E. C. ELLETT, M.D.
MEMPHIS, TENN.

It would seem that very little remains to be said concerning the treatment of a disease so long recognized and so frequently encountered as iritis, but for those reasons the discussion should be sufficiently interesting and profitable to justify our Chairman in providing such a paper.

The varieties of iritis can be dismissed in a few words. The most useful classification is that based on the cause, which will be duly considered in this paper. As regards the local clinical manifestations, we may regard all iritis, from the point of view of treatment, as forms of plastic iritis, differing only in degree.

The object of the treatment of iritis may be stated, in the words of Brailey and Stevenson, as threefold:

1, To dilate the pupil; 2, to relieve pain; 3, treat any constitutional condition that may be present as a cause, as well as to attend to the patient's general bodily welfare and secretions.

I. DILATION OF THE PUPIL.

The object of this procedure is, as we all know, (*a*) to prevent the formation of adhesions, which may so lessen the size of the pupil as to interfere with vision, or to interfere with the circulation of the aqueous between the anterior and posterior chambers; (*b*) to diminish the volume of the iris, and thus to squeeze out the blood from it; (*c*) the drug which paralyzes the iris muscle affects the ciliary muscle similarly and puts both at rest; (*d*) it also acts as a local sedative.

To dilate the pupil we must use a mydriatic drug. We must then consider (1) what drug, (2) in what strength, and (3) how and how often should it be applied.

There are not many drugs from which to choose, and if we omit cocain and homatropin as being of too feeble mydriatic power to be considered in this connection we have three left, namely: (*a*) Atropin, (*b*) scopolamin and hyoscin (which are possibly identical), and (*c*) hyoscyamin, daturin and duboisin (which are identical).

Without going at all into a discussion of things so often discussed, it suffices to say that of these drugs we unanimously choose atropin as the most efficient. Nor is it necessary to review the well-known questions of the chemistry of the mydriatic drugs, so fully elucidated long ago by Risley and others.

What strength solution shall we employ? The standard solution of four grains to the ounce may require modification either way. In patients presenting themselves for treatment with adhesions already formed, it may be necessary to increase the strength to eight grains to the ounce for a few instillations in order forcibly to break up the adhesions. On the other hand, in children, and in those susceptible to the drug, a weaker solution may be expedient. Under some circumstances a small solid crystal of atropin may be introduced into the eye, as will be mentioned later.

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*Read in the Section on Ophthalmology of the American Medical Association at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

How and how often should we use the solution? This depends, too, on circumstances. In general four instillations in twenty-four hours, with the patient at rest, and under favorable surroundings, will suffice to keep the pupil dilated, and this is the index by which we gauge our therapeutics. When the patient is first seen it is well for the surgeon to instil the drops until the pupil is dilated, but we frequently see that very little dilation is procured in one hour, while a continuation of the drops for twenty-four hours may break all the adhesions and give a round pupil. Even if this has not happened by the end of the twenty-four hours, it does not mean that the adhesions are permanent, for continued use of the drug may result in the continued rupture of synechia for as long as four or five days. When full dilation is secured, the frequency of the instillation should be reduced until the minimum dose which will maintain the mydriasis is ascertained. Briefly, this should be continued until the eye is free from redness.

If the drug fails to dilate the pupil fully, several expedients may be used. It is recommended, as has been mentioned, to place a small pure crystal of atropin in the lower cul-de-sac, and this, by its vigorous action, will often rupture adhesions which solutions of the drug will not affect. I have had no personal experience with this plan, since the danger of introducing so much of so powerful a drug into the circulation has seemed to me too great a risk. I hope that some of the members of the Section will speak of their experience on this point. Another expedient to increase the effect of atropin in dilating the pupil is to use it in combination with cocain. I prefer not to mix the solutions, but by keeping them separate either can be used more or less energetically without affecting the method of using the other. The drop of cocain should precede the atropin to secure the best effect. The cocain lessens pain and increases the contraction of the blood vessels of the iris directly and by its action as a mydriatic.

Of the adrenal preparations great things were expected in ophthalmic therapeutics, but it is doubtful if any good is to be attained by their use except in ophthalmic surgery. Indeed, some writers have argued that the blood is driven from the superficial vessels by their action and the deeper structures are more greatly engorged, so that an iritis would be aggravated rather than relieved by such a drug. While not admitting the correctness of this reasoning, we can at least agree that no apparent benefit is gained by the use of these preparations. Paracentesis of the cornea may be mentioned as a measure which would increase the sensibility of the eye to a mydriatic, although a measure rarely, if ever, used for that purpose. Dionin is a comparatively recent addition to our resources in ophthalmology, and one of its many reputed virtues is to enhance the action of mydriatics by stimulating the lymph circulation. It seems that considerable observation would be necessary to settle this point, though the literature of dionin would suggest abundant observation of its action. I am not satisfied that dionin is a certain and unfailing agent for this purpose, or, if certain, that it is superior to cocain. The application of heat, either dry or moist, by stimulating the circulatory activity of the eye, also aids in securing and maintaining mydriasis. Dry heat may be applied almost continuously, since with the means at our command the heat is usually not very severe, while moist heat is best applied at stated intervals for ten or twenty minutes at a time. On the whole, moist heat, being more energetic, is preferable; it is applied with a towel, gauze or other cloth wrung out of hot water, after the manner of barbers. The local abstraction of blood is of great value as an aid to the action of mydriatics. This will be spoken of again later.

Two simple measures are of great value as an adjuvant to mydriatics, and, in fact, to all our therapeutics in iritis, namely, proper protection of the eye from light, and rest. Not only is rest of the eye necessary, but rest in bed is a part of the treatment whose value must have been impressed on every one. I feel satisfied that every patient with iritis would be better off in bed till convalescence is established.

We formerly heard a good deal about "atropin catarrh," but it seems to be pretty well established now that this form of conjunctival inflammation is simply an infection from dirty solutions and dirty droppers. If the solutions are made with a saturated solution of boric acid, or other unirritating antiseptic, as the menstruum, and proper care of the droppers enforced, this condition will rarely be seen. Before leaving the subject of the drops, we should be reminded of the virtue of warm solutions for this purpose. A little point which I saw from the pen of Dr. Casey Wood has been worth much to me, namely: First draw some hot water into the dropper, then expel it, and draw up the solution of the drug. This insures a clean dropper and a warm solution, and correspondingly less irritation to the eye.

II. TO RELIEVE THE PAIN.

The state of the pupil and the comfort of the patient together guide us in forming an idea of how satisfactory is the progress of a case of iritis. The use of the mydriatic, cocain, dionin, rest, protection from light, and the application of heat or cold, all contribute to the patient's comfort and freedom from pain, and while pain persists improvement is not imminent. Special consideration should be given to one or two of these measures. Dionin is much used as an ocular analgesic. In many cases the instillation of a 5 per cent. or 10 per cent. solution will relieve ocular pain for several hours, and it may be repeated as often as necessary. In my experience, it frequently fails to produce this happy effect, while moist heat is much more reliable for the purpose, applied as above stated. Continuous dry heat of lesser degree is often soothing. Cold applications seem to be of the most value in traumatic cases, with threatened or feared suppuration. In such cases the application should be continuous as long as it is needed at all. It occasionally happens that a patient with ordinary plastic iritis prefers the effect of cold to that of heat, in which case cold may be used continuously or intermittently.

We must often give anodynes internally. The various preparations of opium are most effective, but unpleasant by reason of the systemic disturbances to which they give rise. A mixture of antipyrin and salicylate of soda in moderate doses is a very efficient anodyne, five grains of the former and seven and one-half of the latter in simple elixir being a convenient form and dosage.

Counter irritants have a place in the treatment of iritis. A blister behind the ear, or one on the brow or temple, is of some value, but this measure is rarely used, as the same effect can be better attained, and, on the whole, with less disturbance to the patient, with leeches. Except in hospitals, artificial leeches are apt to get out of order from lack of use; hence the natural ones are preferable, and their value is very great. Four to the temple will contribute greatly to the relief of pain and to the dilatation of the pupil. McKenzie long ago mentioned the favorable effect of general blood-letting on the action of mydriatics, and the local abstraction of blood is even more gratifying, though probably not so much used as its merit deserves that it should be.

Sometimes pain in the course of an attack of iritis is due to an increase of tension, or the increased tension may be present without any special increase of pain. Special means for the relief of this symptom are hot applications, a myotic drug and paracentesis. Hot applications may so stimulate the circulation of the eye that the excessive fluid will be disposed of and the symptom subside, but most often this does not occur. If the tendency to the formation of adhesions is not marked, we may use a myotic, alternating with the mydriatic, or at least dilating the pupil once in the twenty-four hours. If this does not control the situation, paracentesis may be done, and my preference would be to do this early and repeat it. No special precautions are necessary in its performance under these circumstances, and the relief is prompt. The mydriatic is continued and the operation repeated if necessary.

III. THE CONSTITUTIONAL TREATMENT.

Under this head we should include not only the treatment of any constitutional condition that may be a cause, but any disturbance of function, nutrition or metabolism that could in any way retard the cure of a local condition, or interfere with the action of remedies. The bowels, skin and kidneys in particular should be kept sufficiently under watch to insure the proper performance of their functions, without which no treatment can accomplish its greatest good.

Every one who writes on iritis repeats the statement that 50 per cent. of cases are due to syphilis and one-half of the remainder to rheumatism. When the therapeutics of the latter is as certain as the therapeutics of the former, the treatment of iritis in the rheumatic may be more satisfactory, though we should hasten to add our thanks at the relative amenability of the iritis as compared to the joint manifestations.

It is a question as to how far such a paper as this should attempt to deal with the treatment of possible causes of iritis. A little latitude in this direction would result in the production of a compend on the "Practice of Medicine." Only a few matters need be considered and certain well-known facts may be hurried over. The fact that the iritis of syphilis is usually an early secondary manifestation would give us the hint as to mercury, even if the observation of the effect of mercury on the iritis itself did not lead us to that conclusion. In iritis in any stage of syphilis, mercury gives by far the best results and is best given by inunction. The more marked the plastic features of the inflammation the more urgent is the need of mercury and the more striking are its effects. It may be said here, and will be elaborated later on, that it is by no means in syphilitic iritis alone that mercury is of value, but in plastic iritis of whatever origin. It is thought that the energetic treatment of primary syphilis will prevent iritis, as well as the other secondary manifestations.

The subconjunctival injection of mercury was ardently advocated by Darier, who reported especially good results from it in specific diseases of the eye. It seems settled that the action is not specific or antibacterial, but that the good results are due largely to the increased circulatory activity, and similar results are obtained, with much less pain, by normal salt solution. The mercurial preparation is a 1 per cent. solution of either the bichlorid or cyanid, of which from one to three minims is given at a dose.

In an iritis which is manifestly or presumably of rheumatic origin, the indications for internal treatment are less clear in proportion as the pathology and therapeutics of rheumatism and the allied states are not exact. The salicylates, alkalies, hot baths, regulation of diet, confinement to bed to secure the advantages of the equable temperature, in addition to the rest, all have their place. Frank[1] has had favorable results in rheumatic iritis from the local application of an absorbable salicylic acid compound, called mesotan. This is mixed with equal parts of cotton seed or olive oil and rubbed into the skin around the eyes. It is probably in connection with rheumatic, lithemic and gouty conditions that Brudenell Carter cautions against the "attempts of certain writers to draw the trail of a sometimes imaginary diathesis across the manifest phenomena of an obvious malady." It is certain that the internal treatment in this class of cases does not always confer conspicuous benefit, and we should not rely on it to the prejudice of energetic local measures.

A few cases of iritis have been reported by Jacobson[2] and Pechni which were apparently due to malaria. The proof is not conclusive, but in such cases quinin should be administered, the time and quantity being determined by the blood examination.

Tuberculous iritis presents particular therapeutic indications. In addition to a vigorous supporting plan of internal medication, the injection of tuberculin, injections of air into the anterior chamber and various general medicaments, have been advised. Heath[3] treated one case by injecting air into the anterior chamber, with unfavorable results, though he quotes favorable reports from Koster and Felix. The reports on tuberculin are hardly more encouraging. Falkenburg[4] observed three cases, two of which he treated with tuberculin. In both of these enucleation finally became necessary and both patients later died of meningitis. The third patient received no tuberculin and at the end of five years was in good health. Nevertheless it would seem advisable to administer tuberculin, but unless improvement sets in promptly the eye should be removed.

Treacher Collins' article on "Intraocular Tuberculosis"[5] came to notice while this paper was being prepared. It only emphasizes the uncertainty which attends the use of tuberculin, but the majority of the evidence, especially the experimental evidence, both with old tuberculin and tuberculin T.R., is adverse.

A variety of causes have occasionally been found to be at the bottom of a case of iritis. Thus Fage[6] saw a patient with iritis who had also ozena, but no other apparent cause for the iritis. Nasal antisepsis seemed to hasten the cure. We frequently seek in the nose for a cause of chorioiditis, and it is not a surprise to have so pronounced a nasal affection fastened on as the cause of iritis. Westhoff[7] observed iritis as a symptom of iodism, and cases have been reported plainly due to oral sepsis. These few instances will at least serve to show how far we should seek for the cause of iritis, since, when found, its elimination often simplifies the management of the ocular condition very materially.

Aside from its relation to cause, the internal treatment of iritis is of much importance. As has been intimated, besides their action in those cases manifestly due to syphilis or rheumatism, mercury and the salicylates are of great value in other forms of iritis. Mercury seems to be specially indicated in cases with much plastic exudation, early tendency to the formation of adhesions, and the rather uncommon type in which a large transparent mass forms in the anterior chamber, the spongy iritis of Knapp. This exudate melts as if by magic under the influence of mercury. In my experience, the drug is best given by inunction, though painting on the oleate or deep injections of bichlorid or of gray oil may be used. Except in chronic cases or cases associated with chorioiditis and running a slow course, I am not favorably impressed with the action of iodids in iritis. Nor are sweats apparently so potent as in chorioiditis or a general uveitis, but they are of undoubted value nevertheless, as has been pointed out before this Section by Drs. T. A. Woodruff and Hiram Woods. Given in the manner suggested by the former, the activity of other measures is notably increased, and the systemic cleansing is also of great benefit. While pilocarpin has many advantages in producing sweats, other means may be resorted to, such as vapor baths and Turkish baths. In this connection mention should be made of what Burnham of Toronto calls his "combined method." It consists in administration of bichlorid of mercury, 1/24 gr., with potassium iodid, grs. 5 to 10, and on alternate day a hypodermic injection of pilocarpin, gr. 1/12 or more. He claims that much benefit results from this treatment in iritis and iridocyclitis and various other ocular diseases. The treatment is given for twelve days and the pilocarpin is left off for from one to six weeks, to be given again for twelve days. The treatment is to be continued indefinitely, according to the needs of the particular case. Burnham's claims for this plan of treatment sound extravagant, and as far as I know no one else has followed exactly this plan. It is certainly well worth a trial.

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[1] Amer. Jour. of Ophthalmology, June, 1904.
[2] Amer. Med., Feb. 8, 1902.
[3] Ophth. Record, May, 1904.
[4] Inaug. Diss., Tübingen, 1901.
[5] Ophthalmoscope, February and March, 1907.
[6] Oph. Rec., 1898, p. 32.
[7] Med. Weekblad, 1898, p. 16.

DISCUSSION.

Dr. Allen Greenwood, Boston, stated that the questions of the best means to hasten the absorption of exudates and break up adhesion, of when to stop the mydriatic, of how best to relieve secondary glaucoma, and of the best means of preventing recurrences, often put to the test the best judgment we possess. He endorsed the use of solid atropin in some obstinate cases, with the proviso that it be used only by the attending ophthalmic surgeon. He uses a piece about the size of a small pinhead, and after thoroughly cocainizing the eye, places the particle with forceps or brush in the lower cul-de-sac. The patient is told to hold his finger over the lachrymal region for fifteen or twenty minutes. Sometimes Dr. Greenwood uses this method of getting an extra pull five or six hours after the patient has once or twice instilled pilocarpin. He has seen adhesions give way under the solid atropin treatment when before they had shown no signs of farther yielding under ordinary treatment, and he has never seen the slightest ill effect from this use of atropin by the surgeon, while he frequently sees severe constitutional symptoms produced by the 1 per cent. solution used too freely by the patient at home. Lately, Dr. Greenwood has convinced himself that a previous use of dionin helps the atropin in its work of thinning and rupturing the adhesions, and in many cases in which leeches, hot fomentations, and cocain have done but little to ease the agonizing pain, dionin has had a magic effect. The patient should always be warned of its effects on the conjunctiva and lids, lest he be frightened by the chemosis and swelling. Besides relieving pain, dionin frequently stops an impending secondary glaucoma, and there is no doubt that impending high tension and severe pain are frequently associated as cause and effect and that dionin relieves both, by its dual action as a lymph vessel dilator and as an analgesic. It may be used as a 5 to 10 per cent, solution, or as a powder dusted directly in. Dr. Greenwood cautioned that in using atropin one must err on the side of using it too long, or run the risks of early and often disastrous recurrences. It is a good rule to continue the daily drop of atropin for one or two weeks after it seems to all outward appearances to be safe to discontinue it.

To relieve secondary glaucoma, pilocarpin or eserin, alternating with the atropin and supplemented with the frequent use of dionin, may be sufficient. In using the myotic, care must be exercised not to produce a myosis that will allow fresh adhesions, for it would be much better to do an immediate paracentesis, an operation which Dr. Greenwood believes deserves much more frequent application than has been accorded to it. Zur Nedden, in his article on the therapeutic and diagnostic value of early puncture of the anterior chamber in iritis, mentions the results of twelve cases of iritis produced in rabbits, in which paracentesis was the treatment used. Eyes so treated recovered in from eight to fourteen days; eyes not so treated recovered in from three to four weeks. Five cases so treated in man seemed to confirm these good results.

In cases not quickly and permanently relieved by these methods one should not hesitate to perform an iridectomy. Besides relieving the glaucoma, it hastens recovery from the iritis and is not followed by bad results. Recurrences are to be prevented by treating the general condition. Mercurials are useful in all forms of iritis, and frequently the salicylates and guaiacol. Dr. Greenwood agreed with Dr. Ellett as to the value of the frequent use of leeches and in the invaluable aid furnished by moist heat. He has seen chronic cases much benefited by the pilocarpin sweat, and in this connection reminded those trying it for the first time not to allow the patient his morning use of atropin drops if they wish the full diaphoretic action of a moderate dose of pilocarpin; a point frequently overlooked.

Dr. H. W. Ring, New Haven, Conn., added his testimony as to the effectiveness of the use of the actual powder of atropin in these cases. He had a case that would not yield to the ordinary solution. He put in a small grain of powdered atropin and some dionin, and was able to keep the pupil perfectly dilated. Later, he had a similar case in which the usual method failed. He then tried this powder again, with the same result. Since that time he has had four other cases, in two of which he did not try other methods first.

Dr. J. F. Byington, Battle Creek, Mich., found that some of these cases of iritis yield to subconjunctival injections of normal saline solution. Their effect is somewhat similar to dionin, and they may be employed after dionin has ceased to be effective, on account of the tissues becoming accustomed to the drug.

Dr. A. E. Davis, New York, reported a case of poisoning from the use of the powdered atropin. The case was one of iritis of both eyes. The adhesion would not yield to the solutions of atropin. He used dionin in powdered form first, then immediately after the powdered atropin. Its use was followed by marked atropin poisoning of such severity that Dr. Davis had to call in a general physician. The patient was put to bed, kept quiet, and in about six hours he was all right again. In this case the powdered atropin was used in both eyes, so that there was, of course, more opportunity for absorption.

Dr. J. H. Shorter, Macon, Ga., corroborated what Dr. Ellett said as to the bad results in these cases in negroes, but did not agree as to the cause. The bad result probably is due to the fact that negroes, being ignorant, try all sorts of remedies before they go to the doctor and the iritis has been allowed to progress to the last degree. It is almost proverbial that syphilis is less virulent in the negro race than in the white. Almost all negroes have syphilis, but they often go without any treatment and without serious tertiary results. They seem to be partly immune, but it seems to be different in the case of iritis and Dr. Shorter attributes this to the fact that they allow it to go on untreated.

Dr. C. H. Williams, Boston, Mass., confirmed what Dr. Greenwood said as to the value of paracentesis. He remembered that when a student in Zurich thirty years ago, he had been impressed by the frequent use Horner made of paracentesis. Its use is followed less often by secondary glaucoma; it gives more relief from pain and oftener permits the separation of persistent adhesions. It deserves more general use.

Dr. W. R. Parker, Detroit, emphasized the last point made by Dr. Williams in reference to paracentesis. During the past two years he has been using, almost as a routine measure in these cases of plastic iritis, repeated tapping of the anterior chamber and as yet has no reason to regret having done so.

He has noticed a type of iritis, the form following a posterior uveitis, in which there is almost no reaction, but an increase of tension. Two or three such patients had been treated for glaucoma. These cases must have atropin in spite of the increased tension. By repeated tapping and pushing the atropin one may save some pupil even though the iritis runs its course. Dr. Parker favors the use of dionin in the relief of pain in these cases of plastic iritis with secondary glaucoma; it certainly gives relief.

Dr. R. S. Lamb, Washington, D. C, thought it a mistake always to consider an iritis as syphilitic. He had a patient with secondary glaucoma from rheumatic iritis who had been treated for a year and a half for syphilis. She had hemorrhagic glaucoma in one eye, that had to be removed on account of the great pain. The other eye improved and she has been able to see a little with it. As to syphilis in the negro, Dr. Lamb does not agree with the statement that the negro has immunity; if he has, it is an acquired immunity, in certain families. Iritis is very common and severe adhesions, posterior synechiæ, are the stages seen. Dr. Lamb still finds leeching very useful.

Dr. Edward Jackson, Denver, stated that Dr. Ellett's division is good for the purposes of the paper, but in practice constitutional treatment should be placed first. More can be done by intelligent constitutional treatment than by intelligent local treatment. It is discouraging to see a patient come in with marked adhesions, the history of pain, preventing sleep, and no improvement at all in five weeks of continuous treatment locally, with not a dose of medicine by the mouth. One patient had had atropin, hot applications, leeching, dionin; and had not received a dose of internal medicine. The patient was under the care of a general practitioner. Syphilis, rheumatism, tuberculosis, autointoxication, diabetes, and a long list of general diseases cause iritis; and the first thing to do in the treatment of an iritis is to find out which of these general conditions is responsible, and to direct attention to the treatment of that condition.

Dr. Leartus Connor, Detroit, said that early in his practice he had charge of a case that was not doing well. He asked an old friend, Dr. J. F. Noyes, to see the patient. Dr. Noyes advised giving the man 20 grains of calomel and 20 grains of bicarbonate of soda, and emphasized, that no matter what the cause of the iritis, its treatment should be commenced by a large dose of calomel and soda. The old doctor was right. Dr. Connor expressed some surprise that the introduction of powdered atropin was looked on as a new thing; for twelve or more years it has been his habit to use it because, first, it remains in the eye, and, second, the dose can be gauged accurately. He has yet to observe the first case of atropin poisoning from its use.

Dr. Hiram Woods, Baltimore, agreed with Dr. Jackson as to the importance of classification and attention to the systemic cause. Of course, the early use of atropia is essential. The late Dr. Julian J. Chisholm, irrespective of cause, put the patient to bed and gave large doses of salicylate of sodium, 20 or 30 grains, every two or three hours, until he obtained constitutional effect, even to the point of delirium. Researches by Friedenwald and others have since demonstrated that this drug has a selective and controlling effect on inflammation in the anterior segment of the eye. In undoubted syphilitic cases Dr. Woods has seen this treatment favorably affect a commencing iritis. Regarding the use of mydriatics Dr. Woods said that sometimes pain is increased by atropin, and the ciliary area, usually not sensitive to pressure in iritis, becomes exquisitely painful to touch. The meaning is that the ciliary bodies are becoming involved. In such a case as this, in the hospital some years ago, he had the opportunity of consulting with Dr. Knapp. He suggested that euphthalmine in 5 per cent. solution be substituted for atropia. The mydriatic effect of euphthalmin is prompt, but it does not last so long as atropia. By these frequent relaxations the ciliary processes are unloaded, so to speak, into the iridic vessels, while a new application of euphthalmin restores temporary dilatation. Dr. Woods did not advise this substitution as a routine, but only when the ciliary bodies are threatened. In this class of cases he has seen great benefit from this substitution.

Dr. G. C. Savage, Nashville, Tenn., pointed out that the *sine qua non* of the treatment of iritis is dilatation of the pupil. He has seen more lost eyes from iritis where everything had been done in regard to the constitutional treatment, without using atropin, than when atropin alone had been used. Oculists, he said, should always remember that they are internists as well as oculists. Dionin is a solvent of lymph. He has had cases in which a film of lymph extended all over the pupilary opening, and under dionin it melted away—hence an explanation of its helping the dilatating effect of atropin. It dissolves this plasma and weakens adhesions; thus it gives the atropin a chance to pull the pupil open.

Dr. E. C. Ellett, Memphis, Tenn., stated that Dr. T. A. Woodruff had asked him to say something about a remedy he has used in cases of plastic iritis, especially those of specific iritis, which has not been mentioned here this morning. It consists in the subconjunctival injection of a solution of iodin; the injection is made in the usual manner, four or five minims being injected well back with the idea of getting into the capsule of Tenon. He said he had seen it suggested in an article by Dr. E. E. Gibbons, of Baltimore, in the *Journal of Eye, Ear and Throat Diseases*, June, 1902. The solution consists of iodin crystals, gr. 1/7; potassium iodid, gr. 1; distilled water, 1 ounce.

A good suggestion as to the use of pilocarpin is to apply an icebag to the patient's head when the pilocarpin is given. This will contribute very greatly to his comfort and the sensation of fulness of the vessels of the head is done away with to the patient's great satisfaction. A patient does not have to use atropin very long until the breath becomes so offensive that it is unpleasant to go into the room where he is. This is due to disturbance of the salivary and digestive secretions. Daily attention to these secretions must, therefore, be of great importance. In regard to constitutional treatment, that, he said, was considered in the paper, and particularly along the lines that have been referred to, the administration of anti-rheumatic and anti-syphilitic remedies.

TREATMENT OF ULCERS OF THE CORNEA.*

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This paper is limited to treatment of ulcers of the cornea, but to indicate intelligently the proper procedures which one must use in treating this ever varying symptom it is necessary to have as a basis some classification of the pathologic process, for the treatment must vary according to the conditions. In other words, no hard and fast lines can be laid down for the handling of ulcerations of the cornea *per se*.

If we consider the subject from the standpoint of development then we have to treat ulcers of the cornea on the ground that they are either primary or secondary, and if secondary the cause is of first consideration in the line of treatment. The treatment, too, is modified, as the ulcer may be marginal or central, superficial or deep, simple or infected, progressive or regressive. Then, also, we may have to approach the subject from the symptomatic standpoint and possibly this may be the best way to approach it. Some symptoms are common to all forms or classifications of corneal ulcers, and not infrequently the trouble has to be treated entirely according to the symptoms: Pain, photophobia, impairment of vision, pericorneal injection, loss of corneal tissue and sometimes iritis.

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For pain and photophobia in acute stages a solution of the sulphate of atropin is useful, from 1 to 4 grains to the ounce of distilled water; two drops are instilled in the conjunctival sac from once every three hours to three times a day; a saturated solution of boric acid is also useful as a lotion, and a pair of plain or toric dark glasses may be needed. In sthenic cases leeches may be applied to the temple in addition to the preceding treatment. Solutions of cocain for pain and photophobia give immediate relief, but do more harm than good if used at all continuously. If conjunctivitis coexists the lids may be touched up with a solution of nitrate of silver, from 2 to 5 grains to the ounce. In the subacute and torpid stages, or when acute symptoms do not exist, stimulation should be practiced, and this is accomplished by the use of the yellow oxid of mercury ointment, combined with atropin, or by itself in the later stages when atropin is not needed. At this stage powdered calomel, iodoform or thymoliodid (aristol) may be sprinkled on the ulcer instead of using the mercurial ointment. A solution of the sulphate of eserin, instead of atropin, is frequently used when the ulcer is small and sluggish.

In deep and sloughing ulcers atropin is almost universally used because of its quieting effect and because it lessens the chances of iritis, but frequently eserin is the better remedy, because it has a tendency to stop the migration of white corpuscles and promotes absorption, through dilitation of the ciliary vessels, at the same time lessening tension. It is particularly indicated in marginal ulcers in strengths of from gr. ¼ to 1 grain to the ounce of distilled water, one or two drops of this solution being instilled into the eye at intervals of from four to eight hours; but on account of its tendency to promote ciliary congestion and iritic irritation, a solution of the sulphate of atropin in strengths of from gr. ½ to 4 grains to the ounce of water, two drops, once daily, should be used to overcome this tendency. Dionin (ethyl-morphin hydrochlorid), combined with the atropin or eserin, in strengths varying from 1 to 10 per cent., has been used to aid these drugs in allaying pain and promoting absorption.

When perforation is impending antiseptic compresses should be used continuously, except when making the local applications or when suppurative conjunctivitis exists. If the floor of the ulcer bulges a paracentesis should be performed, followed by application of eserin or atropin, depending on the location of the ulcer. Paracentesis may have to be repeated several times in order to relieve pain and to hasten recovery.

Spread of local infection may be stopped or retarded by scraping with a curette, by the application of chemicals or by the use of the cautery. After curetting away all the sloughed material it is well to touch up the ulcer with a solution of corrosive sublimate, 1 to 2,000, and to dust on iodoform or other antiseptic powder. Cauterization is indicated in all sloughing ulcers when other measures have not been efficacious, and in infecting ulcers of the serpiginous type.

Bandages are used either for protection or pressure; for protection they are applied to keep the lids closed and to keep the ball quiet and to keep out dust and light, but they are contraindicated if there is much secretion.

We must also take into account the general health of the individual affected, the locality in which he lives and his age. There is nearly always a lowered vitality with a corneal ulcer, and by use of constitutional measures corneal resistance is increased. A calomel purge should be given to rid the system of bacteria and their ptomains. The system should be toned up with fair doses of quinin, which increases the phagocytic action of the cells and reinforces the resisting power of the cornea. If we would have our treatment in all particulars a success none of these considerations may be neglected. Definite rules may not be laid down, but certain principles are common to the various types.

The cause must be removed in order that the symptoms may be speedily arrested. It is not always possible to locate or to designate the cause of a given ulceration, but when due to the presence of a foreign body in the conjunctival sac or on the cornea itself, the irritation must be effectively removed. When ulceration is due to misplaced or misdirected cilia, these should be removed by electrolysis in order that they may not again be objects of irritation. When a chronic catarrhal conjunctivitis, or an acute contagious conjunctivitis, or a trachomatous condition coexists with an ulceration of the cornea, any one of them should receive our first consideration when blocking out our line of treatment, for while they may not be the direct cause, they are always aggravating factors. Chronic catarrhal conjunctivitis may require several changes in treatment before it is conquered, as the conjunctiva soon becomes accustomed to or wears out one line of treatment. If the secretion be considerable a solution of nitrate of silver, from 1 to 10 per cent., may be used to touch up the membrane of the conjunctiva, or a solution of from 0.25 to 0.5 per cent. may be dropped into the conjunctival sac, to be followed by a thorough washing of the conjunctiva with a boric acid or normal salt solution. Of late years many prefer a solution of argyrol (silver vitellin) varying in strength from 10 to 50 per cent.; this drug has the advantage of being much less painful than nitrate of silver, but has the disadvantage of being exceedingly mussy. Sulphate of zinc is another favorite remedy in solutions varying in strength from 1 to 5 grains to the ounce of water. The alum stick applied to the mucous membrane of the lids may be used at times with great advantage. With all of these, solutions of boracic acid are used for cleansing and antiseptic purposes.

If we have phlyctenular conjunctivitis to deal with it is not infrequently connected with a phlyctenular keratitis, and here the general health must be treated, as well as the local conditions, if we desire the best results, and an ulceration is the essential pathologic condition. The patient should be built up on iron and the ulcer stimulated.

Acute contagious conjunctivitis, when due to the gonococcus, is very likely to have ulceration of the cornea as a sequel. Solutions of nitrate of silver have been the standby to prevent and remedy this complication. Later solutions of protargol (protein silver salt) were used and lauded by many operators; and, later still, argyrol (silver vitellin) has had its many enthusiastic users. One of the most recent aspirants for favor in these infective ulcers is desiccated yeast. It is freshly prepared for each application, which may be anywhere from every hour to once or twice daily. The desiccated yeast crystals are mixed with distilled water until they are thoroughly dissolved, making a creamy solution, which is put into the conjunctival sac with a dropper or rubbed into the ulcer with a cotton-tipped applicator. This remedy is useful, not only in gonorrheal infections of the conjunctiva, but in many other conditions characterized by considerable secretion.

Having removed the cause, one should endeavor to prevent the spread of the ulcer, that perforation, with its diastrous consequences, may not take place; or that opacity of the cornea may not be so extensive as materially to impair the vision. Probably this extension may be best prevented by the use of mercurial ointment, the yellow oxid being the favorite, in strengths varying from ¼ to 1 grain, thoroughly mixed with one dram of lanolin or petrolatum, with directions to use a piece one-half the size of a kernel of rice within the conjunctival sac and thoroughly distributed by massage once or twice every twenty-four hours. If the ulcer shows a pertinacious activity, it may be scraped with a corneal spud, or touched up very carefully with the pure tincture of iodin, anhydrous carbolic acid or the galvanocautery.

A simple central ulcer, by neglect or through poor nutrition, may develop into a purulent or deep ulcer. If the ulcer be centrally located, it ought to be treated with a solution of the sulphate of atropin in strength of from 1 to 4 grains to the ounce; but the treatment for peripheral ulceration would the more likely be productive of good if a solution of sulphate of eserin in strength of from ½ to 2 grains to the ounce were used, especially if the ulceration is very deep, because it lessens tension.

As pain has a tendency to increase tension, it may be combated by intermittent moist heat. Cloths wrung out of hot water and placed on the eye for from ten to thirty minutes, every hour or two, will ordinarily make the patient comfortable, but poultices should never be used. The moist heat not only diminishes the pain, but it allays the congestion, develops blood vessels, and by increasing nutrition hastens the process of repair. Nothing in the way of medication which may leave metallic deposits on or in the cornea should be used, and all collyria should be soothing. When perforation is threatening, myotics should be used or paracentesis performed and this may be repeated every twenty-four or forty-eight hours, if necessary.

Should the necrotic process be marked, subconjunctival injections of bichlorid of mercury may be used in strength varying from 0.1 to 1 per cent., depending on the extent of the necrosis.

Secondi uses as a subconjunctival injection, when such conditions exist, a solution composed of one part of bichlorid of mercury, two parts chlorid of sodium, 2,000 parts of water, injecting anywhere from a few drops to half a dram.

Darier injects a few drops of a 1 to 4,000 solution of the cyanid of mercury. These measures should be preceded by instillation of a few drops of a cocain or holocain hydrochlorid (ethenyl-paradiethoxy-diphenyl-amidine hydrochlorid) solution in the conjunctival sac, as the injections are painful and are liable, by reason of their irritating qualities, to produce a necrosis of the conjunctiva. A normal salt solution seems to be just as efficient a subconjunctival injection, without the necrotic tendencies. If, under these lines of treatment, the ulcer continues to spread or to grow deeper, cauterization is indicated, and this may be accomplished either by drugs or cautery. A 50 per cent. solution of the nitrate of silver, tincture of iodin or pure carbolic acid are the drugs most commonly used. They may be applied to the ulcer by means of a small piece of cotton wound on a wooden toothpick, using only enough of the drug to cover the ulcer. The actual cautery or the galvanocautery is useful and sometimes most essential, but should be used only by the expert and on patients not exceedingly nervous, except in desperate conditions. A 10 per cent. solution of nitric acid, applied with the cotton-tipped toothpick, is exceedingly efficacious in serpiginous ulcers, and when this fails a Saemisch incision may save an otherwise almost hopeless eye. In severe ulcerations, due to diplobacilli, Paul recommends Peters' zinc-ichthyol salve.

Chronic serpiginous or Moren's ulcers have always been prognosticated unfavorably, in the light of the results of ordinary treatment, on account of the tediousness of the disease and its tendency to relapse, but it would appear, from the reports of Paul and Romer, that the prognosis has become vastly better by the introduction into the treatment of Romer's pneumococcus serum. One c.c. of the serum is injected into the subconjunctival tissue at the first treatment and one-half the amount on every other day. It is not so painful as the cyanid of mercury.

The process of repair is promoted by all the measures mentioned. The moist heat favors the separation of necrotic tissue, promotes development of blood vessels in the cornea and relieves pain. Paracentesis through the base of the ulcer or outside of it, when perforation is threatening, does good by relieving tension and starting the flow of lymph, thus promoting repair.

If perforation and prolapse of the iris occur early, the patient should be anesthetized, the iris drawn out and cut off, the spatula being used afterward to tuck back into place the angles of the iris coloboma. Sometimes a piece of conjunctiva, twice the size of the original opening, is tucked between the edges of the corneal wound and secured by a compress bandage. This results in a flat scar externally and an anterior synechia internally.

All ulcers leave behind them opacities of greater or less density, which last for short or long periods of time, depending on their character. These need stimulation, which may be accomplished by the various mercurial unguents, the favorite of which has already been mentioned, if only a mild stimulant be needed. Calomel in powdered form, sprinkled on the cornea very lightly, once in twenty-four hours, gives a more active stimulation, while jequerity, in powdered form or in watery solution, will set up an acute inflammation, which results in a marked clearing of the cornea, where blood vessels have been the chief cause of the opacity.

Galvanic electricity has also been used for the removal of corneal opacities. - A silver-cupped cathode, with a drop of mercury on it, is placed on the cornea, while the sponge anode is placed on the cheek, and a current of from one-quarter to four milliamperes is turned on for a period of from one to five minutes, every three or four days. Massage by a facial artist or expert masseur may be of much value. This may be direct to the cornea itself or indirectly through the lids from one to three times daily. Massage is assisted very materially by the use of hot packs.

The internal treatment of opacities must not be overlooked, especially in patients concerning whom it can not be said, as it was of Cæsar's wife, that they are above suspicion. In such, saturated solution of the iodid of potassium, in gradually increasing doses, running from 5 grains three times daily to 60 or 70 grains three times in the twenty-four hours, will work wonders, and in many cases in which we are unable to find any specific history or symptoms this drug will frequently give very decidedly happy results.

Another drug, concerning which much favorable mention has been made as a scar remover, is thiosinamin (allyl sulphocarbamid), but with what confidence one may praise its selective power on the cornea it is a little unwise to say. It is used internally in from two to three grain capsules, two or three times daily for two or three months, or by hypodermatic injections into the skin of the back in solutions of varying strengths, daily or every two or three days, over a period of five or six months. That it does have a very marked effect on the scar tissue, softening it and causing it to disappear to a great degree in patients on whom no other treatment is being directed, there can be no doubt, but in many patients it seems to affect the scar tissue not at all, and as yet no rules have been formulated to differentiate or to determine beforehand the patients to whom it will be beneficial.

Thus far the treatment has been directed at the opacity itself, locally or through the general system, to the end that vision might not be interfered with. Having failed in clearing up any given opacity of the cornea, which interferes with the vision, if there be any peripheral cornea transparent, vision may be secured by an iridectomy or an iridotomy. There are many cases in which everything has been done which is possible for vision, but in which the opacity is central and unsightly. This may be removed, or at least for a limited period, by needling with or without India ink or by keratoplasty.

As Theobald says, there is a vast difference in the behavior and in the intractability of corneal ulcers. In some instances, they are uncontrollable and tend to go from bad to worse, in spite of all that can be done to combat them, and this probably depends on the nature of the bacteria producing the ulceration and the feebleness of the opposition.

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DISCUSSION.

Prof. Carl Hess, Würzburg, Germany, reported that some good results had been obtained with the pneumococcic serum in cases due to the pneumococcus alone, especially in recent cases. It is successful not only in mild cases, but even when the patient comes with half of the cornea destroyed. In the latter cases the cautery is employed also. In every instance the serum is injected first.

Dr. E. A. Shumway, Philadelphia, emphasized the importance of the question of etiology of corneal ulcer. Not only is one better able to anticipate the severity of the process after determining the micro-organism present, but more intelligent treatment can be given. In the early stages it may be impossible to distinguish clinically between a severe type of ulceration and an ordinary mild infection. If the pneumococcus is found, however, the treatment must be energetic, cauterization applied early and paracentesis promptly resorted to if the process advances; on the other hand, the presence of the diplobacillus assures us that the condition will be readily controlled. This investigation has been repeatedly urged, and all should recognize the fact that the clinical diagnosis is incomplete unless supplemented by bacteriologic examination. The obtaining of the material is, of course, not so easy as in conjunctivitis. The superficial exudate must first be removed, and some of the material from the deeper part of the ulcer secured, especially from the advancing line of infiltration, in the serpiginous ulcer, if the true cause is to be found. The investigation must therefore be made only by the hand of the skilful surgeon, as the movement of an unquiet patient may produce further traumatism to the cornea, which will be followed by a rapid extension of the process along the line of injury. Active treatment to the ulcer should follow immediately the removal of the necrotic tissue. Another point of prime importance is the search for disease of the lachrymal passages. Many of the most severe and obstinate cases of ulceration, especially in elderly people, are due to infection by the pus from a dacryocystitis. The discovery of the condition is therefore to be followed by free opening of the canaliculus, cutting of any obstruction in the nasal duct, and irrigation of the canal with antiseptic solutions. If this does not control the suppurative process, the sac should be promptly excised. He considers dionin a valuable drug in the treatment of ulcer. To its action as a lymphagogue, in stimulating the removal of the bacterial toxins, and its analgesic effect, must be added, as Callan has shown, a decided action in stimulating corneal regeneration. In the after-treatment of the resulting maculæ, also, it is of assistance in clearing them up, but its best effect is secured by intermitting its use for several days, from time to time, as an immunity is readily established. The treatment of serpiginous ulcers is often exceedingly discouraging. Much has been hoped from the use of Römer's pneumococcus serum. So far, however, the results have been distinctly disappointing, and Römer's reported successes have never been repeated elsewhere. The addition of the injection of sterilized cultures of the organisms to that of the polyvalent serum (Merck), which Römer has most recently advocated, may make the treatment more effectual, but thus far Dr. Shumway does not think the method has been employed by any of our American surgeons.

Dr. L. H. Taylor, Wilkes-Barre, Pa., said he thought Dr. Ellis did not lay stress enough on the use of the cautery. He lives in a community where there are a great many of these infected ulcers and it is his practice always to cauterize without waiting. Whenever a patient comes to his office with an infected ulcer, without waiting to find out the cause, he knows there is a serious process and that it needs energetic treatment, and he at once applies tincture of iodin. He formerly used, for a number of years, the actual cautery, and still uses it in a certain number of cases, and his chief reason for using the iodin instead is that it is less terrifying to the patient, is more readily applied, and while it gives some pain is not so unpleasant to the patient. He gets excellent results and thinks a less dense leucoma follows its use than after the cautery. He believes that theoretically what Dr. Shumway says is true if we have the appliances to make the bacteriologic examination, but if we have an infected ulcer to deal with we know that it is a serious condition, and the proper aplication of the iodin does not do any harm.

Dr. J. A. Tenney, Boston, said that he had been in the habit of making use of a method that was first brought forward by Dr. Williams of Cincinnati at the International Congress of Ophthalmology in 1876; that is, touching the bottom of the ulcer with the strongest solution of carbolic acid. He uses that all the time. He cited one case: An Italian girl was brought to him with a deep ulcer in each eye. The mother said they had been to the Eye and Ear Infirmary. He told them they should have left the child there, as it would at least have received proper nourishment. The child was so stupid that it scarcely needed an anesthetic. He took the carbolic acid on a probe and dipped it down into the bottom of each ulcer. That was on Monday; on Wednesday he saw the child again and the ulcers were then healing.

Dr. John A. Donovan, Butte, Mont., said that Dr. Ellis gave the best known and most reliable treatment that could be recommended, with the exception that possibly nitric acid should be used in preference to the other caustics. In the hands of experts he recommends the electrocautery, and ophthalmologists should be experts. The electrocautery, small short electrode, in handle at angle of 45 degrees, at a barely dull red heat, simply lightly touched at spots at 1 or 2 millimeters apart, all around the edge of the ulcer, not touching its floor, if that looks healthy, is by far the best treatment. He has used the cautery in many hundreds of cases, and has had but one in which three cauterizations, at the most (with rest in bed), did not control its spread. In this case he cauterized four times, used nitric acid once, opened anterior chamber three times, cauterized then the fifth time, saved the eye and some vision. In no case in the last seven years, in which he has used it constantly, has he had the least cause for regret, and there is never a time that he does not have some cases under treatment. To him it is as easy to use, equally convenient, better controlled, and infinitely more reliable, while fully as safe, if not more so, than any other method.

Dr. G. C. Savage, Nashville, Tenn., emphasized the value of dionin. It relieves tension, which gives great comfort, for the pain is largely due to the increase of tension. He believes the very best agent for the local treatment of corneal ulcers is acetic acid. It will destroy the germs; it has penetrating powers. It not only destroys the germs lying on the surface, but reaches those deeper in. The great advantage it has over any other application is that it does not destroy cell tissue. The epithelium is turned white for a moment, but soon clears up and the vitality of the tissue is greater than it was before. Iodin, the cautery and carbolic acid all destroy cell life as well as germ life. To his mind acetic acid has a decided advantage over any other application we can make to an ulcer. Besides making the application of the acid (1 part to 7 to 10 parts of water), with a cotton-wrapped toothpick, under cocain, he nearly always gives a weaker solution of the acid (5 to 10 drops to 1 ounce of water), to be used constantly.

Dr. Leartus Connor, Detroit, said that one individual will find one agent better and another another. The thing is to destroy the malignant germs without harming the cell tissue. He has used all the remedies mentioned, with excellent results. At one time he used to fill the eye with a solution of bichlorid of mercury and then with a scoop curette the ulcer and obtained very good results. He thought the use of dionin important because the drug reduces the tension considerably. Dry cupping of the temples he finds helpful in certain conditions. In some cases he never omits a vigorous calomel and bicarbonate of soda purge and always regulates the diet with the idea of keeping the tension low. Generally patients get the greatest good as well as comfort from the local use of hot water. It is very effective and can not do any harm. He uses a tumbler, applied touching the nose and edge of bone below the socket and then raised until the eye is in the water. It is the next best remedy to atropin.

Dr. S. L. Ledbetter, Birmingham, Ala., said he had used hot water in the manner referred to by Dr. Connor, using a teacup and telling the patient to turn it over the eye and open and close the eye, having them use it frequently and for five or ten minutes at a time.

Dr. H. B. Ellis, Los Angeles, said that, for the last four or five years, he did not think he had ever had a case but what he had used dionin, in conjunction with atropin or eserin; sometimes separate from either of these, and as a promoter of absorption and for the relief of pain he knows of nothing better.

ALIMENTARY INTOXICATION.

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A series of toxic symptoms are frequently observed during the course of nutritional disturbances in infancy which Finklestein has termed alimentary intoxication. The clinical picture made up of these symptoms is better known under the appellation entero-colonic catarrh, milk poisoning, bowel infection, etc., and in the severer cases the term cholera morbus is applied to it.

The attack does not occur suddenly in a previously healthy infant, but, on the contrary, in one in whom a distinct deviation from the normal has existed for some time, which can only be ascertained by a close study of the daily temperature and weight charts. Clinically, such children may not, at this time, present any prominent symptoms. They may or may not be irritable and restless during sleep. The stools often continue normal in appearance and number, or they may be increased to three or four in the twenty-four hours, and be of thin consistency. Occasionally, regurgitation of food after feeding is observed. There is a daily fluctuation of temperature, which is never marked, varying from 1 to 2 degrees. The weight curve shows that the infant, instead of gaining, is standing still or losing slightly.

This condition is always found to be preceded either by a quantitative or qualitative increase in the diet or the substitution of some other diet, which has carried with it an equivalent effect. This period is spoken of as the dyspeptic stage. It illustrates how close a relation exists under certain conditions between disturbances in the infant and food changes. This can readily be demonstrated, and, in fact, is occurring constantly in practice, by increasing the diet to intolerable points, uncontrolled by accurate temperature and weight records. In this manner this stage can be diagnosed intelligently, and the climax of intoxication may be aborted by taking appropriate measures. The dyspeptic stage may continue for days or weeks before the onset of the severe toxic symptoms. The latter may occur suddenly, at any time, during the dyspeptic period or after an additional increase in the diet.

The onset of the intoxication is announced by marked nervous symptoms, which may take on one of two forms. After a varying period of irritability, the infant is seized with convulsions, followed by a condition of sopor or coma, or he may become apathetic, very drowsy, not easily awakened, soporose and in some instances comatose. Occasionally, the temperature remains afebrile, but, as a rule, it rises sharply.

The number of stools are often increased, but not infrequently seem normal in appearance and number at the beginning of the attack. Considerable depression is evident, and in the severe forms there is marked collapse, with a low blood pressure and livid skin. Prior to, coincident with, or subsequent to the rise of temperature, there is a sudden decline in the weight curve, the loss often reaching from 400 to 700 grams in from 24 to 48 hours. The breathing is accelerated, deep and may be misinterpreted as a pulmonary symptom.

A striking feature at the height of intoxication is the alimentary glycosuria, dependent on lactose and galactose, and due to their absorption and failure to undergo oxidation. At the same time, an albuminuria and cylindruria may be found. A leucocytosis is invariably present during the acute stage, but not exceeding 30,000. Skin manifestations, such as vasomotor exanthemata, scleroderma, etc., are not uncommon.

A study of the physiognomy is most important in the diagnosis of this condition. A comparison of the expression and facial movements of the infant suffering from alimentary intoxication with that of the normal healthy child will readily show the finer grades of disturbances of consciousness, etc., and enable one in the first glance to recognize the infant suffering from intoxication. The face is usually relaxed, or drawn, as if in pain. The eyes may appear fixed, staring into space, or move slowly on attempts to attract attention.

The entire clinical picture varies in severity in different cases. In some cases all the symptoms will be found present in classical form; in others, certain symptoms will be so pronounced as to overshadow the rest. There are certain familiar conditions which Finklestein has styled forms of alimentary intoxication.

1. The cholerie form, with great loss of weight and extreme collapse, and only slight evidence of cerebrospinal symptoms.

2. Hydrocephaloid form, in which the nervous symptoms predominate, simulating a tubercular meningitis.

3. Soporose form, in which, from the beginning, there is deep sleep, which may deepen into coma, while all the other symptoms may be but slightly marked.

4. Asthma dyspepticum, in which the peculiar type of breathing is the most marked symptom.

The symptoms of intoxication do not always form the climax of a period of dyspepsia. A chronic intoxication may develop, resulting in what Finklestein calls decomposition, better known as marasmus or infantile atrophy. The symptom-complex characteristic of alimentary intoxication has usually been referred to bacterial decomposition of the food and absorption of toxins, or to bacterial infection, notwithstanding the frequent want of pathologic proof for the latter in many fatal cases.

Before discussing this feature, it may be well to establish tenable grounds for the assumption of an alimentary intoxication.

This condition is never seen developing in the healthy infant at the breast whose nursing is properly regulated. It is, however, not infrequently seen developing in a poorly nourished infant at the breast whose feeding is not properly regulated. Its usual subject is the artificially fed infant suffering with some disturbance of nutrition.

The status of nutrition of the infant plays the important rôle in this matter, and the more seriously it is affected the closer it approaches the stage of decomposition, the more serious and irreparable is the damage caused by intoxication. It is this nutritional disturbance of the child which renders possible the precipitation of a period of intoxication by dietetic errors, the latter acting merely as the exciting cause.

The action of the food on the infant with relation to development of toxic symptoms can readily be followed in artificially fed infants, when under complete control for observation and study. Intolerant increases in the quantity of diet or of individual constituents will be found to commence a period of dyspepsia, which latter, as above stated, can only be followed accurately by daily weighing and observation of temperature. The temperature will show daily subfebrile fluctuations, which, though slight, are significant, and the child, instead of gaining normally, will stand still or even lose.

This dyspeptic stage may be terminated by lessening certain constituents of the food, such as carbohydrates or fats, and in other instances by lessening the total food quantity. Lack of interference in the matter of an increase in food at this time will precipitate, sooner or later, the intoxication. And exactly at the time when the catastrophe of intoxication develops, the most convincing argument of the influence of food in the production of alimentary intoxication becomes evident. If food is withdrawn entirely, and water alone is allowed, within twenty-four hours, the temperature drops to normal, the weight loss ceases, the mental condition clears up, glycosuria disappears, and the most desperate clinical picture is converted into one of hopefulness. It might be contended, however, that this is not necessarily convincing, as it might be assumed that ridding the intestinal tract of its contents and not the withdrawal of food, is responsible for the drop in temperature. I think it will be conceded that if the temperature remains normal under institution of proper treatment with relation to food from the time of this first drop, and this can be demonstrated, it, at least, could not have been an inflammatory process that gave rise to the first jump in temperature.

If a bacterial decomposition of the food were responsible, this would have occurred in the albumin of the food, and we would have an alkaline stool, while the stool in the intoxication is acid; on the other hand, were it alkaline, this decomposition could just as well have occurred in the bowel secretion.

It is well, here, to consider the reaction of the infant to food and food constituents that can be noted at this time.

As already stated, if, at the height of intoxication, the food is entirely withdrawn and water substituted, the temperature will drop to normal and can be maintained there if proper treatment, which will subsequently be considered, is followed. If, after the temperature has been normal, whether it be for a few hours, twenty-four hours or longer, the former diet is resumed, even in small quantities (barring certain instances that will later be mentioned), shortly thereafter the temperature will begin to rise, and if the diet is continued, in a day or two a relapse of the intoxication has developed with all its symptoms, including glycosuria. If, now, the food is withdrawn, the same sudden drop in temperature and improvement of symptoms will be observed. It might be claimed that there was a reinfection, but this change occurs under the most careful precautions for sterilizing the food, and the reaction in the infant occurs too rapidly to have been referred to bacterial infection or decomposition of food. On the other hand, no one has been able to demonstrate poisonous toxins in the bowel contents in these cases, and if a reinfection had occurred, it would not subside on withdrawal of food.

The relation of the food constituents to the infant's condition during the stage of de-intoxication is interesting. Quite contrary to expectations, the casein seems to act as an inert food during this period. It has been found that casein, precipitated from fat-free milk, and broken up, can be given mixed with the water the infant receives and his convalescence will proceed as though he were receiving only water. Quite the opposite is observed with the fats and carbohydrates.

Fat given during the attack is disastrous, causing the condition to grow worse at once. Fats are not only deleterious at this time, but also prior to intoxication, when an increase in this constituent is not infrequently responsible for precipitating the acute attack.

The rôle of the carbohydrates is especially important in starting the disturbance leading up to intoxication, and during the intoxication, if given, they will cause a persistence of the symptoms, often leading to a fatal termination.

It is a matter of experience that some children, with so-called "bowel infections," do not tolerate whey well after they have been tided over an apparently severe attack by the withdrawal of food. This formerly was attributed to the residual proteids in the whey, following the Biedert teaching of attributing almost everything harmful in milk to proteids. One can observe this same result when the infant is given milk sugar solution instead of whey, indicating that the carbohydrates are in all probability the responsible factor. Such misleading views concerning proteids have been responsible for the long discussions on intoxications, which have been inadvertently referred to as infections and reinfections, but which might have been cut short by proper diet.

It was long ago observed by Wiederhoffer that some of these children, when placed on the breast, instead of improving, became worse and died. On the other hand, there are a certain number of infants who will slowly improve on the breast, and it is here that the question of the previous condition of the child plays such an important rôle in causation and in convalescence from alimentary intoxication. If the infant has suffered seriously before the development of the intoxication he may not show the sudden favorable reaction on the withdrawal of food, and only after a few days show a normal temperature and freedom from serious symptoms. Again, a certain number of cases are so overwhelmed that they proceed immediately to a fatal termination.

This condition of the infant is a very important factor and depending on it all shades of reaction of the organism to intoxication may be observed. While one infant may develop a relapse in convalescence from slight errors in dietetic management, another may, after the subsidence of intoxication symptoms, be able to take almost the same quota of nourishment as before the attack. In some cases there may be present a severe infectious complication, causing fever and preventing convalescence.

From the above considerations it would seem evident that we must seek the cause of this condition not in bacterial infections or food decompositions, not in toxins supposed to be contained in milk, as this condition may occur under the most careful preparation of food, but in an intolerable quota of nourishment, either quantitatively, qualitatively or both, supplied to an infant already suffering from nutritional disturbance, resulting in an abnormal destiny of the nourishment in intermediary metabolism. That some grave perversion of metabolism exists would appear from the presence of glycosuria at the height of intoxication.

While it presents clinically, in its severest form, a picture similar to that of the uremia or diabetic coma, there are some objections to the acidosis theory, which I will not discuss now.

Before considering the treatment I wish to report a case in my service at the Cook County Hospital:

This child of four months was brought into the hospital without any history, except that it had been fed on condensed milk, and had been seized with a convulsion the day it was received. The infant was soporose and in a state of collapse, with livid skin; emaciated; temperature 103 F.; pulse rapid; breathing accelerated; bowel movements brownish in color and of a thin, batter-like consistence.

The treatment employed in this case was as follows: Salt solution hypodermically, to combat collapse and low blood pressure. Water only by mouth. There was a drop in the temperature by the following morning, and the temperature remained at this level until the child was placed on a diet composed of milk, whey and water, when a relapse occurred with all the symptoms of intoxication repeated. Withdrawal of the milk given in the mixture resulted in a considerable drop in the temperature, although it still continued above normal, and symptoms of intoxication persisted. Suspension of the diet, and substitution of barley water, caused an immediate drop to normal and disappearance of symptoms.

The indications for treatment in alimentary intoxication consist in combating the collapse, cutting short the intoxication, and slowly bringing the child back to a diet commensurate with its caloric requirements. The first indication may be met by hypodermoclysis of salt solution, using 50 to 100 c.c., and repeating as is deemed necessary. The second indication is met by withdrawing the food entirely, and allowing water only for twenty-four hours. With the subsidence of all symptoms, begin feeding as follows: As exceedingly small quantities of fat are injurious, begin with centrifugated breast milk, if possible, given in teaspoonful doses, five times a day, or an equal quantity of buttermilk, to which neither sugar nor meal has been added; or if this is not at hand, fat-free milk may be used. As a diluent, and to supply the liquid necessary, water and a thin cereal gruel may be used or given separately.

After an interval of twenty-four hours, provided the above has been well tolerated, without any evidence of return of the intoxication, the separate quantities of milk may be increased to two teaspoonfuls, which, after two or three days may, under the circumstances mentioned, be doubled, and so on, until they are gradually brought to a diet (free of fat in artificially fed infants) that will temporarily meet their needs from a caloric standpoint, having added, in the meantime, with their increased tolerance of the buttermilk (where employed), 30 grams of sugar, preferably maltose, and 15 grams of flour to each liter of buttermilk while boiling.

The child should not be kept on the buttermilk diet longer than six weeks. After this time whole milk dilutions will be necessary to meet its needs. In case the infant was at the breast, after four or five days of careful feeding, with centrifugated breast milk, it may be returned to the breast, the amount of nurse being carefully controlled.

During the treatment slight relapses are common where the food toleration has been passed. More effective and permanent results are accomplished by proceeding slowly, allowing forty-eight hours for judging the effect of a food increase before again adding to it.

Cathartics and intestinal antiseptics are unnecessary, unless constipation exists, as sometimes occurs in the soporose form, when a laxative is indicated.

There is little doubt that injudicious dieting and constant or frequent administration of laxatives in convalescence are responsible for the persistence of varying temperature rises in the first instance, and slimy green stools in the second instance, which are wrongly interpreted as manifestations of an entero-colonic catarrh, or a bowel infection with repeated reinfections, etc.

RESTORATION OF THE PELVIC FLOOR.*

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The lesions resulting from labor involve, primarily, the pelvic floor and the sphincter apparatus to a varying degree, while, secondarily, there result certain displacements of the pelvic organs directly dependent on the weakened pelvic floor. The manifold operations for repair of these injuries of the pelvic floor have depended largely on the originators' varying conceptions of the anatomy and physiology of these structures. The reason for so many different types of operation undoubtedly depends on insufficient knowledge of the anatomy. One naturally would suppose at the present time that this subject had been completely worked out, but a careful examination of the works of various anatomists shows that there is very little agreement as to the exact structure of the female pelvic floor. In a general way the works of the English and American anatomists have been characterized by insufficiency of detail in the treatment of the female pelvic floor, notwithstanding the fact that their descriptions of this region in the male is usually very complete and satisfactory. To this general statement there are, of course, notable exceptions, such as the article in Deaver's "Surgical Anatomy" and Peter

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* Read before the Medical Association of the Southwest, Oct. 9, 1907.

Thompson's section in "Morris' Anatomy," which are highly recommended for study. On the other hand, the works of the German and French anatomists are especially complete and satisfactory. We would especially recommend Luschka,[1] Henle,[2] Gegenbaur,[3] Waldeyer,[4] and Poirier and Charpy.[5] During the past five years I have been continuously at work investigating the structure of the female pelvic floor. I have examined many subjects and dissected them carefully, and as a result of this dissecting-room experience, together with my clinical experience, I feel that the following descriptions of the normal and torn pelvic floor are accurate. The drawings (Figs. 1 to 7) were made by Dr. E. L. Parmenter from my own dissections and under my supervision.

ANATOMY OF THE PELVIC FLOOR IN THE FEMALE.

The pelvic floor consists of two segments or planes. The superior plane is known as the pelvic diaphragm and is composed of the levator ani muscle and two layers of fascia; the upper layer of fascia is the recto-vesical fascia or fascia diaphragmatis pelvis superior; the lower layer of fascia is the anal fascia or fascia diaphragmatis pelvis inferior. The inferior plane is limited to the urethral triangle and is known as the urogenital diaphragm or trigone. It is composed of the musculus trigoni urogenitalis and two layers of fascia. The upper layer is the superior layer of the triangular ligament or fascia diaphragmatis urogenitalis superior. The inferior layer of fascia is the inferior layer of the triangular ligament or fascia diaphragmatis urogenitalis inferior.

The levator ani is a paired muscle which is divided for description into an anterior portion known as the puborectalis and a posterior portion known as the iliococcygeus. The puborectalis arises from the posterior face of the body of the pubic bone, being separated from its fellow of the opposite side by an interval of usually one inch. It forms a flat muscular bundle one inch wide, which passes downward and backward along the side of the vagina, where it divides into two portions. The innermost division, sometimes called the levator vaginæ, continues backward and downward until it reaches the posterior margin of the urogenital trigone, where it turns sharply downward and inward and forms a loop with similar fibers from the opposite side, in the space between the lower end of the vagina and the terminal portion of the anal canal. As this division turns toward the median line it gives off a thick bundle of fibers (Fig. 1) from its outer side, which runs into the outer cornua of the sphincter. Some of the latter fibers are continuous in the anterior extremity of the sphincter to the median line. The outer division of the puborectalis turns backward, and passing wholly above the sphincter ani, joins similar fibers from the opposite side behind the anal canal at the level of the perineal flexure.

The iliococcygeus arises in a continuous line from the arcus tendineum musculus levator ani and from the inner surface of the spine of the ischium. The anterior fibers pass backward and somewhat downward, and at their termination they run between the external and internal sphincters to reach the fibrous tissues surrounding the anus. Some of these fibers, however, terminate by running into the sphincter ani. The remaining fibers of the iliococcygeus run backward and are inserted into the anococcygeal ligament and sides of the coccyx. The muscle has been described as consisting of two layers, which is only partly true. The outer band of the puborectalis runs backward, lying external to the anterior fibers of the iliococcygeus, thus making two layers at this point. The remaining portion of the muscle, however, is seen to be composed of a single layer. The fascia diaphragmatis pelvis superior and inferior or rectovesical and anal fasciæ cover the superior and inferior surfaces of the muscle. They are derived from the obturator fascia and form a fibrous sheath for the muscle, being continuous at the inner margin of the puborectalis.

The pelvic diaphragm can best be described as a musculofibrous plate, indicating the predominance of muscular action. The puborectalis draws the vagina and the rectum forward and compresses them laterally. The anal canal is reduced to an anteroposterior slit by the clamp-like action of the puborectalis. The vagina at the level of the levator is concave from side to side, the concavity being toward the pubes. From the fact that the loop back of the anal canal encircles it, the levator acts as a powerful sphincter. The fibers inserted into the sphincter enable the levator to lift up the anus over the fecal mass in defecation and perform a similar function in parturition. The muscle as a whole supports all the pelvic structures.

The inferior layer of the triangular ligament is homologous with the obturator membrane and is really a part of the ligamentous wall of the pelvis. It is triangular in shape and extends completely across the pelvic arch from the anterior margins of the ischial tuberosities to near the symphysis pubis, leaving a narrow interval for the passage of the dorsal vein of the clitoris. The superior layer of the triangular ligament corresponds to the inferior in form and is derived from the obturator fascia. It fuses with the inferior layer at its base and apex. The compartment between these two layers is occupied by a thin sheet of muscle, which is divided for description into an anterior portion known as the compressor urethræ and a posterior portion known as the transversus perinei profundus which is inserted into the perineal center. These three layers form a strong plane which is attached to the bones of the pelvic outlet and is perforated by the urethra and vagina.

The urogenital trigone can be described as a fibromuscular plate placed beneath the puborectalis. It runs parallel with, and serves as a support to, the puborectalis. It is capable of supporting a great deal of intra-abdominal pressure. The muscular layer is of some importance in assisting the fascia by acting as a tensor fasciæ.

When we examine the pelvic floor after removing the pelvic organs we see that it resembles a funnel whose sides and posterior walls slope downward toward the anus which is the lowest point. Anteriorly the pelvic floor is nearly horizontal in the erect posture, the inclination downward being very slight. As a result of this conformation we can readily see that intra-abdominal pressure is deflected forward by the sloping surface of the posterior portion of the floor and inward by the sloping lateral surfaces so that it would fall on the plane surface of the anterior portion of the pelvic diaphragm in the middle line. We have seen that the interval between the puborectalis extends from the pubic arch backward behind the vagina. Furthermore, the posterior attachment of the puborectalis is not fixed so that this portion of the pelvic diaphragm operates under a decided mechanical disadvantage. Beneath the anterior plane surface of the pelvic diaphragm the urogenital trigone stretches across the pubic arch as a fibromuscular plate of great strength supporting the pubo-

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1. Anatomie des Menschen, 1863.
2. Anatomie des Menschen, 1866.
3. Anatomie des Menschen, 1890.
4. Das Becken, 1889.
5. Traité d'Anatomie Humaine, v, 1901.

rectalis, which plays back and forth on it during action and quickly becomes stretched when the former is torn.

Were it not for the urogenital trigone, sagging of the pelvic floor would be the normal condition of woman. Since the child must pass through the opening in this comparatively unyielding structure its laceration is of frequent occurrence and we can not, therefore, emphasize too strongly its importance in the surgical repair of injuries to the pelvic floor. The pelvic floor is perforated in woman by the rectum, vagina and urethra. Each of these three canals is closely connected with the floor in its passage through it. The rectum and vagina are provided with a sphincter below while the external sphincter of the female urethra is located in the urogenital trigone.

The sphincter apparatus is derived from the primitive sphincter cloacæ, which also gives rise to the superficial transversus perinei, the ischiocavernosus and transversus perinei profundus, in addition to the sphincter ani and externus, bulbocavernosus and compressor urethræ. The sphincter ani is a very important muscle, many of the fibers of the levator are inserted into and interwoven with it. It is through these fibers that the levator is able to and does elevate the floor of the pelvis. The external sphincter ani is one inch deep and encircles the anal canal. It consists of three strata:

1. A subcutaneous portion which decussates in front of and behind the anus.

2. The superficial sphincter ani arises by means of a fibrous aponeurosis from the last bone of the coccyx and from the anococcygeal raphé. It passes forward and divides into two halves, which encircle the anal canal. Anteriorly it is connected with the bulbocavernosus and some fibers of the levator ani. The bulbocavernosus is superficial to the levator ani. These two muscles are attached on either side anteriorly, and by the intermingling of these fibers, which takes place at this point, a sort of cornu is produced so that the entire muscle is much broader in front than behind. I have named the insertions or attachments of the bulbocavernosus and the levator ani to the sphincter, the cornu of the sphincter ani.

3. The deep external sphincter ani forms an annular band closely connected with the levator ani. It is not connected with the coccyx. In many cases the fibers of the deep division pass over to the opposite side in front of the anus and are connected to the ascending ramus of the ischium representing the superficial transverse perinei. The bulbocavernosus arises posteriorly from the perineal center, where it mingles with the fibers of the external sphincter and transverse perinei superficialis. It overlies the vaginal bulbs and is attached anteriorly to the pubes, the urogenital trigone and the clitoris. The transversus perinei is present in 30 per cent. of adult females, and when present usually consists of a few fibers. It is really a prolongation of the deep layer of the sphincter ani.

INJURY TO THE PELVIC FLOOR.

The injuries to the pelvic floor depend on disproportion existing between the size of the passage and the passenger, and the site and extent of the tear depend on the comparative strength of the structures involved. The superficial injury to the vaginal wall is, when extensive, always to be found in the sulci on one or both sides, and never involves the posterior vaginal column, a point worthy of consideration in repairing these injuries. The reason for this is the extreme weakness of the vaginal wall lateralward from the column. Opinions vary in regard to the injuries to the levator. My observation of recent tears and my dissection of old ones at operations and in the dissecting room has been that the levator vaginæ is torn in the median line down to the rectal wall and the attachment to the sphincter ani is ruptured, usually to a greater extent on one side, although the fibers inserted into the cornua of the sphincter are torn on both sides. It seems reasonable to expect that this would be the case, since these fibers are exposed equally with the lateral thick portions of the muscle to the strain resulting from the passage of the child. It is a question of resistance, and the lateral mass of the puborectalis is stronger that the levator vaginæ.

The explanation of complete tears is found in the firm attachment between the levators and the cornu of the sphincter ani in certain cases. In these cases, after laceration of the levator loop, the pressure falls on the sphincter and it gives away. The superficial muscles are torn in various ways. Usually the skin tear is slightly to the right or left of the median line, and the bulbocavernosus and transverse perinei (when it exists) is torn in the same line. A constant lesion is found, viz.: tearing of the attachment of the anterior extremity of the sphincter from the bulbocavernosus, allowing the sphincter to retract toward the coccyx (Fig. 2).

As a result of the laceration of the fibers of the levator attached to the sphincter the anal canal prolapses downward and is drawn backward by the sphincter, giving rise to the so-called rectocele. Injury to the urogenital trigone is very common and depends on the comparative inelasticity of this supporting structure. It is torn backward and separates into two portions. These two portions, however, retract very slightly, so that they can be found very easily when operating.

I would call attention to the great number of cases where the levator fibers, as well as the urogenital trigone, are torn down to the rectum, and yet the superficial perineal muscles are not torn. As a result of the separation of the levator down to the rectal wall this becomes the weakest portion of the pelvic diaphragm and, as Noble[6] has shown, the tendency is to become more and more stretched and relaxed by the intra-abdominal pressure, which is focussed at this point. In case there is an internal laceration of the levator fibers, without injury to the superficial structures, they will be found inefficient in holding up the pelvic structures, and we therefore have rectocele and cystocele occurring, notwithstanding that there seems, on superficial examination, to be a perfectly normal perineum. The diagnosis of internal separation is exceedingly easy if one is familiar with the topography of the levator and inserts one finger in the rectum and one in the vagina and palpates the intervening tissues.

FUNDAMENTAL PRINCIPLES.

The sections on anatomy of the normal and torn pelvic floor have been introduced as a basis for the contention that the principles which underlie the operations for injury to the pelvic floor are precisely the same as those which underlie operations for ventral hernia. To-day surgeons the world over are agreed that the only rational method of operation for ventral hernia is to suture the various layers of the abdominal wall together in their original position by means of buried sutures. I believe the day will come when operations on the pelvic floor will be performed in a similar manner by all surgeons. If the pelvic diaphragm and urogenital trigone make up the floor of the female pelvis, and if injury to these structures gives rise to relaxed vaginal outlet with its accompanying prolapse of the pelvic organs, the rational method of treating this condition would be by demonstration of these anatomic structures and bringing them together accurately by buried sutures.

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[6] Amer. Gyn., March, 1903.

When this has been properly done the apparent redundance of the vaginal wall disappears completely. Resection operations are therefore faulty in conception. The anatomic type of operation is the only one worthy of consideration. Buried sutures cause no trouble and enable us to suture the different planes separately. We should remember that the puborectalis plays back and forth on the urogenital trigone, therefore through and through sutures including the trigone as well as the muscle would interfere with the free play of the muscle above. Through and through sutures should be discarded and layer sutures adopted in all cases.

The operations that have been developed on an anatomic basis are few, but the operations that resect and narrow the dilated outlet are too numerous to mention. Henry O. Marcy[7] has for many years given this subject much attention. He was the first surgeon to use buried sutures in perineal operations. Albert Goldspohn[8] wrote a very important article on the suturing of the levators, and M. L. Harris[9] recommended and practiced excision of a piece and subsequent suture of the puborectales, thus shortening them. Other articles were written by Noble[6] and G. R. Holden[10] along the lines suggested by Marcy and Goldspohn. A study of these articles will show that great stress was laid on the importance of the puborectalis, while little emphasis was placed on the suturing of the urogenital trigone and no mention was made of reattaching the sphincter ani.

THE AUTHOR'S OPERATION.

Tenaculum forceps are placed on each side of the vaginal outlet about the level of the carunculæ, and lateral traction is made which develops a prominent fold. If the skin of the perineum is not torn no mucous membrane will be visible, but if it has been torn badly the outer surface at the upper part will be mucous membrane which turns out as a result of traction. At all events the distance from the top of the fold to the anus will be 1½ inches. This fold is now incised in the median line from the top downward until the fibers of the sphincter are clearly exposed below. This incision goes at once entirely through the skin and Colles' fascia below and the vaginal wall above if it has been everted. A few touches of the knife demonstrate the deep layer of the external sphincter at the lower part of the wound. The knife is now laid aside and no further incision is made.

A pair of blunt-pointed scissors are now thrust under the lateral vaginal wall in a direction upward and inward in the long axis of the vagina for one inch (Fig. 3). The blades are then separated, raising the vaginal wall from its bed. The separation of the vaginal wall extends from the middle of the side of the vagina down to the rectum. On looking into the wound between the blades of the scissors one can see the puborectalis in its sheath. This process is now repeated on the opposite side. No attempt is made to separate the posterior vaginal column from the anterior rectal wall. It is never separated by the injury and it is unnecessary in operating in order to get room to work. Furthermore, this is the cause of oozing in the flap operations.

The puborectalis is now recognized on the left side by palpation, and a curved needle 2 cm. (¾ in.) long, held in a needle-holder, is made to penetrate it from within outward, being guided by the index finger of the left hand (Fig. 4). When the needle is felt to pick up the muscle it is used as a hook to bring the muscle into view. The suture is now pulled through and its end held by an assistant. The needle is then transferred to the other end of the suture and the right puborectalis penetrated from within outward in a similar manner. This suture should be placed about three-fourths of an inch in front of the anus in ordinary cases, but not so near the posterior wall of the vagina as to require force to bring the puborectales together. If this is the case it should be placed a little nearer the anus (Fig. 5).

The first suture, having been placed but not tied, is used as a traction suture to aid in passing the lower one, which can easily be passed from without inward. When this suture has emerged from the puborectalis on the right side it is carried under the sphincter on the right side one centimeter from the median line and caused to penetrate it from within outward. The needle is now transferred to the other end of the suture and carried through the sphincter from within outward one centimeter to the left of the median line. This suture is now pulled up and tied, the knot being on the outer surface of the sphincter.

This suture approximates the lower ends of the puborectales together, pulls the sphincter toward the symphysis and up into the pelvis a variable distance, depending on the amount of displacement. The suture which was first placed through the puborectales is now tied. In introducing the first suture the needle is carried from within outward to avoid the trigone and to locate the muscle easily. One can not possibly miss the muscle by following this plan, since it is the only structure to be found in the pelvis at this point. When the muscle sutures are tied the anus ascends into the pelvis, the wound becomes shallow and its edges approach each other. The urogenital trigone is clearly visible ready for suturing (Fig. 6). It is sutured from below upward. I use a continuous suture of formaldehyd catgut.

After two or three turns of the suture have been introduced the vaginal wall must be separated at its upper part from the trigone by blunt dissection and another stitch introduced. This last step is very important, as it restores the vulvar orifice. Neglect to close the upper part of the trigone results in a slight gaping of the vulva. When the trigone has been approximated to the proper extent the suture is then reversed and brought back from above downward as a subcuticular suture approximating the mucous membrane and afterward the skin and is finally tied to the free end below, thus burying the knot beneath the skin (Fig. 7).

By following this method of suturing the wound has invariably healed throughout by first intention. The after-treatment consists in keeping the wound dry by means of subiodid of bismuth and the application of a sterile vulvar pad. I have performed the operation ninety-six times, and my colleague, Dr. Jabez N. Jackson has carried out the above technic in more than fifty cases. The functional results of this operation have been excellent. Those patients operated on as long ago as 1904 are just as perfect as they were on leaving the hospital.

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[7] Amer. Jour. Obstet., 1889; also The Journal A. M. A., xii, 349; ibid., xli, 1061.

[8] Medicine, 1897.

[9] The Journal A. M. A., Dec. 9, 1899.

[10] Jour. Obstet., October, 1905.

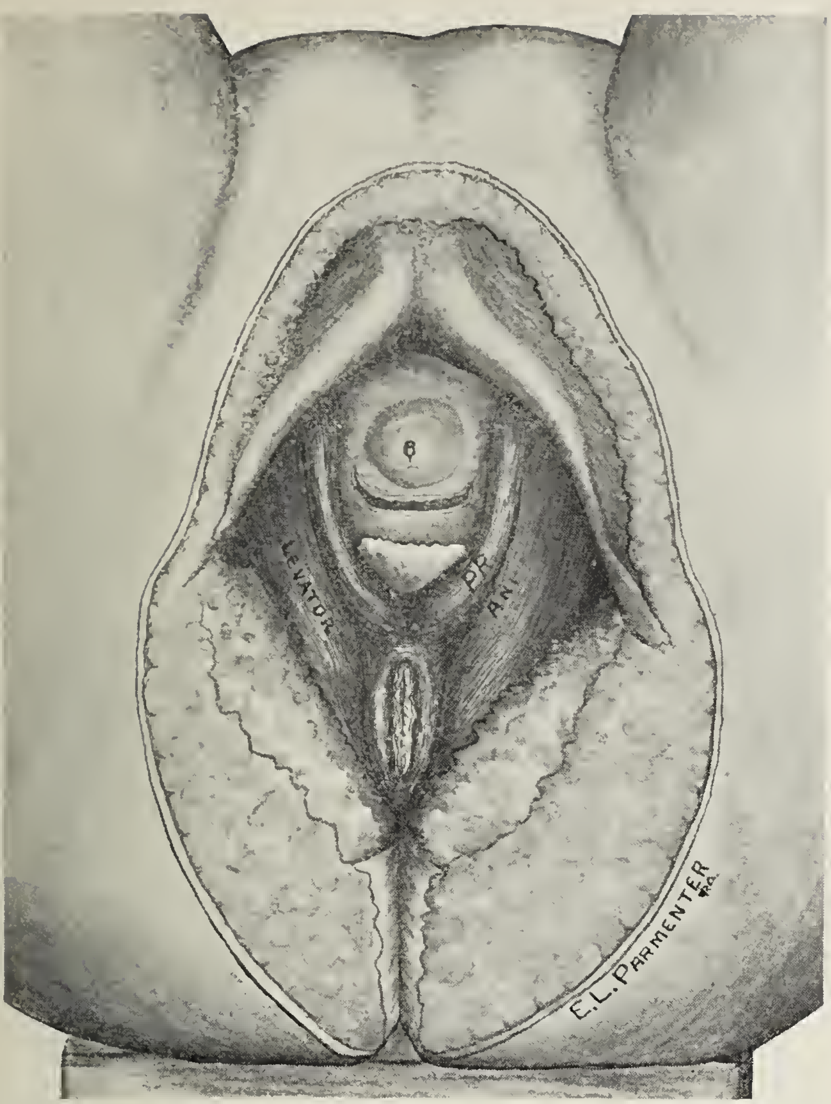

Fig. 1.—Author's dissection of nulliparous woman, 23 years old: seen from below. Note the characteristic thickening of the puborectalis (P R) and the intimate connection between the loop and the sphincter ani externus.

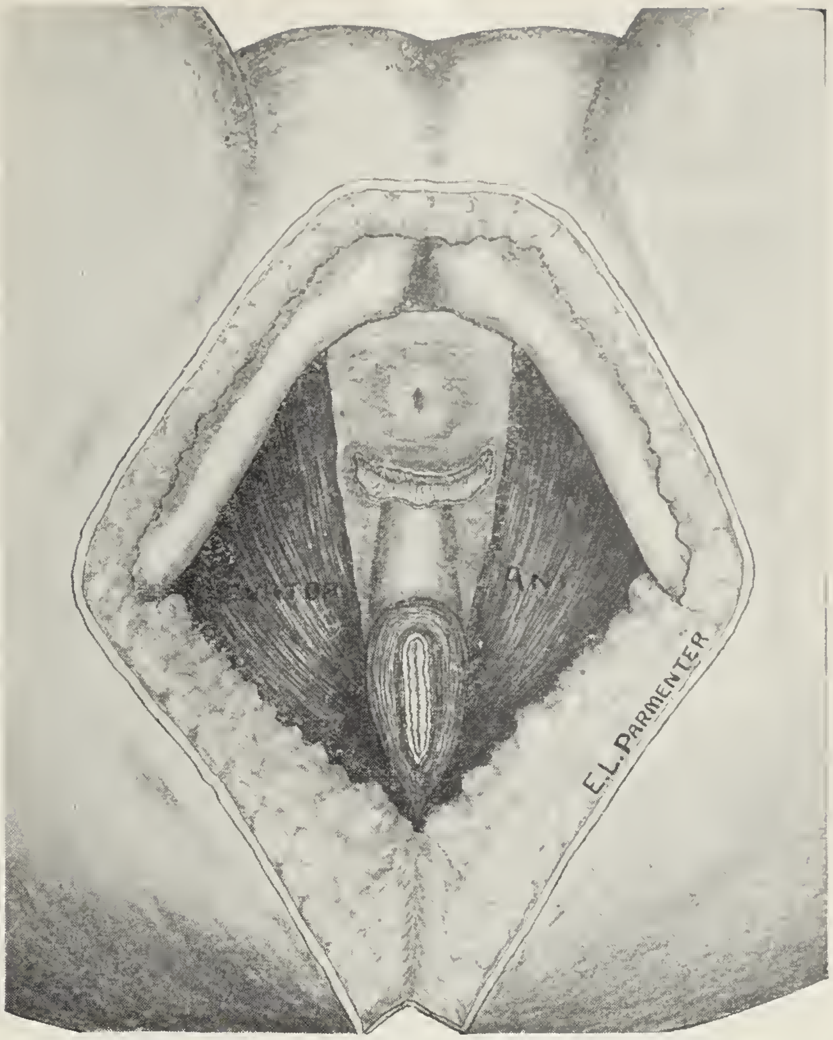

Fig. 2.—Dissection of a woman about 60 years old showing the characteristic separation of the anterior extremity of the sphincter from the puborectalis. The anterior extremity of the sphincter ani in this case was more than an inch below the level of the pelvic diaphragm.

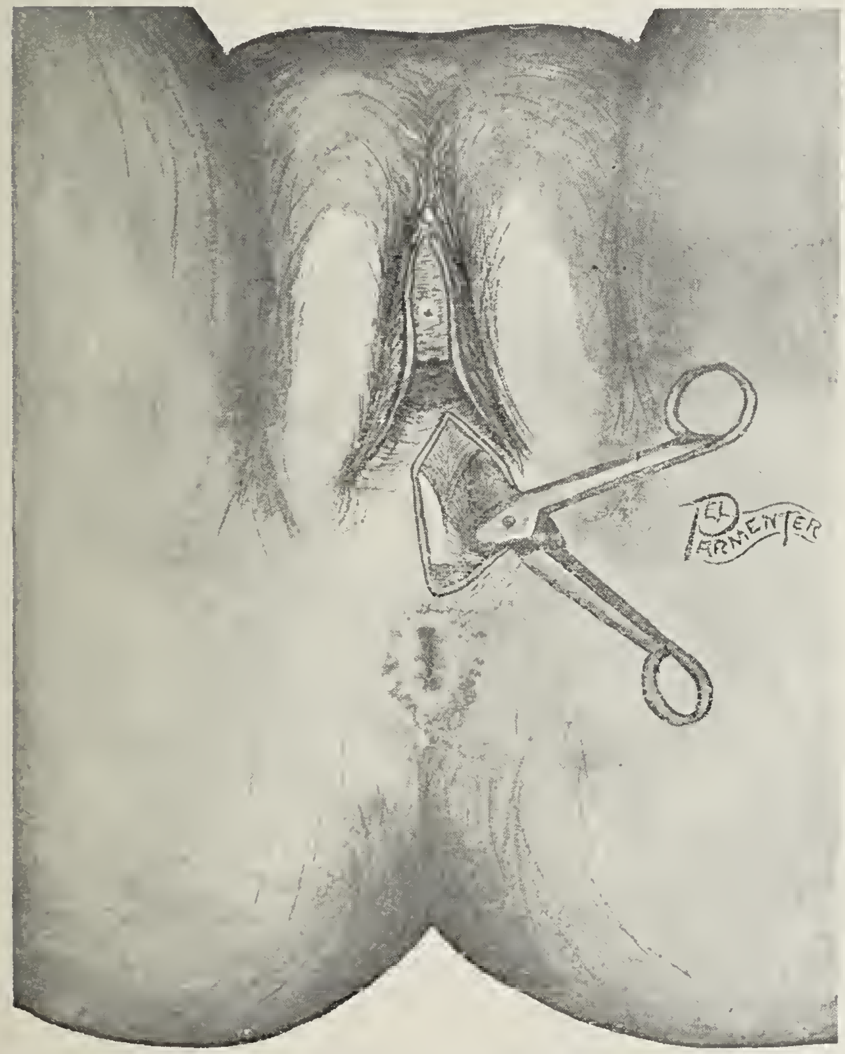

Fig. 3.—Showing the blunt pointed scissors pushed upward and inward beneath the lateral vaginal wall, for one inch. The blades are separated, as shown, and the operator can then look into the wound and see the puborectalis clearly. This process is then repeated on the opposite side. The transverse band of fibers in the lower part of the wound is the anterior extremity of the external sphincter ani.

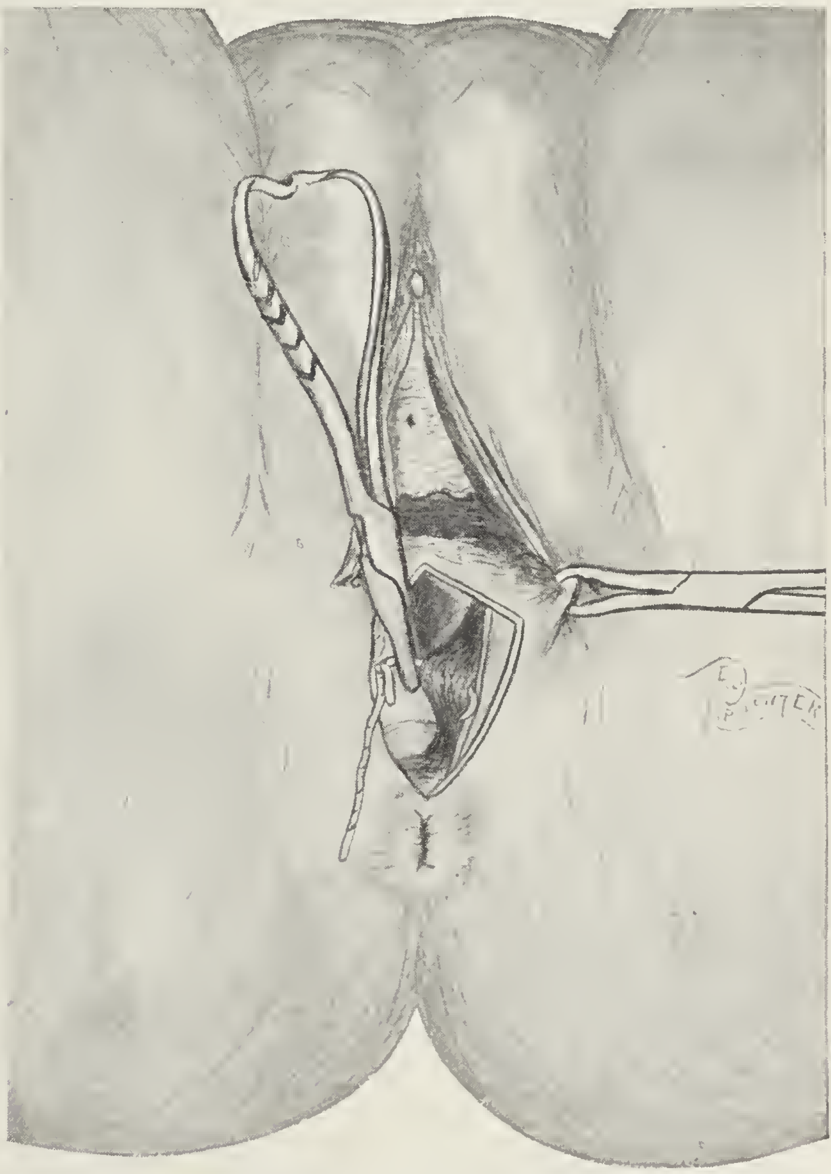

Fig. 4.—The puborectalis picked up by the needle and the needle used as a tractor to draw the muscle toward the median line so that the needle will not also include the triangular ligament which is seen lying superficial to it. When this thread has been drawn through, the needle is transferred to the opposite end of the suture and the muscle of the opposite side is treated in the same way, the needle passing from within outward.

Illustrating Article by Dr. Howard Hill.

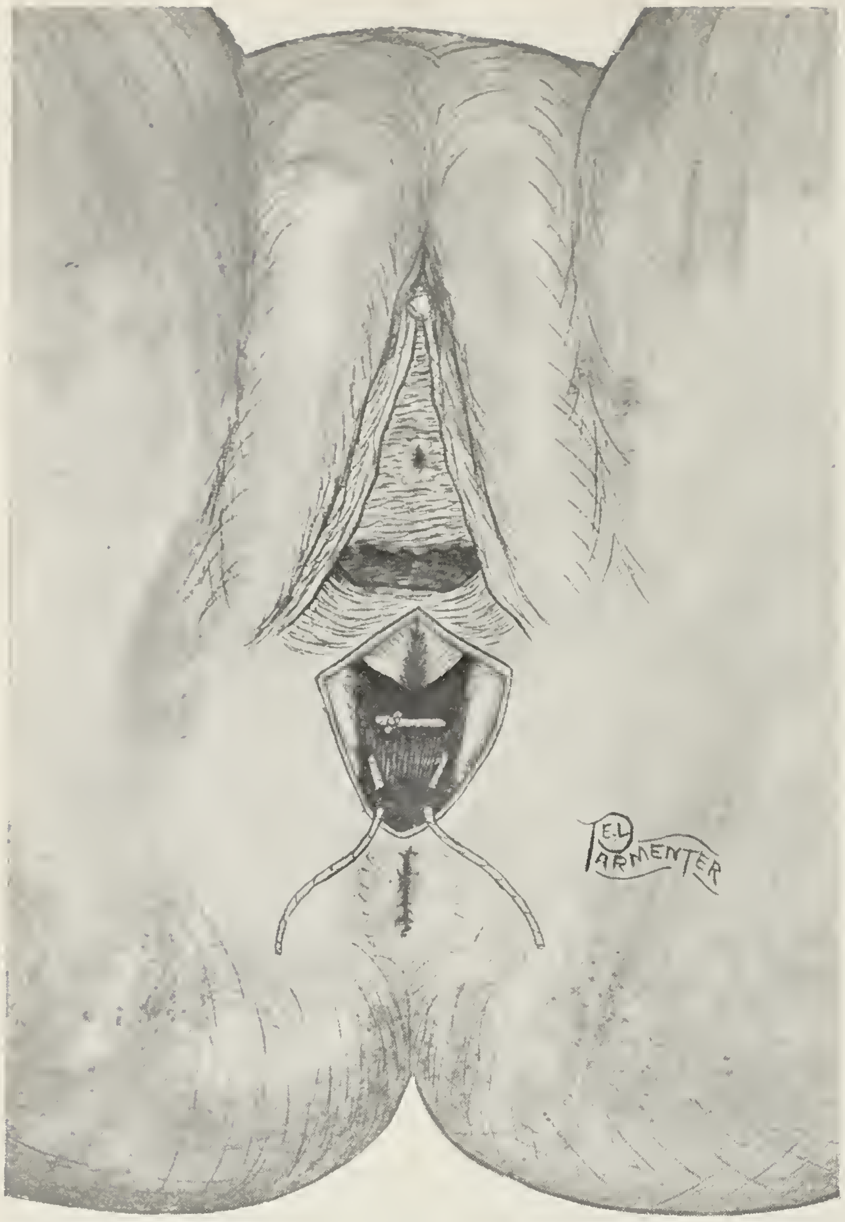

Fig. 5.—Showing the upper suture placed and the lower suture ready for tying. When this suture is tied it draws the anus forward and upward into the pelvis.

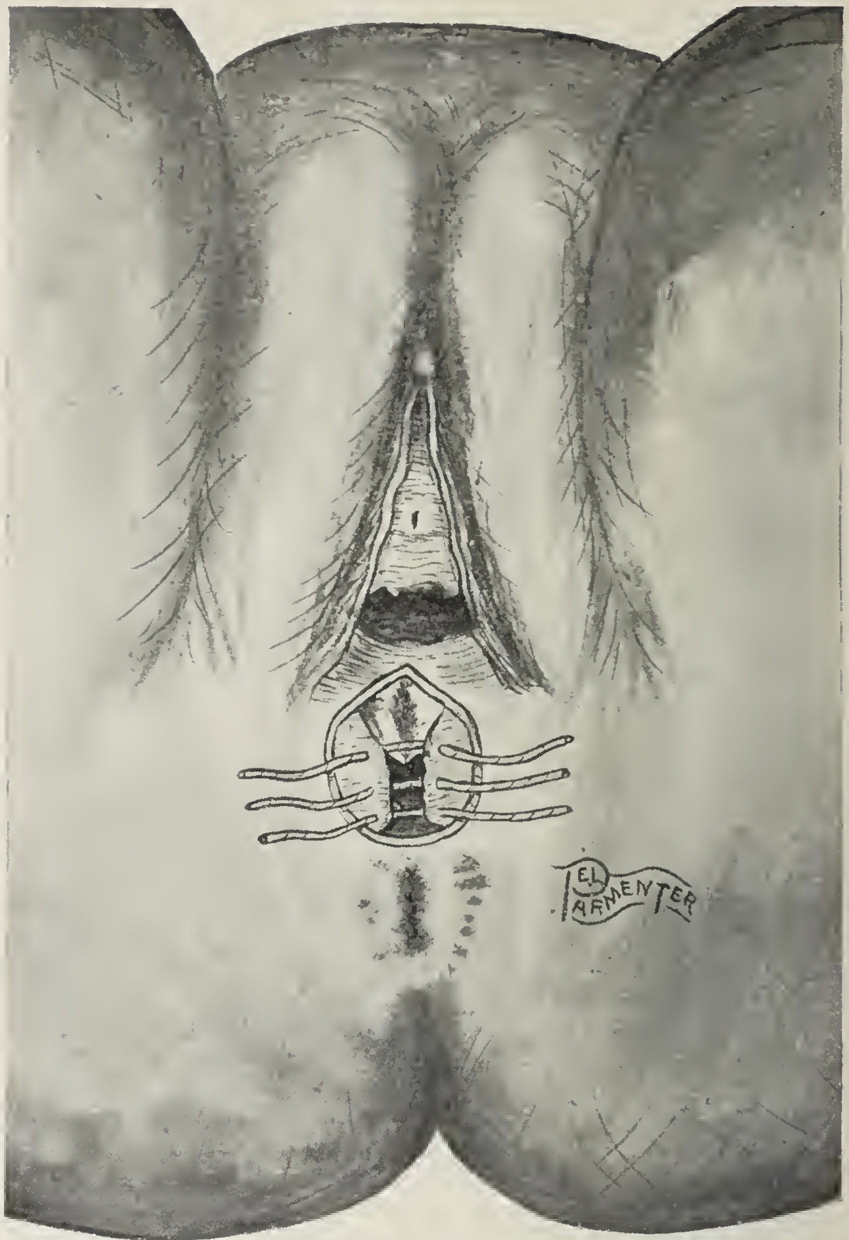

Fig. 6.—Showing the suture inserted into the urogenital trigone ready for tying. While this illustration shows interrupted sutures, it is better to suture from below upward by a continuous suture. When the upper margin of the trigonum has been reached, the same suture is used to close the mucous membrane and skin from above downward by the subcutaneous method.

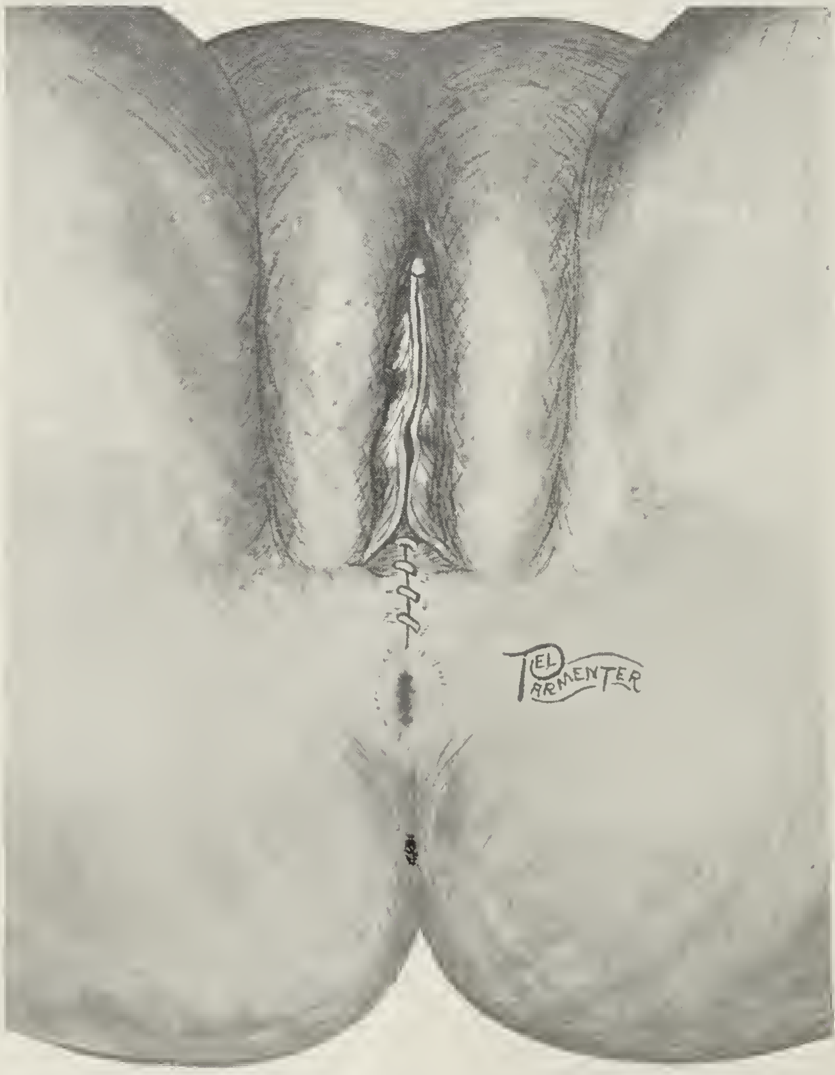

Fig. 7.—Showing the appearance of the perineum at the close of the operation. The author prefers a subcuticular suture in place of the through-and-through suture shown in this figure.

Illustrating Article by Dr. Howard Hill.

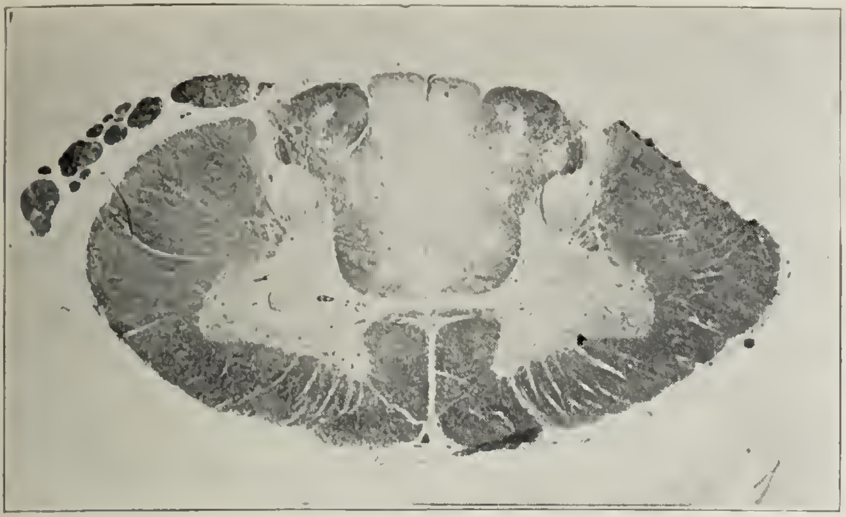

Fig. 1.—(Case 4) Cervical enlargement. Degeneration principally in Goll's and partly in Burdach's tracts.

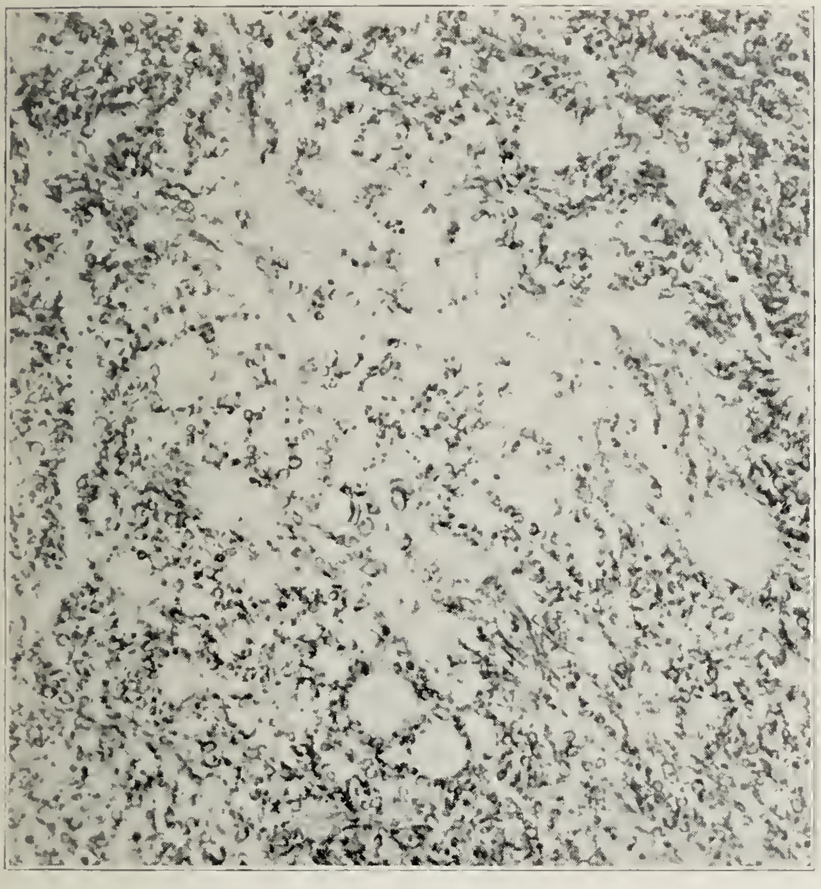

Fig. 2.—(Case 4) Showing a vacuolated, partially degenerated area.

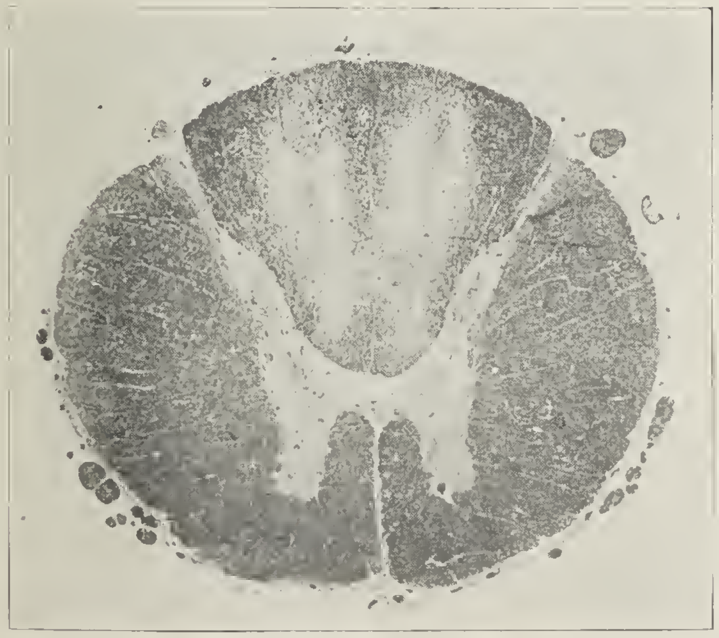

Fig. 3.—(Case 4) Degenerated areas limited to posterior columns.

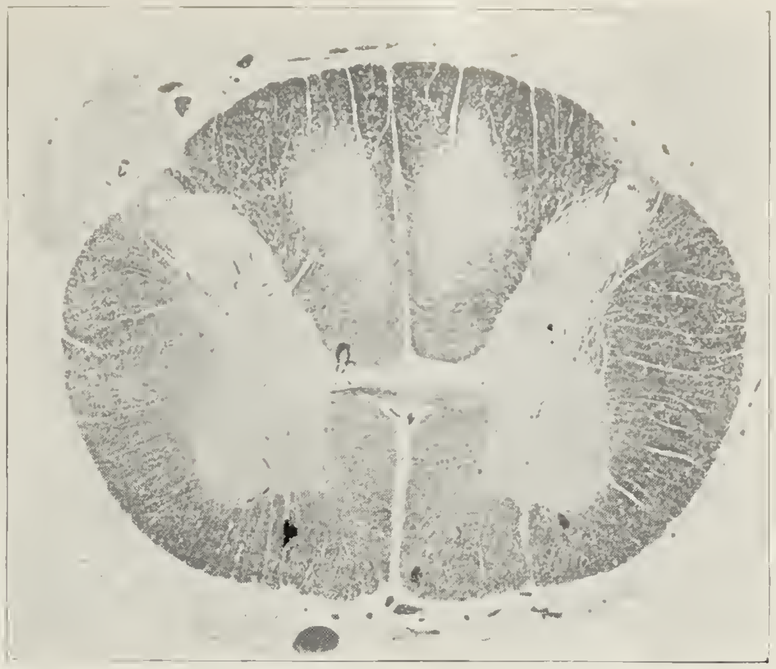

Fig. 4.—(Case 4) Lumbar cord. Degeneration in posterior columns diminishing.

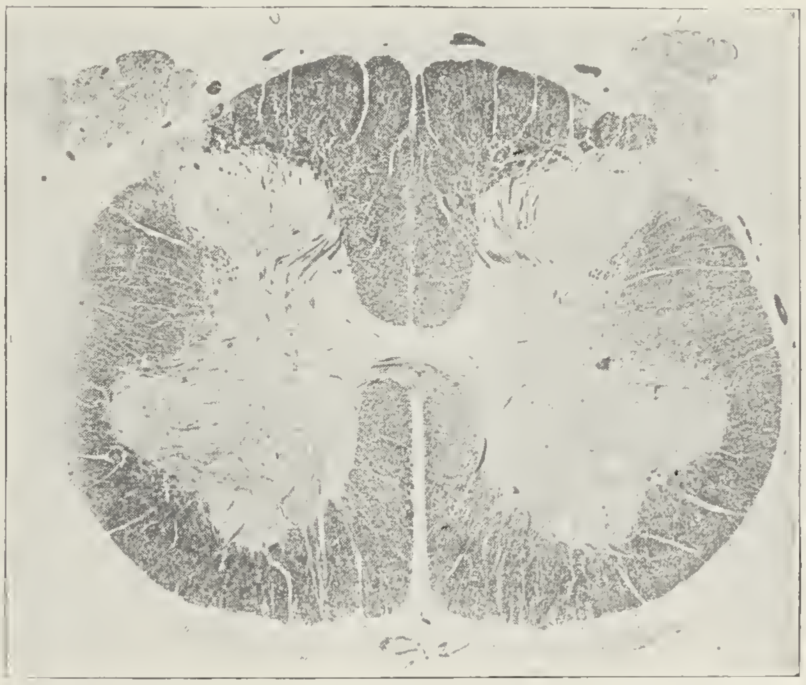

Fig. 5.—(Case 4) Lumbosacral cord. No degeneration in posterior columns. Slight degeneration in lateral tracts.

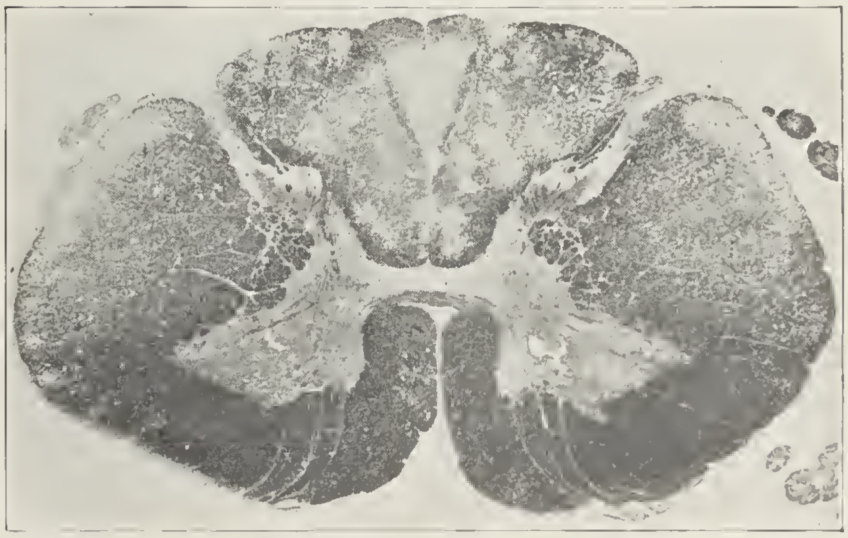

Fig. 6.—(Case 10) Cervical cord showing diffuse degeneration in posterior columns and lateral tracts.

Illustrating Article by Dr. Julius Grinker.

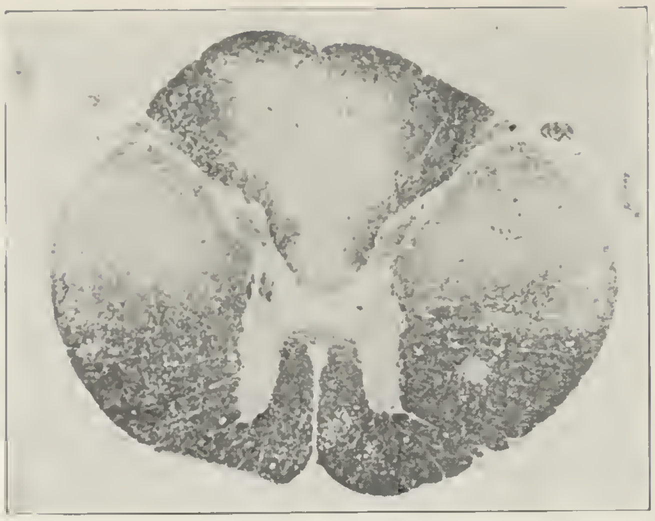

Fig. 7.—(Case 10) Dorsal cord showing a typical picture of posterolateral degeneration.

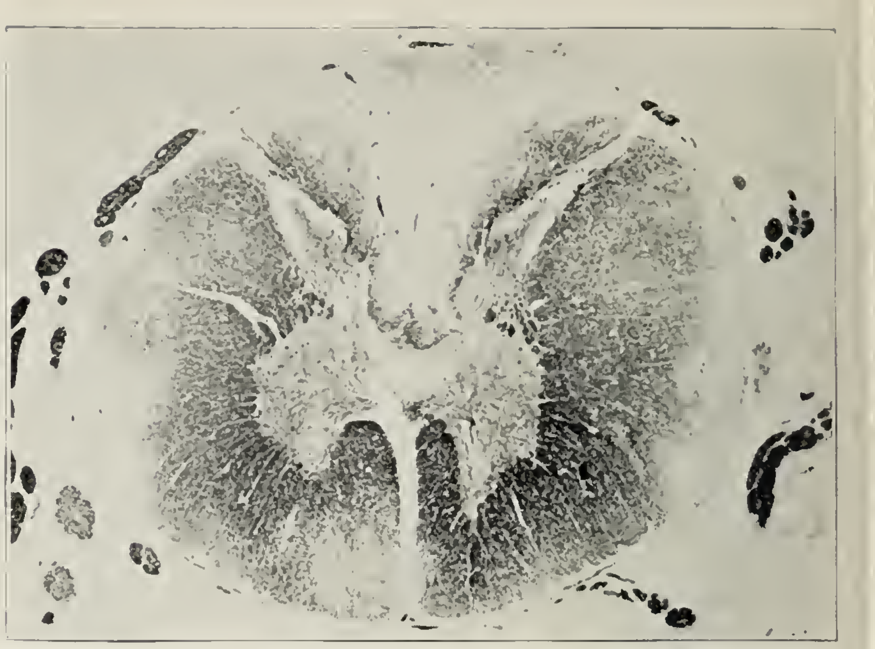

Fig. 10.—(Case 16) Low cervical cord. Diffuse degeneration most extensive in posterior columns.

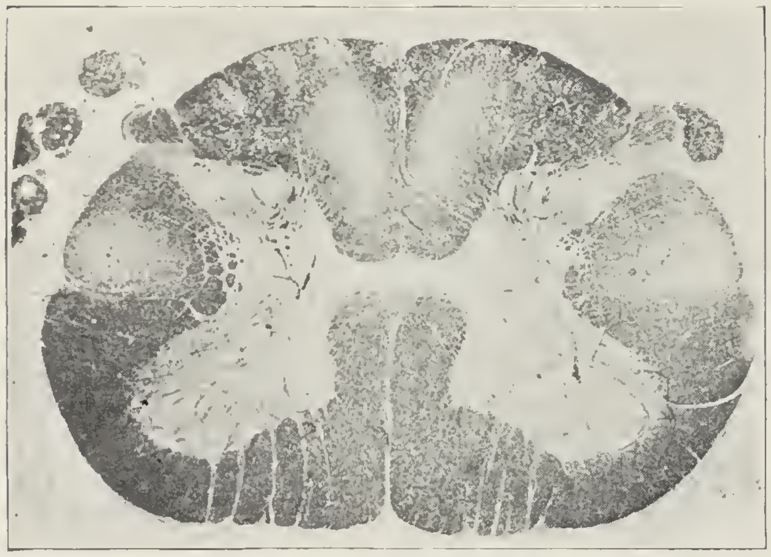

Fig. 8.—(Case 10) Lumbar cord. Areas of degeneration in posterolateral tracts not as large as in previous section.

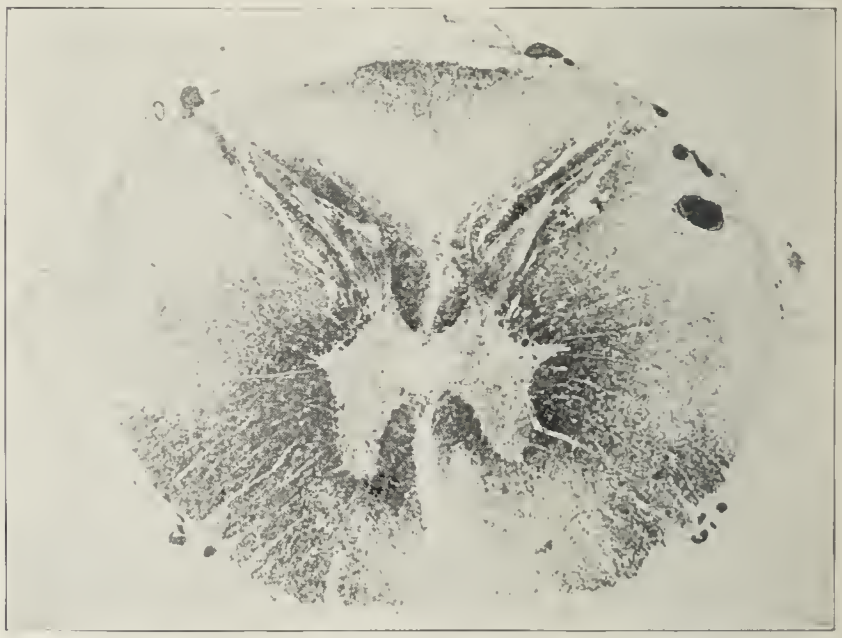

Fig. 11.—(Case 16) Dorsal cord. Diffuse degeneration in nearly all tracts.

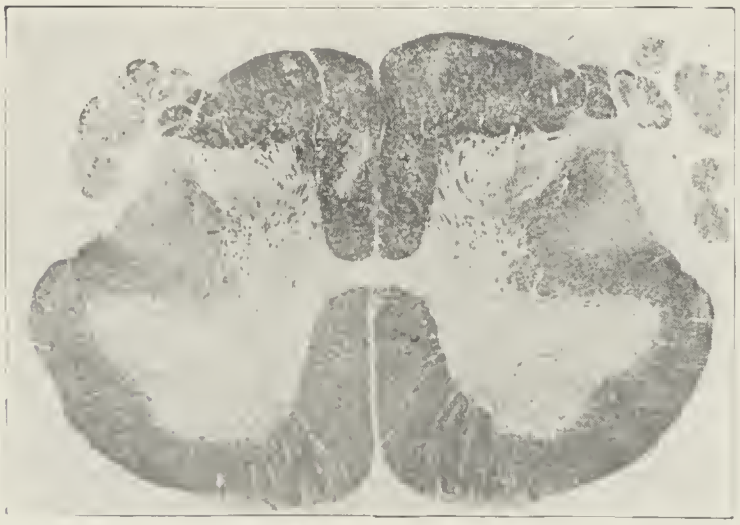

Fig. 9.—(Case 10) Upper sacral cord. Slight degeneration in posterior column, somewhat more extensive in lateral tracts.

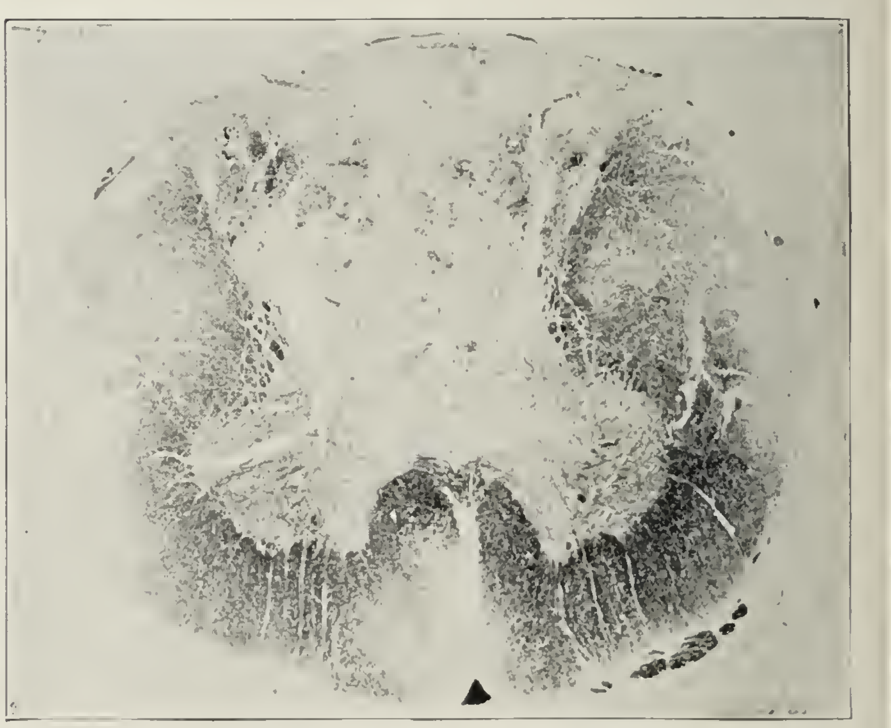

Fig. 12.—(Case 16) Lumbar cord. Very extensive degeneration.

Illustrating Article by Julius Grinker.

SUBACUTE COMBINED CORD DEGENERATION, WITH REPORT OF CASES.*

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CHICAGO.

Although writers have previously reported cases that appear to belong to this disease, our first definite knowledge of it began in 1887, when Lichtheim[1] reported three cases of pernicious anemia with symptoms indicating spinal cord involvement. His pupil, Minnich,[2] followed with a series of cases, in some of which he was able to demonstrate the cord changes in the posterior and lateral tracts. Then came the excellent reports of Von Noorden,[3] Eisenlohr,[4] Nonne,[5] Bowman,[6] James Taylor,[7] Burr,[8] Michell Clark,[9] Risien Russell[10] and others, who described a similar pathology in the cords of those dead from pernicious anemia, secondary anemia and from exhausting disease without anemia. To Putnam[11] of Boston belongs the credit of having been the first to point out that the cord lesions which had been often described in connection with pernicious anemia are in no wise characteristic of that disease, but occur in other conditions of ill health with or without anemia. Since then were published Dana's[12] article on the same subject, an exhaustive monograph by Russell, Batten and Collier,[13] articles by E. W. Taylor,[14] Putnam and Taylor,[15] Robert J. Edes,[16] Billings,[17] Burr and McCarthy,[18] E. W. Taylor and G. A. Waterman,[19] Michell Clark[20] and many others who have enriched the literature with additional proofs confirming the observations of the earlier authors. The greater number of these publications have appeared in specialist journals not readily accessible to the general practitioner; hence this paper.

The disease has been described under many names, such as subacute combined sclerosis; subacute ataxic paralysis; combined cord degeneration; combined sclerosis of the Lichtheim-Putnam-Dana type, diffuse spinal cord degeneration, subacute combined cord degeneration. In common with recent writers I prefer the last name, because it very nearly defines the disease and has the advantage of being non-committal as regards the diffuse or systemic character of the cord changes.

SYMPTOMS.

The principal symptoms can be divided into (a) sensory symptoms due to posterior tract degeneration, and (b) motor symptoms, consisting of weakness and spasticity in the early stages, due to pyramidal tract degeneration, which is followed in the terminal stage by flaccid paralysis, owing to supervening anterior horn degeneration.

One of the earliest manifestations of the disease is impairment of subjective sensation in the lower extremities. The patient most often complains of a tingling or numbness or prickling in the feet or calves of the legs, frequently combined with a dull ache in the lower spine. As these uncomfortable sensations have in many cases been preceded by some other disease, or there may have been impaired vitality from whatever cause, the patient usually attributes his subjective sensory disorders to the antecedent condition. In other cases a tired feeling or tightness and stiffness about the legs may be the initial symptoms. Whichever symptoms may have appeared first, ataxia or the lack of power to co-ordinate properly the muscles in standing and walking soon follows. In general terms one might say that motor power is at first but slightly affected, perhaps nothing more has been noted than a tendency to fatigue after slight exertion, and this was regarded as an expression of neurasthenia and treated as such. On the other hand, the distress occasioned by paresthesia, especially from feelings of intense cold or of waves of heat, may be severe and give rise to bitter complaints.

It is important to remember that subjective sensory symptoms with slight inco-ordination may appear early and remain a long time before objective signs of sensory disturbance can be elicited. While the paresthesia is at first generally confined to the lower extremities, sooner or later the arms and fingers become similarly affected; the patients then complain of inability to use the hands and fingers for "fine" work. Exceptionally the disease begins in the arms and somewhat later extends to the legs and feet. In rare cases the numbness and tingling is first felt in the tongue, giving the sensation of a foreign body; even the penis has occasionally been the seat of these perverted sensations. Other of the sensory symptoms are the so-called girdle sensation, that is, a feeling of constriction about the trunk, and neuralgiform attacks—root symptoms—which are not infrequently found in this disease, although they are more common in other affections of the spinal cord.

The superficial reflexes do not show characteristic findings and the light reflex is usually normal, although a sluggish response to light has been reported in a few cases. The tendon reflexes are almost invariably found exaggerated quite early in the disease, and ankle clonus, Babinski's toe sign, Oppenheim's foot sign and Gordon's paradoxic reflex are common accompaniments of the pathologically exaggerated deep reflexes. Gradually the lower extremities become spastic and walking becomes very irksome because of inco-ordination and spasticity, two symptoms which have given the disease its name, "spastic ataxia." After a time, as the condition progresses, the patient is compelled to take to his bed which he seldom leaves afterward, because of the successive development of complete paraplegia. There will usually now be found various degrees of anesthesia, analgesia, thermoanesthesia and loss of muscle and joint sense affecting principally the lower portion of the body. Such patients have difficulty in locating their lower extremities, except when they are aided by vision. Sphincter disturbances, if they occur at all, are usually slight in degree and may consist in nothing more than a desire to urinate frequently, or there may be a moderate degree of constipation or diarrhea.

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* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907. A large portion of the article (Case histories 2, 3, 5, 6, 7, 8, 9, 11, 12, 14, 15 and 17) is omitted because of lack of space. The complete article appears in the Transactions of the Section and in the author's reprints.

[1] Neurolog. Centrbl., 1887.
[2] Neurolog. Centrbl., 1889.
[3] Charité-Annal., 1891.
[4] Deutsche med. Wochschr., 1892.
[5] Archiv. f. Psychiat., 1893.
[6] Brain, 1894.
[7] Medico-Chirurg. Tran., 1895.
[8] University Med. Mag., 1895.
[9] British Med. Jour., 1897.
[10] Lancet, 1898.
[11] Jour. of Nerv. and Mental Dis., 1891.
[12] Jour. of Nerv. and Mental Dis., 1899.
[13] Brain, 1900.
[14] Boston Med. and Surg. Jour., 1900.
[15] Jour. of Nerv. and Mental Dis., 1901.
[16] Boston Med. and Surg. Jour., 1901.
[17] Chicago Med. Recorder, 1902.
[18] Jour. of Nerv. and Mental Dis., 1903.
[19] Boston Med. and Surg. Jour., 1903.
[20] Brain, 1904.

The cranial nerves, with the exception of the optic nerve, are practically never affected in this disease; optic atrophy is but rarely seen. Nystagmoid movements have been observed; this symptom probably resulted from extreme weakness of ocular muscles.

Anemia is a common symptom in subacute combined cord degeneration; indeed, as has been stated, the first cases of this disease were invariably described in association with grave types of anemia. All varieties may occur, from the slight anemias ordinarily considered still within the range of normal to the most serious types of pernicious anemia, with high color index, nucleated reds and extreme poikilocytosis.

After a period varying from six months to six years, the patient rapidly passes into the terminal stage: the deep reflexes become abolished and sphincter paralysis appears. This stage is of short duration. If the patient is not carried off by some intercurrent complication, such as pneumonia, decubitus or cystitis, extreme emaciation with exhaustion usually closes the scene.

Russell, Batten and Collier,[13] in their excellent article on this subject, divide the disease into three stages. Their first stage is characterized principally by ataxia with slight spasticity; in the second stage there is increased spasticity, and in the third or terminal stage there are flaccidity and complete paraplegia with cachexia.

In agreement with most American observers, I believe the division into stages is of doubtful value, because not all cases present these stages and when present the passage from one to another is often very gradual.

The course of the disease varies from one and a half to five or more years and is progressively downward. Prolonged remissions have been observed which occurred either spontaneously or were the result of treatment, but I know of no recoveries in this disease.

The reported cases can be conveniently subdivided into three groups: 1, Those in which pernicious anemia was present from the beginning; 2, cases in which a grave type of anemia, not necessarily of the pernicious variety, was at some time associated with the disease and constituted an important sign; 3, cases in which the anemia, if present at all, was insignificant and constituted a minor symptom of the entire disease. Cases of the first group have been frequently described and are, therefore, best known. It is to the second and particularly the third, and least known, group of cases that I wish to direct special attention.* Though relatively more common, they are less often recognized than the cases presenting from the very beginning such a striking symptom-complex as pernicious anemia.

Group I.—The first group includes cases in which pernicious anemia was present from the beginning.

Case 1.—*History.*—C. D., 36, steamfitter, with negative family history, was admitted to Cook County Hospital Nov. 23, 1905. With the exception of an attack of malaria five years previously, he always had good health. Venereal infection he denies, but admits having been a steady consumer of six to eight glasses of beer daily and an occasional glass of whisky. In June, 1905, he first noticed a gradually increasing weakness in his lower limbs, which was soon followed by numbness, tingling and prickling sensations in the same parts. He described some of his sensations as a feeling of his foot "going to sleep," and as more or less constant dull aching pains in his lower limbs, with occasional paroxysms of pain sufficiently intense to prevent sleep. With sensory symptoms persisting, the weakness and unsteadiness in his legs kept on increasing, until in September of the same year he was unable to walk. One month later he became bedridden because of the complete paraplegia which had developed. Neither at this time nor previously were there any ocular, aural, heart, pulmonary or gastric symptoms, except that for the past month he had suffered from anorexia.

Examination.—Patient, a middle-aged man, of good muscular development, presented a lemon-yellow appearance of skin and mucous membranes. He lay quietly in bed, appeared listless and disinclined to exert himself in the least degree. The viscera showed normal findings, with the exception of the heart, which revealed a soft blowing systolic apical murmur, audible also at the base. The upper extremities presented practically negative findings, but the lower limbs were held in partial flexion. When forcible extension was attempted he complained of severe pains above the knees. There was marked motor weakness in the lower extremities, but none in the upper. There was no wasting of muscles. The superficial reflexes were generally reduced, the cremasteric reflex was absent. The deep reflexes were somewhat exaggerated in the upper extremities, and markedly accentuated in the lower extremities, with distinct ankle clonus, Babinski and Oppenheim signs bilaterally present. There was marked disturbance of muscle and joint sense and hypalgesia and hypothermia in both legs and to a lesser extent in the thighs. There was delayed conduction of all forms of sensation. Tactile sensation was markedly reduced over the dorsum of the feet and the lower third of the legs, while it was perfectly normal over the abdomen. Incoordination was extreme in legs and feet and slight in upper extremities. The patient could not tell the position of his lower extremities on passive motion. Stomach analysis showed an absence of free hydrochloric acid, but no lactic acid was present. The urine was found normal.

In the spring of 1906 frequent catheterization had to be undertaken because of inability to expel the urinary contents completely. At about the same time there was rather obstinate constipation. In the beginning of summer the sphincters had resumed their functions. The blood examination made at time of entrance showed marked pernicious anemia.

Treatment.—The patient was immediately put on treatment with arsenic (Fowler's solution) in ascending doses; he soon showed remarkable improvement; his color changed from a cachectic appearance to one of almost plethora, but the cord symptoms were unaltered. A blood examination made June 4, 1906, yielded: Hemoglobin, 95 per cent.; erythrocytes, 6,664,000; white blood corpuscles, 7,200; polymorphonuclears, 66; large lymphocytes, 7; small lymphocytes, 15; eosinophiles, 9. Another blood examination made July 3, 1906, showed: Hemoglobin, 100 per cent.; red blood corpuscles, 6,112,000; white blood corpuscles, 6,500. Patient left hospital in July, 1906, much improved in his general condition, and with a blood finding as just stated, but without any change in his cord symptoms.

Subsequent History.—Oct. 3, 1906, about four months later, he re-entered the hospital with a history that during his stay at home the spinal cord symptoms had remained about the same and that his general condition was satisfactory until about five weeks previously, when his health began to deteriorate, his skin turned white again and his former weakness returned. He complained of insomnia, anorexia and dyspnea on the slightest exertion. The bowels were constipated, and after taking laxatives, loss of sphincter control became evident. During the previous four weeks he had had dull frontal headaches and increased stiffness in his legs. He presented physical findings that were almost identical with those elicited when he first entered. The liver and spleen were palpable and tender to the touch. In the lower extremities there was complete loss of all qualities of sensation, marked incoordination and complete paralysis of the spastic type, with Babinski and Oppenheim signs. The blood examination made Nov. 4, 1906, showed: Erythrocytes, 1,500,000; hemoglobin, 30 per cent.; color index, 1; whites, 3,400; numerous normoblasts and megaloblasts. Dec. 5, 1906: Erythrocytes, 2,420,000; hemoglobin, 48 per cent.; leucocytes, 6,800; color index, 1; no nucleated reds were found, but large and small poikilocytes were abundant. He was again treated with increasing doses of Fowler's solution, strychnin and iron. He began to improve and his anemic appearance gave way to that of apparent health, but no change was noticed in the cord symptoms. The improvement at this time was only temporary, as after a few weeks he relapsed and became worse than ever. In the following March he developed fever, ranging from 99 F. to 102 F., with 25 to 38 respirations to the minute. His sphincters were completely paralyzed. He became mildly delirious and died March 17, 1907. Macroscopically, the cord shows typical postero-lateral degeneration. Dr. Leweson, the interne who cared for him, will report the microscopic examination.

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* Lack of space forbids me to quote more than one case of each. Those desirous of perusing the entire series of cases kindly communicate with me asking for reprints.

CASE 4.—*History.*—P. L., aged 52, entered Wesley Hospital in March, 1904, in the service of Dr. N. S. Davis, through whose courtesy I am reporting this case. Patient was a carpenter, with good family and personal history, who had always been well until a few weeks previously, when he began to complain of general weakness, loss of appetite and inability to follow his occupation. In appearance he was quite emaciated and looked ill, but a physical examination failed to detect anything beyond marked tachycardia and weak pulse. A blood examination showed 1,800,000 erythrocytes, no leucocytosis, and a relatively high hemoglobin percentage. His temperature ranged from subnormal to normal. Under treatment with Fowler's solution in ascending doses decided improvement occurred in his general condition and in a short time the blood count showed 3,000,000 erythrocytes. The following month (April, 1904) he left the hospital, greatly improved, with the intention of resuming work. He made an attempt but failed because of returning weakness and exhaustion. He continued to grow paler and weaker and at last he was even incapable of walking a short distance without becoming faint and dizzy. In this condition he was readmitted to the hospital in November, 1904. Besides the general weakness, there were constant dull pains in the lower extremities, affecting principally the calves of the legs. In addition he complained of tingling and numbness in his toes and finger-tips, with uncertainty as to their position.

Examination.—Patient appeared extremely emaciated, with cachectic look and lemon-yellow skin. The viscera, including the urinary organs, showed nothing abnormal; the pupils reacted to light and accommodation. There were no paralyses or pareses. The sensory examination revealed general reduction of pain, temperature and touch sense, particularly marked on the outer borders of legs and arms and in finger-tips. The muscle and joint sense was almost lost in the lower and blunted in the upper extremities. He was unable to distinguish between a 25-cent piece and a nickel. Inco-ordination in upper and lower extermities was very pronounced. Superficial reflexes were present and brisk. The deep reflexes were all pathologically exaggerated, there was no ankle or rectus clonus, but with careful technic a slight Babinski could be detected. The pulse was rapid and small. A blood count showed 1,250,000 erythrocytes.

Under rest and arsenic the patient improved once more. His pains and aches disappeared and the blood count showed an increase in the reds to 2,500,000 erythrocytes. This improvement, however, was only temporary. He soon relapsed into his former condition, emaciation and exhaustion became extreme, bladder and rectal incontinence developed and fever, varying from 100 to 103 F. appeared with rapid respiration and thready pulse. A complicating pleurisy and pulmonary edema, with marked abdominal tenderness and tympanitis, further aggravated his condition and he died on Dec. 23, 1904.

Autopsy.—This was held by Prof. F. R. Zeit, who made the following pathologic diagnosis: Anemia of all organs, bilateral acute fibrinous pleurisy, general acute septic peritonitis, and acute parenchymatous degeneration of liver and kidneys.

Nervous System.—Macroscopically the brain appeared normal, but the spinal cord showed marked changes in the posterior columns, particularly in the cervicodorsal region.

Microscopical Examination.—In the cervical region (Fig. 1*) the degeneration appears sharply limited to the dorsal tracts, of which Goll's column has almost completely degenerated, the few undegenerated fibers being situated near the posterior commissure and the dorsal periphery of the cord. Burdach's columns show a "patchy" degeneration, confined mostly to their internal portions, those merging into Goll's columns, while the entire postero-external zone, the root entrance zone, the long strip bordering on the posterior horns, and the cornu-commissural zones are intact. The lesions were of the two types previously described by other reporters, namely, a degeneration with small overgrowth of neuroglia toward the center of the degenerated area, bounded by an area of many vacuoles, the so-called *Lueckenfelder* of the Germans (Fig. 2). Proceeding downward to the dorsal cord the degenerated areas in the posterior columns have a tendency to become smaller (Fig. 3) and continue to diminish in size in the lumbar cord (Fig. 4), until no more degeneration is evident in the lowest lumbar and beginning sacral cord (Fig. 5). Only slight degeneration was seen in the crossed pyramidal tracts with the Weigert-Pal stain; sections stained with Marchi also showed slight degeneration in the lateral strands of the lumbar cord. Gray substance, nerve roots, pia and vessels showed no recognizable pathologic changes.

In looking over the cases of Group I we find that pernicious anemia was the most conspicuous symptom-complex, with the cord disease following closely or occurring simultaneously with the anemia. A feature that can not escape observation is that, while there may be remissions in pernicious anemia and the general health may improve for a time, when cord symptoms have once been established, no improvement seems possible.

GROUP II.—This group includes cases in which a grave form of anemia is found associated with subacute combined cord degeneration at some time of its course, not necessarily in the beginning and not constituting its most important symptom.

CASE 10.—*History.*—F. X., aged 60, with negative family and personal history, had in 1902 what was considered a nervous breakdown. Formerly an active business man and wide awake in every sense of the term, he had now become weak, apathetic and somnolent. The tendency to sleep was so great that he would yield to it even when in the theater and while in attendance at social functions. The other complaints at this time were marked weakness in the lower extremities, occasional headaches and rather obstinate constipation. He made an attempt to recuperate his health by travel, but instead of improving he returned much worse. He continued to lose strength steadily and in the winter of the same year his gait had also become uncertain. The following summer he again traveled for a few weeks, but he suffered greatly from diarrheal attacks, which still further reduced his vitality. Subsequently paresthesia and weakness in the lower extremities had become pronounced. The physician who formerly treated him kindly furnished the following notes of his findings while under his care: Oct. 18, 1902, the patient complained of numbness in legs and hands, and of constipation. The deep reflexes were about normal, but some ataxia was present in the lower extremities. Blood and urine were normal. Nov. 20, 1902, his general condition was about the same, knee and ankle jerks were reduced and ataxia in the lower extremities was marked. His condition seemed somewhat improved in March, 1903; reflexes could be obtained, but there was still weakness and ataxia in the lower extremities. Blood and urine were normal. From June 6 to July 14, 1903, there was some improvement. The paresthesia then showed a tendency to mount higher toward the trunk.

Examination.—In October, 1903, the patient appeared ill and cachectic. The sensory examination revealed analgesic areas over the lower extremities and marked loss of muscle and joint sense in the same parts. The gait was extremely ataxic and the deep reflexes were absent. Babinski sign was present on both sides. Sphincter disturbances were marked and patient was greatly debilitated. Blood examinations were made by several blood experts, whose findings did not agree in the details, but their reports all indicate a grave form of anemia.

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* The plate of illustrations (pages 1107 and 1108) is inserted opposite the beginning of this article.

Energetic treatment with arsenic and other tonics had absolutely no effect on the progress of the disease. The patient continued to grow worse and died Oct. 28, 1903.

Autopsy.—The postmortem examination was held the next day by Prof. F. R. Zeit, who made the following pathologic diagnosis: Hypertrophy of left ventricle, chronic fibrous endocarditis of mitral and aortic valves. Atheroma of aorta, chronic diffuse nephritis, fatty infiltration of the liver and interstitial hepatitis. The organs were anemic. Nervous system: Macroscopically the brain and medulla revealed normal findings externally, but on cutting into the cord yellowish areas of degeneration could be seen in the posterior and lateral columns. Nothing was found in the brain and medulla. Microscopically the greatest amount of degeneration was found in the upper portions, becoming gradually less as lower levels were reached, so that the sacral cord presented practically a normal appearance. This finding seems in harmony with that of the majority of observers. The cervical cord (Fig. 6) showed a "patchy" but symmetrical degeneration in the posterior columns, leaving free the fibers at the entrance zone, most of the fibers at the external root zone, the fibers bordering on the posterior horns, a strip of fibers seemingly delimiting Goll's from Burdach's columns, and also the fibers in the cornu-commissural zone. Generally speaking, Goll's columns were more completely degenerated than Burdach's; the latter tract, however, showed more of the "patchy" degeneration which has been frequently mentioned by various reporters. Of the lateral columns the ascending antero-lateral-tracts—Gowers' bundles—escaped, but the direct cerebellar tracts were almost entirely degenerated and the crossed pyramidal tracts showed degeneration of most fibers. The areas bordering on the posterior horns externally, as well as the reticular zones at the base of the posterior horns had practically been spared. Gray matter and vessels as well as meninges showed no pathologic findings of importance.

In the dorsal cord (Fig. 7) degenerated masses which had been seen in Goll's and Burdach's columns intermingled with healthy fibers, were here merged into one large area of degeneration. In the lower portion of the cord, the areas corresponding to Goll's columns in higher segments, appeared completely degenerated, with the exception of the fibers at the dorsal periphery and a few fibers of the cornu-commissural zone, but most of the postero-external divisions of the posterior columns, the entrance zones, had been left intact, along with the fibers bordering the posterior horns and the posterior commissure. The lateral tracts had degenerated more uniformly than in previous sections, but even here the antero-lateral half was less affected than the posterior half with its crossed pyramidal tract, but few spots of degeneration being found in the former. In the lumbar cord (Fig. 8) the areas of degeneration had gradually become contracted, so that only the central portion of each posterior column showed complete destruction while the peripheral portions contained only small scattered areas of degeneration. In the lateral columns the degeneration appeared almost entirely to be limited to the peripherally situated crossed pyramidal tracts. Still lower down in the lumbar cord, approaching the sacral division, the degeneration was practically limited to a small area in the crossed pyramidal tract and an insignificant patch in the posterior columns (Fig. 9). The lower sacral segments and the conus medullaris showed normal findings.

GROUP III.—This group includes cases in which anemia is either absent, slight, or constitutes but a minor symptom of the entire disease.

CASE 16.—*History.*—C. H., aged 43 years, a working woman, entered Cook County Hospital Feb. 26, 1905. She gave a negative family history and stated that she had had three miscarriages and ten full-term children, of which number two died of tuberculosis. She never had venereal disease and never drank to excess. On account of desertion by her drunken husband she had been compelled to do washing in order to support a large family, which excessive labor had of late somewhat exhausted her strength. She was always well until about two months previously, when she developed tingling and numbness in the lower extremities and a feeling as though her feet were asleep. During the same length of time she experienced a feeling of constriction about the waist which she described as a sensation of a rubber band being continually tightened about her abdomen. Uncertainty in gait came on about the same time. Tingling and numbness were also experienced in hands and fingers. She never suffered acute pain and while she was generally constipated, the bladder always functionated normally.

Examination.—This revealed a small, poorly nourished woman who walked with a spastic and ataxic gait. Paralysis or paresis of muscles could not be detected. Eyes reacted to light and accommodation. The deep reflexes were all exaggerated, marked ankle clonus was present bilaterally, but Babinski's sign could not be elicited. There was marked impairment of the pain, touch, temperature, muscle and joint sense in the lower extremities, becoming fainter toward the waist line, but not extending beyond it. The big toes were completely analgesic. No hyperesthetic nor hyperalgesic areas could be found. Heart and lungs were negative. The urine showed an occasional trace of albumin, but no casts.

The course of the disease was subacute, with a downward tendency, although at one time the patient had left the hospital much improved. After a few weeks she returned, however, in a worse condition than when she first entered. The troublesome paresthesia continued to progress and became quite general. Eventually she was unable to recognize objects by touch with eyes closed. In addition, motor power soon became greatly impaired and she seldom left her bed. Seven months after her first admission incontinence of sphincters and complete paraplegia developed. The reflexes were still exaggerated and muscular twitchings were present. Toward the end of November, 1905, a complete ascending paralysis developed which involved upper extremities and intercostal muscles. Speech was somewhat disturbed, the temperature rose to 103 F., respirations were 28 to the minute. Several days before death (Dec. 2, 1905) a muttering delirium supervened, followed by coma. The last blood count, made three and a half weeks before death, showed a hemoglobin percentage of 65; erythrocytes, 3,200,000; leucocytes, 6,800.

Autopsy.—Postmortem examination revealed nothing of importance in the viscera. The following points are from the notes taken: The brain is normal, but the spinal cord shows widespread and diffuse degeneration throughout all levels, affecting all systems indiscriminately. The various tracts show different involvement. In the cervical region (Fig. 10) we find almost complete degeneration of the posterior columns, excepting a few fibers at the extreme dorsal periphery; the postero-external root zone and the cornu-commissural zone have been partially spared. The direct cerebellar tracts and portions of Gowers' bundle have degenerated unequally. In the region of the right direct pyramidal tract there is considerable degeneration, but the crossed pyramidal tract shows only a moderate degree of degeneration. In the dorsal cord (Fig. 11) we recognize the picture of postero-lateral tract degeneration; at this level it resembles the cord of Case 10, but in addition we have here degeneration in the anterior tracts, particularly the right. At the level of the lumbar enlargement (Fig. 12) we see what is unusual for this disease, complete destruction of the posterior columns; all definition between white substance and posterior horns is lost; the entire area between the internal borders of the posterior horns appears light, with but few islets of normal tissue remaining. The periphery of each lateral half in this situation has also degenerated. The crossed pyramidal tracts have largely disappeared. We again recognize at this level the area of degeneration that was seen bordering the right median fissure in higher segments.

SUMMARY OF CASES.

In the entire series there were fourteen males and only three females. Nearly all were over 40 years old (except the patient in Case 36), and in only one case (Case 3) was there a history of past syphilis. Nearly all began with subjective sensory disturbances and disorders of inco-ordination and were followed by motor weakness. In several cases gastrointestinal disorders, and particularly diarrheas, appeared either before the beginning or during the course of the disease. As regards its association with anemia, we find only four cases which began as a typical pernicious anemia, while the others either showed but little anemia or the anemia, though pernicious in type, was not an early symptom. At the time of examination nearly all presented an appearance of ill health, and in some the disease was preceded by a prolonged illness or at least by a neurasthenic state.

SUMMARY OF PATHOLOGIC ANATOMY.

There was no strict conformity to the systemic type of degeneration in any of the cords examined. On the contrary, the degeneration appeared in more or less discrete patches, differing in this respect from such system diseases as tabes. In nearly all there was involvement of the posterior and lateral columns, although the cord of the patient in Case 4 showed only an insignificant amount of degeneration in other than the posterior column tracts. The greatest amount of degeneration was generally found in the cervical and dorsal regions, except Case 16, which showed the greatest damage in the lumbar cord (Fig. 12). Gray matter, vessels and nerve roots showed no pathologic changes of importance. The processes of vacuolation and neuroglia formation have been found side by side in nearly all the sections examined.

DIFFERENTIAL DIAGNOSIS.

Early in its course the disease may be mistaken for tabes, because of the sensory disturbances common to both affections. In fact, it would appear that this mistake must have occurred quite often when we read in the older authors of the complications of tabes with lateral tract disease. It will be recalled that sensory disorders in combined cord degeneration are for some time usually only subjective and rarely show paroxysmal recurrences, while in tabes we have the so-called lancinating and girdle pains, Argyll-Robertson pupils and visceral crises, all symptoms which are rarely found in combined cord degeneration. In addition, the detection of muscular weakness and exaggerated reflexes with Babinski's toe sign will at once rule out tabes. In the more advanced stage of the disease, when spasticity and the reflexes have become greatly accentuated and when marked weakness in the lower extremities dominates the field, it must be differentiated from lateral sclerosis and transverse lesions of the cord. In the latter there are early loss of sphincter control, more complete paralysis of motion and sensation, beginning at definite cord levels, of rather sudden onset; while subacute combined cord disease develops rapidly, and paraplegia with loss of sphincter control may mark its termination, but never its beginning.

From lateral sclerosis, or so-called spastic paraplegia, the disease can be differentiated by the complete absence of sensory symptoms in the former disease and their invariable presence in the latter. The family ataxias, of which Friedreich's disease is the most prominent representative, have close anatomic and symptomatic similarities with the disease under consideration.

Friedreich's disease is a combined cord affection in which the sensory tracts, such as the posterior columns, the direct cerebellar tract and Gowers' bundle, are principally affected; the pyramidal tract is usually but slightly involved. Further, there are no exaggerated reflexes nor spasticity—symptoms which are commonly present in subacute combined cord degeneration. Bearing in mind the familiar features of Friedreich's disease, the nystagmus, the absent reflexes, the marked ataxia and its occurrence in early life, we have definite diagnostic criteria that make it stand apart from almost any other disease.

From hereditary spastic ataxia and hereditary cerebellar disease the age and the hereditary or familial traits are sufficient for diagnosis.

SPINAL SYPHILIS AND MULTIPLE SCLEROSIS.

Spinal syphilis and multiple sclerosis of certain types offer great difficulty in the differentiation from combined cord degeneration.

Spinal Syphilis.—For our purpose only two varieties of spinal syphilis require differentiation: 1, Syphilitic meningo-myelitis; 2, Erb's spinal syphilis.

1. In meningo-myelitis the symptoms are those of meningeal irritation, such as pain and tenderness over vertebra, radiating pains in upper and lower extremities, followed by the symptoms of myelitis, paresthesia and sensation of weakness, spasticity and various paralyses, exaggerated reflexes, bladder and rectal disturbances. If the cervical cord is affected we have atrophic paralysis in the upper and spastic paralysis in the lower extremities. If the lumbar cord is the seat of the syphilitic process absent knee jerks and complete loss of sphincter control are additional symptoms.

2. Erb in 1892 described the type of spinal syphilis now bearing his name substantially as follows: "Several years after a syphilitic infection there may be gradual development of spastic paresis in the lower extremities, slightly spastic gait with slight motor paresis, exaggeration of the deep reflexes, slight or absent sensory disturbances, mild or severe bladder difficulties, with no abnormalities of intelligence, no involvement of upper extremities, cranial nerves or pupils."

Because of the similarity in symptoms these types of spinal syphilis occasionally cause almost insurmountable difficulties in differential diagnosis. We must remember first that a history of syphilis is rare in combined cord degeneration; in the few instances in which luetic infection has been mentioned this has occurred long ago and a direct connection was not shown. All authorities are agreed that spinal syphilis usually develops within the first five years after luetic infection. In the presence of such a history the symptom-complex of combined cord degeneration must be interpreted as spinal lues.

Root symptoms and complete paralysis of motion, while prominent in meningo-myelitis, are rare in combined cord degeneration; in the latter, paresthesia, inco-ordination and slight degrees of motor weakness are leading symptoms. The sphincters are involved early in meningo-myelitis and late in combined cord degeneration. Further, the symptoms of meningo-myelitis often develop in step-like fashion, are usually atypical, incomplete, and have a tendency to appear, recede and reappear just as in cerebral lues. On the other hand, the course of subacute combined cord degeneration is steadily progressive; rarely does it show remissions, and hardly ever intermissions.

A practical point in diagnosis is that while in meningo-myelitis of luetic origin there is usually found a history or the presence of one or more cerebral symptoms, viz., headache, dizziness, transient ocular palsies, a rigid pupil, such symptoms speak strongly against the diagnosis of combined cord degeneration.

Of additional value in differentiation is the sensory dissociation frequently noted in luetic meningo-myelitis: touch and pain sense is intact, while temperature sense is disturbed, or *vice versa*. In combined cord disease objective sensory disturbances conform mostly to the type of posterior column disease.

The differential diagnosis between combined cord disease and Erb's spinal syphilis, to this day not recognized by all neurologists as a distinct type, is extremely difficult and at times impossible. When we reflect that the pathologic changes considered typical of combined cord degeneration have been found in the cords of supposed cases of Erb's spinal lues we need not wonder that the symptoms are occasionally identical. A history of recent lues will certainly, and the therapeutic test may possibly, decide the diagnosis in a doubtful case.

Multiple Sclerosis.—We should expect that insular sclerosis will produce symptoms similar to those of combined cord degeneration, provided the posterior and lateral tracts are the seat of sclerotic patches, and such is really the case in many instances. For diagnosis we shall consider the patient's age and the course of the disease. Multiple sclerosis usually occurs in young adults, combined cord degeneration in persons past middle age. The course is subacute in the latter and chronic in the former disease.

Multiple or insular cerebrospinal sclerosis rarely affects the cord alone; indeed, its very name indicates that islets of sclerosis are found indiscriminately scattered throughout the entire cerebrospinal axis; we, therefore, look for cerebral symptoms in every case. Although the triad of symptoms, nystagmus, scanning speech and intention tremor are rarely all found in the same individual, we may find at least one of these classical signs to decide the diagnosis. If eye findings are present slight paleness of the temporal discs and central scotoma speak in favor of multiple sclerosis, while the rare cases of combined cord degeneration in which fundus changes have been observed resembled the tabetic variety more than any other.

A careful sensory test will occasionally offer valuable aid in differentiation. In combined cord disease the perversion of sensation refers to pressure and position and generally corresponds to that of posterior column disease—sensory disorders are altogether infrequent in multiple sclerosis, and if present do not conform to a system arrangement.

ETIOLOGY AND PATHOLOGY.

Under etiology and pathology I can only offer purely theoretic considerations. One view maintains that the disease is due to failure of the glandular secretions to neutralize the body poisons resulting from metabolism, which poisons then act deleteriously on the tissues of the spinal cord. Others ascribe the disease to insufficient nutrition and development of poisons from disease of the worn-out blood-making organs, and cite as corroborative proof the fact that the disease usually occurs at the degenerative period of life. Some have reasoned from the coincident existence of pernicious anemia with combined cord degeneration that the latter is the result of the former, but this view had to be abandoned when cases of cord degeneration were found without pernicious anemia and when cord symptoms were recorded prior to the development of symptoms of pernicious anemia. Most observers believe that a hypothetical toxin is responsible for the lesions in this disease. An argument from analogy is that the particular poison may have selective affinities for certain tracts in the cord tissues just as other nerve poisons pick out certain peripheral nerves or brain centers, and the various types of multiple neuritis, pellagra and ergotin poisoning have been cited in support of this view.

PROGNOSIS AND TREATMENT.

The disease usually terminates fatally within one and one-half to five or even six years. Instances of partial and even complete recovery have been recorded, but sufficient latitude must be allowed for mistakes in diagnosis. There is no valid reason, however, why improvement and even arrest of the disease should not occur if treatment is begun sufficiently early.

As the cord disease is frequently found in company with anemia or some other form of ill health, the associated disorder will come in for a large share of attention. At all events rest of mind and body is positively indicated. If anemia is present iron tonics and arsenic, particularly the latter, are indicated. If gastrointestinal disorders, such as indigestion or diarrheas, are troublesome strict attention will be paid to the dietary and appropriate remedies administered.

The sensory discomforts which are usually only subjective in the beginning can be greatly benefited by the application of the faradic brush. The Pacquelin cautery applied over the spine occasionally relieves sensory symptoms. General faradization as a tonic and local faradization over weak muscles, used in moderate strength and not longer than twenty minutes at each sitting, appear to be beneficial; in addition gentle massage may be used cautiously. Patients must be warned against every form of fatigue; they are advised to lead a regular life and the early cases are permitted to indulge in a moderate degree of open air exercise.

For the inco-ordination nothing has yet excelled or even approached in efficacy Frenkel's systematic exercises originally devised for the treatment of tabetic ataxia. These can be varied to suit each case and will be found very helpful in the early and even in the more advanced degrees of inco-ordination encountered in this disease. The underlying principle of the method is to re-educate the patient's muscles in proper co-ordination, at first with the aid of sight and later without it. Only persistent systematic effort is fruitful of results.

It is needless to say that there is no specific remedy against this disease. The treatment must, therefore, be purely symptomatic. Bearing in mind our utter helplessness in the face of the fully developed disease, it will be our endeavor to recognize the disease in its early stages when treatment can accomplish the most good.

In conclusion I wish to express my thanks to Dr. Hugh T. Patrick for the loan of a number of interesting case records which constitute the groundwork for this paper. To Dr. F. R. Zeit I am greatly indebted for notes on two postmortem examinations and for the use of the laboratory facilities under his charge at Northwestern University Medical School.

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DISCUSSION.

Dr. Hugh T. Patrick, Chicago, said that, although the members of the section are all perfectly familiar with the disease, by those outside of the neurological ranks the disease is but little understood and often unrecognized. In the first place, the cases begin very gradually, perhaps not exceedingly gradually, but at any rate slowly, and they begin with such symptoms as might lead one to suppose that the trouble is functional and will be transient. In the next place, supposing that combined degeneration is suspected, too many observers expect to find great anemia. Indeed, we have been led to look on and to classify these cases as a complication or result of pernicious anemia, although they occur both with and without anemia. Dr. Patrick has seen many of these cases in which there was no anemia, or only moderate secondary anemia, as well as cases in which there was a pernicious anemia. Furthermore, in looking back over the cases he has seen, he can remember a few in which he was compelled, provisionally, to exclude organic disease, because he could find nothing whatever to justify a diagnosis of organic trouble. There were absolutely none of the signs which we must rely on to make the diagnosis of organic disease. As regards the diagnosis, he thought that in some cases it is absolutely impossible, even after rather extended observation, to decide whether the case is one of combined spinal cord degeneration, or, as some prefer to call it, diffuse degeneration, or multiple sclerosis, or specific disease of the cord. He has made all of these mistakes in various ways. For instance, in one case under observation for a long time, he at first thought it was a case of combined cord degeneration, but under specific treatment the patient improved rapidly and then came to a standstill so that it undoubtedly was a specific case. Another case he thought to be one of multiple sclerosis was really a case of combined degeneration.

Special Article

THE SCARLET FEVER EPIDEMIC OF NINETEEN HUNDRED AND SEVEN.*

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Two kinds of evidence are recognized in the courts of law, direct and circumstantial. The first is positive and, if true, it is incontrovertible. Circumstantial evidence, however, though it may be convincing, still deals only with possibilities and probabilities and may be refuted by direct evidence or by stronger circumstantial facts.

Practically speaking, all studies in the etiology of disease are based on purely circumstantial evidence. We sometimes become so accustomed to the deductions of certain observations that we lose sight of the possibility of error. Koch's postulates are, perhaps, as clear and convincing as any scientific reasoning can be: A germ isolated from the blood or body of a person sick or dead from a given disease; that germ cultivated outside the body until a pure culture is obtained; that pure culture being introduced into a healthy individual, and such inoculation being followed by the typical symptoms of the disease; and, finally, an examination having been made of this last patient's blood or organs, and this particular germ being there recovered, all this is convincing proof that this particular germ causes the disease in question.

This, however, is but a statement of probabilities. The inoculated individual, though apparently well, might in reality already be afflicted with the disease before the inoculation. Negative evidence is never conclusive. The fact that a number of blood tests have been made with negative results is not absolute proof of the absence of a certain germ in the blood. Failure may be due either to faulty technic or to the accidental absence of the germ from the drops tested; observation may be faulty and the germ taken from the inoculated patient, though resembling that introduced, may really be different; or the so-called pure culture may in reality be a mixed culture, and the unrecognized germ may be the real cause of the disease. These are possibilities always present, but they are reduced to an infinitesimal degree by numerous observations, by different investigators, under varying conditions. Still it must be remembered that this evidence is always, and at best, circumstantial in character.

Unfortunately, in studying etiology, it is frequently impossible to get evidence as clearly convincing as Koch's postulates. In such studies we must be careful to exclude prejudice. The fact that a disease is sometimes directly traceable to contagion from another patient does not prove that it is always so. This form of prejudice has undoubtedly done much harm. Often those high in authority have been so thoroughly imbued with the idea that every case of diphtheria or scarlet fever may be directly traced to a previous case that they neglect to protect against other possible sources. Yet there are many cases of diphtheria in which the only apparent cause has been the germ cultivated in sewage and introduced into the system with water or food or with inspired air. So with scarlatina. Where it has been endemic, various observers have thought that the germ developed in the soil and contaminated the water supply.

Evanston, a city of about 24,000 people, is located on the shore of Lake Michigan, north of, and adjoining, the city of Chicago. Two sand ridges traverse the city from north to south, prehistoric banks of the lake. Between these ridges and to the west the soil is a rich alluvial deposit. The elevation of the city is from 12 to 40 feet above the level of the lake.

The city is well drained, the sewers emptying into the lake, and it is supplied with water taken from the lake three-fourths of a mile from the shore. As a rule, the more wealthy citizens live along the lake shore and on the ridges. The artisan and laboring classes are more particularly to be found west of the ridge.

Most of the inhabitants are Chicago business men, who go to the city in the morning and return at night. There is a university which is the center of activity for many more. There are a few factories employing men only, but there are no workrooms where boys and girls labor.

North of Evanston, along the shore of the lake, are the villages of Wilmette, Kenilworth and Winnetka. These villages, like Evanston, are sewered into and supplied with water from Lake Michigan. They have no factories, and the citizens are Chicago business men, going to business in the morning and returning at night. These villages are all in the Township of New Trier, and use the same high school, which is located between Kenilworth and Winnetka. Evanston has its own high school.

I may here say, by the way of explanation, that I am in no way connected with the department of health of Evanston. Having previously made some studies in the etiology of contagious diseases and being interested in that line of investigation, I undertook this study for my own satisfaction and have sought information wherever I could find it. For data I am under obligation to the health departments of Chicago, Evanston, Wilmette, Kenilworth and Winnetka. I have attempted to weigh the facts impartially.

In August and September, 1906, Evanston physicians found a number of cases of scarlet fever in Evanston and in those parts of Chicago known as Rogers Park and Edgewater. It was noticed that practically all received milk from one dairy depot, which for convenience I shall call Depot A. The Evanston commissioner of health, Dr. William R. Parkes, therefore, ordered this Depot A to obtain its supply of milk from another source. I suppose this was done. The manager of Depot A—whose honesty and intended veracity are not questioned—presented to me certain statements tending to show that Dr. Parkes had acted through personal prejudice. He also showed to me an affidavit to the effect that there was no scarlet fever among the employés of the bottling plant nor among the farmers supplying the bottling plant. I was invited to go and examine the plant and the dairies, but did not do so. At that time and until the middle of January I was an occasional patron of Depot A.

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* Read by request at the North Shore Branch of the Chicago Medical Society, Jan. 7, 1908.

In January, 1907, seven cases of scarlatina were reported in Evanston within the first thirteen days. On January 14, 12 cases, January 15, 35 cases, and in the following days, 29, 20, 24 and 19, in the order stated (Chart 1). Inasmuch as a large percentage of the families used milk or cream from Depot A, Dr. Parkes immediately ordered the managers of the depot to get their supply from another source. Because it was thought that he acted without further investigation, he was severely criticised by certain people, and the company owning Depot A sent one Dr. P. to make an investigation. Dr. P. announced that he was going to make a thorough examination and tabulate the findings, and that when completed he would give me a copy. He knew that at that time I was making a similar investigation. He went to various physicians and offered to pay them for assistance. He paid me, for example, the price of one call at each house in which I had had recent scarlatina cases in order that I might be able to answer more explicitly certain questions. I am still waiting to receive his report, but incidentally from outside sources I have heard of the results of the company's statements. Before proceeding with the subject I shall here answer two of the company's assertions.

1. The disease was scarlatina. In the diagnosis of the disease we are dependent on the general symptoms, for as yet no specific germ has been recognized by the profession. There are in general practice in Evanston about thirty physicians. Almost every one of these physicians reported cases in the epidemic. No physician with a general local practice failed to report scarlatina, except one, who refused to take these cases. While in a few individual cases the diagnosis was later changed, no physician in Evanston would think of saying that the large majority of the cases were not scarlatina, and no physician has even said that none of his reported cases was scarlatina.

2. At a meeting of the Evanston Branch of the Chicago Medical Society a resolution was passed unanimously that it was the sense of the branch that the epidemic was caused by impure milk. This resolution has never been rescinded, nor has any member suggested such action.

In considering the evidence as to the etiology of this outbreak we must remember certain facts tersely put in legal decisions. In the case of Johnson vs. Continental Casualty Co., the St. Louis Court of Appeals says: "Demonstrative proof that he died solely in consequence of the accident hardly could be made. On such issues evidence can not go beyond producing that degree of conviction in reasonable minds on which men are accustomed to decide and act in ordinary affairs. All possibility of mistake can not be excluded."

In the case of the M., K. & T. Ry. Co. vs. Raney, the Court of Civil Appeals of Texas says: "The testimony was sufficient to support the finding of the jury, that the plaintiff contracted the smallpox from the company's agent, when, in so far as the evidence showed, such agent was the only person to whom the plaintiff was exposed who had the disease, and the evidence showed that the plaintiff contracted it within the usual time after such exposure."

In the Evanston epidemic we find that suddenly and without apparent reason there was a remarkable increase in the number of cases reported. Unlike other epidemics in which families were attacked seriatim, now whole families came down in a day. A remarkable proportion of the cases were adults. In afflicted families, many who had previously had the disease now showed mild symptoms for a day or two, indicating that the virulence of the poison was too great in proportion to their protection. The disease was scattered not only throughout the eastern part of Evanston, but through Rogers Park, on the south, which was supplied from Depot A, and through Wilmette and that portion of Kenilworth supplied from Depot A; but Winnetka, not receiving Depot A milk, had only one case, and that was easily traced to contagion. There were also few cases in the western part of Evanston, which is inhabited chiefly by artisans and laborers, and here, too, Depot A had few patrons. Ordinarily contagious diseases show a preference for those who, through lack of knowledge or finances, are less perfectly guarded by sanitary precautions. There was no evidence of exposure to previous cases in a great majority of the patients. Those cases showing contagion in a majority of instances were traced back to users of milk from Depot A. There was no gathering, church or school, through which the infection could have come; this was especially sought by Dr. P. There was a possibility of the infection having been received through strange dogs or cats in two or three cases only. Dr. P. stated that he found a number of unreported cases before the January outbreak, but the health department was unable to get definite facts supporting that statement. Even if this were true, contact with unreported cases was not shown. Dr. P. also stated that he believed that the outbreak might be justly charged to defective quarantine, stating that certain trainmen on the C. & N. W. Ry. suburban trains worked regularly, though living at home when there were cases of the disease in the family. Here, again, he simply made general statements, but gave no evidence to support his claim. Even if this fact were admitted, it does not prove his contention, for, as is well known, exposure to previous cases generally affects first one, then another in a family, whereas in this instance it took whole families at one time and showed no preference for train-riders or their families. It does not explain the immunity of Winnetka and most of Kenilworth.

On the other hand, in Evanston, in all the cases reported in the previous August, the families were users of Depot A milk, and this was also true in a majority of cases reported during the rest of the year. In the eight days, January 14 to 21, when the largest number were reported, out of the 157 cases reported, at least 97 per cent. of the families were patrons of Depot A (Chart 1). In a large family boarding house the milk and cream did not come from Depot A, but one woman bought milk for her baby from Depot A because she supposed it was extra safe. That baby was the only victim of the disease in that neighborhood. Out of about seventy persons in the house the only one afflicted was the only user of Depot A milk. Owing to the publicity given the facts, there was an immediate loss of patronage for Depot A, which may to some degree explain the recession of the epidemic, and the second day after Depot A began to deliver milk from a new source the number of new cases reported was reduced to four. When the spread of the disease was practically stopped in Evanston it was rapidly increasing in Chicago, where the milk that was refused by Evanston was delivered. (See Chart 2.)

The company owning Depot A sought to explain this enormous proportion of their patrons by the manifest falsehood that they sold most of the milk in Evanston. This falsehood was repeated by them so frequently that it was believed by some who were uninformed. By questioning milkmen I had estimated that Depot A sold about one-eighth of the milk in Evanston. Every milk wagon in Evanston carries a license tag. In January, 1907, there were forty-two wagons licensed, of which Depot A had only six, or one-seventh of the total number. It is fair to say, therefore, that Depot A supplied only one-seventh of the milk in Evanston.

Even if Depot A were supplying most of the milk in Evanston that would not explain the sudden fall in the number of cases, particularly after the change of source of supply, unless this milk were the real cause.

The class of citizens and mode of life are practically the same in Evanston, Wilmette and Winnetka. In December, 1906, and January and February, 1907, 210 cases were reported in Evanston. In the same time Wilmette, with a population of 5,000, one-fifth as large as Evanston, had 38 cases, which is about the same proportion.

In the same proportion Winnetka, with a population of 2,800, should have had over 20 cases. It had one only, traced to direct contagion. In all the cases after January 14 in Wilmette the patients were users of Depot A milk. In Kenilworth the only cases of the disease were reported January 14, 15 and 16, 7 cases. Of these, four patients were regular patrons of Depot A. The other three were next door to one of the other cases. They were not regular patrons of Depot A, but the morning before they were taken sick the maid borrowed milk and the physician was unable to learn from what source this milk came. These facts are significant taken with the further fact that no Depot A milk enters Winnetka.

In Chicago (Chart 2) for the six weeks ending January 11 an average of 135 cases of scarlatina were reported each week. The next week, ending January 18, there were 348 cases, more than two and one-half times as many as the previous week. In the week ending January 25 there were 1,005 cases and the next week 1,689. January 25 the shipment of milk from "X" was stopped, but there is a period of incubation, so we could not expect to see the results of the changed milk supply until the week ending February 8, in which there were 620 cases. The next two weeks there were 386 and 277 in order named. Since the population of Chicago is 87.5 times as large as that of Evanston, it will be noticed that it did not suffer so severely in proportion, considering the entire population. The disease, however, was to a degree confined to the north and west sides of the city. Chicago (Chart 2) is represented on a scale of 1 to 10 compared with the others.

In the week ending February 1 the great increase in the number of cases reported was attributed by the Department of Health of Chicago to the fact that people were becoming alarmed and sent for physicians in milder cases of illness, and also to greater zeal in inspections. Yet in the same paragraph which mentions an increase of 681[1] cases of scarlatina and an increase of 51 cases of measles there is mentioned a decrease of six of diphtheria.

If the increase in reports of cases of scarlatina were due to greater zeal in making reports and inspections, we should look for a similar increase in reports of diphtheria, measles and whooping cough. Chart 4, which gives the total number of cases reported in Chicago for that period, shows a fairly even line for whooping cough; and the rise in the lines for diphtheria and measles is no more than we should expect from uncertainty of diagnosis between those diseases and scarlatina.

Further, a study of the table and diagram of deaths in Chicago (Chart 3) shows a fairly even list for whooping cough, measles and diphtheria, but in the week ending February 1 the number of deaths (44) from scarlet fever was double that of the week before. This would tend to show that the increase in reports was not due to the "scare" and the reporting of milder cases. The map published in the *Bulletin* of the Department of Health February 9 strengthens the suspicion that infected milk from "X" was the cause of Chicago's scarlet fever.

In the *Bulletin* of the Chicago Department of Health January 26, 1907, we read: "Milk from this locality (i. e., 'X') has hitherto been sent to Evanston principally, a small part, however, went to Wilmette and Oak Park."

"Investigation on the 25th inst. shows that, so far as could be ascertained, there are no cases among the employés of the plant at present, and only one case has appeared among the dairies supplying milk to this plant. Milk from this dairy has not been received since the case was discovered. No milk from this plant has been sent to Chicago since the Health Department of Evanston prohibited the entrance of this milk to the city of Evanston."

These paragraphs are very misleading. On the evening of January 15 Dr. Parkes called up Dr. Whalen, who then occupied the chair of Commissioner of Health in Chicago, and reported to Dr. Whalen the conditions in Evanston and his opinion that the disease came from "X" milk. Dr. Whalen was very skeptical and refused even to investigate. Dr. Parkes again conferred with Dr. Whalen January 24 and reported further facts. The result was the visit of Chicago officials in "X" January 25. They did not spend so much time as was consumed in the quiet detective work of Evanston's representatives and evidently received their information from the milk company without question.

Previous to January 16 the "X" bottling plant shipped daily five cars of milk. Three of these went to Chicago, one to Oak Park and the smallest car went to Depot A in Evanston. Depot A, as before stated, delivered milk in Rogers Park, in Wilmette and a little in Kenilworth, aside from Evanston.

The physician employed at "X" by the milk company admitted, when confronted with facts, that there were five or six cases of scarlet fever in the family of Edwards, who sold milk to the company. After the disease was discovered the company says it did not ship Edwards' milk, but we have reason for believing that the Edwards milk was used in the condensing plant. The physician of the company attended two cases in the family of Fred Reaman, who shipped his milk through the "X" plant, and we have evidence that Reaman milk was received and shipped as late as January 24, and had been so regularly received since the physician was called late in December. The Evanston commissioner has the names of not less than fifteen families which were quarantined in "X" in January, 1907, for scarlet fever, but evidence shows that the quarantine was lax.

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[1] This number does not exactly agree with the tables in either Chart 3 or 4. Variations are explained by the fact that the data were collected by three persons at different times.

MONTHS,	AUG.	SEPT.	OCT.	NOV.	DEC.	JANUARY, 1-13	JANUARY, 14-21	JANUARY, 22-26	JANUARY, 27-30	FEB.
TOTAL CASES.	3	11	2	4	4	7	157	21	5	12
USING X MILK.	3	9	1	1	3	0	153	13	1	1
%	100	81.8	50	25	75	0	97.4	61.9	20	8.3

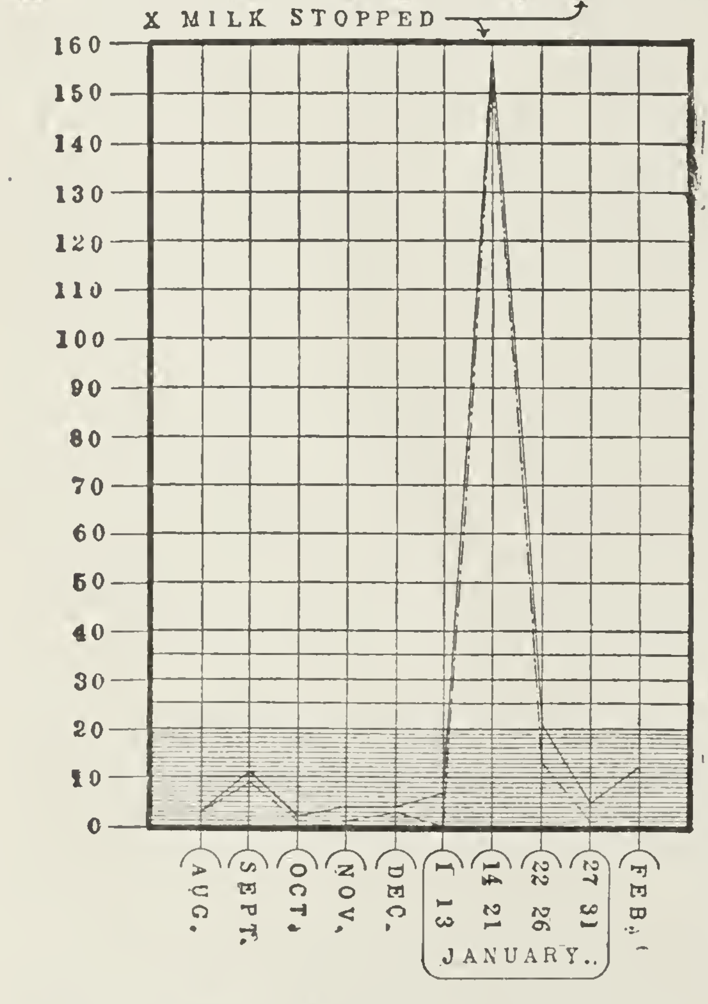
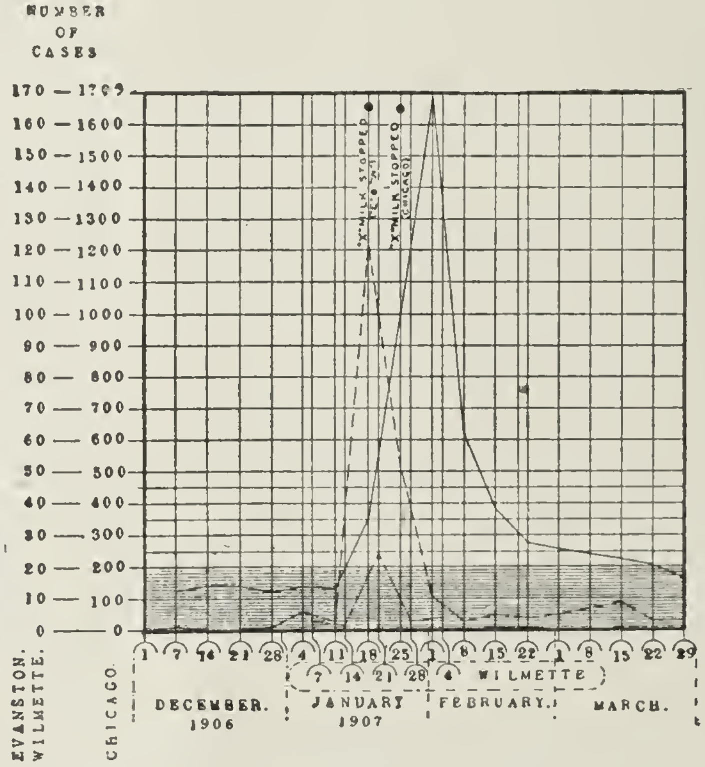


Chart 1.—Showing total number of cases and proportion in which "X" milk was used. Total cases, ———; cases using "X" milk, —. —. —.



CHICAGO	EVANSTON,	KENILWORT.	WEEK ENDING.	WILMETTE.
129			1906 7 DEC.	1
142			14	
141			21	
121	1		28	
141	6		1907 4 JAN.	
136	3		7 11	3
348	121	7	14 18	2
1005	52		21 25	24
1689	11		28 1 FEB.	3
620	3		4 8	4
386	5		15	
277	4		21 22	1
260	5		MARCH 1	
240	7		8	
227	9		15	
204	3		22	
169	3		29	

KEY. { CHICAGO: ———
EVANSTON: — — — —
WILMETTE: -.-.-.-

Chart 2.—Number of cases of scarlet fever reported during the epidemic of 1907. Chicago, ———; Evanston, — — — —; Wilmette, -. -. -.

Members of some of these families were employés of the milk company. After Evanston refused to receive "X" milk the car previously sent to Evanston from "X" went to Chicago until a representative of the Illinois State Board of Health called on the Wisconsin State Board of Health, and the "X" bottling plant was closed January 25.

Inasmuch as no specific germ has been isolated for scarlatina, a bacteriologic examination of the milk would not be conclusive for this epidemic. It must be remembered that even if a specific germ of scarlet fever had been found in the milk it would not be conclusive proof of the origin of the epidemic, for it might be claimed that the bacteria appeared in the milk after the disease started, from common origin. However, we should expect to find some evidence of the disease among the handlers of the milk or their families or among the herds.

The milk received in Evanston by Depot A comes already bottled, so it would not be likely to become infected in Depot A. So far as known, there was no case of the disease in the families of that depot before this outbreak. January 19 a case was reported in the family of one of the drivers.

The milk was bottled at "X." Milk of the evening of January 10 and the morning of January 11 was taken to the bottling works, bottled and shipped by rail to Evanston, where it was received about 1 a. m. January 12. Owing to the rules of the milk drivers' union this milk was delivered after breakfast. Since little milk or cream is taken raw except at breakfast, most of this milk was consumed on the morning of January 13.

This statement is authoritative. When the time from the cow to the consumer is considered, and the most excellent value of the milk as a culture medium, it may readily be seen that a few germs at the time of milking may have become an army by the time the milk is consumed.

In spite of the affidavit relative to the absence of scarlet fever at "X," on investigation it was found that in August, when the first outbreak occurred in Evanston, a capper in the "X" bottling plant, by the name of Strickland, had desquamating hands. He had recently been ill, but the physician called it a case of blood poisoning.

Soon after this two of his working mates were taken ill; one by the name of Meyers was quarantined for scarlatina, and the other, Miller, had similar symptoms, but being under the care of another physician was not quarantined.

January 25 a representative of the Illinois State Board of Health found 40 cases at "X," which has a population of about 700, and 15 more close by in territory supplying the "X" bottling plant.

Soon after the January outbreak it was learned that a representative of the Illinois State Board of Health came to Evanston to investigate. He did not make himself known to Evanston physicians nor to anyone in the health department, but told his errand at the Columbia Restaurant. He then went to "X." He was met at the train by an employé of the milk company, shown around the plant, given dinner and returned home, having called up Dr. Parkes at Evanston by telephone. We understood that he reported a clear bill of health for "X." Dr. Egan was then absent from his office on account of sickness. A letter to another member of the board brought forth an insulting and incoherent reply ending as follows: "The information which you convey in regard to the action of the milk company is certainly important, if you are prepared to defend this statement if necessary in court."

WEEK ENDING.	WHOOPING COUGH.	SCARLET FEVER.	DIPHTHERIA.	MEASLES.
JAN. 5	6	13	15	0
12	8	11	19	6
19	6	18	17	4
26	12	22	16	13
FEB. 2	7	44	15	4
9	9	44	15	11
16	8	39	11	4
23	8	27	20	7
MARCH. 2	7	23	5	12
9	6	27	9	4
AVERAGE.	7.7	26.8	14.2	6.5
KEY.	....	————	— — — —	—·—·—

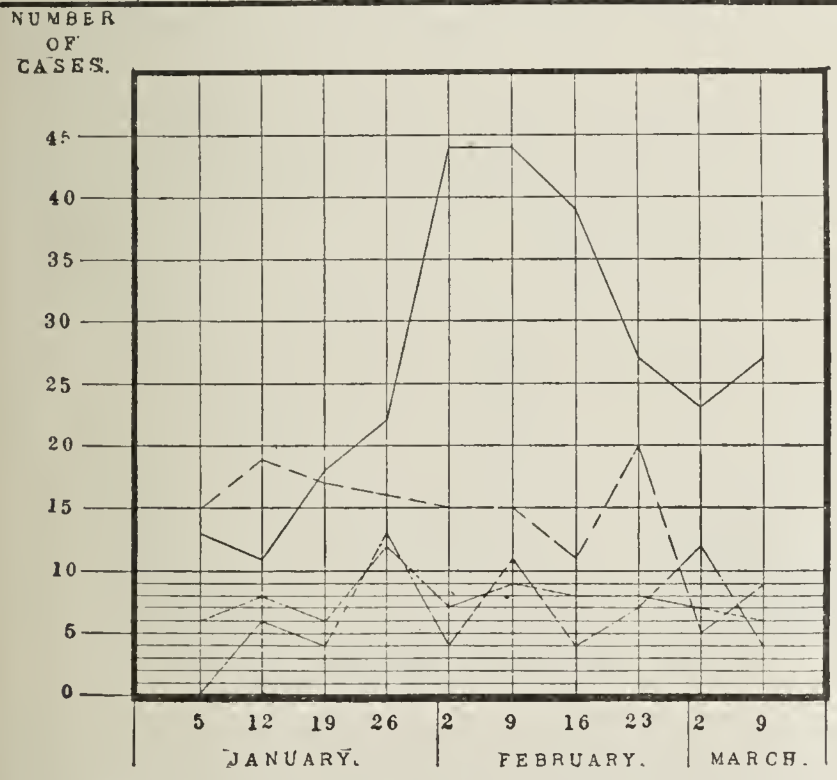


Chart 3.—Deaths from contagious diseases in Chicago for week ending Feb. 1, 1907. Scarlet fever, ————; whooping cough, ... ; diphtheria, — — — — —; measles, - . - . - .

In that and other letters he argued that the board should not be expected to act in this case because "X" was outside Illinois, and that the Pure Food Commissioner was the proper official to guard the purity of the milk. In view of the foregoing this extract from a letter dated March 19, written on State Board of Health paper and signed "J. A. Egan, H.," is interesting:

"In reply I would state that besides my personal investigation, two inspectors for this board visited the source of supply complained of, and we were *unable to obtain any evidence* to substantiate the claim that the epidemic was caused by infected milk supplied by the —— milk company." (Italics mine.) And this after one of those inspectors reported 55 cases in that community! Six per cent. of the population sick with scarlet fever and yet "no evidence" of infection!

There are other very important facts which might easily have been discovered had the doctor really been as anxious to protect the health of our citizens as to protect the milk company.

MONTHS		DECEMBER 1906				JANUARY 1907				FEBRUARY 1907				MARCH 1907				
WEEK ENDING		7	14	21	28	4	11	18	25	1	8	15	22	1	8	15	22	29
CASES REPORTED	DIPHTHERIA	23	133	39	133	134	148	150	298	292	210	150	145	141	115	136	121	88
	MEASLES	21	22	31	37	26	39	36	139	190	154	130	117	102	103	111	108	126
	WHOOPING COUGH			1	1		6	1	16	19	13	6	6	6	8	2	8	3
	SCARLET FEVER	129	142	141	121	141	139	348	1005	1684	620	386	277	260	240	227	204	169

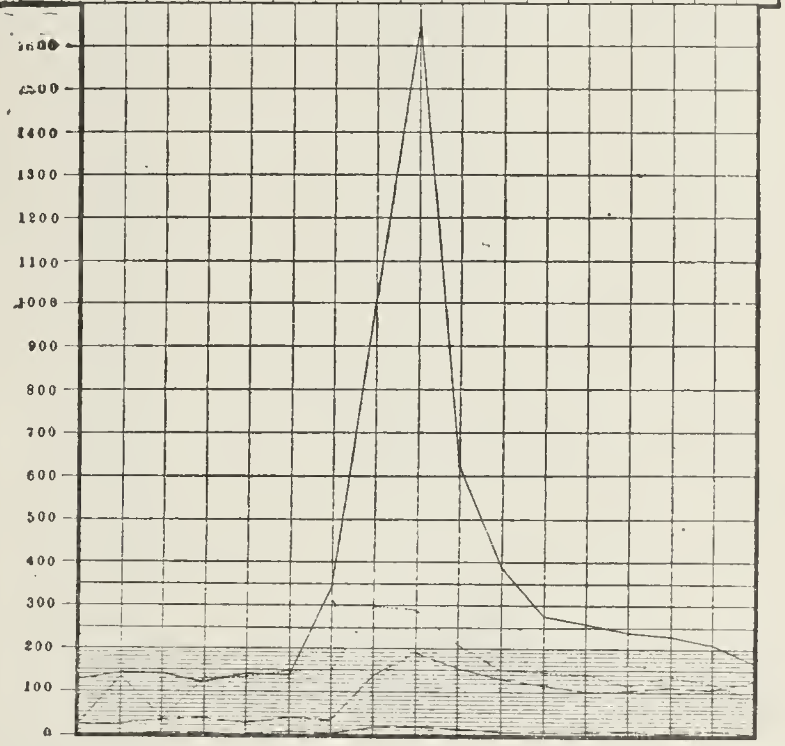


Chart 4.—Showing contagious diseases in Chicago. Scarlet fever, ————; whooping cough, — — — — —; measles, - . - . - . ; diphtheria, ...

Dr. Parkes, with much of this evidence in hand, urged the Department of Health of Chicago to investigate. Then, and not till then, was there a decline in the number of cases reported in Chicago. In February or March I was shown a letter by the manager of Depot A. This letter purported to come from the secretary of the Wisconsin State Board of Health and expressed the opinion that there was no reason why the "X" bottling plant should have been closed. I have tried to get a copy of this letter but failed.

It must be recognized that to Evanston and its department of health must be given the credit for checking the epidemic. The expense of the investigation was borne by the little city of Evanston. Dr. Parkes and his assistant, Dr. Craven, without authority outside of Evanston, and in spite of the passive opposition of the Department of Health of Chicago and the Illinois State Board of Health, were obliged to do their work not only outside of Cook County, but outside of the State of Illinois. If they had failed to prove their case it is not unlikely that the rich corporation would have at least caused annoyance in the courts.

The recently organized league of health officers is really, it seems to me, a monument to the inefficiency of the State Board of Health. The league is doing work which in other states is conducted by the state board. This league is a most excellent mutual organization, and it has taken up the work started by Dr. Parkes to prevent a recurrence of our past affliction. At that time he required every dealer in Evanston to give a list of all persons handling their milk, either in Evanston or in bottling plants and a list of all farmers supplying the milk, each with his location, and the names of all physicians practicing in such location. In case of future trouble all members of the league will be promptly notified, and if the milk from a certain source is refused by one jurisdiction it will be refused by others.

The company owning Depot A puts up condensed milk which is shipped all over the country. The process of condensation does not necessarily, however, destroy disease germs. I am informed by the dairy division of the Department of Agriculture in Washington that in condensed milk sold in bulk it is probable that the spores of contagious diseases are not killed. In at least one case in Evanston no other source could be found than the use of condensed milk and cream from Depot A.

It is a well-recognized fact that if a company knowingly exposes a patron to injury the company is liable. In the case above mentioned of the M. K. & T. Ry. Co. vs. Raney, the Court of Appeals of Texas further held that since the agent who sold the ticket was an employé of the company and its representative, and the agent knew that he had smallpox, the company, therefore, knew it and it was liable.

But this liability is not alone to the patrons of the company. In the Supreme Court of Minnesota the case of Depue vs. Flateau was one in which the plaintiff called at Flateau's to inspect cattle with a view to purchase. Night having come on, he wanted to stay all night, but was refused permission. He was ill and too weak to care for himself. He was found the next morning nearly frozen to death. He sued for damages. The court held that: "whenever a person is placed in such a position with regard to another that it is obvious that if he does not use due care in his own conduct he will cause injury to that person, the duty at once arises to exercise care commensurate with the situation, and a negligent failure to perform the duty renders him liable for the consequences of his neglect."

In spite of the general denial by the state board (which, as we have intimated, is directly contradicted by the letter of the only state board inspector who really made an inspection), I think that I have given evidence which produces conviction in reasonable minds that our epidemic came in milk from "X."

Officers of the company were cognizant of conditions. When one at "X" was confronted with a small part of the evidence secured and was asked why they did so, he replied that they did not wish to injure the business. They were in position to know the facts and, to put it mildly, they kept silent. They did not use due care in their own conduct and so caused injury not only to their own patrons but to others who received the disease indirectly.

The company can not even plead their disbelief in the possibility of conveying the disease in milk. That does not excuse their deception, which made it less possible for the community to protect itself. That does not excuse the personal abuse of those who were seeking for facts. Due care was not used by the company in August and September in that they not only failed to inform Evanston officials of the true conditions, but in that they made affidavit that there was no case of scarlet fever there.

Up to the present, so far as I am aware, this rich company has done absolutely nothing to compensate either individuals or the community for loss of time and trade, for sickness and death, and for all the needless expenditures of money made necessary by this criminal negligence.

It is not claimed that the scarlet fever originated at "X" any more than it is claimed that smallpox originated in the M. K. & T. ticket agent. The facetious reasoning of the Illinois State Board of Health relative to the large number of unreported cases and lack of precautions to prevent the spread of the diseases is good, so far as it goes. Most of those mild cases and lack of precautions undoubtedly occurred at "X." It is not for us to show whence "X" received its infection, nor does it by one hair's breadth lighten the legal and moral liability of "X" and the milk company.

If the conclusions are correct, judging from this epidemic, the period of incubation, when milk is the cause, is from one to four days in most cases. Exact data are not available. According to the information at hand, "X" milk was last delivered in Evanston January 17. On January 18 there were twenty-four cases, but by January 22 there were only three, and thereafter the cases reported showed much smaller percentage of Depot A patrons.

This epidemic is not unique. In 1885, in the Marylebone district of London, there were sixty cases of scarlatina. It was found that the patients had just one thing in common—all used milk received from a model farm at Hendon. Mr. W. H. Power and Dr. Klein concluded that the fever originated in a disease of the cattle. In Dover the year previous a similar epidemic, it was agreed, came from infected cattle. In this county I find that there are numerous lesser examples in which observers supposed that the disease originated in cattle. In one case it was supposed to have come from drinking the water of a stagnant pond by the cattle. So far as I could learn, there was no evidence of disease among the cattle at "X."

In January, 1907, 63 cases of scarlet fever were reported in Boston, Cambridge, Somerville and Everett. In the following five days there were 485 cases. In three weeks the total was 717. It happens that the maximum was reached in Boston one day after that in the other places; in 84 per cent. of the cases the patients patronized one milk company, and the milk received by the company was retailed in Cambridge, Somerville and Everett one day ahead of Boston. This epidemic probably arose from a hitherto unsuspected case in a taster at the bottling plant.

In "the good old days" when the cow was turned loose in the morning, and herds were small, the danger of spread of disease through milk was not great. The time from the cow to the table was short, and one dealer had few patrons. Now, necessarily, the time is greater. At "X" one infected pail might easily infect five carloads. This puts on dealers and dairy men the necessity for far greater care. Stables must be more expensive. The expense of caring for the milk is greater. All this must be paid for, and we as physicians must teach the people this, as well as make demands on the dealer. A Boston dairyman who sold certified milk at 15 cents a quart found that he had lost money even at that price and quit the business.

If two bottling plants are located in one town the milk must be brought by wagon from a greater distance in order that each may get its full supply. The greatest danger is before the bottling plant is reached. It is not necessarily because of a "trust" agreement that we find only one bottling plant in a place. I strongly suspect that the recent cry of "trust" originates with such a farmer as Dr. Craven met one day. Dr. Craven demanded that suitable floors be put in the dairy barn, that it be made clean, and that proper provision be made for cooling the milk. The reply was that the business had been so conducted for twenty years. What was good enough for his father was good enough for him. Dr. Craven refused to permit this milk to be delivered in Evanston and was about to report the circumstances to Chicago. Now this farmer finds that he must quit the business or conduct it in a more cleanly and more expensive way, and so has complied with requirements. The added price of milk is to a degree a form of life and health insurance.

Finally, this epidemic shows the necessity for a thorough organization of health officials, local, state and national, so that no possible question of authority may delay investigation and action. It also suggests that state boards of health should not be appointed by a nonprofessional executive, but that the members should be selected by the local health officers of the various states.

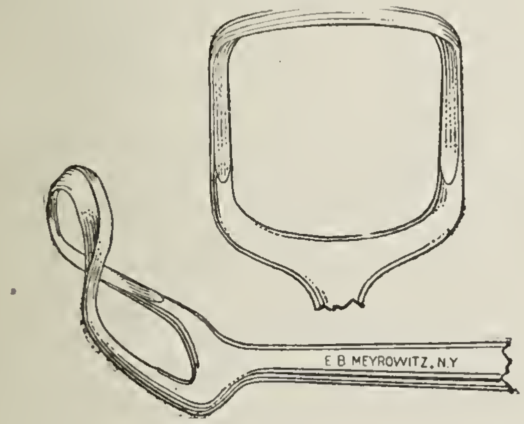
[EDITOR'S NOTE:—Comments on the above article, made by Dr. James A. Egan, secretary of the Illinois State Board of Health, will be found in the Correspondence Department of this issue.—ED.]

Clinical Notes

AN IMPROVED ADENOID CURETTE.

ARTHUR J. HERZIG, M.D.
NEW YORK CITY.

As it is almost impossible with the ordinary curette thoroughly to remove the lateral adenoid masses, I have devised an instrument which will enable the operator to do this completely at one introduction of the curette. The instrument is modeled after the Beckmann curette and differs from it in having two lateral cutting edges running half way down the sides. When the instrument is drawn along the hand no impression should be made on the skin by the cutting edges, hence any danger of removing or injuring the mucous membrane of the pharynx is done away with, and one is no more liable to cut the cartilages of the Eustachian tubes with this than with any other form of adenoid curette. The technic in using this instrument is slightly different from that required with other curettes. The patient is prepared for operation in the usual way, and the mouth gag is put in place; the curette is inserted as usual, but, instead of making downward cuts, lateral cuts are made, followed by a downward cut. In this way the lateral masses are first removed, and then the central mass.

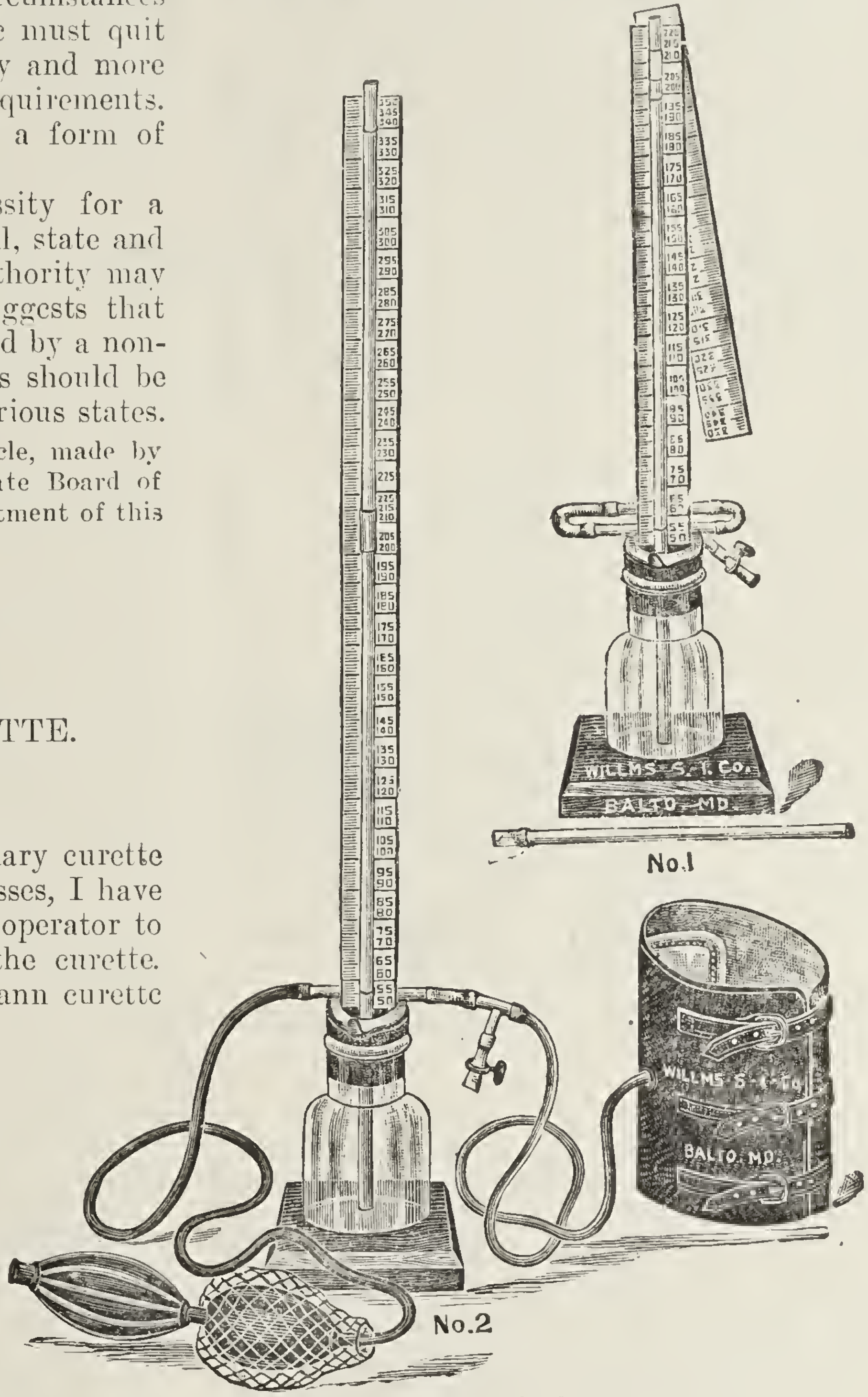


2040 Seventh Avenue.

PORTABLE BLOOD-PRESSURE APPARATUS.

K. H. BEALL, M.D. AND E. M. MASON, M.D.
FORT WORTH, TEXAS. MONTGOMERY, ALA.

Having need for a portable blood-pressure machine and not being satisfied with the instruments now on the market, we have had an apparatus made which we believe to be the most satisfactory and practical sphygmomanometer for clinical use that has yet been devised.



Portable blood pressure apparatus.

Our instrument is patterned after the Riva-Rocci, as used in the wards of the Johns Hopkins Hospital; this we have put into a compact, portable form, reducing the liability of breakage practically to nothing. The component parts of the apparatus are simple and inexpensive, therefore the cost of any necessary repairs would be trivial.

An explanation is hardly necessary, as the accompanying illustrations clearly show the instrument ready for use and closed for transporting. The manometer tube is in two sections, connected by a rubber cuff and the scale is hinged, the break occurring at the 195 mm.

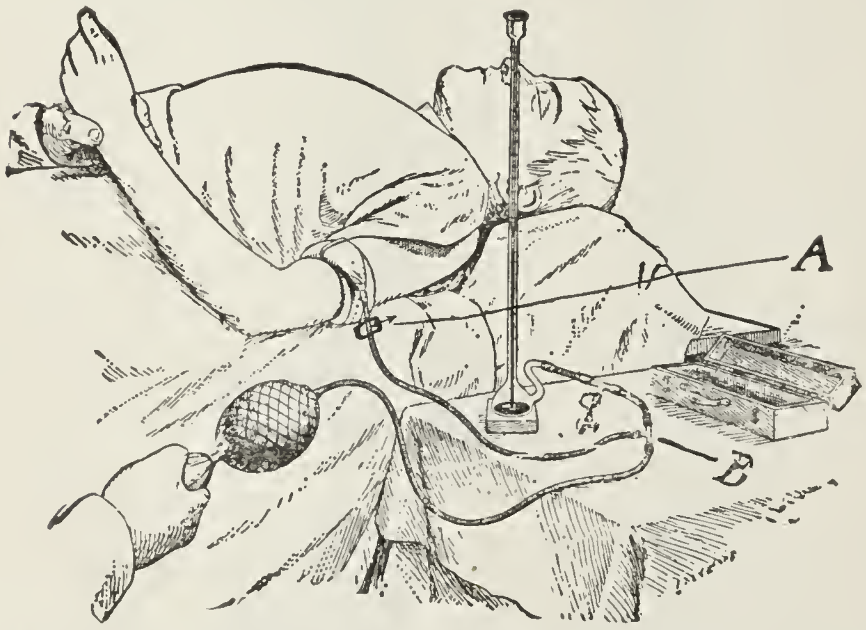
mark. In ordinary cases there is no need of putting on the extra joint of tubing. When not in use the manometer tube is closed by a glass plug, which fits into the rubber cuff, thus preventing the escape of the mercury.

If the apparatus is to be packed and unpacked frequently two small bull-dog clamps are handier for closing the tubes at the mouth of the bottle than is the rubber tubing shown in Figure 2. When the instrument is packed the arm cuff, which is a wide leather band, is folded around the tube and the two bulbs. The container measures only 3 by 4 by 9 inches.

AN ACCURATE METHOD OF CONTROLLING THE PRESSURE OF THE BANDAGE IN BIER'S HYPEREMIC TREATMENT.

GORDON WILSON, M.D.
Associate Professor of the Practice of Medicine, University of Maryland; Visiting Physician to the Maryland Hospital for Consumptives; Physician in Charge of the Municipal Hospital for Consumptives.
BALTIMORE.

Those who have made use of Bier's treatment in inflammatory conditions of the extremities know that one of the greatest troubles in carrying it out has been the difficulty in applying the Esmarch bandage with just the right amount of tension, and in my experience I have always found it necessary to see the patient fifteen minutes after its application to make sure that it was neither too tight nor too loose. Another factor that must be taken into consideration when we leave the bandage on all night is that there is, with sleep, a falling of the blood pressure, and on this account a bandage that was not too tight for the patient while he was awake might be too tight during sleep.



Method of employing the sphygmomanometer to control the degree of hyperemia.

While making some blood pressure observations with Cook's modification of the Riva-Rocci sphygmomanometer it occurred to me that by this means one could control absolutely and accurately the amount of pressure and feel sure that the bandage was applied correctly. It would also have the advantage that the bandage could be applied by a trained nurse or an untrained assistant in an accurate manner by simply instructing him or her how to take the blood pressure, then to allow the pressure to fall 5 or 10 mm. below systolic pressure, and tighten the screw cock at A (see cut) and disconnect the apparatus at B, leaving the inflated bag about the arm or thigh. In the short time that I have made use of this method I have found that with a pressure of 10 mm. less than the systolic pressure one can bring about a passive hyperemia that fulfils the conditions as defined by Bier, namely, that there should be warmth, cyanosis and enlargement, and that there should not be pain, blanching or coldness below the bandage.

In the discussion on Bier's hyperemic treatment at the German Surgical Congress two years ago, Bardenheuer,[1] of Cologne, called attention to the errors of technic, and said that only after he had exchanged assistants with Bier had his results been excellent. Klapp,[1] Bier's assistant, attributed the bad results reported in the discussion to lack of patience and technical errors. Smieding,[2] another of Bier's assistants, lays great stress on the importance of the right amount of pressure exerted by the bandage, and attributes the poor results obtained at times to the failure to apply the bandage just right.

ULCER IN MIDDLE THIRD OF THE ESOPHAGUS;

WITH ANATOMIC STRICTURE AND ESOPHAGOSPASM.

WILLIAM LERCHE, M.D.
ST. PAUL, MINN.

The scarcity of reported cases of this kind justifies, I think, the report of the following case:

History.—Mrs. S. E., age 56, xi-para, had one miscarriage; denies syphilis; had pleurisy and erysipelas many years ago. Five years ago she had a suppurating thrombophlebitis of the right leg, which kept her in bed for four months. About six months after this she had a choking spell while eating, and the food was regurgitated. Since then such spells have come on more or less frequently; sometimes there would be an interval of weeks between attacks. Both fluids and solids were promptly regurgitated; they never stayed down for any length of time. The attacks have become more and more frequent, although even now there are days when she has no trouble at all.

On two occasions, about three years ago, and one year and one-half ago, she brought up a considerable quantity of pus and fresh blood. For a couple of months after these attacks she was entirely relieved from any disturbance in swallowing. At times she can not get any food or drink down for two or three days. Soda water has relieved her at times. She is otherwise in good health.

Examination.—The patient has a pronounced anterior curvature of the spinal column. Examination of organs other than the esophagus, negative. The inlet to the esophagus admits a 14 mm. bougie with some difficulty. An obstruction is met with 32 cm. from the incisor teeth, which permits a 11 mm. bougie to pass. There is blood on the olive point on withdrawal. There is no obstruction below. Examination through the esophagoscope reveals a constriction at 32 cm., which is very narrow. On the right side, protruding from underneath the constriction, is seen a white, partly detached membrane, under which appears a bleeding ulcerated surface. The lumen is so narrow that I can not get a view of the part below the stricture, although the 11 mm. bougie passed through. On subsequent examinations, after dilatation, the ulcerated area is seen to extend nearly all around the wall, although it is most extensive on the right side. The esophagus above the constriction appears to be somewhat dilated, and measurements with my esophagometer show a dilatation of 60 cm.[1]

Repeated microscopic examinations of specimens taken from the edge of the ulceration only show inflammatory changes, leucocytes and small cell infiltration.

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[1] Abstract in Prog. Med., December, 1906.

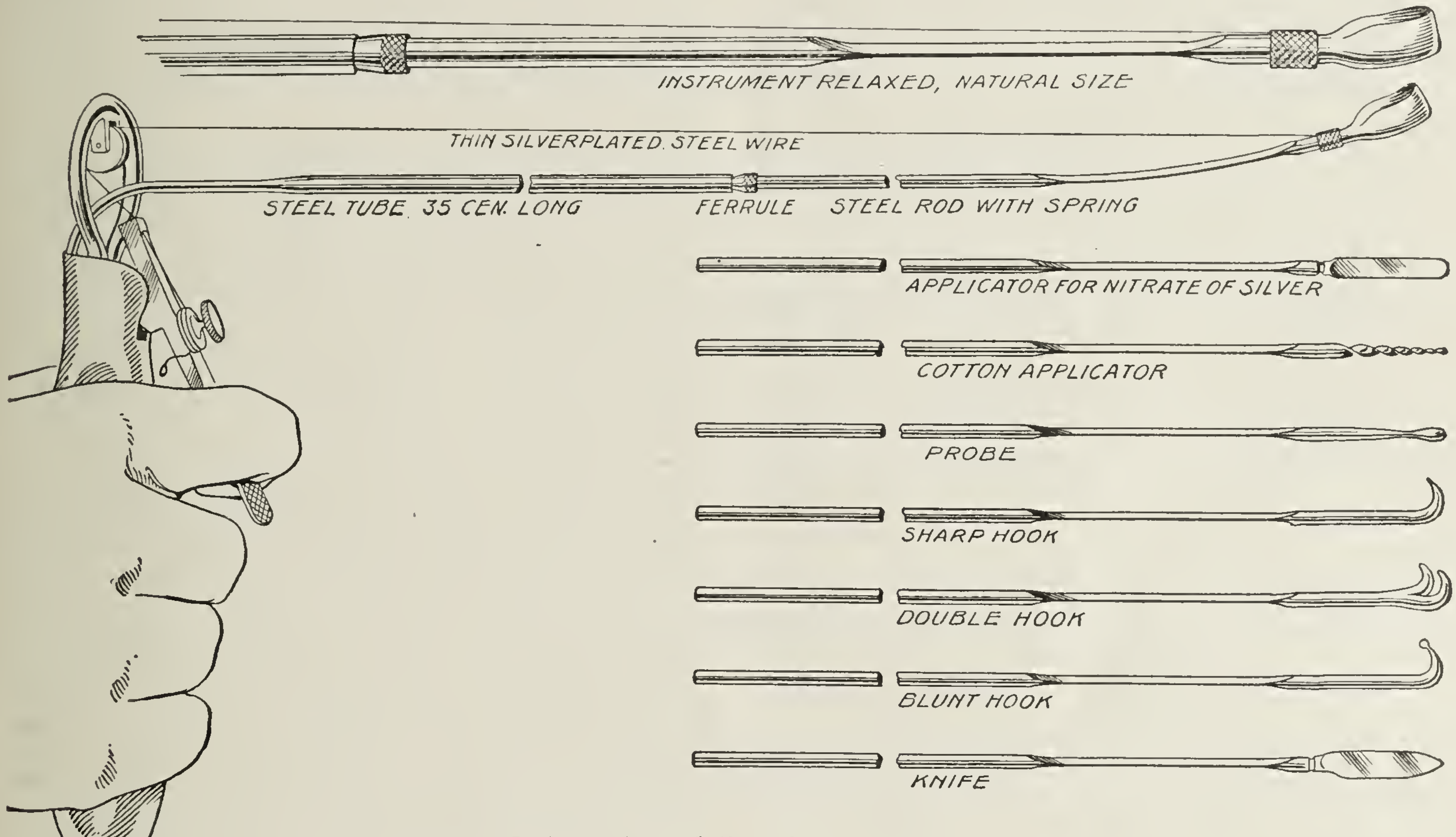
[2] Trans. Nat. Assn. Study and Prev. Tuberc., iii, 1907.

[1] A cut of this esophagometer with description, together with report of three new cases of cardiospasm, appeared in The St. Paul Med. Jour., April, 1908.

We have here an ulceration of the mucosa of the esophagus, with an anatomic stricture causing esophagospasm above the stricture.

The etiology of this ulceration can not be determined with certainty, but the discharge through the mouth, on two occasions, of pus and blood, followed by relief of symptoms for a couple of months, speaks for an abscess with subsequent sloughing of the mucosa.

Treatment.—I have treated this case by bi-weekly applications of nitrate of silver melted on the applicator, through the esophagoscope. Later I have applied strong tincture of iodin. At present there is a smooth scar. I have also stretched the stricture with rubber silk-bag-dilators, using the apparatus, which I have constructed for this purpose.[2] These rubber silk-bag-dilators are 10 cm. long and straight, not thicker at the ends, like those I use for stretching the cardia. The sizes increase by 1 mm. up to 20 mm. The stricture in this case I have dilated to 17 mm. The patient has now no trouble with swallowing and is in good health.



Instruments used through esophagoscope.

The difficulty in manipulating any long instrument through a narrow tube, without obstructing the view, has led me to devise a set of instruments with which to operate through the esophagoscope (see cut). By pressing the trigger with the forefinger the lower end, beyond the spring, only is moved. The instrument can be lengthened and shortened at will by telescoping it. When used the whole shaft should be held firmly against the wall of the esophagoscope, opposite the field of operation, and the trigger manipulated. In this way the long instrument does not obstruct the view, and the lower end is under the operator's control.

With the curette I have been able to remove specimens for examination a number of times without any difficulty. Applications can be made exactly to the spot desired by using the cotton applicator or the tip for the nitrate of silver. The blunt and the sharp hooks, and the double hook, are for the extraction of foreign bodies. Forceps of different shapes and a galvanocautery for the division of hard rubber toothplates are operated on the same principle. When it is desired to change tips the ferrule at the distal end of the instrument is pulled back, the steel wire is unhooked and the ferrule is turned, after which the tip is pulled out and replaced by another. To the handle is attached the steel tube, 35 cm. long, into which the tips fit. By moving the ferrule the instrument can be adjusted to the length desired. These instruments are also for bronchoscopic work.

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2. Am. Jour. Med. Sciences, October, 1907.

TRANSPOSITION OF ABDOMINAL VISCERA.

FRANK K. BOLAND, M.D.
ATLANTA, GA.

I wish to report a case of complete transposition of the abdominal viscera, found in the dissecting room of the Atlanta School of Medicine.

The subject was a male negro, about 40 years of age, and, unfortunately, his history is not obtainable. He died of pulmonary tuberculosis, but no decided pathologic changes were visible except in the lungs. The heart was directed to the right, with the innominate artery on the left side. All the abdominal organs were transposed, the liver being on the left, the spleen on the right, the cecum and appendix in the left iliac fossa, etc.

In a case like this, presenting puzzling symptoms in disease, the easily found position of the heart might suggest the location of the other viscera.

Indications for Theobromin.—C. Alvarez publishes a clinical study of the action of theobromin in asystoly in the *Revista de la Soc. Med.*, Argentina, October, 1907. He thinks there is nothing to be compared with it for recent asystoly and for asystoly free from complications, especially when the kidney is sound, and in all cases in which the pulse rate shows little modification. The theobromin does not accumulate in the system, and it is less dangerous than digitalis, he thinks. Unless the pulse is extremely irregular, he gives theobromin the preference in every case of asystoly, changing to digitalis in case the desired effect is not obtained with the theobromin.

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[*For other information see second page following reading matter.*]

SATURDAY, APRIL 4, 1908.

RELIGIOUS THERAPEUTICS.

During recent years, and no doubt due to the increasing strain on the nervous system imposed by the economic and social conditions of the times, there seems to have occurred a marked increase in what are termed functional disorders of the nervous system. This group of diseases, indefinite in character, poorly classified, frequently confounded with organic troubles of various sorts, and requiring a treatment altogether different from the latter, is often a bugbear to the practicing physician. The reason is obvious. These disorders for the most part concern the mental state and in order to be properly managed a knowledge of psychology, normal and abnormal, is indispensable. It is not alone the trained neurologist and alienist who has to deal with this class of cases. By far the majority of them are first seen and treated by the general practitioner. It is a well-known fact that in no department of medicine is the average medical man so poorly trained as in psychopathology. In medical schools even to-day no adequate training is given in psychology. Little wonder is it, therefore, that the treatment of functional diseases is unsatisfactory. But physicians should see the reason and to a degree feel that they are not wholly without responsibility that patients of this class fall victims to all kinds of quackeries and cults. If the medical profession knew of a reliable treatment for functional disorders, Eddyism, for instance, could never have flourished as it has.

Because of the great increase in this class of diseases and the unsatisfactory condition of psychotherapy a widespread popular interest has been shown of late in this problem. Cults of various kinds have made tremendous strides, drawing their followers for the most part from the long established churches, so that even the latter are beginning to realize that something must be done.

As an example of an attempt to meet this problem in a practical way may be mentioned the work first started last year at the Emmanuel Church in Boston, and later undertaken at other cities, e. g., in Chicago by Bishop Fallows. In a recent number of *The Outlook*[1] Dr. Richard C. Cabot writes interestingly of this work and gives an account of the leaders, their methods and results. Also in *The World To-day*[2] Bishop Fallows tells of the work as carried on at his church in Chicago. Dr. Worcester and Dr. McComb, who first inaugurated and are at present conducting the work in Boston, received, it appears, their first suggestion years ago from Dr. S. Weir Mitchell, who believed that in certain cases the work of the minister of the gospel and the physician might be combined to advantage in the treatment of disease. In Boston the diagnosis and approval of a physician is required in each case in order to eliminate organic disease, and only so-called functional disorders are treated.

The psychical treatment is carried on by a system of education and training in autosuggestion, rest cure, work cure, psychoanalysis, etc. The patients report at regular intervals and direct personal attention is given. There are also social gatherings in the church, where suitable music is provided and from time to time addresses are given by eminent authorities on such questions as insomnia, nervousness, habit, suggestion, prayer and the like.

The results thus far, according to Cabot, are gratifying. Out of 123 cases in which the results are known, including neurasthenia, hysteria, alcoholism, sexual neuroses and psychoses, seventy-five have shown a distinct improvement. This is encouraging when one considers that many were chronic, stubborn cases often treated previously by several physicians. Bishop Fallows states that his results also are encouraging.

There is no doubt that in diseases like those mentioned much may be done by systematic psychic treatment, and one effective way of obtaining results may be appeal to the religious sense of the individual. Religion, of course, is here used in its broadest sense as the foundation and motive power of all that is worth doing and need not necessarily be restricted to Christianity as has been done in the work above mentioned. The same psychologic principles underlie other modes of treatment—faith healing, Eddyism, Dowieism and numerous other beliefs. But the method followed in Boston is a decided step in advance of most systems that attempt to heal, in that it requires the diagnosis of a physician. The leaders have a profound respect for medicine, believe in the use of drugs and other familiar therapeutic measures whenever indicated, and attempt to work in cooperation with rather than against the medical profession. They recognize the limitations of suggestion as a therapeutic agent, and on this account the work is to be commended.

FRESH AIR IN THE PREVENTION AND TREATMENT OF DISEASE.

There is a growing realization of the value of fresh air as a therapeutic agent. There is no doubt that many of the respiratory complications which play such havoc among patients suffering from exhaustive diseases are effectually prevented by the free admission of air to the sick room. While we have lost most of our fear of air as a producer of disease, it is not generally realized that the fresh air treatment has been a recognized and applied therapeutic measure among at least some members of the medical profession for the better part of a century.

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[1] Feb. 29, 1908.

[2] March, 1908.

Attention was called in a recent editorial[1] to the fact that one of the prize essays in the early days of the Medical Society of the State of New York suggested the advisability of cool, fresh air directly admitted to the room as a therapeutic measure in typhoid fever, and it stated very clearly the benefits that had been observed from this method of treatment. If the experiences at Bellevue Hospital for the last hundred years were to be collated it would be found that practically every ten years some thorough-going clinician has suggested the advisability of the fresh air treatment for patients suffering from exhaustive diseases.

A typical example of this is to be found in the case of one of the most distinguished members of the medical profession of the preceding generation, Dr. Alonzo Clarke. In the story of his life, written by Dr. Ellsworth Elliott,[2] the following paragraph shows what Dr. Clarke was doing with his typhus fever patients at Bellevue between 1850 and 1860. The lesson it contains deserves to be taken to heart by every physician who sees much of exhausting febrile disease and wishes to avoid respiratory complications. "It is interesting to read how he managed typhus fever in Bellevue Hospital. There were 250 cases constantly under his care, and as many more under the care of his colleagues. The mortality was great. Precautions against the draughts of air, for fear of pneumonia, were carefully adopted. Dr. Clarke, not having this dread, ordered that there should be the freest ventilation, with scrupulous cleanliness. Although it was winter, the windows were removed, stoves were placed before the open spaces to raise the temperature of the incoming air, clothing was increased, stimulants were given in moderate quantities, and other medicine mostly dispensed with. Of the 250 cases not a death occurred in the period of a fortnight. In two weeks they were convalescent. In other wards of the hospital where the management was unchanged the mortality was undiminished."

Evidently the idea of fresh air for fever and respiratory disease is not new, and it is to be hoped that in the vicissitudes of medical opinion our growing enthusiasm for it will fasten it securely to therapeutics and prophylaxis for all time.

FURTHER OBSERVATIONS ON THE GENESIS OF GALLSTONES.

Recently the work of Kramer, Gérard, Baldwin and Lichtwitz on the origin of gallstones was reviewed in these columns.[1] Kramer was able to produce artificial gallstones in the test-tube by inoculating pure bile with *B. coli* and *B. typhosus*. The constituents of the stones, he stated, originates from the bile and is not due to an he stated, originate from the bile and are not due to an gall tract. He did not obtain the constituents of stones from bile inoculated with staphylococcus nor from sterile bile on long standing.

Continuing the work along these lines, Baemeister[2] has added some new facts which are interesting and which he uses to explain the properties of gallstones and their occurrence under certain conditions. He found that *B. pyocyaneus* and *B. proteus,* as well as *B. coli* and *B. typhosus,* cause a precipitation of cholesterin, and also that on long standing the cholesterin separates out in sterile bile. In filtered bile it does so less rapidly than in unfiltered bile.

He was able to follow the successive steps in the process of cholesterin crystal formation with the microscope. If bile stands a long time, there appear droplets of myelin, at first extremely minute, gradually increasing in size and forming amorphous clumps of cholesterin. Fine needle-like crystals and also the flat typical crystals of cholesterin separate from the droplets directly or from the larger masses. This process may occur in sterile bile and in infected bile; in bile that contains epithelial cells the process proceeds much more rapidly. The author is therefore led to believe that the formation of cholesterin depends on autolysis of the bile, which process goes on slowly in sterile bile and is accelerated by the presence of protoplasmic bodies, especially epithelial cells and bacteria. This view is essentially different from that of Naunyn, who considered infection and desquamation essential, and it brings us back to the ideas of Thudichum, who fifty years ago explained the origin of gallstones on a purely chemical basis by assuming a disintegration of the bile with the formation of cholesterin and other substances.

The occurrence of myelin droplets (fluid cholesterin) in the epithelial cells as observed by Naunyn, Aschoff holds is due to the resorption of cholesterin from the bile by the cells and is not a result of the cell metabolism as has been assumed by so many.

Baemeister contends that in most cases the first stone arising in the gall bladder is a cholesterin stone and due to stagnation of the bile. This furnishes favorable conditions for bacterial infection. When this occurs there arises as a result of the inflammatory process a marked proliferation of the mucous glands in the wall of the gall bladder and consequently a marked increase in the secretion of mucus. This mucus is rich in lime salts and furnishes the material for the formation of new stones and of layers on the surface of the cholesterin stones already present. This explains the occurrence of one large cholesterin stone often at or near the opening into the duct and many smaller stones rich in calcium in the fundus of the gall bladder. It also explains the nearly pure cholesterin nucleus often found in stones and the superimposed layers rich in lime salts. This view again differs essentially from that held by Naunyn, who assumed that the cholesterin stone was formed from the stones rich in calcium salts by infiltration of cholesterin and the displacement of the lime salts.

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[1] Our Forefathers' Knowledge, The Journal A. M. A., Feb. 8, 1908, 454.

[2] Trans. N. Y. State Medical Society, 1887.

[1] The Journal, March 14, 1908, p. 880.

[2] Münch. Med. Wochschr., 1908, Nos. 5, 6 and 7.

The work of Baemeister, together with that of Kramer and Gérard, appears to contain real contributions to our knowledge of the origin of gallstones. Its chief value is in showing the significance of stagnation as the essential factor in the production of cholelithiasis and cholecystitis. To analyze more thoroughly the causes of this stagnation and to remove them are now the problems at hand.

THE FOOD AND DRUGS ACT AND DR. WILEY.

The Food and Drugs Act, the most important of the laws passed by Congress in recent years, is largely the result of the energy, persistency and especially the courage of Dr. H. W. Wiley, chief of the Bureau of Chemistry of the Department of Agriculture. On this bureau rests the responsibility for the enforcement of the act, or at least for the determination of certain fundamental questions underlying its enforcement. These questions, in the main, are technical and the manner in which they are decided has a very direct bearing on certain vested and commercial interests. It is not strange, therefore, that much opposition has developed on the part of some of these interests against the tentative decisions of the Bureau of Chemistry. Dr. Wiley has maintained that certain preservatives, which in the past have been added to many of our common articles of foods, are injurious to health and that their presence, therefore, constitutes adulteration in the meaning of the act. On the other hand, the canners of fruits and vegetables, meat-packers and others affected, assert that there is no evidence to support such rulings. They maintain, for instance, that the results of the experiments with the so-called "poison squads" are too indefinite to settle the questions here involved. A number of "experts" have come forward to help the manufacturers in their argument, and a somewhat voluminous literature has developed, especially in the trade journals. Appeals have been made repeatedly, not only to the Secretary of Agriculture, to which department the bureau belongs, but even to President Roosevelt. It is not surprising that both of these officials have found themselves unable to pass on the merits of these purely technical questions. In this dilemma the President has appointed a commission of five men experienced in chemistry, pharmacology, pathology, etc., to go over the various subjects in dispute and to render such advice as may be called for to settle the questions at issue. This board of referees is constituted as follows: Professors Ira Remsen, Baltimore; John Harper Long, Chicago; Christian A. Herter, New York City; Russell Henry Chittenden, New Haven, Conn., and Alonzo E. Taylor, San Francisco. The selection of such men is a guarantee that the advice given will be unprejudiced, wise and based on scientific and demonstrable data.

Unfortunately, the fact of the appointment of this board has been utilized by the enemies of Dr. Wiley in an effort to discredit him. Numerous articles have been published in trade journals picturing the chief of the Bureau of Chemistry as a fanatical tyrant who will now be overthrown, and intimating that this board has been appointed to "down Wiley," etc. It will be noticed, however, that the most vociferous of these journals are little better than house organs for certain industries, and the value of their opinions, therefore, should be discounted accordingly. Unfortunately, however, many newspapers have been misled by these special pleaders into making the same statements and thus, in turn, misleading the public. One of the individuals misrepresenting the reasons for the creation of this board, and most active in doing all he can to prejudice the public against Dr. Wiley, is a representative of the Pacific Coast Borax Company, who sometimes signs himself "H. H. Langdon" and sometimes "H. L. Harris." This man is losing no opportunity to get something in the newspapers that will carry the impression that Dr. Wiley is to be forced to resign if he does not resign voluntarily. The reason for such misrepresentations is not hard to find. Should one of Dr. Wiley's rulings be enforced, the people of the United States might be relieved of the necessity of consuming with their food-stuffs the vast quantities of borax compounds now used, and the business of the Pacific Coast Borax Company might suffer as a result.

It may be that Dr. Wiley's views in some respects are unnecessarily extreme, as is asserted by some manufacturers. But those who know him well, who know how thoroughly he has investigated the many-sided questions involved, and who appreciate his large knowledge, obtained from actual observations of the adulterations and frauds connected with foods, drugs and liquors, believe otherwise. Of his capability, energy, courage and, above all, honesty of purpose, no one entertains a doubt. The President of the United States, it is well known, has paid tribute to the great service which Dr. Wiley has rendered the country in working for the food law and other measures looking to the health of the public, and it is certain that President Roosevelt did not create this board to "down Wiley."

The personnel of the new board is sufficient guarantee of both its ability and its honesty. If Dr. Wiley's decisions are fair and just and are based on demonstrable scientific fact, they will be indorsed by the board. If, on the other hand, the board can show that any of his views are scientifically unsound, Dr. Wiley will be the first man to admit it. This board has been created to cooperate with the chief of the bureau of Chemistry and not to antagonize him or to nullify his decisions.

THE EASTERN NEW YORK CUSTODIAL ASYLUM.

The commission appointed about twelve months ago by Governor Hughes to select a site for the Eastern New York Custodial Asylum, has submitted its report, which makes a comprehensive and satisfactory document. This body appears to have gone about its task with a singularly clear conception as to what is needed, since no feature has been overlooked or omitted. The commission is to be greatly commended for calling to its aid the advice of expert engineers and landscape architects to pass on some of the many important practical problems that lie at the very foundation of institutional construction. Mr. John C. Olmsted, of Brookline, Mass., and Mr. Emil Hinchling, architect and engineer respectively, have given good advice, which we hope may not be lost when the work of building begins.

An important recommendation is that about twelve hundred acres of land shall be acquired for the new institution. This is commendable, and it would be better if the acreage could be raised to 1,500 or 1,800. An ample supply of good water is not omitted. Sites have been secured in the past that were devoid of this essential, and before work could be commenced, the state had to pay out a very large sum of money for that which should have been incorporated in the original purchase.

A series of resolutions passed at the meeting of the Medical Society of the County of New York, March 23, 1908, embodies some excellent reasons for cordially supporting the proposed measure. It appears that the existing state custodial institutions at Rome, Syracuse, Newark, and Sonyea, respectively, with a collective authorized capacity for only 3,183 inmates, now house 3,250; that over 1,000 applicants are on the waiting list, and that 1,808 patients are at present improperly confined in state almshouses, not to mention the 20,000 persons in private homes, who should be under state custodianship for their own and the community's protection. Moreover, the location selected has the great advantage of being easily accessible from New York by boat and rail at a cost not exceeding $1 for the round trip, a matter of great importance, not only to the department of public charities, which is at present mulcted in $25 transportation for each patient sent under charge of an attendant to the Sonyea Colony, but also to the distressed friends, for most of whom, residing as they do in the vicinity of Greater New York, the expense attendant on visiting patients is prohibitive. That this is no imaginary hardship is demonstrated by the constant pitiful pleading of friends to have their sick ones retained in the accessible city institutions instead of being sent away out of reach.

So pressing is the need for this new institution that it is to be hoped nothing will stand in the way of its development. At the same time no beginning should be made until a complete topographical map of the entire plant shall have been made locating each house, all roads, establishing the various groups, fixed grades, sewer and water lines, and till provision is made for amply securing the one and disposing of the other. In other words, let the institution be built on a systematic plan—one that may be made to include the developments.

Finally, let the legislation omit the word "asylum," which is obsolete and harmful in the works of modern charity, and change the name either to the one recommended by the commission, "The Haverstraw State Colony," or preferably to one that will perpetuate in New York State the memory of a worthy citizen. We suggest the name of Seguin, who was a useful worker in the field of the training of backward children.

SOUTH CAROLINA PRACTICE ACT AMENDED.

The South Carolina Legislature has passed the amendment to the medical practice act asked for by the South Carolina Medical Association. The amendment authorizes the State Board of Medical Examiners to revoke licenses when just cause is shown. The "five-year clause" in the old law, exempting physicians who have been engaged in practice for five years, has been eliminated. Osteopaths are required to qualify before the State Board of Medical Examiners, under the same conditions as any other persons who wish to treat the sick, except that they are exempt from examination in materia medica, therapeutics and major surgery. These changes greatly strengthen the medical practice act of the state. The significant feature is that exactly the same bill was introduced a year ago and failed of passage, although the personnel of the legislature of 1907 was practically identical with that of the legislature of 1908. Commenting on these facts the *Journal of the South Carolina Medical Association* says: "A great transformation has taken place in the attitude of the legislators in regard to medical legislation. . . . For many years this legislation has been urged. The profession has begged and pleaded for its enactment, but until now to no avail. . . . To whom but the recognized medical profession can the statesman turn for aid in the solution of problems affecting the public health? . . . Our legislature has had the wisdom to recognize this truth, and in a spirit of far-seeing and broad-minded patriotism it has deferred to our medical profession for its judgment on these momentous questions and in so doing it has wrought even better than it knows, and has earned the gratitude of every citizen from the greatest to the humblest." The physicians of South Carolina are to be congratulated on the results achieved, and especially on the closer relationship which now exists between the medical profession and the representatives of the people—the legislature. This united action of the profession, combined with the cooperation of an enlightened public, gives promise of better conditions in the future in public health affairs.

A LAYMAN'S VIEW OF OSTEOPATHIC LEGISLATION.

It is interesting to note the comments made by the lay press on proposed legislation along medical lines. Not infrequently the editor strips the question of all scientific aspects and states the case in the language of common sense. The March *Journal of the Medical Society of New Jersey* quotes as follows from an editorial in the *Asbury Park Journal* on the proposed osteopathic bill: "The rule qualifying doctors to attend patients should be based on a thorough knowledge of the fundamental laws of medicine and surgery. The practice by the osteopaths of manipulation should not excuse them from knowledge of the general subjects on which allopaths and homeopaths are examined, and their plea to be called doctors without examination by the state board is not deserving of support." This point should be emphasized wherever an attempt is made to give some sect the rights and privileges of physicians without requiring them to give evidence of possessing the necessary qualifications. If applicants can demonstrate that they possess the same knowledge of fundamental subjects required of medical practitioners, there can be no legal objection to their practicing any form of treatment on which they and the patients agree. The inconsistency of the osteopathic demand is that they ask recognition as legally qualified practitioners and at the same time demand the right to specify on what subjects they shall demonstrate their knowledge. By the same reasoning any sect or cult might arise and demand examination on subjects of its own devising as a basis for legal recognition as scientific practitioners of medicine. If osteopaths or members of any other sect desire to secure the rights and privileges of legally qualified physicians let them demonstrate possession of the same degree and quality of knowledge demanded of all other practitioners.

A NOSTRUM TRUST.

The statement that a New York firm of lawyers is circularizing proprietary medicine owners, on behalf of "a group of gentlemen who are organizing a corporation with substantial financial backing to acquire the good will and business of a number of proprietary medicine concerns" has been given wide publicity. The secondary aim of this project—the primary aim, of course, being the exploitation of the credulity of the public when in that state of hyperesthesia induced, as is well known, by protracted or serious illness—appears to be twofold, viz.: to lessen expenses, by centralization, as regards rent, cost of distribution, advertising, by the elimination of the middleman, etc., and to substitute for "the present isolated, and, in many instances, antagonistic interests," a combination "sufficiently strong to meet such unfriendly criticism as has been the lot of many proprietary articles in past years." The "detailed plan of organization" published contains one or two frank admissions that we are glad to welcome, and we hope that the widest publicity will be given to them. The statement is vouchsafed that "*next to the merits*" (italics ours) "of the preparations themselves, judicious and elaborate advertising is the most vital element of a successful remedies business." The restraint and moderation of this claim, however, are somewhat marred by the succeeding admission that "the patent medicine business is one which prospers by the use of advertising or *perishes through lack of it.*" (Again italics ours.) This admission that advertising is absolutely essential to the success of the "patent medicine" business clearly demonstrates that for reasons of policy the "group of gentlemen" put the cart before the horse in making "judicious and elaborate advertising" secondary to the "merits" of the preparations themselves, for it is well known that some highly prosperous (and well-advertised) nostrums are altogether devoid of any merit whatever.

THE AMERICAN HEALTH LEAGUE.

Some time ago we referred to the fact that the Public Health Defense League was about to publish a journal. This league has now amalgamated with the American Health League, and the first number of *American Health,* its official organ, is now before us. It contains, among other things, the address of Prof. Irving Fisher and part of the address of Prof. W. H. Welch at the meeting of the American Association for the Advancement of Science, last January. The present membership of the league is about 3,000. The minimum subscription of $1 per annum places it within reach of all. Applications for membership should be forwarded, with remittance, to the Treasurer, Title Guarantee and Trust Company, 176 Broadway, New York City. It is desirable that as many physicians as possible, by joining the league, should lend their material and moral support to an organization that is likely in the near future to become a powerful factor in the betterment of the national health.

Medical News

ARKANSAS.

State Society Meeting.—The Arkansas Medical Society meets in Little Rock, May 13, 14 and 15, under the presidency of Dr. Charles C. Stephenson, Little Rock.

Hospital Notes.—The new Florence Infirmary, Pine Bluff, was turned over to its lessees, March 1. The building is a three-story brick structure, containing 46 rooms, and has been constructed at a cost of nearly $20,000. Dr. Arthur C. Jordan is in charge of the institution and Dr. John S. Jenkins is his assistant.

Personal.—Dr. Thad Cothern, Walcott, recently took a poisonous tablet by mistake, and is still suffering from the effects. ——Dr. Henry N. Dickson, Paragould, sustained a broken leg in a runaway accident, February 24.——The barn of Dr. William H. Moorhead, Stuttgart, and contents, valued at over $3,000, was destroyed by fire, March 12.

CALIFORNIA.

State Medical Society Meeting.—The Medical Society of the State of California will meet April 21 to 23 at Coronado Beach Hotel, Coronado, San Diego County.

Communicable Diseases.—Several cases of measles are reported in Antioch.——An epidemic of measles, chickenpox and scarlet fever has caused the closure of the grammar school of Redwood City for ten days.

May Donate Library.—At a recent meeting of the Pasadena Branch of the Los Angeles County Medical Society, the question of loaning the medical library, at present kept in the Public Library Building, to the Barlow Medical Library, Los Angeles, was brought up. The plan is to donate the library to the Barlow Library, or to loan it until the administration building of the Pasadena Hospital is completed.

Plague Situation.—The following official statement was given out March 18, signed by the mayor and Surgeon Blue of the Public Health and Marine-Hospital Service: "The undersigned are gratified to state that the plague situation is very much improved and is still improving, there having been since the first day of January of the present year but two bacteriologically verified and but three clinical cases of plague, with only one death, since the beginning of the year. There is every prospect that by the time the fleet anchors in the Bay of San Francisco the city will be cleaner than it ever has been in its history."

Personal.—Dr. Elmer E. Stone, superintendent of the Napa State Insane Hospital, was exonerated, March 17, by the board of directors, on the charges made against him. Dr. George W. Ogden, fifth assistant physician at the hospital, has left the institution.——Dr. Homer C. Edwards, Oakland, who recently underwent a serious surgical operation, is convalescent, and has resumed practice.——Dr. Conrad Richter, San Francisco, has been appointed surgeon of the Pacific Mail steamship *China*, succeeding Dr. Cyril E. Lewis, transferred to the *Manchuria*, relieving Dr. Meadows, resigned.——It is understood that Dr. William A. Cundy, Pasadena, has received about $4,000, in the settlement of the estate of Mrs. Fanny Taylor, Long Beach.——Dr. Thomas J. Cox, Sacramento, was operated on for appendicitis at the Mater Misericordiæ Hospital, March 16.

COLORADO.

Northwestern Alumni Banquet.—The Colorado alumni of the Northwestern University Medical School, Chicago, held their annual banquet in Colorado Springs, March 21. Dr. Amos R. Sollenberger, Colorado Springs, is president of the Association; Dr. Willard Lucas, Pueblo, vice-president, and Dr. C. Blaine Ackley, Denver, secretary. Dr. D'Orsay Hecht was the representative of the faculty at the banquet.

Personal.—Dr. Caroline D. John, Denver, who fractured her scapula, several weeks ago, has recovered and resumed practice.——Dr. John F. Roe, chief surgeon of the Rio Grande Hospital, Salida, for more than seven years, has resigned, to become assistant chief surgeon to the Rio Grande System, Denver, vice Dr. James B. Devlin, deceased.——Dr. Claude C. Keeler, one of the county physicians of Denver County, has been discharged, in order to reduce expense.

DISTRICT OF COLUMBIA.

Smallpox.—During the week ended March 21, 18 new cases of smallpox were reported in Washington. The patients were all negroes and were removed to the Isolation Hospital.

Personal.—Dr. Charles W. Franzoni and Thomas C. Smith were presented with loving-cups at a meeting of the Medical Society of the District of Columbia, March 18.——Dr. Charles S. White, superintendent of the Emergency Hospital, Washington, has tendered his resignation to take effect April 15. He is to be succeeded by Dr. Ernest F. Magruder.——Dr. Harrison Crook, Washington, was awarded a verdict of $4,476, March 13, against the Baltimore and Ohio Railroad for services rendered to victims of the Terra Cotta disaster. Dr. Crook sued the company for $6,361.

ILLINOIS.

Tuberculosis Prevention.—The Illinois State Board of Health has issued the seventh edition of its valuable circular on "The Cause and Prevention of Consumption." This circular is a practical guide for the consumptive and his associates, dealing little in generalities and theory, but devoting attention to the minor details of life, on which in reality, the protection of the well and the recovery of the sick depend. The circular comprises 60 pages of printed matter, and the subject matter is presented in clear and simple terms, so as to be easily understood even by those of only modest educational attainments.

Chicago.

Smallpox.—Of the 19 individuals who were taken to the Isolation Hospital during March, 17 were unvaccinated, and the other 2 had been vaccinated more than 35 years ago, and had not been revaccinated.

Contagious Disease Situation.—During the week ended March 28, 205 cases of measles, 105 cases of diphtheria, 84 cases of scarlet fever, 56 cases of chickenpox, 39 cases of whooping cough and 20 cases of typhoid fever were reported to the department, showing an increase in diphtheria of 30 cases, and in measles of 73 cases, and a decrease of 15 cases in scarlet fever.

Deaths of the Week.—The deaths for the week ended March 28 numbered 660, equivalent to an annual mortality of 15.89 per 1,000; 57 more than for the preceding week, and 84 fewer than for the corresponding week of 1907. Of the deaths reported, 104 were due to pneumonia, 83 to tuberculosis, 81 to heart diseases, 40 to violence (including suicide), 37 to nephritis, 34 to diarrheal diseases, 33 to nervous diseases, 28 to cancer, 25 to bronchitis, and 24 to acute contagious diseases. Of the latter, diphtheria and scarlet fever caused each 8 deaths, and measles and whooping cough, each 4.

New Tuberculosis Hospital.—On April 7 the people vote on a bond proposition, which includes plans for a new consumptive hospital, to be built by Cook County. The present institution at Dunning is to be turned over to the state. During 1907 and up to March 28, 1908, the Cook County Institutions cared for about 2,805 out of approximately 8,000 tubercular patients of the county, or about one-third. Of the 350 tubercular patients now cared for by Cook County, 40 are quarantined at the poorhouse, as beds elsewhere are unavailable. A hospital for late cases of tuberculosis surpasses all other measures in the fight against disease, inasmuch as it limits the contagion.

A Uniformed Health Department.—It has been decided to divide the city into six districts, each district being in charge of a medical inspector, who will devote his entire time to this work. All the employés of the department will wear a uniform after April 1. Those below the grade of medical inspector will wear a blue blouse, with a single row of distinctive brass buttons, and a black soft felt hat. The medical inspectors will wear a double-breasted coat, with velvet collar and brass buttons, with a single gold star on the collar, and a black soft felt hat. The ambulance surgeons will wear a red cross on the left sleeve. Heads of departments will wear the same uniform as the medical inspectors, with two stars on the collar, and the commissioner will have three stars and a white soft felt hat.

INDIANA.

Blow for Itinerants.—The city council of Fankfort, at its meeting March 8, passed an ordinance, levying a license of $20 per day on all transient merchants and $10 a day on itinerant and nomadic venders of medicine.

Want Law Enforced.—Members of the Fort Wayne Medical Society, at its meeting March 10, made an appeal to the mayor and the board of safety to enforce the city ordinance against spitting on the sidewalk, as the ordinance had been allowed to become a dead letter.

Personal.—Dr. Andrew J. Chittick, Burlington, is reported to be seriously ill and to have been taken to Indianapolis for an operation.——Drs. Clifford Hirshfield and H. K. Bonn have been selected as county physicians of the new Methodist Episcopal Hospital and Deaconess Home, Indianapolis, to be opened about May 1.——Dr. John G. Wishard, formerly of Indiana, chief of the medical staff of the Shah of Persia and chief surgeon of the Presbyterian Hospital at Teheran, has been visiting in Warsaw.——Dr. Carl Flucks, Saint Wendells, has been awarded a verdict of $2,000 against the St. Louis, Iron Mountain & Southern Railroad for injuries received Sept. 5, 1907, on a train of the defendant company, leaving St. Louis, in which Dr. Flucks suffered a fracture of five ribs.

Communicable Diseases.—Measles is reported to be epidemic in Terre Haute.——Measles and whooping cough are reported epidemic in and around Clay City.——The prevalence of smallpox in Linton has caused the mayor to order the closure of all schools and places of amusement and public gathering.——At Franklin, where 13 cases of smallpox have been reported, all of mild type, all schools and places of public gathering have been closed.——Seven cases of smallpox were discovered in one family in Gas City, March 15.——Scarlet fever and diphtheria have broken out in Benton.——Scarlet fever is reported epidemic in Lockport neighborhood.——Mumps is reported to be epidemic in and around North Webster.——Measles is said to be very prevalent at Seymour.——During February 200 cases of measles were reported in Montgomery County.——There are said to be 33 cases of scarlet fever in Fort Wayne.——There have been more than 30 cases of scarlet fever at Ligonier, but the epidemic is now said to be abating.——Several cases of scarlet fever, all of mild type, are reported at Benton, and all the churches and schools have been closed.——Scarlet fever, diphtheria and smallpox are reported from Wakarusa.——Diphtheria is said to be prevalent south of Middlebury.——The prevalence of diphtheria has caused the closure of the schools at Urbana and several district schools in the vicinity.——A number of cases of smallpox are reported in Blue Lick neighborhood.——Several new cases of smallpox are reported near Nappanee.

IOWA.

State Medical Society Meeting.—The annual meeting of the Iowa State Medical Society will be held at Des Moines May 20-22, instead of May 13-15, as previously announced. Headquarters will be held at the Savery.

Inspection of Medical Colleges.—A committee of the State Board of Health of Iowa, consisting of Drs. Albert C. Moerke, Burlington, Alfred P. Hanchett, Council Bluffs, and Bert L. Eiker, Leon, has just completed an inspection of the medical colleges located at Keokuk, Iowa City, Des Moines and Sioux City. The committee will report at the next meeting of the board, to be held early in April.

KENTUCKY.

Medical Board Meeting.—At the annual meeting of the medical board of Deaconess Hospital, Louisville, March 19, Drs. Gavin Fulton and David C. Morton were elected members of the board. After the meeting a banquet was tendered by the board of directors, when the general outlook of the hospital was discussed from various viewpoints.

Vaccination Suit.—Lucy Elam, operator of a machine for redrying tobacco in Lexington, has sued the city of Lexington, the board of health and Drs. Nathan R. Simmons and Thomas A. Shannon for $5,028, alleging damages to that extent through compulsory vaccination. The $28 is for loss of twenty eight days of labor at $1 per day, and the balance of $5,000 is for "bodily and physical pain and mental anguish."

Tuberculosis and State Board Bills Vetoed.—Governor Willson has vetoed the Watson bill, which was prepared by the State Board of Health under the direction of the secretary, Dr. J. N. McCormack. The governor stated that the treasury was too depleted to allow this extra expenditure. For the same reason the governor says that he will veto the bill passed by the legislature to establish a state sanatorium for tuberculosis. The bill was endorsed by the boards of health of the state, and by the greater part of the profession.

LOUISIANA.

Tulane Alumni Notice.—The alumni of the Medical Department of the Tulane University of Louisiana propose to give a Stanford E. Chaille jubilee on May 19 and 20, to celebrate the completion of the fiftieth year of his service as dean of the medical department. Professor Chaille retires from the faculty and deanship at the end of the current year. It is proposed to establish a Chaille Memorial Fund from the alumni and friends of the Tulane University, the funds obtained to be used for a dormitory for medical students and the revenue derived to be used for the support of a chair of physiology or hygiene, to be named after Dr. Chaille. It is hoped that a subscription of $15,000 or $20,000 will be made for this purpose.——All Tulane members who will attend the session of the American Medical Association, June 2 to 5, in Chicago, are urged to communicate with Dr. Hugh B. Williams, 100 State Street, with a view to the assembly of Tulane men during the session.

MARYLAND.

Anti-Christian Science Bill Signed.—The governor of Maryland on March 26 signed the bill abolishing the practice of "Christian Science" in Maryland. By the provisions of this bill it is made illegal for Eddyites to treat the sick by their methods if they make a charge for their services.

Personal.—Dr. Irvin M. Wertz, Williamsport, has been appointed physician to the Washington County Almshouse (Bellevue Asylum), vice Dr. William B. Morrison, Hagerstown, who has held the position for six years.——Dr. Samuel Clagett, Knoxville, has been appointed local physician for Frederick County for the Baltimore & Ohio Railroad.

State Society Meeting.—The annual meeting of the Medical and Chirurgical Faculty of Maryland will be held in Baltimore, April 28 to 30. Dr. Joseph D. Bryant, New York City, president of the American Medical Association, will deliver the annual oration. Two symposiums have been arranged, one on "Surgery of the Chest," and the other on "Modern Therapeutic Measures." Prof. E. F. Schaefer, Edinburgh, will deliver the Herter lectures at the Johns Hopkins University, April 27 to 30, and the members of the Faculty have been invited to attend. A banquet will be held at the Hotel Stratford immediately after the annual oration.

Baltimore.

To and from Europe.—Dr. J. Morris Slemons sailed for Europe March 27.——Dr. Francis C. Goldsborough has returned after a six months' stay abroad.——Dr. H. Barton Jacobs sailed for France March 25.

Thief Convicted.—"Dr." E. B. Ernst, claiming to be from Denver, Colo., is said to have been found guilty March 27 of stealing books and instruments from lawyers and physicians' offices, and to have been sentenced to seven years' imprisonment in the penitentiary.

No Mosquito Larvæ.—Dr. William N. Hill, chief of the "mosquito brigade," reports that as a result of the thoroughness with which war has been waged against the mosquito during the summer and fall of 1907, no mosquito larvæ are to be found within 20 miles of Baltimore.

Appropriation for Faculty Building.—The legislature has appropriated $25,000 to the Medical and Chirurgical Faculty of Maryland for the building of its new home. The faculty asked for $100,000 for this purpose.——The $32,000 appropriated by the legislature to the "regents of the University of Maryland" is to be divided between the University of Maryland Medical School, Baltimore Medical College, College of Physicians and Surgeons and the Maryland Medical School. These institutions have been receiving this amount from the legislature for several years.

MASSACHUSETTS.

Damages Against Physician.—In the case of Edward Lefebre, who sued Dr. Edward F. Gleason, Boston, for $10,000, for destroying the eyesight of one of his eyes, by an accidental gunshot wound, the verdict was for $4,500.

Physicians Organize.—Thirty physicians of Dorchester met recently and organized the Dorchester Medical Society, with Dr. Madison T. Thurber, president; Dr. Robert M. Merrick, vice-president, and Dr. Henry F. R. Watts, secretary-treasurer.

Hospital Notes.—The fourteenth annual report of the Melrose Hospital Association shows receipts for the year of $9,615 and expenditures of $9,268.78. The hospital building fund now amounts to more than $21,000, and there is a fund of $25,000 available to build the new modern building, with a special ward for children, on condition that a corresponding amount be raised in Melrose.——At the annual meeting of Franklin County Hospital board, Greenfield, Dr. Enoch G. Best, Greenfield, was elected president, and Dr. Charles L. Upton, Shelburne Falls, vice-president.

Personal.—Dr. Reginald Heber Fitz, Hersey professor of the theory and practice of physic in the Harvard Medical School, will retire from teaching at the close of the present academic year.——Dr. A. T. Shoonmaker has been re-elected a member of the Westfield board of health.——The Andover board of health has reorganized with Dr. John A. Leitch, chairman, and Dr. Charles E. Abbott, secretary. The new member, Dr. Jeremiah J. Daly, also qualified.——Dr. and Mrs. Frederick H. Packard, Belmont, are in Paris.——Dr. George Arthur Craigin, clinical instructor in pediatrics in the Harvard Medical School, has resigned, to take effect February 1.——Dr. Charles J. Dowling, Springfield, has been reappointed medical inspector of the public schools, vice the late Dr. Charles F. J. Kennedy.——Dr. and Mrs. John F. Welch, Quincy, have returned from St. Augustine, Fla.

MISSISSIPPI.

Campaign Against Illegal Prescribers.—The State Board of Pharmaceutical Examiners has inaugurated a campaign against illegal pharmacists and prescriptionists.

State Association Meeting.—The annual meeting of the Mississippi State Medical Association will be held April 14, 15 and 16 in Natchez, under the presidency of Dr. Robert S. Curry, Columbus. On the evening of the second day Dr. J. N. McCormack, Bowling Green, Ky., chairman of the committee on organization of the American Medical Association, will deliver an address on "Things About Doctors which Doctors and Other People Ought to Know."

A Narrow Escape.—The Davrok optometry bill came near being made a law by the legislature which has just adjourned, inasmuch as it passed the house without opposition, was defeated in the senate, but passed on reconsideration, after an explanation by the "scientists" present. It was again reconsidered, however, and indefinitely postponed after a discussion over an amendment exempting Confederate veterans from the workings of the bill. A few of the county societies passed resolutions against the bill, but the medical profession as a rule seemed apathetic.

State Board of Health Bill Passed.—The State Board of Health appropriation bill was passed by the state legislature March 10. This gives the board $5,000 a year for expenses and $2,500 a year to use in case of an outbreak of infectious or contagious diseases.——In the senate the recommendation of the State Medical Association to limit the membership of the

State Board of Health to ten members, who were to be named by that organization, was rejected. Under the existing law five members of the board are named by the association, and the remaining eight members, one from each congressional district, are selected by the governor.

NEBRASKA.

Smallpox.—Smallpox is reported to be prevalent at Avery, where 12 cases are under quarantine.

State Society Meeting.—The date of the Nebraska State Medical Association meeting, originally set for May 5 to 7, has been changed to May 19 to 21.

Sustained in Use of Pass.—Judge Thomas on March 13 directed a verdict against the State of Nebraska, in the case of Dr. David T. Martyn, of Columbus, who was being prosecuted under the state law, for accepting a pass from the Union Pacific Railroad. It was shown that Dr. Martyn had an indeterminate contract to do work for the railroad, with a salary of $25 per month and an annual pass.

Casualty Association Meeting.—The Physicians' Casualty Association organized six years ago in Omaha, held its annual meeting February 29, when it was reported that more than 200 claims, amounting to $40,000, had been paid for accidental injuries. The following officers were elected: Dr. De Witt C. Bryant, president; Dr. Dellizon A. Foote, vice-president, and Drs. Robert A. Gilmore, H. Leroy Crummer and Charles C. Allison, directors.

County Society Meeting.—At the annual meeting of the Otoe County Medical Society, held in Nebraska City, March 6, the following officers were elected: President, Dr. Arthur P. Ginn; vice-president, Dr. M. M. MacVean-Edmonds; secretary-treasurer, Dr. Frank S. Maxwell; delegate to the state society, Dr. Claude Watson; alternate, Dr. C. Frederick Stockert; and censors, Drs. William M. Neal, M. M. MacVean-Edmonds, all of Nebraska City, and Dr. Christian T. Gritzka, Talmage.

NEW JERSEY.

Filtration System for Burlington.—At a recent meeting of the Burlington city council it was decided to establish a gravity filtration system. The cost will be about $50,000.

New Health Board.—The state senate on March 11 passed a bill abolishing the State Board of Health and the State Sewage Commission and creating a new board, to be called the State Board of Health, to assume the duties of the two boards abolished.

Communicable Diseases.—During February, 17 cases of typhoid fever were reported to the Gloucester board of health. ——Measles is said to be very prevalent throughout Gloucester County.——The board of health of Cold Spring has ordered the various lodge halls closed on account of the prevalence of measles.

NEW YORK.

Attempt to Evade Civil-Service Law.—A bill has passed the assembly which seems to be an attempt to circumvent the civil-service law. This bill provides for an amendment to the laws of 1900 under which the State Sanitarium for the Treatment of Incipient Tuberculosis was established at Ray Brook. It is stated that the trustees of the institution shall have power to select as superintendent of the hospital "a well-educated physician, not a member of the board of trustees, a graduate of a legally chartered medical college, with an experience of at least six years in the practice of his profession." The trustees now wish to appoint a deputy superintendent who has not been in practice six years. The civil-service commission has sent in three names from its list of eligibles, from which the trustees have declined to make a selection.

The Vivisection Bill.—Arguments for and against regulating by law and legalizing by supervision experiments on living animals were heard on March 25 before the judiciary committees of both houses on the Cobb-Johnson and Lee-Davis bills. Eminent physicians from all parts of the state came out strongly against any law on the subject, while others, together with the representatives of many humane societies, urged that these bills might become law. These said that all they asked was that vivisection be taken out of the hands of untrained persons and medical students, and be left in the hands of eminent practitioners and scientists who would have a due sense of responsibility. The bill was amended eliminating the provision requiring the use of anesthetics in operations for the development of serum, as this feature had been much objected to by medical men.

New York City.

Banquet to Professor Koch.—A banquet will be given to Prof. Robert Koch, under the auspices of the New York German Medical Society, April 11, at the Waldorf-Astoria Hotel. Admission cards may be obtained from Dr. George H. Mannheimer, 60 East Fifty-eighth Street.

The Middleton - Goldsmith Lecture.—The Middleton - Goldsmith lecture of the New York Pathological Society will be delivered by Dr. Frank B. Mallory of Harvard University, at the New York Academy of Medicine, April 4, on "The Results of the Application of Special Histological Methods to the Study of Tumors."

Personal.—Dr. Adoniram Judson, after 30 years' services as orthopedic surgeon in the out-patient department of the New York Hospital, has resigned, to take effect April 2.——Dr. Edmund M. Devol, Brooklyn, is a beneficiary to the extent of $10,000 under the will of a grateful patient of that city. Dr. Devol expects to spend the summer abroad.

Vacancies in Dispensary.—It is announced that there are two vacancies at the genitourinary clinics of the West Side German Dispensary on Tuesday, Thursday and Saturday evenings, from 7:30 to 8:30. There is opportunity at these clinics for special work in cystoscopy, urethroscopy and catheterization of the ureters. Applicants may communicate with Dr. Abraham L. Wolbarst, 105 East Nineteenth Street.

Almost an Epidemic.—Scarlet fever and measles are almost epidemic in this city at present. These diseases have been so thoroughly kept under control that the board of health is loath to admit that they can assume epidemic proportions. This is the year for a preponderance of measles, but scarlet fever is not due until next year. March 23, 1907, there were reported 375 cases of scarlet fever, while on March 21 of the present year there were 961 cases. It has not been necessary to close any schools and the health department does not expect that this action will be necessary.

The Armstrong Bill.—The Medical Society of the County of New York has sent a letter to its members calling attention to this measure, which provides for the purchase of a site for an institution for epileptic and feeble-minded persons, near Haverstraw, Rockland County, 22 miles north of New York City, which may be reached by the regular boat from the Department of Public Charities. A copy of resolutions showing how necessary this step is for the welfare of New York City and for the profession is enclosed and the united and persistent efforts of the profession in securing the passage of the bill is solicited.

PENNSYLVANIA.

Contagious Diseases.—By direction of the State Board of Health, the Hazel township schools at Jeanesville were closed on account of typhoid fever. All the rooms and books will be fumigated, but the schools will remain closed until the health authorities deem it advisable to reopen them.——Wayne has an epidemic of children's diseases, including scarlet fever, chicken pox and diphtheria. The cases so far reported are of mild type.

Philadelphia.

Hospital Receives Portrait.—A portrait in oil of Dr. John H. Packard, chief surgeon of the Pennsylvania Hospital for many years, was hung in the hall of the hospital, March 27. It was the gift of the former resident physicians of the institution. The committee on presentation was composed of Drs. James Tyson, Thomas H. Andrews, Robert Le Conte and James C. Wilson.

Plans for New Hospital.—Ground will be broken in April for the foundations of the Phipps Hospital, which is to be on the north side of Lombard Street between Sixth and Seventh streets, one of the most crowded centers of population in the city, and in close proximity to Starr Garden Park. One reason why a site in a thickly populated section was chosen was due to the insistence of Mr. Phipps that the hospital should be located near those centers where tuberculosis most flourishes. The cost of the building and land will be about $500,000, and an endowment of the same amount will be necessary to maintain the hospital at the highest degree of efficiency.

Health Report.—The total number of deaths reported for the week ended March 28 was 555, an increase of 24 over the previous week, and a decrease of 10 from the corresponding week of 1907. The principal causes of death were: Typhoid fever, 13; measles, 6; scarlet fever, 10; diphtheria, 7; epidemic cerebrospinal meningitis, 3; consumption, 70; tuberculosis of the larynx, 5; tuberculosis meningitis, 9; cancer, 23; diabetes, 7; apoplexy, 11; paralysis, 8; heart disease, 42; acute respiratory diseases, 78; enteritis, 22; appendicitis, 6; Bright's disease, 53; premature birth, 16; congenital debility, 11; old age, 8; sucide, 3; accidents, 11; and marasmus, 5. There were 248 cases of contagious diseases reported, with 32 deaths, as compared with 288 cases and 34 deaths reported in the preceding week.

RHODE ISLAND.

Change in Date of Society Meeting.—The secretary of the Rhode Island Medical Society announces that the date for the annual meeting at Providence has been changed to May 26.

VIRGINIA.

Must Pay License.—In the general assembly March 4, the senate measure designed to exempt physicians from payment of a license fee, was finally defeated, after a stormy debate.

Health Bill Passed.—The Baker health bill, which has already passed the house, passed the senate March 6 by a unanimous vote. The bill which provides that the health department shall institute researches into the best methods to combat contagious and epidemic diseases, is one of the most far-reaching measures enacted by the present legislature.

Personal.—Dr. Charles H. Bunting, University of Virginia, has been appointed to the chair of pathology in the College of Medicine of the University of Wisconsin, Madison.——Dr. Otto C. Wright, Jarrett, was appointed secretary of the Southside Virginia Medical Association, at its joint meeting with the Petersburg Medical Faculty, vice Dr. Emmett F. Reece, Courtland.——At a meeting of the Fourth District Medical Society, March 3, Dr. Samuel A. Hinton, Petersburg, was nominated a member of the executive council.——Drs. W. Preston Hoy and John G. Rennie have been elected directors of the Petersburg Antituberculosis League.——Dr. Powhatan Schenck, Norfolk, has been appointed by the governor quarantine officer for the District of Elizabeth River and its tributaries.

GENERAL.

Decrease of Cholera in Philippine Islands.—Chief Quarantine Officer Heiser reports under date of February 25, that for the week ended February 8 the number of cholera cases reported in the city of Manila continued to fall, there being only 6 cases for this week, as compared with 13 for the preceding week and 41 for the week before. There were 5 deaths from cholera reported during the week. There has also been a reduction in the number of cases occurring in the provinces. The disease continues to occur sporadically in widely separated sections of the archipelago.

Coming Meetings.—The second congress of the American School Hygiene Association will be held at the Hotel Rudolf, Atlantic City, N. J., April 17 and 18, under the presidency of Dr. Henry Walcott, Cambridge, chairman of the Massachusetts State Board of Health.——The thirteenth annual meeting of the Association of Southern Railway Surgeons will be held in Birmingham, Ala., April 28 to 30.——The tenth annual meeting of the American Proctologic Society will be held at the Palmer House, Chicago, June 1 and 2, under the presidency of Dr. A. Bennett Cooke, Nashville, Tenn.

Medical Society of Missouri Valley.—The semi-annual meeting of this association was held in Lincoln, March 19 and 20, under the presidency of Dr. William F. Milroy, Omaha, Neb. An address on Medicine was delivered by Dr. Charles H. Hughes of St. Louis on "Psychiatry and Neuriatry of the Consulting Room, Sick Room and Court, and the Treatment of the Entire Patient in Medical Practice." The evening session, held in the College of Medicine of the State University, under the direction of the Lincoln Pathological Club, consisted of a series of clinical demonstrations, illustrated by stereopticon views and by experiments on dogs, representative of the present-day laboratory methods of teaching. After the evening session a smoker was given in honor of the visitors at the Lindell Hotel.

FOREIGN.

Home and School for Mentally Diseased Children.—A German exchange states that the first German sanatorium and school for psychopathic children is soon to be erected near Berlin.

Journal for Professional Affections.—A new periodical has been founded in Italy by Professor Pisenti to be devoted exclusively to questions in regard to professional affections and industrial accidents from the medical point of view. The title of the new journal is "La medicina degli infortuni del Lavoro e delle malattie professionali."

The Turin Bressa Prize Goes to Rutherford.—Every four years the Academy of Sciences at Turin awards the Bressa prize of 9,600 lire (nearly $2,000) for the most important scientific discovery during the interval. This year the prize was awarded to Prof. Ernest Rutherford of the University of Manchester, England, for his works on radioactivity, 1903-1906. Rutherford was professor of physics at Montreal until two years ago.

The Fleet at Rio de Janeiro.—The *Brazil Medico* comments on the presence of the United States fleet at Rio as demonstrating anew the wonderful success realized in that city in exterminating yellow fever. Conditions have always been peculiarly favorable at Rio for the persistence of yellow fever, and even after the means to exterminate it had been shown the world, the authorities and the populace did not dream of the possibility of applying them to Rio, which for half a century or more had been one of the most deadly endemic foci. Our contemporary attributes the victory to the science and energy of one man, Dr. Oswaldo Cruz, who organized the crusade against yellow fever and in five years carried it to successful completion. The completeness of the victory was shown by the arrival of the American fleet. Fifteen thousand non-immunes, in the heart of the summer season, arrived in the American fleet, anchored in the harbor, landed, gave themselves up to amusements, diversions and irregularities of all kinds and yet few scarcely even remembered that they were in what less than four years ago was an endemic focus of yellow fever, lurking in wait and especially deadly for recent arrivals.

LONDON LETTER.

(From Our Regular Correspondent.)

London, March 21, 1908.

Honor to Florence Nightingale.

The freedom of the City of London has been conferred on Miss Florence Nightingale. At her request the illuminated resolution presenting her with the freedom of the city, was closed in an oaken instead of, according to the ancient custom, a golden casket, and a check for 100 guineas was devoted for the furtherance of those objects to which she has given her whole life.

Preventing the Spread of Consumption.

The day schools subcommittee of the London County Council education committee suggest that the council should cooperate with the Paddington Health Society in a scheme which the latter has in hand for preventing the spread of consumption. The society asks the council to notify it of Paddington children suffering from consumption, so that they may arrange for the visitation of their homes with a view to showing the patients that by obeying the simple rules of health the spread of infection may be checked. When sanatorium treatment is ordered, the Society will endeavor to provide it. The education committee has decided to supply a medical register to each school, so that when a child is found by the school doctor to be suffering from consumption the name can be entered in this register, which will be submitted to the managers at each meeting. It is hoped that by this method the managers will be able to deal with the class of children referred to.

Typhoid Carriers.

In Great Britain attention has only recently been attracted to the "typhoid carriers" (persons in good health who harbor typhoid bacilli), described by German writers. Dr. R. W. Branthwaite, in a report to the government, has described a remarkable outbreak of typhoid at the Brentry Inebriate Reformatory due to a "typhoid carrier." From September, 1906, to November, 1907, 28 persons were attacked with typhoid. The cases occurred at irregular intervals and always in batches, three, four or five individuals sickening at about the same time, evidently from more or less simultaneous infection. The possibility of a typhoid carrier was entertained and inquiry showed that among the inhabitants of the institution 11 male inmates, 6 male attendants and 6 female inmates had at some time in their lives suffered from typhoid fever. The dairy maid was one of the 6 women who had suffered from the disease (6 years previously). Apparently she had completely recovered. She was removed from the dairy and was found to be harboring typhoid bacilli. The outbreaks started after her admission to kitchen work, in doing which she was able to contaminate the food and they became more virulent when she was given dairy work.

Therapeutics

[It is the purpose of this department to outline an up-to-date management of disease, to suggest scientific treatment for diseased conditions, and to present prescriptions that are simple, useful and palatable. Prescriptions are written in both the metric and apothecaries' systems, but the amounts of the ingredients are NOT exact translations of one system into the other, but quantities convenient for pharmacist and physician. It should be understood that solids are weighed in grams or fractions of grams, while liquids are measured in cubic centimeters; that a teaspoon holds five cubic centimeters, i. e., more than a fluid dram, hence a 100 cubic centimeter preparation will contain twenty doses.]

Cathartics.

Cathartics may be subdivided into laxatives, purges, salines, and irritants or drastics. The object for which a cathartic is used determines from which class the drug should be selected. The main difference between laxatives, purgatives, salines and irritants is that the members of the first three classes can rarely cause, even in large doses, anything more than free, profuse catharsis. The drugs under the irritant class can cause, sometimes even in small doses, irritation and even inflammation of the intestines, and an actual enteritis.

The indications for the use of a cathartic are:

1. To unload the bowels.
2. To relieve constipation.
3. As an eliminant.
4. To lower blood pressure.
5. To remove edema or exudates.

1. An evacuant should be given to clean out the intestines when there is an irritant in the bowels, as in acute intestinal indigestion; in intestinal colic, and in acute diarrhea. If the patient is seen in the evening the best purgative is, perhaps, calomel, in a dose of from 0.10 to 0.30 gram (2 to 5 grains), followed in the morning by a saline; or if a quicker action is desired, especially if the patient is seen in the daytime, a proper dose of Epsom salt, citrate of magnesium, a seidlitz powder, or a glass of some cathartic mineral water is the best treatment. One of the most valuable of purgatives is castor oil, especially for children. But perhaps there is no better treatment for a complete cleansing of the bowels than a dose of calomel combined with 1 gram of bicarbonate of soda, with the withdrawal of all food for a number of hours, and with a powder of bismuth (bismuthi subnitras) and salol (phenylis salicylas) for a series of doses, as bismuth 1 gram (15 grains) and salol 0.30 gram (5 grains), every two hours, for ten doses. After a longer or shorter interval, from ten to twenty hours, of abstinence from food, a bland, corrected diet should be instituted.

Rarely in children with intestinal indigestion small doses of calomel, as from 1/20 to 1/10 of a grain every hour until there is green purging, is good treatment. The calomel is supposed to have an antiseptic action in the bowels. If a minute portion of it is changed into corrosive sublimate as it passes through the stomach, some antiseptic action occurs. Such chemical change is, however, undesirable on account of causing irritation of the stomach, and nausea and vomiting. These small doses of calomel also cause intestinal irritation and often a troublesome diarrhea, and besides, the cleaning out of the bowels by any such treatment is slow. There is also danger of producing salivation and a good deal of weakness. In other words, much as such treatment is lauded by many clinicians, it is often objectionable, and, generally, if calomel is to be administered it should be given, in the proper dose for the age and condition, to act as quickly and completely as possible.

In obstinate constipation saline cathartics or various combinations of the more active cathartic vegetable drugs are needed. Before giving strong drastic drugs, however, especially such as produce irritation or much peristalsis, a decision must be made that there is no obstruction; in other words, that the condition is not an obstipation. If there is obstruction of any kind, active cathartics will make the condition worse. Reliance, in these conditions, should be on large colon injections of warm water or oil, and if unsuccessful, surgical procedure.

It is well to begin the treatment of all acute diseases, especially infections, with a cleaning out of the bowels by means of some simple purge.

The best purges are as follows: Calomel, castor oil, a saline cathartic.

The saline cathartics are: Magnesium citrate, magnesium sulphate, potassium and sodium tartrate, seidlitz powder, sodium phosphate, sodium sulphate.

Of course, a large dose of any laxative will act as a purge.

2. In chronic constipation laxatives only should be used; never the strong cathartics or purgatives, and the dose should be just sufficient, with a properly regulated diet, cold morning sponging of the body, abdominal massage, and physical exercises, such as walking or outdoor games or athletic work, and perhaps abdominal muscular exercises, as, altogether, to cause one good movement of the bowels a day.

If there are hemorrhoids, such drugs as cause pelvic congestion should be avoided. The same is true in pregnancy and in pelvic inflammations. Aloes and rhubarb, unless in small doses and combined with some modifying drug, are perhaps well avoided when these conditions are present.

It is sometimes best to give a small dose of a laxative three times a day, after meals instead of once a day, viz., after supper or at bedtime, the object being ordinarily to have a movement of the bowels directly after breakfast, which is the most convenient time and the best time for most people. This method of administering a small dose of a laxative three times a day is most satisfactory with a preparation of rhamnus purshiana (cascara sagrada).

If a patient has hemorrhoids or rectal pain, it is often a good plan to cause a movement of the bowels just before going to bed, as this precludes the probability of a fecal mass in the rectum causing congestion all night.

If there is plethora, liver or kidney insufficiency, or obesity, a saline laxative in the morning before breakfast is the best treatment.

The best drugs to use as laxatives, and perhaps in the order of preference, are as follows: Cascara sagrada, aloin, podophyllum, rhubarb, Carlsbad salt, other natural spring salts, Rochelle salt, Epsom salt, glauber salt, magnesia, sulphur.

3. In all toxemias, uremia, diabetic coma, blood poisonings of all kinds, quickly acting cathartics, as croton oil, elaterium, compound jalap powder, Epsom salt (and the activity is in the order named) are indicated. If a purgative is to be daily repeated, the milder salines should be used.

4. When there is cerebral congestion or pressure (in apoplexy, or when there is danger of it), the purgatives that cause large, watery stools, thus relieving arterial pressure, are indicated. The blood pressure in the head is always less than that of the rest of the system, hence the lower the systemic pressure, the lower that in the head. Saline laxatives are generally the best for this purpose, and should be given concentrated, or, if the action must be as soon as possible, a drop of croton oil in a little granulated sugar on the tongue is the best treatment.

In advanced arteriosclerosis a daily laxative, combined with a proper regulated diet and such other medication as is indicated, is good treatment.

5. A purge that causes watery stools is indicated when we wish to remove edemas and exudates. As many such cathartics, notably elaterium, are very depressing to the heart, they should be used with care. A concentrated solution, in proper dose, of one of the saline cathartics, is generally satisfactory, and to reap the most advantage from the action of such a solution the liquids taken should be restricted.

Drastic cathartics or irritants are: Colocynth, croton oil, elaterium, gamboge, jalap, scammony.

Myalgia and Joint Pains.

Although each physician has his own method of combating such pains, it will not be amiss to refer to a few good things said by Dr. S. Solis-Cohen, in *Merck's Archives*, May, 1901. He believes that for the immediate relief of severe lumbago or wry-neck nothing equals the intramuscular injection of atropin and morphin and he advises 1/60 of a grain (0.001 gm.) of the former (a large dose) and 1/6 of a grain (0.01 gm.) of the latter. He follows this hypodermatic treatment with the internal administration of some form of colchicum, as:

R.	c.c.		
Vini colchici radicis	25	or	fl℥i

Sig.: Ten drops, in water, every four hours.

Or:

R.	gm. or c.c.		
Colchicinæ salicylatis	012	or	gr. 1/6
Aquæ gaultheriæ	100		fl℥iii

M. et Sig.: A teaspoonful, in water, every four hours.

"In painful affections of the muscles and joints—rheumatic, rheumatoid, gouty, neuralgic and of unknown origin"—he has seen a great deal of relief caused by the external use of oil of wintergreen or oil of birch, as:

R.	c.c.		
Olei gaultheriæ	100	or	fl℥iv

Sig.: Rub frequently over the painful region.

Or:

R.	c.c.		
Olei betulæ	100	or	fl℥iv

Sig.: Rub frequently over the painful region.

Or, these are perhaps well diluted, as:

R.	c.c.		
Olei gaultheriæ		or	
Olei olivæ	āā 50		āā, fl℥ii

M. et Sig: Use externally, as directed.

Or:

R.	c.c.		
Methylis salicylatis		or	
Olei olivæ	āā 50		āā, fl℥ii

Sig.: Use externally, as directed.

Of course, in acute articular rheumatism friction or rubbing is contraindicated, and a cloth may be saturated with the above solutions and laid over the part and then covered with flannel or cotton.

Painful nerves are sometimes soothed with the following combination:

R.	gm.		
Mentholis	10		
Chloralis	10	or	āā, ʒiiss
Camphoræ	20		ʒv

M. et Sig.: Paint over the painful nerve.

He also speaks of the value of guaiacol painted over painful regions, and says that it is even more valuable if combined with wintergreen oil, and perhaps best in the form of an ointment. He also sometimes adds camphor, peppermint, and even mustard, depending on the amount of irritation he wishes to set up. He suggests the following combinations, subject to modification in each individual case, depending on the consistency and the amount of counter-irritation desired:

R.	gm. or c.c.			
Olei gaultheriæ	1			
Guaiacolis	1			āā, m. xv
Mentholis		50	or	gr. x
Adipis lanæ hydrosi	8			
Cerati	8			āā, ʒii

M. (Dispense in a tin tube).

Sig.: A small quantity (about the size of a pea) to be well rubbed in over the seat of the pain night and morning.

He finds this prescription of special value in neuralgic headache and intercostal neuralgia.

The following he finds useful in painful joints, especially in chronic gout:

R.	gm. or c.c.			
Olei gaultheriæ	1	50		
Guaiacolis	1	50		āā, m. xx
Camphoræ	1			
Mentholis	1			āā, gr. xv
Olei caryophylli		50	or	m. v
Glycerini				
Cerati				
Adipis lanæ hydrosi	āā, 5			āā, ʒi

M. et Sig.: A small quantity to be well rubbed in over the seat of pain.

Pharmacology

THE BROADER AIMS OF THE COUNCIL ON PHARMACY AND CHEMISTRY.

TORALD SOLLMANN, M.D.

Member of the Council, Professor of Pharmacology and Materia Medica at the Medical Department of Western Reserve University.

CLEVELAND, OHIO.

(*Continued from page 1055.*)

II. WHAT IS WRONG WITH THERAPEUTICS?

Doctors are supposed to be especially prone to disagree, but I doubt whether anyone can be found to take exception to the statement that therapy has not, during the last generation or two, kept pace with the other departments of medicine. A generation ago therapeutics was an art, promising to develop into a science. At present it can not be classed as an art, nor as a science; it can only be classed as a confusion.

Within the gates, we hear much clamor from the man who would substitute the laboratory for the bedside, and from the man who would substitute the bedside for the laboratory. One shouts valiantly for every new product of the advertiser's skill; another asserts boldly that the treatment of disease is a figment of the imagination. One praises baths as the modern elixir of life, another electricity, another radium. This one rests his faith in nurses, and this one in office furniture—and thus it goes. Without the gates, we see healers of various names, even more noisy, each shouting for his little cure-all, discordant in every thing but their attack on what they discern as the weakest part of medicine.

Is the condition really so bad as it appears? Is the confusion beyond remedy? If I believed this I would not waste my time in writing these papers. The only excuse for handling dirty linen is to clean it. I am so optimistic as to believe that the present turbidity of therapeutics is the turbidity of fermentation, rather than that of putrefaction. I believe that in this turbid medium crystals have been forming as nuclei for further elaboration—in other words, that considerable progress has been made, little as this appears to be the case. The only question in my mind is whether or not the fermentation is sufficiently advanced, whether it is time to apply the clarifying agent. I believe, however, that the attempt is bound to do good, at least by showing us where we stand and in what channels further efforts must be directed.

Of one thing we may be sure—no *one* of the discordant elements is the *whole* of therapeutics. What is needed to create order out of the confusion is not so much the appearance of some great genius. It is nothing more nor less than a proper attitude of mind—a fair, tolerant and broad spirit of earnest inquiry—sufficient interest in the subject to make us all inquire, think, and above all, *act* on our thoughts; and finally —*cooperation.*

The problems underlying therapeutics are so broad and ramified that no adequate solution can be hoped for unless *all* cooperate—every self-respecting member of the medical profession, big and little—the so-called leader and the private; the country doctor and the college professor; the press and the societies; chemists, pharmacists and manufacturers—all can and must contribute their quota to the solution of the problems to make the movement for better therapeutics successful. And the first step in this cooperation is the cultivation of the spirit which I have outlined. That is the clarifying agent which I would propose. And it seems to me that no one who has the true interests of his profession, and incidentally of himself, at heart, can afford to refuse his cooperation in this movement.

(To be continued.)

Air Disinfection—The Question of Pure Air Versus Purified Air.

The disinfection of rooms in which an infectious disease has occurred is a very important matter. The spread of the disease and the lives of other people are involved and the greatest care should be exercised to see that the agents used for this purpose are efficient. To lull the patient and the family into a sense of security by the recommendation of an inefficient agent for this purpose, either during the illness or after its termination, is very reprehensible. It is needless to repeat the well-known fact that efficient disinfection can not be carried out in a room occupied by the patient. Agents which kill germs in a certain degree of concentration fail to do so when they are diluted below that concentration, and while the organisms may be temporarily inhibited from growth they will again become active and virulent under favorable circumstances. This thought is suggested by the report, given below, of an investigation of the much advertised proprietary Vapo-Cresolene. In this particular instance, considering the injurious effect on the kidneys of cresol and other members of the phenol group, patients, especially children, suffering from infectious diseases, should not be compelled to breathe the vapor of such a drug unless the advantage to be derived is very great.

Applying the principle generally, it is certainly more rational to get rid of infected air by turning it out of doors than to attempt to kill the germs in it while the patient is still breathing it. It is difficult to conceive any reason for using chemical agents to purify the atmosphere of a room when an unlimited quantity of pure air is to be had at no greater expenditure of effort than the mere opening of a window.

Report on Vapo-Cresolene.

Humboldt, Tenn., Feb. 10, 1908.

To the Editor:—What can you tell me about Vapo-Cresolene?

G. W. Penn.

Answer:—Vapo-Cresolene has been examined in the American Medical Association's laboratory and the chemists' report follows:

According to the statements on the trade package, Vapo-Cresolene "is a product of coal-tar possessing far greater power than carbolic acid in destroying germs of disease." It is recommended as a remedy for a number of diseases, including croup, catarrh and diphtheria. According to the manufacturers, it should be used only in "the Cresolene vaporizer," which makes it "unequaled for the disinfection of sick rooms" and the "safest and simplest method of destroying infection and purifying the air." From the examination[1] we conclude that Vapo-Cresolene is essentially cresol and corresponds in every respect to cresol U. S. P. (Physician's Manual, page 36).

This report indicates that Vapo-Cresolene is a member of that class of proprietaries in which an ordinary product is endowed, by the manufacturer, with extraordinary virtues. The type is so common and has been referred to so frequently that but for the dangers attendant on the inhalation of any of the phenols, this particular product need not have been mentioned.

Examination of Proprietaries in Germany.

F. Zernik in an address to the German Pharmaceutical Association in Berlin, Jan. 9, 1908, reviews the principal proprietaries introduced during 1907, and comments on the results of their examination. Recently, the great commercial houses have facilitated the investigation of their products by furnishing information regarding the source, composition and properties of their preparations. In the main, this information has proved reliable, but not always. Zernik's examinations show the imperative necessity of impartial investigations of the products of even the most reputable firms. Such firms will be glad to acknowledge and correct errors, but Zernik notes another spirit as prevalent to some extent in the commercial world.

That reports of irregularities in their products should be unpleasant to the manufacturers is quite natural, especially as these reports are not confined to the pharmaceutical press; various medical journals, both domestic and foreign, are beginning to open their columns to them.

Then appear corrections: These corrections, however, it is sad to say, are often based on the motto "*si fecisti, nega*" (if you have done anything deny it), and in them facts that have been established by absolute evidence are opposed by an expenditure of dialectics that is worthy of a better cause.

Zernik regards the exposure of unworthy preparations as decidedly to the advantage of the pharmaceutical and chemical industry of Germany. He says: "In this relation, the reaction which has set in in the United States, against the prevalence of doubtful preparations, may serve as a model." He describes the work of the Council on Pharmacy and Chemistry, and concludes: "In this cooperation of the physician and the pharmaceutical chemist as it has been established in the United States, the way is pointed out in general by which relief from the present inconveniences may also be obtained by us."

Zernik reviews the principal preparations which have appeared during the year 1907, but we have space only for a notice of those which are on the American market, or are otherwise of special interest:

PARALYSOL.

Paralysol is a solid cresol soap preparation that has been introduced into the market in the form of tablets; the tablets weighing one gram are designed for the extemporaneous preparation of a cresol soap solution, analogous to metacalin which was introduced in 1905, but has since been withdrawn from the market.

FORMIDIN.

Formidin was found by Zernik to be deficient in its iodin contents. He emphasizes the fact that it is not a chemically individual substance. His report on formidin was given in The Journal, July 13, 1907, page 157.

IODOFAN.

In the report of last year on iodofan given in The Journal, June 22, 1907, page 2129, Zernik stated that iodofan contained only about 4 per cent. of iodin instead of from 42 to 47 per cent. which it should contain according to the formulas given by the proprietors. His conclusions in this respect were questioned, but subsequent examinations fully confirmed his previous results. An account of these results can be found in The Journal, March 14, 1908.

ICHTHYANAT.

Ichthyanat is the name of a new substitute for ichthyol, which is obtained by the bituminous shale of the Achensee (in North Tyrol). In its chemical and pharmacologic properties it appears to be similar to ichthyol.

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[1] Analysis of Vapo-Cresolene: One part of Vapo-Cresolene was found to be soluble in about 60 parts of water. Mixed with an equal volume of glycerin a clear solution is obtained; from this, by addition of an equal volume of water, almost the entire original volume of Vapo-Cresolene separates out. Submitted to distillation, a few drops distil over at 90 C., then the boiling point of the liquid rapidly rises to 90 C., and almost the entire liquid distils over between 90 to 100 C. Its specific gravity at 25 C. is 1.0407. From this it appears that Vapo-Cresolene corresponds in every way to the description of cresol as found in the United States Pharmacopeia.

SYNTHETIC SUPRARENIN.

There has been introduced a synthetic which agrees in composition, properties and physiologic action with the alkaloid from the suprarenal glands. It is said to surpass the latter in the strength and uniformity of its action.

DIETHYL BARBITURIC ACID.

Under this name a preparation completely identical with veronal, but obtained by a different process, has been introduced. According to the patented process, disodiumcyanamid is warmed with urea and diethylmalonic ester, for three hours at a temperature ranging from 105 to 110 C. (221 to 230 F.). The mass solidifies and the alcohol is distilled off. The residue is dissolved in water and the principal amount of the diethylbarbituric acid produced is separated by hydrochloric acid.

BROMURAL.

A description of bromural appeared in The Journal, March 14, 1908, page 879. Zernik states that the bromural of commerce is not yet entirely pure. It melts at about 147 C. (296.6 F.), while the true monobromisovalerylurea melts at 154 C. (309.2 F.).

NOVASPIRIN.

Novaspirin is a preparation consisting of the disalicylic acid ester of anhydromethylencitric acid. Zernik found that the preparation corresponded in composition to the claims made for it (The Journal, July 13, 1907, page 157).

VINOPIRIN.

The investigations of Zernik on this substance were described in The Journal, July 13, 1907, page 157.

BOROVERTIN.

Borovertin is an urinary antiseptic, consisting of hexamethylentetramin trimetaborate. Zernik gives no new facts regarding this preparation except that according to the patent it may be produced either by rubbing together the components in molecular proportion and drying at 60 C., or by gradual evaporation of the water or solution of the component. Borovertin tablets contain 10 per cent. of maranta starch.

ATOXYL.

Zernik gives the result of investigations into the composition of this preparation and notes especially the varying quantity of water as shown by the differences between analyses made in Germany and the results obtained by the American Medical Association. He concludes: "It is a striking fact that in spite of the amount of sodium which was undoubtedly known to the manufacturer the incorrect designation metaarsenicanilid was for years attached to this, in no sense, indifferent remedy. The determination of the constitution of this remedy now confirmed from three different sources has given a certain clearness to the pharmacologic relations of atoxyl. It is well known that after the use of this preparation, poisoning, especially severe disturbance of vision, even to blindness, has occurred, so that the name 'atoxyl' is to be understood only *cum grano salis*. While it was formerly a matter of discussion whether the arsenical or the anilin component was to blame for these toxic effects, it is now scarcely to be doubted in consideration of the constitution of atoxyl that we have here to do with the action of arsenic, as the anilin as such is detoxicated by the entrance of the arsenical radical into the nucleus, as is the case, e. g., in sulphanilic acid. Experimentally also, Blumenthal and Jacoby have lately determined that atoxyl poisoning is really an arsenical poisoning. The demand that in the case of so active a preparation the content of water shall be exactly fixed and shall not be subject to such variations as have been exhibited, appears to be thoroughly justified. On the other hand, in consequence of the easy decomposition of the commercial preparation, it is the duty of the apothecary to protect atoxyl from the action of the air in tightly closed vessels."

A Correction.

Two weeks ago, in referring to Dr. LeRoy Crummer's appointment on the staff of clinical consultants of the Council on Pharmacy and Chemistry, we stated that he was connected with the Creighton Medical College. He is professor of therapeutics in the College of Medicine of the University of Nebraska.

Eno's Fruit Salt.

Philadelphia, March 21, 1908.

To the Editor:—Can you furnish the formula of Eno's Fruit Salt? A patient under my observation took this preparation on the advice of a friend and has since developed signs of cardiac dilatation, weakness and arrhythmia. A. A.

Answer:—According to an analysis in the *Pharmaceutische Centralhalle*, Nov. 1, 1906, Eno's Fruit Salt consists of about 50 per cent. sodium bicarbonate, 15 per cent. sodium bitartrate and 35 per cent. free tartaric acid. Therefore, its composition is very similar to that of seidlitz powder.

Correspondence

The Scarlet Fever Epidemic of Nineteen Hundred and Seven.

A proof of the article with the above title by Dr. Hemenway, which appears on page 1115 of this issue was submitted to Dr. James A. Egan, secretary of the Illinois State Board of Health, who writes as follows:

Springfield, Ill., March 18, 1908.

To the Editor:—Much that is interesting to the medical profession might be said by me in connection with the charges brought against the Illinois State Board of Health by Dr. Hemenway in his paper. The permission to reply to Dr. Hemenway's paper limits me to a brief statement of the facts and I must, of necessity, exclude comment and criticism.

I take occasion, however, to express my astonishment that Dr. Hemenway's charges, reflecting on the efficiency of the Illinois State Board of Health and the Chicago health department, should have been made before the North Side branch of the Chicago Medical Society, which is little known beyond the confines of the north shore of the city, where the Chicago Medical Society itself would doubtless have welcomed Dr. Hemenway's paper and would have given it the widest publicity. I am further astonished that Dr. Hemenway should have made his charges in a meeting without serving some notice on the organizations attacked, so that their representatives might have been present to discuss the paper and, incidentally, to have corrected several errors and misconceptions. More surprising it is that Dr. Hemenway should have waited until a year after the occurrences with which he dwells, and until they have well nigh faded from memory; until a time when the commissioner of health assailed has been out of office for nearly a year; until an inspector for the State Board of Health, to whom improper motives are attributed by Dr. Hemenway, has been out of office for several months. It is, indeed, difficult to understand why Dr. Hemenway should have remained silent for a year before laying the facts in his possession before the readers of The Journal and, incidentally, before the people of Illinois.

Scarlet fever formed the subject of a well-advertised "symposium" at a meeting of the Chicago Medical Society, Feb. 27, 1907, and at that time special attention was devoted to the etiology of the outbreak of that disease which had prevailed during the previous sixty days. Dr. Hemenway was present and gave the opinion that the milk supply was responsible for the spread of the disease. If he made any strictures, however, on the management of the epidemic, by state or city health organizations, I have yet to hear of it. Still, that was the time and the place for such charges if they were to be of the slightest benefit to these organizations or to the public.

Within a few weeks after this "symposium" Dr. George W. Webster, president of the Illinois State Board of Health, read a paper on scarlet fever before the Evanston Branch of the Chicago Medical Society, which held its meeting a few blocks from Dr. Hemenway's office. Here was an excellent opportunity for Dr. Hemenway or any other person to reflect on the manner in which the epidemic of January and February, 1907, was handled by the Illinois State Board of Health, if Dr. Hemenway or any other person had cared to do so. But there were no criticisms so far as I know, and Dr. Hemenway did not attend this meeting.

Scarlet fever prevailed generally throughout northern Illinois in January, 1907. I say scarlet fever, and Dr. Hemenway will agree that it was scarlet fever, although, on Jan. 16, 1907, he asserted that the cases were not typical. The Illinois State Board of Health, which is charged with the general supervision of the interests of the lives and health of the people, and which, as a rule, acts in an advisory capacity only, kept in close touch with the infected municipalities, which under the law, are empowered to do all acts and to make all regulations which may be necessary or expedient for the promotion of health and the suppression of disease. All municipalities in Illinois are vested with authority to pass health ordinances, which, according to the Supreme Court, have the same force and effect of laws passed by the legislature.

Jan. 16, 1907, the State Board of Health, which Dr. Hemenway has charged with inefficiency and passive opposition, was advised by Dr. William R. Parkes, health commissioner of Evanston, that there were forty cases of scarlet fever in that city among the customers of the ——— Milk Company, I immediately called Dr. Parkes on the phone and inquired as to the probable source of infection, and was advised that it lay in "X." I then wired Dr. J. C. Westervelt of Shelbyville, chief medical inspector of the State Board of Health, to go to "X" and to make an investigation. The following day a communication was received from Dr. Hemenway, in which he stated that the disease prevailed among users of the ——— Milk Company, and that this milk came from Lake G.

Not hearing from Dr. Westervelt, a severe storm having crippled the telegraph service, I wired Dr. E. F. Baker of Jacksonville, an inspector for the board, directing him also to go to "X" to investigate the milk supply of the ——— Company.

Space prohibits a detailed account of the investigations made by Drs. Westervelt and Baker in a foreign state, immediately after the report of scarlet fever reached the State Board of Health. Jan. 19, 1907, however, Dr. Westervelt reported that he had made a careful investigation at "X," which, by the way, is in Wisconsin, and that he found that there had been no case of scarlet fever among any of the employés of the ——— Milk Company since July, 1906, and that, in his opinion, there was no infection in "X" milk. Dr. Westervelt further stated that he had heard no complaint against ——— milk except in Evanston.

Incidentally, it may be noted that, as stated by Dr. Hemenway, in his letter of January 16, ——— milk from the same source as the Evanston supply was used in Oak Park and in the north side of Chicago, where scarlet fever was practically epidemic, yet I have never heard that infection was laid to the ———milk either in Oak Park or in Chicago. Dr. H. G. Vaughn of Oak Park stated at the "symposium" of the Chicago Medical Society, above referred to, that a most careful investigation had failed to implicate the milk supply there.

The *Bulletin* of the Chicago Health Department for the week ended Jan. 26, 1907, states that the department's dairy inspector, who visited "X" January 9, had found several cases of scarlet fever in the town, but none among the dairies supplying milk to the company and none among the employés of the plant; and that, on a subsequent visit, January 25, there was no case among the employés of the ——— plant, and but one case had appeared among the dairies supplying milk to it.

As stated, scarlet fever prevailed at that time throughout northern Illinois, and in Chicago it was prevalent on the north side. Dr. Whalen, health commissioner of Chicago, advised this board that he did not attribute the epidemic to infected milk, and that he had heard no complaint against the ——— milk except from Evanston. The later successful suppression of scarlet fever in Chicago was brought about by a vigorous policy of isolation, quarantine and disinfection, and not through changes or restrictions in the milk supply.

On January 24 an anonymous letter, alleging that scarlet fever prevailed among the employés of the ——— Milk Company at "X," was forwarded to the State Board of Health by the health officer at Evanston. As the State Board of Health is glad to avail itself of any information, anonymous or otherwise, I called up Dr. Baker and directed him to go to "X" and to *stay there* until he had made a complete investigation. Dr. Baker reached "X" on January 25, and there met an inspector from the Chicago department of health, and ascertained that an inspector from the Evanston board of health had been there the day previous. The investigation was searching in character, but no case of scarlet fever was found among the employés or families of the employés of the ——— company.

While at "X" Dr. Baker learned of the existence of scarlet fever at "Y," Wis., which apparently had not come within the ken of the Evanston officials or of Dr. Hemenway. At this point Dr. Baker found that the ——— company was receiving milk from fifteen families in which scarlet fever prevailed. This information was immediately communicated to the Wisconsin State Board of Health by Dr. Baker, and the shipment of milk from that point was stopped. So much for the work of the Illinois State Board of Health in the scarlet fever epidemic of 1907.

There is much more that I should like to say in answer to Dr. Hemenway, but I have already taken up too much space. Still, I feel it necessary to correct Dr. Hemenway on one or two points. In referring to the action by the municipalities within a fifty-mile radius of Lake Michigan in joining together for public health work, Dr. Hemenway says: "This organization is a monument to the inefficiency of the State Board of Health." Dr. Hemenway, who is thoroughly familiar with the powers and duties imposed on these municipalities, should appreciate that this commendable action, which might, with profit to the various municipalities, be emulated in other parts of the state, constitutes no reflection on the State Board of Health which, as heretofore, will render aid to all cities, villages and townships in the state whenever necessity requires.

Dr. Hemenway is in error when he further states that this organization is doing work which is conducted in other states by the State Board of Health. In no state does the State Board of Health, as a rule, usurp the functions and authority of municipalities and assume charge of local health matters. In scarcely any state is there a more thorough system of sanitary inspection than is maintained in Illinois. In but few other states—I doubt if Dr. Hemenway could name more than one offhand—are three medical inspectors kept continually busy in making investigations in the various counties, of which there are 102 in Illinois.

It may be that the outbreak of scarlet fever in Evanston in 1907 was caused by infected milk. It may be that "the idea that every case of scarlet fever can be traced to a previous case"—an idea which, when acted on, resulted in the speedy suppression of the outbreak in Chicago and other municipalities in northern Illinois—is erroneous and indefensible. It may be that the investigations conducted by the Illinois State Board of Health were not as searching and as thorough as would have been the case had other physicians constituted the personnel of the members or inspectors of the State Board of Health; but Dr. Hemenway should bear in mind that, as aptly stated by von Jürgensen in Nothnagel's "Encyclopedia of Practical Medicine," "in none of the acute exanthemata does our lack of knowledge of the cause of the disease prove so disturbing a factor as in scarlatina."

James A. Egan,
Secretary, Illinois State Board of Health.

[The above was submitted to Dr. Hemenway, who comments:]

Evanston, Ill., March 20, 1908.

To the Editor:—Dr. Egan's note requires slight answer. If I had wished to make charges against any official, municipal or state, they would have been preferred before the proper authority, and not in a newspaper, professional or secular.

Every public official may have his official acts discussed critically. This does not denote unfriendliness. To prefer charges is very different. The public is entitled to know the facts. Up to the present the State Board of Health has not published them, though it is now more than a year since the epidemic. If, as Dr. Egan says, the only complaint came from Evanston, it shows that only because of the repeated spurs from Evanston. Dr. Baker was sent to "X" January 25, and not till then was anything really done, and, therefore, to Evanston belongs the credit. If, as stated in Egan's letter of March 19, the board was unable to find any evidence to substantiate the claim that the disease came from the infected milk, why was the shipment of milk stopped, as Dr. Egan says it was?

Dr. Webster did not read such a paper, as stated by Dr. Egan, before the Evanston Branch. Under the auspices of the branch he did give a *public lecture* on the general subject of public sanitation. I was present at that meeting, and after the lecture I was one of those who accompanied Dr. Webster to the train.

After the symposium of the Chicago Medical Society, realizing that I had but touched on the subject, Professor Hektoen and others urged me to write a paper. This I promised to do, but I delayed, hoping to receive the report of the State Board of Health, and that of the representative of the milk company. Because the territory of the North Shore Branch suffered with Evanston in the epidemic, I was asked specially to discuss this subject in a symposium of that branch. In my paper I simply stated facts as I found them. The paper speaks for itself. It will be noticed that I did not name either the milk company, or the towns from which the milk came. If Dr. Egan knows the facts, he knows that milk from "Y" was bottled at and shipped from "X"; and he must also know that my article shows that I knew of the disease at "Y" on milk farms.

I think that reference to the tables and diagrams will show that the subsidence in the epidemic was more due to the stopping of the milk than to a change in the quarantine.

When an attorney was preparing to enter suit against the milk company he wrote to Dr. Egan for information; I regret that the doctor does not explain his reply, which immediately stopped further action by the attorney. This reply is directly contradicted by the report of Dr. Baker, who found 40 cases at "X" and 15 at "Y."

Finally, through the inability of Dr. Westervelt to find the disease afterward reported by Dr. Baker, as stated by Dr. Egan, the board lost one week's time.

"X" is near Lake G., and explains the statement made to me from the milk company, that the milk came from Lake G.

Henry B. Hemenway.

Mr. Bok's Article—A Criticism.

Bennett, Iowa, March 23, 1908.

To the Editor:—After reading the article by Edward Bok, editor of the *Ladies' Home Journal*, I am compelled to say that his accusations are the most audacious and malicious of all the attacks made on our noble profession and the practitioners thereof. No opportunity has been let slip by him where actual proof could not be brought to bear on the falsity of his statements. He even goes so far as to say that he himself knows and the average physician does not know the ingredients of his, the average physician's, prescription. It must be that Mr. Bok's position as editor of a magazine whose monthly publications run into the millions of copies has turned his head, and his good judgment has been cast aside for this once while he drags the whole medical profession through the mire caused by a few unscrupulous physicians aided by the manufacturers of certain cure-alls.

The medical profession is an institution devoted to the spiritual, mental and physical condition of the people; therefore, all but holy. The true physician has no relation to the nostrum, and this statement applies to at least 99 per cent. of physicians practicing to-day. He never had any relation to the nostrum except that of an enemy armed and in mortal combat with the whole fraternity of nostrum makers and fakers. The most eminent physicians in our profession do not prescribe nostrums of which they do not know the ingredients, and Mr. Bok does not, nor can not, prove his statement to that effect; he is liberal enough, however, to admit that the prescribing of nostrums is on the decrease, but he omits the fact that the decrease is largely being brought about by the very fraternity whom he accuses of using the nostrum in their professional work.

It is the business of every physician to prescribe any medicine, proprietary or not, if he knows the formula and considers the prescription suitable to the case. Right here I will say that there is no medicine, secret formula included, that is not open to the physician's knowledge if he so desires to know its ingredients and will make known his want either to the manufacturer or a qualified analytical chemist. Certainly formulas are written by men who never attended medical schools, and I note that editors and others no better qualified sometimes enter into severe criticisms of the profession which does know and which chooses to use, in prescriptions, remedies that are not known to the laity in general. No professional man is more aware and careful of the personal rights of the laity than the physician himself, in fact this right of the layman is almost too carefully fostered by the physicians of this country. In many instances it would be better for the individual and the public in general if the physician would disregard the rights of his patient and enforce rigid measures contrary to them.

To whom shall we go for our pharmaceuticals, toxins, vaccines, chemicals and other laboratory products, if not to Wampole, Parke Davis, Fairchild, Mulford and other well-known manufacturers of standard supplies? Better deprive the people of the steam railroad, the steamboat, the electric car, the air brake, the telephone, the telegraph, the printing press and all other of the numerous inventions now in use by the public, and intended to save life and labor to that public, thus removing the very agencies that make it possible for the editor of the *Ladies' Home Journal* to reach its enormous publication and distribute the same to the reading public, through whom he is trying to punish the doctors for an imaginary offense that he has no further proof of than the fact that some pharmacist has said that certain physicians have prescribed certain preparations that they, the pharmacist and the editor of the *Ladies' Home Journal*, do not know the ingredients of and, knowing the ingredient, do not know its therapeutic uses nor the condition or state for which this particular unknown remedy, to them, was prescribed.

It is the duty of the public as well as that of the physician to insist on each and every manufacturer of medicines, as well as manufacturers of foods and food-stuffs, to make their goods true to formula and to name. Then adulterators and substitutors will be held responsible and not the physician who prescribes what he is told and believes to be standard pharmaceuticals that are not true to label and as a consequence injures his patient. The manufacturers of pharmaceuticals have culminated directly from the old-time apothecary and hold their important position with the medical profession on their merits only, the physician could dispense with them so far as their product is concerned, but they can not exist without the physician. Therefore it is to the interest of every manufacturer to serve the consumer well; in order to do this the reliable manufacturer is constantly on the lookout for the wishes of his customer in the medical profession, and in order to meet his demands he has engaged the ablest of our chemists, mechanics, veterinarians and doctors to conduct his tests for purity and action and to carry through elaborate experiments for the benefit of science and mankind, as well as the designing of special apparatus for the manufacture and production of the newer and most approved remedies. With the manufacturer as a cooperative worker and the improved products of his well-equipped laboratories to combat disease the science of medicine, through the efforts of the physicians, has made and is now making rapid strides toward perfection, that goal which is the aim of all medical men.

From the nature of Mr. Bok's writing in The Journal of the American Medical Association for March 21, especially when he says perhaps he does and perhaps he does not know what a nostrum is, this being a fair unprovoked admission, it would occur to any reader that Mr. Bok was somewhat at sea to know just what he was writing about. I would like to know what proof the editor of the *Ladies' Home Journal* has that the constituents of Thermol, Bromidia, Nutritive Elixir, Phenalgin, Radam's Microbe Killer, Phenol Sodique, Beefine, Bromo-Quinine and tasteless Cod Liver Oil were not well known to the prescribers of these remedies as well as their therapeutic uses and probable benefit to those they were prescribed for, or on the other hand if they were really prescribed by the persons whose signatures appeared thereon, or by some promoter of these remedies who takes liberties with the well-known doctor's signature to cover up his illicit practices and promote the sale of the remedies prescribed.

The public, nor no part of it, has found the genuine physician, who constitutes more than 99 per cent. of the practicing physicians of this country, prescribing remedies and medical agents that they have no knowledge of. It would be impossible for any physician to prescribe a remedy and keep himself entirely ignorant of its qualities, not saying, however, that the editor of the *Ladies' Home Journal* has not given out damaging information to millions of the laity stating the unenviable position the average physician has placed himself in when he has and will continue to use drugs that are not well known to the editor of the *Ladies' Home Journal* and his druggist acquaintances.

Having in my possession several copies of the London *Lancet*, a leading medical journal printed more than fifty years ago, I find on comparison with the leading text-books and medical journals of this time and period a decided improvement over the practices then in vogue. Of course you will understand I have not consulted the files of any "cut rate" corner drug store proprietor nor do I so intend, claiming as I do the only way to approach, even approximately, to a solution of this question is by comparison of the leading text-books and medical journals of the present time through whose columns and pages the physician young and old is kept abreast of the science and taught the best and most approved practices. My comparison of these writings of over half a century ago with the advanced methods of treatment as applied to-day makes my heart glad and I am convinced that the scientific prescribing and the compounding of remedies is at its zenith as compared with the crude concoctions of the date of my *Lancets* some fifty years gone by.

It is little wonder that the public is nonplussed as to a course of action when the leading publications of our day approach them with the gravest kind of accusations against the noblest and best of our professional men, the average physician. Happily, however, the inaccuracy of these accusations is real to any layman who may stop to think and the horror of the unsubstantiated charge is being largely replaced by a new and everlasting confidence in the members of the profession who have so patiently and painstakingly served the people, often times without thanks or compensation. This is but a natural culmination and the physician of the future will command more confidence, respect and compensation for he is succeeding in branches of his art where heretofore death claimed all.

A. J. Charlton, M.D.

[Comment:—Since the publication of Mr. Bok's article in The Journal for March 21 we have received a large number of letters commending the article. Even if the limit of space did not forbid, it would be unnecessary to publish these. The letter quoted above is the only communication we have received expressing disapprobation of Mr. Bok's paper and of its publication.

It must be borne in mind that Mr. Bok wrote in reply to our editorial comments on what he said in a meeting of the Philadelphia County Medical Society and which was afterward the subject of discussion in the Philadelphia newspapers. It must be remembered, further, that for several years, as editor of the *Ladies' Home Journal*, Mr. Bok has been heart and soul in the fight against "patent medicines." This led him to investigate a closely related condition; that is, the use of nostrums by medical men. Mr. Bok represents the intelligent layman who has given the subject thought and study, and as such his opinions—whatever minor fallacies they may contain—should at least be treated with respect.

The statement made by our correspondent that there is no medicine whose true formula may not be learned from the manufacturer, unfortunately, is not susceptible of proof. Had it been, there would have been no occasion for the organization of the Council on Pharmacy and Chemistry. The Journal for the last three years has shown repeatedly that the statements of certain proprietors regarding their products are not to be relied on. The suggestion that the individual physician should secure the services of an analytical chemist to determine the composition of the remedies he prescribes is, of course, impracticable. The further suggestion that manufacturers be compelled by law "to make their goods true to formula" is a splendid one. Mr. Bok, however, was dealing with an actual condition, and not with a theory. Whether the physicians, spoken of by Mr. Bok, who prescribed phenalgin, phenol-sodique, *et al*, knew their composition, we do not know. If they did know, they must have obtained their information from the analyses of the Council on Pharmacy and Chemistry, or from some source unknown and unavailable to most of us.

Whatever criticisms may be made of Mr. Bok's paper, the arraignment on the whole is fair, considering always the fact that it was a layman writing from a layman's standpoint; and it is certainly worthy of the careful, dispassionate consideration of physicians. The time has passed when we can wrap ourselves in a cloak of professional dignity and assume an attitude of infallibility toward the public. The more intelligent of the laity have opinions on medical subjects—often bizarre, it must be admitted, but frequently well grounded—and a fair discussion of such opinions can result only in a greater measure of confidence in and respect for the medical profession.—Ed.]

Sleeping Outdoors.

Dayton, Ohio, March 21, 1908.

To the Editor:—A few days ago I read an article in one of the popular magazines on "Outdoor Sleeping." The writer recommended the porch for the whole family, and the picture which accompanied the article, showing white beds, some large, some small, open to fresh air all around, did look very inviting. It was only afterward that I wondered what this whole family did on a rainy night, at least those nearest the edge of the porch, and how the housewife got the dampness out of all the bedclothes the next day.

Sleeping in a tent at all times is open to similar objections, and the window device, which appeared in your columns may be fine for a sick person, but would hardly do for the whole family, especially if the latter contains a few healthy romping babies who would soon run their legs through any such contrivance.

Our family, consisting of my husband, who is a physician, myself and our two boys (5 and 3 years old, respectively), have such a simple, inexpensive, easy way of sleeping outdoors that the impulse to tell about it is irresistible. Our bedroom, about 16 x 17, contains three beds, a large one and two cribs for the boys. It has one unusually large door opening on a wide porch and three windows, two of them also opening on porches. The door is always wide open at night, so is one of the windows, sometimes two, sometimes all of them. The door, of course, is protected by a screen door. During the day, door and windows are closed and register is opened and the beds and floor and walls thoroughly dried and warmed. A little before 6, the children's bedtime, the register is closed and door and windows are opened. We follow this program in all sorts of weather, and it seemed delicious to be wakened by a thunderstorm the other night, the rain coming down in torrents and we seemingly lying in the very midst of it, so comfortable and dry. When the children were small and would not stay covered, I made jackets for them out of old blankets to be worn over their night clothes, donning one or two, according to severity of weather and pinning blankets around their bodies.

If any one doubts the efficacy of ventilating by means of the door, let one of his boys carelessly leave the door open while he is ensconced in his easy chair some cold wintry night enjoying his cigar and book. He will not stop to argue whether the air circulates at the top or the bottom. Of course, there are some inconveniences. "Earth gets its price for what earth gives us," and air does, too, I suppose. It is not pleasant to get up in a cold room like ours and supply the children with drinks, and our oldest boy, whose bed is nearest the door, complained one night that the snow flakes were falling on his face. But one learns not to mind such little things as that. Sometimes when the children have bad colds we do discuss the advisability of sleeping like other people—we talk of it during the day, but when night comes we open the door as usual and the colds disappear rapidly in spite of or perhaps on account of the door. One night the baby woke us with a croupy cough. I heard my husband bend over the crib and listen and I was thoroughly frightened and was sure things would have to be closed now. But baby went on sleeping, so did we, and the croup bothered us no more.

When I think of the many, many people, whose lives during the day are spent in close offices or stores, must be spent that way, and whose nights are voluntarily passed in atmosphere just as bad, when the pure air is all around them to be had for the asking only, I almost get the burglar's instinct of opening their doors and windows. My husband makes professional use of our bedroom; uses it for an object lesson. Many a time I have heard him walk refractory patients in there to show them how our babies sleep. They go home and obediently open one window at the top an inch and a half.

MRS. W. F. PRATHER.

Miscellany

"Cactin and Cactina"—a Correction.

An article entitled "'Cactin' and 'Cactina'; an Examination Into Their Physiologic Actions," by Dr. S. A. Matthews of the Laboratory of Experimental Therapeutics of the University of Chicago, appeared in THE JOURNAL, March 21, 1908, page 956. Through some unaccountable error final proof of the article was not submitted to Dr. Matthews, and a number of serious errors were, therefore, overlooked. Some of the important ones are as follows: An x to indicate the point of injection is omitted from the tracings, Figures 1 and 8. In the next to the last line of the second paragraph, "cactin" should read "cactus." In the legend of Figure 6, "7.200" should read "200." In the legends of Figures 8, 9, 10, 11 and 12, the word "cactin" should read "cactina." The same error occurs in the third line of Experiment 2, on page 957, and in the next to the last line of the second paragraph in the second column on page 957. In the legend of Figure 9, "10:00" should be "10:50." In the second paragraph under the heading "Cactina (Sultan)," "This preparation of cactin" should read "This preparation of cactus."

A reprint of the article as corrected will be sent on receipt of a one-cent stamp for postage.

Serotherapy in Epistaxis.—F. Schiffers of Liège reports in the *Arch. internat. de Laryngol.*, February, 1908, two cases of threatening epistaxis which he was able to control by P. E. Weil's technic, namely, injection of about 10 c.c. of fresh, normal human or animal serum. The patient in the first case was a child nearly 10 years old, presenting symptoms of hemophilia or idiopathic purpura. The blood did not coagulate before thirty-two minutes, but nine days after the first injection (30 c.c. of rabbit blood injected subcutaneously in the abdomen), the interval before coagulation had continued to diminish until the blood coagulated in from six to eleven minutes after four similar injections. The child has been in good condition during the nine months since. The second patient was a young woman subject to recurring capillary hemorrhage in the nose for three years, and later in bladder, nose and ears. Marked improvement followed the subcutaneous injection of fresh rabbit serum. Both patients had taken calcium chlorid internally previously without appreciable benefit. Weil's communication on serotherapy of hemophilia and allied conditions was summarized in THE JOURNAL, Dec. 21, 1907, page 2098. Schiffers regards it as a notable advance in treatment of recurring epistaxis.

To Whom Belongs the Calculus?—A German surgeon removed a calculus from the bladder of a patient, and as the calculus was an interesting specimen of incrustation on a foreign body—the tip of a catheter—he used it for a demonstration before his medical society, thus destroying it. When presented with the surgeon's bill, the patient refused to pay the bill unless the stone was returned to him. The *Münch. med. Wochschr.* discussed the affair, closing with the advice to the surgeon to make a bargain for the stone before the operation. The patient will probably then be less insistent on retaining his calculus. A legal authority consulted stated that the stone or whatever is removed from the patient by the surgeon belongs to the patient if claimed within a reasonable time. But if the patient does not demand the stone until the surgeon presents his bill, and if he then makes his payment of the bill contingent on the return of the stone, the surgeon can then proceed with confidence to sue him for the amount. A somewhat similar case was mentioned recently on page 974.

Opsonotherapy in Dermatology.—J. F. Schamberg, in *Journal of Cutaneous Diseases*, December, states that, while this method of treatment has heretofore been limited to lupus vulgaris and other circumscribed pyogenic affections of the skin, it is not impossible that it may be found of value in the treatment of other cutaneous diseases that result from parasitic infection. Thus, in blastomycosis, ringworm, favus and actinomycosis he thinks that it should be given a trial.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

TUBERCULIN.

EDGERTON, MINN, March 18, 1908.

To the Editor:—What preparation of tuberculin does Trudeau use and how does he apply it? HERMANUS DE BOER.

ANSWER.—Trudeau employs Koch's Bacilli Emulsion or Denys' tuberculin. He gives the preference to the latter. Denys' tuberculin is the filtrate of liquid cultures to which 0.25 of 1 per cent. phenol (carbolic acid) has been added to preserve the liquid and to insure the destruction of any tubercle bacillus which might have passed through the filter. The liquid should not be used for two weeks after its preparation, as that is about the time required to kill tubercle bacilli with carbolic acid solutions. Denys' tuberculin is prepared in eight dilutions.

Trudeau begins with a decigram of No. 2, containing 1-10,000 of a milligram and increases by 1-10,000 of a milligram for 10 doses; he then begins with solution No. 3, one decigram of which contains 1-1000 of a milligram and increases by 1-1000 of a milligram for 10 doses. It is evident that in this method, in changing from one solution to another, the amount of tuberculin added to each injection is suddenly increased ten times. As a result of this, apparently reaction occurs more frequently at the second or third injection of a new solution.

To obviate this, the progression for each solution can be by 0.5 decigram instead of 1 decigram for the first three doses, then by 1 decigram for the remaining doses in each solution, or, if time is to be considered, the amount taken off the first three or four doses can be added in suitable proportions to the last six or seven. Thus instead of increasing 0.1, 0.2, 0.3, and so on to ten decigrams, the increase may be 0.1, 0.15, 0.2, 0.25, 0.3, 0.4, 0.6, 0.8, 0.10. In truly apyretic cases with good nutrition the physician in his discretion can make the increase for the first two solutions by 0.2 decigram, but after the dose of 0.01 milligram is reached the increase for the remaining solution should be 0.1 decigram of each solution.

The intervals between the injections are three or four days; generally two injections a week; but as the higher doses, such as 10 milligrams, are reached, the intervals may be five days, and after 100 milligrams six days, while the last three or four doses should be given a week or ten days apart.

The method of Trudeau is fully given by him in the *American Journal of the Medical Sciences*, June, 1907. See also the same journal for August, 1906.

ROVSING'S SILVER NITRATE GAUZE DRESSING.

LACLEDE, MO., March 21, 1908.

To the Editor:—I have a suitable case for the temporary osteoplastic resection of the chest wall described in the abstract of an

article by Rovsing in The Journal, Feb. 29, 1908, page 738. Please inform me what percentage of silver nitrate was used in the gauze for packing the cavity.
Foster W. Burke.

Answer.—Rovsing, the leading surgeon of Denmark, has used silver nitrate exclusively for antisepsis for several years. He prepares the gauze by placing it in a brown glass cylinder jar, the bottom of which is covered with a 1 or 2 per cent. solution of silver nitrate. With long forceps the strip of gauze is pressed and kneaded into the fluid until it is thoroughly impregnated with the solution, but not to drip, even when it is squeezed. He uses this gauze wherever iodoform gauze might otherwise be indicated, and recommends it in the highest terms. Without having any odor of its own, the silver nitrate gauze is deodorizing in the highest degree, he says, as it destroys all putrefaction bacteria. It also has a contracting influence on the vessels and a rapid and profound bactericidal action on all microbes, both pathogenic and saprophytic, while it is completely non-toxic. It is soft and flexible and can be packed easily into recesses. He applies this silver gauze wherever he does not expect primary healing, and when he drains, he packs the silver gauze around the drain tube and even covers the mouth of the tube with a thick layer of the gauze so that it will suck up and disinfect the secretions. In his communication on the subject of "Silver Nitrate Antisepsis," in *Hospitalstidende,* Sept. 18, 1907, he adds in respect to the gauze that one of its greatest advantages is in the protection of the wound in temporary resections and incisions in order to prevent infection of the wound from the adjacent skin, especially with osteoplastic flaps, etc.

VIAVI.

Philadelphia, March 24, 1908.

To the Editor:—Has The Journal published anything regarding the Viavi treatment? If so, please give me the date, as I have all my Journals for the past five years.

E. L. McDaniel, M.D.

Answer.—Having answered by letter a number of requests similar to the above, we state for the benefit of others that the Viavi treatment was discussed in The Journal, April 27, 1907, page 1445; and an interesting letter from a correspondent on the subject appeared June 15, 1907, page 2041. Both of these items are reprinted in the pamphlet "The Propaganda for Reform in Proprietary Medicines," a copy of which will be sent to any address for six cents.

WANTED—EFFICIENT MEANS TO EXTERMINATE FLIES.

New York, March 23, 1908.

To the Editor:—When summer returns, every hospital will be in urgent need of protection against the assaults of the deadly house fly. All means at present employed for that purpose are objectionable or valueless. Is there not a drug, plant or substance known that will either disperse, attract or destroy the pests?

J. M. C.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending March 28, 1908:

Stark, A. N., surgeon, will, in addition to his other duties, Vancouver Barracks, Washington, assume temporary charge of the office of the Chief Surgeon, Department of the Columbia.

Schreiner, R. R., asst.-surgeon, granted leave of absence for 15 days, to take effect on his arrival at Madison Barracks, N. Y., with troops from San Francisco.

Gibner, H. C., asst.-surgeon, ordered to report at the Army General Hospital, Presidio, San Francisco, for temporary duty.

DeWitt, W., asst.-surgeon, ordered to Fort Yellowstone, Wyo., for duty on expiration of present leave of absence.

Woodbury, F. T., asst.-surgeon, relieved from duty in the Philippines Division, and will proceed on the transport to sail from Manila, P. I., about June 15, to San Francisco, and on arrival to report to the Adjutant General of the Army for further orders.

Brownlee, C. Y., asst.-surgeon, relieved from duty at the Pacific Branch, U. S. Military Prison, Alcatraz Island, Cal., and ordered to Manila, P. I., for duty on transport to sail from San Francisco about May 5, 1908.

DeLoffre, S. M., asst.-surgeon, leave of absence extended seven days.

Raymond, T. U., surgeon, on arrival in the United States, will proceed to Fort Sam Houston, Texas, for duty at that post.

Kendall, Wm. P., surgeon, relieved from duty at Fort Sam Houston, Texas, and will proceed to Fort Ethan Allen, Vt., for duty at that post.

Grissinger, J. W., asst.-surgeon, granted 2 months' leave of absence.

Borden, W. C., Banister, W. B., Glennan, J. D., surgeons, appointed members of a board of officers, to meet at the call of the president thereof at Manila, P. I., for the examination of such officers of the Medical Department, ordered before it to determine their fitness for promotion.

Greenleaf, H. S., asst.-surgeon, granted four months' leave of absence, with permission to go beyond the sea.

Graves, L. K., contract surgeon, arrived at San Francisco, for leave of absence for four months from the Philippines Division.

Parkman, W. E., contract surgeon, left Fort Keogh, Mont., and arrived at Fort Missoula, Mont., for duty.

Anderson, E. A., contract surgeon, granted leave of absence for two months.

Daywalt, G. W., contract surgeon, relieved from duty at Fort De Soto, Fla., and ordered to the Depot of Recruits and Casuals, Angel Island, Cal., for duty.

Stephenson, A. V., contract surgeon, relieved from duty at the Depot of Recruits and Casuals, Angel Island, Cal., and ordered to Manila, Philippine Islands, for Philippine service.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ending March 28, 1908:

Rothganger, G., surgeon, detached from the Naval Hospital, New York, and ordered to continue treatment in said hospital.

Smith, G. T., surgeon, detached from the *Maryland,* April 1, and ordered to instruction at the Naval Medical School, Washington, D. C., April 15.

Bogert, E. S., Jr., surgeon, orders of March 10 modified; ordered to course of instruction at the Naval Medical School, Washington, D. C., April 15.

Spear, D. A., asst.-surgeon, detached from duty at the Naval Medical School, Washington, D. C., and ordered to the Naval Hospital, New Fort Lyon, Colo.

Bunker, C. W. O., asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the Naval Academy.

Alderman, C. G., asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the *South Dakota.*

Clayton, J. C., acting asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to report before the Naval Medical Examining Board, that city, April 1, for examination for appointment as assistant surgeon, and then to await orders.

Barber, G. H., surgeon, detached from the Naval Hospital, Boston, Mass., April 10, and ordered to instruction at the Naval Medical School, Washington, D. C., April 15.

Wilson, G. B., surgeon, detached from the *Wabash* and ordered to instruction at the Naval Medical School, Washington, D. C, April 15.

Freeman, G. F., P. A., surgeon, detached from the Naval Hospital, Portsmouth, N. H., and ordered to instruction at the Naval Medical School, Washington, D. C., April 15.

Fauntleroy, A. M., P. A. surgeon, detached from the Naval Medical School Hospital, Washington, D. C., and ordered to instruction at the Naval Medical School, that city, April 15.

Huffman, O. V., asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the *New Hampshire.*

Valz, E. V., asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the *Mississippi.*

Stibbens, F. H., asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the Naval Hospital, Mare Island, Cal.

Stuart, M. A., asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to duty at Camp Elliott, Isthmian Canal Zone, sailing from New York, N. Y., about April 7.

Taylor, J. L., asst.-surgeon, detached from duty with the marine detachment at Camp Columbia, Cuba, and ordered to instruction at the Naval Medical School, Washington, D. C., April 15.

Hayden, R., asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to duty with the marine detachment at Camp Columbia, Cuba, sailing from New York, N. Y., about April 4.

Hale, G. D., asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the *Idaho.*

Boland, M., asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the Naval Recruiting Station, Detroit, Mich.

Duhigg, J. T., asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the Naval Recruiting Station, Des Moines, Iowa.

Cole, H. W., Jr., asst.-surgeon, detached from the Navy Yard, Charleston, S. C., and ordered to instruction at the Naval Medical School, Washington, D. C., April 15.

Trible, G. B., asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the Naval Hospital, Mare Island, California.

Hermesch, H. R., asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the Naval Recruiting Station, Cincinnati, Ohio.

Fiske, C. N., P. A. surgeon, detached from the Naval Hospital, Mare Island, Cal., and ordered to course of instruction at the Naval Medical School, Washington, D. C., April 15.

McLean, A. D., P. A. surgeon, detached from the Naval Recruiting Station, Detroit, Mich., and ordered to the Navy Yard, Portsmouth, N. H.

Blackwell, E. M., P. A. surgeon, detached from the Naval Academy and ordered to instruction at the Naval Medical School, Washington, D. C., April 15.

Woodward, J. S., P. A. surgeon, detached from the Naval Recruiting Station, Cincinnati, Ohio, and ordered to the Naval Hospital, New York, N. Y.

Baker, M. W., P. A. surgeon, detached from the Naval Hospital, New York, N. Y., and ordered to the *Colorado.*

Smith, F. W., asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the *Wisconsin.*

The following medical officers, on March 25, were detached from the Naval Medical School, Washington, D. C., and ordered to duty as specified below:

Kelley, H. L., asst.-surgeon, to Naval Hospital, Canacao, P. I., sailing from San Francisco, Cal., about May 5.

Lawrence, H. F., asst.-surgeon, to the Naval Station, Tutuila, Samoa, and to additional duty on board the *Annapolis,* sailing from Vancouver, B. C., about April 24.

Short, W. H., asst.-surgeon, to the Naval Recruiting Station, Oklahoma City, Okla.

Straeton, R. J., asst.-surgeon, to the Naval Station, Guam, L. I., sailing from San Francisco, Cal., about May 5.

Higgins, S. L., asst.-surgeon, to the Naval Hospital, Canacao, P. I., sailing from San Francisco, Cal., About May 5.

Rose, M. E., asst.-surgeon, to the Naval Recruiting Station, Omaha, Neb.

McDonnold, P. E., P. A. surgeon, detached from the *Connecticut* and directed to wait orders.

Peck, A. E., P. A. surgeon, detached from the Naval Station, Olongapo, P. I., and ordered home to wait orders.

Stepp, J., P. A. surgeon, detached from the *Denver* and ordered home to wait orders.

Randall, J. A., P. A. surgeon, detached from the Naval Recruiting Station, Denver, Colo., and ordered to the *Denver*.

Huff, E. P., asst.-surgeon, detached from the Naval Proving Ground, Indian Head, Md., and ordered to the Naval Station, Olongapo, P. I., sailing from San Francisco, Cal., about May 5.

Wickes, G. L., asst.-surgeon, detached from the Naval Recruiting Station, Omaha, Neb., and ordered to the Naval Recruiting Station, Denver, Colo.

Lando, M. E., asst.-surgeon, detached from the Naval Station, Tutulla, Samoa, and ordered home to wait orders.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended March 27, 1908:

SMALLPOX—UNITED STATES.

Alabama: Mobile, March 1-8, 5 cases.
California: Los Angeles, Feb. 29-March 7, 10 cases; San Francisco, 12 cases.
District of Columbia: Washington, March 7-14, 13 cases.
Florida: De Funiak Springs, March 7-14, 4 cases; Jacksonville, 1 case.
Illinois: Chicago, March 7-14, 6 cases; Rockford, 1 case; Springfield, March 5-12, 16 cases.
Indiana: Fort Wayne, Feb. 29-March 7, 5 cases; Indianapolis, March 1-15, 10 cases; Muncie, March 7-14, 4 cases.
Nebraska: Nebraska City, March 7-14, 2 cases.
New Jersey: Newark, March 7-14, 1 case.
New York: New York, March 7-14, 1 case.
North Carolina: Charlotte, March 7-14, 1 case.
Ohio: Cincinnati, March 6-13, 14 cases; Dayton, March 7-14, 1 case; Sandusky, Feb. 29-March 7, 1 case; Toledo, March 7-14, 2 cases.
Oregon: Portland, Feb. 22-March 7, 6 cases.
Iowa: Ottumwa, March 7-14, 1 case.
Kansas: Kansas City, March 7-14, 12 cases; Topeka, Feb. 29-March 7, 1 case; Wichita, March 7-14, 30 cases.
Kentucky: Lexington, March 7-14, 1 case.
Louisiana: New Orleans, March 7-14, 17 cases, 8 imported.
Michigan: Saginaw, Feb. 22-29, 2 cases.
Minnesota: Winona, Feb. 29-March 7, 1 case.
Missouri: Kansas City, March 7-14, 8 cases; St. Joseph, Feb. 15-March 7, 78 cases; St. Louis, March 7-14, 1 case.
Tennessee: Knoxville, March 7-14, 3 cases; Nashville, 6 cases.
Texas: Galveston, March 6-13, 2 cases; San Antonio, March 7-14, 18 cases.
Washington: Spokane, Feb. 29-March 7, 15 cases.
Wisconsin: La Crosse, March 7-14, 2 cases.

SMALLPOX—INSULAR.

Philippine Islands: Province of Pangasinan—San Fabian, Feb. 25, 100 cases.

SMALLPOX—FOREIGN.

Africa: East London, Jan. 26-Feb. 8, 1 case, 2 deaths.
Arabia: Aden, Jan. 11-25, 4 deaths (imported).
Brazil: Rio de Janeiro, Feb. 2-23, 105 cases, 40 deaths.
Canada: Halifax, March 7-14, 1 case.
Egypt: Cairo, Feb. 11-25, 3 cases, 3 deaths.
Formosa: Jan. 26-Feb. 1, 4 cases.
France: Marseilles, Feb. 1-29, 11 deaths; Paris, Feb. 22-29, 10 cases.
Great Britain: Glasgow, Feb. 22-March 6, 1 case.
Honduras: Tegucigalpa, March 1-8, 2 cases.
India: Bombay, Feb. 11-18, 29 cases; Madras, Feb. 8-14, 2 cases; Rangoon, Feb. 8-14, 1 case.
Italy: General, Feb. 20-March 5, 163 cases.
Japan: Kobe, Feb. 15-22, 181 cases, 108 deaths; Moji, March 16, 1 case, present; Osaka, Feb. 8-15, 199 cases, 63 deaths; Shimonoseki, March 16, present; Tokyo, Feb. 25, present; Yokohama, Feb. 15-22, 64 cases, 16 deaths.
Java: Batavia, Jan. 26-Feb. 8, 6 cases.
Mexico: Mexico City, Feb. 5-12, 2 deaths; Monterey, Feb. 1-8, 1 case, 1 death.
Russia: Batoum, Jan. 13-Feb. 13, 44 cases; Moscow, Feb. 15-22, 48 cases, 12 deaths; Odessa, Feb. 15-22, 4 cases, 2 deaths; Riga, Feb. 22-29, 2 cases.
Spain: Barcelona: March 1-10, 2 deaths; Denia, Feb. 22-29, 5 cases; Malaga, Jan. 1-31, 2 deaths; Valencia, Jan. 25-March 1, 17 cases.
Turkey: Constantinople, Feb. 9-March 1, 9 cases.
Venezuela: Maracaibo, Feb. 18, present.

YELLOW FEVER.

Brazil: Manaos, Feb. 15-22, 6 deaths; Para, Feb. 22-29, 11 cases, 8 deaths.
Ecuador: Guayaquil, Feb. 8-15, 10 cases.

CHOLERA—INSULAR.

Philippine Islands: Manila, Feb. 1-8, 6 cases, 5 deaths.

CHOLERA—FOREIGN.

India: Madras, Feb. 8-14, 26 deaths.

PLAGUE.

Australia: Brisbane, Jan. 18-25, 3 cases, 1 death; Cairns, Jan. 23, 1 case; Sydney, Jan. 11-18, 1 case.
Brazil: Para, Feb. 22-29, 1 case, 1 death; Rio de Janeiro, Feb. 2-23, 3 cases, 1 death.
Egypt: Alexandria, Feb. 23, 1 death; Provinces — Assiout, Feb. 22-26, 8 cases, 8 deaths; Beni Souef, Feb. 24, 1 death; Garbeih, Feb. 26 27, 3 cases, 2 deaths; Keneh, Feb. 24-27, 23 cases, 19 deaths; Menoufieh, Feb. 21, 1 case; Minieh, Feb. 22-24, 3 cases, 1 death.
India: General, Jan. 25-Feb. 8, 9,252 cases, 7,208 deaths; Bombay, Feb. 11-18, 70 deaths; Rangoon, Feb. 1-8, 8 deaths.
Japan: Osaka, Feb. 8 15, 1 case, 1 death.

Medical Education and State Boards of Registration

COMING EXAMINATIONS.

FLORIDA Regular Board of Medical Examiners, Ocala, April 13-14. Secretary, Dr. J. D. Fernandez, Jacksonville

NEW MEXICO Board of Health and Medical Examiners, Santa Fe, April 13-14. Secretary Dr. J. A. Massie, Santa Fe.

ARKANSAS Homeopathic Board of Medical Examiners, Little Rock, April 14. Secretary, Dr. V. H. Haliman, Hot Springs.

ARKANSAS Eclectic Board of Medical Examiners, Little Rock, April 14. Secretary, Dr. A. J. Widener, Little Rock.

ARKANSAS Regular Board of Medical Examiners, Little Rock, April 14. Secretary, Dr. F. T. Murphy, Brinkley.

DISTRICT OF COLUMBIA Board of Medical Supervisors, Washington, April 14-17. Secretary, Dr. George C. Ober, 210 B. St. S.-E., Washington.

WEST VIRGINIA State Board of Health, Parkersburg, April 14-16. Secretary, Dr. H. A. Barbee, Point Pleasant.

ILLINOIS State Board of Health, Northwestern University Building, Chicago, April 15-17. Secretary, Dr. J. A. Egan, Springfield.

Methods of Preventing Impersonation at Examinations.

The requirement of photographs by the State Board of Health of Illinois as a means of preventing impersonation at examinations and the methods employed by that board will doubtless be of interest to other boards. From information furnished by Dr. James A. Egan, secretary of the Illinois board, the methods employed are as follows:

Every applicant who is eligible for examination is given a card for admission to the examination and no person is admitted unless he holds such a card which must be displayed on the table to which he is assigned. In case no such card is displayed, applicant is required to wait aside until after the examination has begun, when investigation is made as to whether he is entitled to examination. Each applicant must also display on the table throughout the examination a recently taken, unmounted photograph of himself, on the reverse side of which must appear applicant's signature as well as the signatures of two legally qualified physicians who both certify to the applicant's signature and recommend to the board that he be licensed to practice medicine in Illinois. After the examination has begun two officials inspect the cards of admission and identify the applicants with the photographs. Both cards and photographs are stamped with similar numbers and the cards are taken up, but the photographs are left on the tables, to be taken up at the end of the third day, when the examination is finished, and filed with the applications.

Fourth Annual Educational Conference.

The fourth annual conference of the Council on Medical Education of the American Medical Association will be held at the Auditorium Hotel, Chicago, Monday, April 13, 1908, the session to begin at 10 o'clock. Besides the address of the chairman, and the report of the secretary, there will be reports of special committees on "Preliminary Education," on "What Constitutes a Medical College in Good Standing" and on "The Essentials of a Model Medical Practice Act." There will also be discussions of "The Character of the State Medical Licensing Examination" and of "Practical Ideas Concerning Reciprocity." There is assurance of a large attendance and the promise of an interesting session.

Kansas October Report.

Dr. D. P. Cook, secretary of the Kansas State Board of Medical Registration and Examination, reports the written examination held at Topeka, Oct. 8-10, 1907. The number of subjects examined in was 16; total number of questions asked, 100; per centage required to pass, 75. The total number of candidates examined was 17, of whom 12 passed and 5 failed. The following colleges were represented:

PASSED.

College.	Year. Grad.	Per Cent.
Howard University, Washington	(1907)	80, 85
Bennett Coll. of Ecl. Med. and Surg	(1907)	80
Louisville Med. Coll	(1894) 80; (1907)	85
University of Michigan	(1904)	80
Lincoln Med. Coll	(1906)	75
University Med. Coll., Kansas City	(1907)	75, 80, 80
Ensworth Central Med. Coll	(1907)	75
Ohio Medical University	(1907)	85

FAILED.

University Med. Coll., Kansas City	(1907)	65
Barnes Med. Coll	(1906)	70
Creighton Med. Coll	(1906)	65
Meharry Med. Coll.	(1907)	70, 70

District of Columbia January Report.

Dr. George C. Ober, secretary of the Board of Medical Supervisors, reports the written examination held at Washington, Jan. 9-13, 1908. The number of subjects examined in was 8; total number of questions asked, 80; percentage required to pass, 75. The total number of candidates examined was 10, of whom 8 passed and 2 failed. The following colleges were represented:

PASSED.

College.	Year. Grad.	Per Cent.
Howard University	(1907)	75.5, 78.4
George Washington University	(1906) (1907)	77.9 82.1
American Med. Miss. Coll	(1906)	84.7
Baltimore Med. Coll	(1907)	81.0
Niagara University	(1897)	79.5
University of Virginia	(1906)	81.4

FAILED.

George Washington University	(1907)	70.0
University Med. Coll., New York City	(1891)	73.6

Marriages

ALEXANDER T. HENDERSON, M.D., Ashland, Ky., to Miss Alice Paynter of Olive Hill, Ky., March 18.

RALPH FRANCIS WARD, M.D., New York City, to Miss Agnes Brook Alsop of Ozone Park, March 17.

JOHN CRAWFORD, M.D., Esmond, N. D., to Miss Mamie O'Malley of Morris, Minn., February 26.

CHARLES C. JACOBS, M.D., New Orleans, La., to Miss Marie D. Cañizares of Habana, Cuba, February 27.

REYNOLDS HAYDEN, M.D., assistant surgeon, U. S. Navy, to Miss Belle Howard of Washington, D. C., April 2.

Deaths

William Bradford Eaton, M.D. University of Berlin, Germany, 1894; later laboratory assistant to Virchow; assistant pathologist in Jefferson Medical College Hospital for two years, and for the past five years in charge of the laboratory of the Bryn Mawr (Pa.) Hospital; a bacteriologist of note; registrar of the board of health of Delaware County, Pa.; died at his home in Haverford, March 17, from septicemia, resulting from a postmortem wound, after an illness of more than a week, aged 39.

Millard F. Reed, M.D. College of Physicians and Surgeons, Baltimore, 1882; a member of the Kentucky State Medical Association; and president of the Lee County Medical Society; health officer of Lee County and medical referee of the State Board of Health since 1884; one of the most efficient practitioners of the mountain district of Kentucky; died at his home in Beattyville, March 23, after an illness of several weeks, aged 50.

Absalom Pettit, M.D. Medical Department of the Tulane University of Louisiana, New Orleans, 1870; a member of the American Medical Association; one of the organizers and once president of the New Orleans Medical and Surgical Association; and a member of the board of experts on yellow fever; a diagnostician of marked ability; died at his home in New Orleans, March 16, aged 67.

William G. Rogers, M.D. University of Virginia, Department of Medicine, Charlottesville, 1844; a member of the Medical Society of Virginia, and Albemarle County Medical Society, and one of the oldest and best-known practitioners of Charlottesville; died in that city, March 15, from the effects of a fall sustained six weeks before, aged 86.

Joseph F. Reuss, M.D. University of Würzburg, Germany, 1845; a member of the State Medical Assocation of Texas, and Dallas County Medical Society; a veteran of the Civil War, in which he served as a line officer in Hunt's Brigade, C. S. A.; a practitioner of Cuero until 1905; died at the home of his son in Dallas, March 17, from senile debility, aged 84.

Robert L. Barret, M.D. Jefferson Medical College, Philadelphia, 1854; surgeon of the Louisa (Va.) Blues, afterward Company B, Thirteenth Infantry, C. S. A., and in Baite's (Georgia) Regiment, and the Twenty-fourth Virginia Infantry, during the Civil War; died at his home in Louisa, Va., March 17, after a prolonged illness, aged 74.

Amos C. Jackson, M.D. Indiana Medical College, La Porte, 1845; for more than 60 years a practitioner of Elkhart County, Ind.; a member of the board of education of Goshen, and for six years president of the City National Bank; died at his home, March 19, from senile debility, after an illness of a few days, aged 86.

Luther Turner, M.D. Medical Department of the University of Iowa at Keokuk, 1856; a member of the Missouri legislature in 1876; and for many years a practitioner of Cherry Box, Mo.; died at the home of his son in Caldwell, Kan., January 31, from influenza, after an illness of about seven weeks, aged 78.

Nehemiah Dodge, M.D. Jefferson Medical College, Philadelphia, 1873; for several years assistant physician to the Milwaukee County Insane Hospital, Wauwatosa, and a well-known practitioner of Milwaukee; died in the Milwaukee Hospital March 15, after an illness of more than a year, aged 55.

Charles William Price, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1901; for several years physician to the Ransom Home, Avoca, Pa., and burgess of that town in 1906; died at his home in Avoca, March 18, from disease of the liver, after an illness of several months, aged 33.

John Minor Gillespie, M.D. College of Physicians and Surgeons in the City of New York, 1890; afterward an interne in St. Luke's Hospital, New York City; died at his home, "Winter Quarters" plantation, Tensas Parish, La., from pneumonia, February 20, after an illness of six days, aged 42.

Cornelius B. Smith, M.D. Eclectic Medical Colege of Pennsylvania, Philadelphia, 1879; for many years a practitioner of Clackamas County, Ore.; and in 1895 and 1897 a member of the Oregon legislature; died at his home in East Portland, March 14, after an illness of ten months, aged 61.

Robert H. Holliday, M.D. Washington University School of Medicine, Baltimore, Md., 1868; a member of the Medical Society of the State of North Carolina and Sampson County Medical Society; a Confederate veteran; died at his home in Clinton, March 3, from pneumonia, aged 66.

Samuel Reuben Hayes, M.D. Cincinnati College of Medicine and Surgery, 1886; a member of the Ohio State Medical Association and Miami County Medical Society; physician of Tippecanoe City; died at his home in that place, March 16, from tetanus, after a short illness, aged 45.

Edmund Howard Martin, M.D. Medical College of the State of South Carolina, Charleston, 1843; for a short time a practitioner of Savannah, Ga., New Orleans, and Memphis, Tenn.; died at the home of his son-in-law in New York City, Nov. 3, 1907, from senile debility, aged 83.

James C. Gillespie, M.D. Vanderbilt University, Medical Department, Nashville, Tenn., 1881; for many years a member of the Knox County (Tenn.) board of equalization; died at his home in Inskip, Tenn., March 17, from disease of the stomach, after a prolonged illness, aged 73.

James L. Baskin, M.D. Vanderbilt University Medical Department, Nashville, 1887; a member of the American Medical Association; died at his home in Ittabena, Miss., Dec. 22, 1907, from injuries received by being knocked off a trestle by a train two hours before, aged 59.

Thomas W. Williams, M.D. Medical College of Indiana, Indianapolis, 1883; of Casey, Ill.; a member of the American Medical Association; died suddenly at Hot Springs, Ark., where he had gone for the benefit of his health, March 14, from heart disease, aged 50.

Jacob Brackett Wentworth, M.D. Medical School of Maine, Medical Department of Bowdoin College, Brunswick, 1876; for many years a practitioner of Lowell, Mass., and later of Brownsfield, Maine; died at the home of his cousin in Lowell, March 17, aged 59.

Asa A. Cannaday, M.D. Medical College of Virginia, Richmond, Va., 1861; assistant surgeon in the Confederate service during the Civil War; died at his home in Jack's Mills, Floyd County, Va., March 13, from influenza, after a short illness, aged 71.

David Henry Chandler, M.D. New York Homeopathic Medical College and Hospital, New York City, 1892; health officer of Cornwall-on-the-Hudson, N. Y.; died at his home in that city, March 19, from pneumonia, after an illness of one week, aged 46.

Brinton Corlies, M.D. Medico-Chirurgical College, Philadelphia, 1896; of Sherwood, West Philadelphia; for several years a medical missionary in China; died suddenly in the Academy of Music, Philadelphia, March 20, from angina pectoris, aged 37.

Clement Venn, M.D. Rush Medical College, Chicago, 1887; of Chicago; formerly superintendent of the Milwaukee County Insane Hospital, Wauwatosa, Wis.; died in St. Joseph's Hospital, March 23, from nephritis, after a prolonged illness, aged 40.

Frank Jones Dewey, M.D. Rush Medical College, Chicago, 1885; a member of the staff of the Central Free Dispensary; died at his home in Chicago, March 23, from injuries received March 8 in a collision between his bicycle and a street car, aged 56.

Franklin W. Hays, M.D. Medical College of Indiana, 1880; of Indianapolis; a member of the American Medical Association; and professor of dermatology and clinical medicine in the Medical College of Indiana; died in Los Angeles, Cal., March 25.

Frank Jay Thornbury, M.D. Medical College of Ohio, Medical Department, University of Cincinnati, 1889; formerly assistant surgeon in the Public Health and Marine-Hospital Service; died recently in a hospital at Rochester, N. Y., aged about 50.

Frank X. Boucher, M.D. Hamline University College of Medicine, Minneapolis, 1906; of Delano, Minn.; while driving across the tracks of the Great Northern Railway at Delano, was struck by a passenger train and killed, March 10, aged 27.

Katherine Burns, M.D. Woman's Medical College of Pennsylvania, Philadelphia, 1892; of Canton, Ohio; a member of the Ohio State Medical Association and Stark County Medical Society; died March 23, after an illness of one year, aged 41.

Robert Fletcher Burleigh, M.D. Dartmouth Medical School, Hanover, N. H., 1887; a member of the American Medical Association, and a specialist on diseases of the eye; died at his home in Braintree, Quincy, Mass., March 23, aged 46.

Walter Coke Folger, M.D. Barnes Medical College, St. Louis, 1898; a member of the Medical Society of the State of North Carolina and Surry County Medical Society; died at his home in Dobson, N. C., February 18, from pneumonia, aged 40.

Jonathan Dearborn, M.D. University of the State of Missouri, Medical School, St. Louis, 1849; for nearly half a century a practitioner of Mount Sterling, Ill.; died at his home in that city, March 18, from senile gangrene, aged 83.

John M. Jones, M.D. Medical Department, University of Nashville, Tenn., 1872; a member of the Tennessee Medical Association and Jackson County Medical Society; died at his home in Newport, Ark., February 13, aged 61.

William McQueen Teetzel, M.D. Trinity Medical College of Toronto, 1896; of Cleveland, Ohio; died at St. Clair Hospital in that city, March 18, from cerebrospinal meningitis, after an illness of less than a week, aged 35.

Henry C. Peck, M.D. Albany (N. Y.) Medical College, 1875; coroner of Broome County, N. Y., in 1899; died suddenly at his home in Port Dickinson, from hemorrhage, following a violent attack of coughing, March 19, aged 54.

Herbert C. Burch, M.D. Hahnemann Medical College and Hospital of Chicago, 1890; mayor of Redfield, S. D.; died at his home in that city, March 15, from cerebrospinal meningitis, after an illness of one week, aged 39.

Robert S. Littrell, M.D. Washington University, Medical Department, St. Louis, 1882; one of the oldest practitioners of Rye, Colo.; died at his home in that place, March 16, from disease of the stomach, aged 59.

Archibald Hume Anderson, M.D. Trinity Medical College, Toronto, 1902; who served in the Boer War; died at his home in Webbwood, Toronto, Ont., from pneumonia, March 15, after a short illness, aged 28.

Arthur John Lawrence, M.D. University of Buffalo (N. Y.) Medical Department, 1875; of Los Olivos, Cal., was found burned to death in his cottage at Camp Meekers, Cal., March 14, aged about 60.

Richard C. Traver, M.D. University of Michigan, College of Medicine and Surgery, Ann Arbor, 1873; died at his home in Somerset Center, Mich., March 18, from pneumonia, after an illness of ten days.

Edwin Porter, M.D. Dartmouth Medical School, Hanover, N. H., 1854; died at his home in Northfield, Vt., March 19, a week after a fall in which he suffered a fracture of the left patella, aged 81.

William A. Dunbar, M.D. University of Louisville (Ky.) Medical Department, 1856; a prominent practitioner of the Kanawha Valley; died at his home in Winfield, W. Va., March 14, aged 75.

Leonardo da Vinci Judd, M.D. Jefferson Medical College, Philadelphia, 1877; for 30 years a practitioner of West Philadelphia; died suddenly from heart disease at his home, March 18, aged 66.

Josiah Richardson, M.D. Medical Department of the Tulane University of Louisiana, New Orleans, 186-; died at the home of his sister in Louisville, Ky., February 5, from senile debility, aged 75.

Paul Joseph Weber, M.D. Medico-Chirurgical College of Philadelphia, 1898; attending physician to the Phœnixville (Pa.) Hospital; died at his home, February 21, from pneumonia, aged 34.

David M. Finley, M.D. Rush Medical College, Chicago, 1868; a veteran of the Civil War; died at his home in Cascade, Iowa, March 16, from cancer, after an illness of several months, aged 68.

Guy R. Hanshaw (Years of Practice, W. Va.); for 50 years a practitioner of Ellensboro, W. Va.; choked to death while eating supper at a hotel in Parkersburg, W. Va., March 14, aged 70.

Stephen Tyler Hume, M.D. Berkshire Medical College, Pittsfield, Mass., 1844; for 63 years a resident of Geneseo, Ill; died at his home in that place, March 21, from acute nephritis, aged 89.

John Alexander McIlwain, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1891; of Mount Tabor, Oregon; died suddenly at Montavilla, Ore., March 17, aged 38.

William W. Wyckoff, M.D. Eclectic Medical College of Pennsylvania, Philadelphia, 1863; died at his home in Trenton, N. J., March 19, after an illness of several months, aged 71.

Alexander A. Crump, M.D. (Years of Practice, Ohio), 1896; said to have been the oldest practitioner of Holmes County, Ohio; died at his home in Millersburg, March 19, aged 88.

Francis H. Roberts, M.D. Homeopathic College and Hospital, Cleveland, Ohio, 1861; of Plainview, Minn.; died at the home of his daughter, near Rochester, Minn., March 14, aged 76.

Frank F. Dennis, M.D. Chicago Homeopathic Medical College, 1894; died at his home in Kokomo, Ind., March 21, from paralysis, after an illness of more than a year, aged 44.

Frank A. Howig, M.D. University of Pennsylvania, Department of Medicine, Philadelphia; a retired practitioner of Big Rapids, Mich.; died at his home, Dec. 10, 1907, aged 79.

Hamilton E. White, M.D. Albany (N. Y.) Medical College, 1880; died at his home in Fort Plains, N. Y., March 20, from pneumonia, after an illness of about six weeks, aged 58.

J. W. Owens, M.D. Eclectic Medical College in the City of New York, 1875; died at his home in Carthage, N. Y., March 16, after an illness of three weeks, aged 80.

George Linville Baker, M.D. Medical School of Harvard University, Boston, 1902; of Boston, Mass.; died at West Haddonsfield, N. J., March 20, aged 28.

William E. Breneman, M.D. Jefferson Medical College, Philadelphia, 1897; died at his home in Saxton, Pa., March 14, after a lingering illness, aged 35.

George T. Thomas, M.D. Rush Medical College, Chicago, 1874; of Kansas, City, Mo.; died at Geneseo, Ill., March 15, from angina pectoris, aged 55.

Frank Lee Benedict, M.D. New York Homeopathic Medical College and Hospital, 1879; died at his home in Portsmouth, N. H., March 13, aged 51.

Preston W. Pope, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1881; died at his home in Nevada, Mo., February 3, aged 56.

Francis E. Rice, M.D. Jefferson Medical College, Philadelphia, 1852; died at his home in New Market, Va., February 22, aged 74.

Marshall D. Bedel, M.D. Miami Medical College, Cincinnati, 1874; died at his home in Norfolk, Neb., February 17.

J. P. Easterly (License, Tennessee, 1889); died at his home, Bright Hope, Greene County, Tenn., recently, aged 69.

Deaths Abroad.

Edwin Robert Bickersteth, F.R.C.S. Edin. 1855; for many years one of the most eminent operating surgeons of the north of England; surgeon to the Royal Infirmary, Liverpool, for nearly 32 years; one of the first to appreciate and adopt the antiseptic system; lecturer on the principles and practice of surgery in the old Liverpool Medical School; president of the Medical Institution in 1870; and president of the surgical section of the British Medical Association in 1883; died at his home in Liverpool, March 7, after an illness of five months, aged 78.

Andrew Halliday Douglas, M.D. Edin. 1840; F.R.C.P. Edin. 1843; treasurer of the Royal College of Physicians for several years; president of the college in 1869; one of the founders and vice-president of the Edinburgh Medical Missionary Society; died at his home in Edinburgh, from cerebral thrombosis, March 10, after an illness of four days, aged 88.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

More Endorsements of Council Work.

Since the last list was published in THE JOURNAL, we have been informed that the societies of the following counties have adopted resolutions endorsing the work of the Council on Pharmacy and Chemistry of the American Medical Association:

Allegheny County, Pennsylvania.
Winona County, Minnesota.
Randolph County, Arkansas.
San Diego County, California.
York County, Pennsylvania.
Muscatine County, Iowa.
Clay-Becker County, Minnesota.
Hamilton County, Iowa.
Oakland County, Michigan.
Lake County, Colorado.
Grand Forks District, N. Dakota

The secretary of the Oakland County (Mich.) organization writes:

"We expect to devote the next meeting to the discussion of the nostrum evil, although we have already adopted resolutions approving the work of the Council."

The Allegheny County (Pa.) Medical Society, after approving the resolutions adopted by the Kentucky State Medical Association, pledged itself to discourage and to curb the use of unethical remedies and also to condemn (as has been its policy for many years) the advertising in medical journals of nostrums and unethical remedies in general.

STRONG RESOLUTIONS IN DAVIDSON COUNTY, TENNESSEE.

The following resolutions have been adopted by the Nashville Academy of Medicine and Davidson County Medical Society:

> WHEREAS, The Nashville Academy of Medicine and Davidson County Medical Society is deeply sensible of the extreme importance of securing pure drugs and of purging our honorable profession from the use of nostrums; and
>
> WHEREAS, We recognize in the Council on Pharmacy and Chemistry, established by the American Medical Association, a body of eminent scientists of high professional standing, whose function is to examine pharmaceutical products and to inform the medical profession as to the composition of said pharmaceuticals; and
>
> WHEREAS, After careful examination of many products it has officially approved a large number of them, and in order more fully to demonstrate its functions has published exposures of a large number of fraudulent preparations that have been foisted on the medical profession and the public in various well-known ways, as examples of the much larger number which they have found of little or no value, or positively harmful; and
>
> WHEREAS, We as physicians are vitally concerned in the work of this council and wish to advance its objects in every way possible; and
>
> WHEREAS, One of the greatest aids to the nostrum manufacturers is the medical press, whether controlled by medical men or interested lay firms; and
>
> WHEREAS, We feel that the medical profession and all agencies controlled by it should now and for all time divorce itself from those interests which prey on the diseased through the sale of nostrums and dishonest proprietary remedies; therefore, be it
>
> *Resolved*, By the Nashville Academy of Medicine and Davidson County Medical Society, in regular session assembled, that we will do everything in our power to secure the use of pure drugs only, and that we will strive in every way possible to rid our profession from the use of nostrums; and be it further
>
> *Resolved*, That we most heartily endorse the Council on Pharmacy and Chemistry, and that we extend to it our utmost confidence. Furthermore, be it
>
> *Resolved*, That we request the members of this body to limit their use of proprietary remedies to those investigated and approved by the Council on Pharmacy and Chemistry, and that those found by them to be of no value, or positively harmful, be treated with rigid ostracism. Furthermore, be it
>
> *Resolved*, That we will cooperate with the Council on Pharmacy and Chemistry in every way possible and will strive to assist it in attaining its aims. Furthermore, be it
>
> *Resolved*, That our members be requested to communicate with the editors, owners, collaborators and publishers of the medical journals of this country on this subject, and to announce to the profession through some suitable medium, such publications as are willing to purge their columns of objectionable matter; and furthermore, our members are requested to support such journals, even if they find it necessary to increase their subscription rates. And further, be it
>
> *Resolved*, That we will lend our untiring energy to the propagation of warfare on these deleterious influences in our profession until we shall have raised it to its proper dignity and shall have afforded the public that protection which is due them through us.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES.

DR. JOHN H. BLACKBURN, DIRECTOR.
BOWLING GREEN, KENTUCKY.

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

The following county societies are also conducting the course of postgraduate study, making a total to date—so far as the director has been informed—of sixty-four, which are following it.

ILLINOIS:—Lake County.
KANSAS:—Wyandotte County.
KENTUCKY:—Oldham County.
MICHIGAN:—Bay County.
MISSOURI:—Butte County.
TEXAS:—Guadalupe County.
INDIANA:—Blackford County, Montpelier.
  Fayette County.
  Elkhart County.
  Grant County.
  Kosciusko County.

Seventh Month.

SECOND WEEKLY MEETING.

Changes in Uterus and Appendages During Pregnancy.

Uterus: Weight, capacity, diameters, form and consistence, situation. Cervix; direction, softening, effacement. Muscular wall; number and size of fibers, elastic tissue. Mucous membranes, decidua. Vessels; arteries, veins and lymphatics.

Ligaments.

Ovaries: Position, cessation of ovulation, corpus luteum.

Tubes: Change in position.

Vagina: Color, blood-vessels, secretion. Pelvic floor. Vulva. Pelvic articulations.

Changes in Other Organs and Structures During Pregnancy.

Abdominal Walls: Distension, striæ, linea alba.

Breasts: Enlargement, Montgomery's glands, secretion, roseola.

Heart: Displacement, size, pulse rate. Blood; amount, leucocytes, alkalinity.

Thyroid: Size, changes in nephritis, in albuminuria.

Kidney: Urine, quantity, toxicity, salts and other elements. Albuminuria; frequency in pregnancy, labor and puerperium. Kidney of pregnancy, differs from nephritis.

Bladder. Stomach and bowels.

Mental and nervous changes.

Diagnosis of Pregnancy.

Positive signs: 1. Fetal heart-beat; occurrence, rate, location. Differentiate from funic souffle, from uterine souffle. 2. Movements of fetus; active and passive. 3. Outlines of fetus by palpation.

Probable signs: 1. Abdominal enlargement. 2. Changes in shape and consistence of uterus. 3. Changes in cervix. 4. Intermittent uterine contraction.

Presumptive signs and symptoms: 1. Cessation of menses. 2. Changes in breasts. 3. Nausea and vomiting. 4. Quickening. 5. Discoloration of vaginal and vulvar mucous membranes. 6. Pigmentation of skin and striæ. 7. Urinary disturbances. 8. Abnormal appetite, emotional changes.

Medicolegal

Death from Blood Poisoning Following Cut.

The Supreme Court of Ohio says that in the case of Rheinheimer vs. Ætna Life Insurance Company, an accident insurance policy, after providing for indemnity for accidental injuries resulting in disability, etc., contained the stipulation that, if death resulted solely from such injuries within ninety days, the said company would pay the sum of $5,000. Besides, the policy contained the further provision that it was issued and accepted on certain conditions, one of which was that this insurance did not cover, in event of accident or death, loss of limb or sight, or disability, resulting wholly or partly, directly or indirectly, from bodily or mental infirmity, or disease in any form, proximate or contributory, as a primary, secondary or final cause of accident, injury or death. While the policy was in full force, and the insured was not afflicted with any known physical or mental infirmity, he unintentionally and accidentally sustained a cut or scratch on the index finger of his left hand, from which blood at once issued, through which wound and coincident therewith it became so infected that blood poisoning was at once introduced into the circulatory system of the insured, from the effects of which he died within five days of the accidental injury. The court holds that the death was not within said exception and that the insurance company was liable. It says that the introducing of the poison was charged to have been simultaneous or next in time to the injury. The inoculating of the poison was the first sequence of the accident. The accidental injury was alleged to have been the sole and proximate cause of the death. The court is not able to say, as a matter of law, that the facts so averred were so improbable or impossible that it should ignore the positive terms of the pleading.

Hospital Exempt from Taxation as a Public Charity—Limiting Physicians to Those Governed by Ethics of American Medical Association.

The Supreme Court of Illinois says, in the case of Sisters of St. Francis vs. Board of Review of Peoria County, that in the St. Francis Hospital charity was extended to all the members of the community, and was not confined to any particular class of individuals. It was an institution of public charity; and where an institution devoted to beneficence of that character is, under the law, exempt from taxation, it does not lose its immunity by reason of the fact that those patients received by it who are able to pay are required to do so, or by reason of the fact that it receives contributions from outside sources, so long as all the money received by it is devoted to the general purposes of the charity, and no portion of the money received is permitted to inure to the benefit of any private individual engaged in managing the charity.

It was argued that this hospital should not be held to be an institution of public charity by reason of the great disparity between the number of charity patients and those who paid for the care and attention they received at it. But this objection seems to the court without merit, so long as charity was dispensed to all those who needed it and who applied therefor, and so long as no private gain or profit came to any person connected with the institution, and so long as it did not appear that any obstacle, of any character, was by the corporation placed in the way of those who might need charity of the kind dispensed by this institution, calculated to prevent such persons making application or obtaining admission to the hospital. The institution could not extend its benefactions to those who did not need them, or to those who did not seek admission.

It was also contended that the nurses who were educated in the training school conducted in the hospital received training fitting them to pursue a profitable business for their private benefit, and that for this reason the hospital was not a public charity. It seemed that the students in this training school received board and instruction in exchange for assistance rendered in caring for patients and in doing other work about the building. It did not appear that the value of that which they so received was greater than the value of the service which they rendered, and there was, therefore, the court holds, no merit in this contention.

Again, the court says that it was urged that the institution was, in fact, being conducted, and this property used, for the benefit of certain physicians in the city of Peoria. This contention was based on the fact that the board of managers of the corporation had established certain rules of government, by one of which rules no physicians were permitted to practice in the hospital except such as subscribed to and were governed by the principles of medical ethics promulgated by the American Medical Association. It did not appear from this record what percentage of physicians practicing in the city of Peoria would be eligible under this rule. It did appear, however, from the testimony of those Sisters who were in actual management of the hospital that they understood the rule permitted all reputable physicians to treat patients in the institution, and that but few physicians practicing in Peoria were excluded. The sisterhood did not provide medical attention. The patient was permitted to call any physician or surgeon he desired who was not excluded by the rule in question. When the patient was unable to pay for medical car he was treated free of charge by the members of the med ical profession practicing in the hospital. The question whether or not this was an institution of public charity depended not at all on what class of physicians were permitted to practice there, so long as the institution was not conducted for the purpose of benefiting the physicians of that class. A hospital is primarily for the benefit of the patient, and not the physician. Whether or not it is a charity is to be determined by the treatment which the patients receive at the hands of those in charge of the hospital. It is, of course, possible that a hospital might be established and conducted for the professional and financial benefit of certain physicians, and that it might make a pretense of receiving charity patients for the purpose of bringing itself within the statute exempting the property of institutions of public charity from taxation, but the evidence of this case clearly showed that no such state of affairs existed here.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

March 21.

1 *A Study of Four Hundred Cases of Epithelioma in Private Practice, with Treatment and Results. L. D. Bulkley and H. H. Janeway, New York.
2 *Acute Invasion of the Kidneys by the *Bacillus Coli Communis.* W. H. Thomson, New York.
3 *Arneth's Method in the Clinical Study of Pulmonary Tuberculosis. G. E. Bushnell and C. A. Treuholtz, Fort Bayard, N. M.
4 Diagnosis and Treatment of Early Ectopic Gestation. A. Brothers, New York.
5 *Treatment of Hyperphonia (Stuttering and Stammering) by the General Practitioner. E. W. Scripture, New York.
6 Freud's Method of Psychotherapy. L. P. Clark, New York.

1. **Epithelioma.**—Bulkley and Janeway's study leads them to emphasize among others the following points: While many patients can be permanently cured by caustic pastes, at times

these are disappointing and may aggravate the trouble. The curette requires additional destructive agents to the base left after operation. By the proper use of the *x*-ray we have a safe, and in patients who have not been grossly neglected or maltreated, a sure method of cure, with the least amount of deformity. In cases in which knowledge and experience show that these lighter measures are not likely to avail, recourse should be had to complete surgical removal.

2. **The Kidneys and the Bacillus Coli.**—Thomson says that the commonest occasion of acute septic invasion of the kidneys by the *Bacillus coli communis* is in the course of typhoid fever. It may also supervene in patients who have had chronic interstitial nephritis complicated with gastroenteritis or serious cerebral symptoms passing into coma with hyperpyrexia. Chronic ulcerative colitis is another antecedent. Thomson knows of no serious condition in which so much can be done if its nature is recognized, but which is so generally fatal if not specifically treated. The diagnosis is certain on finding the *Bacillus coli communis* in large numbers in the urine. The treatment is as follows: First a dose of calomel 10 grains (0.65 grams) and compound jalap powder 40 grains (2.60 grams). The specific medication consists of 10 grains (0.65) of hexamethylenamin and 10 grains (0.65) of sodium benzoate in 4 ounces (120 c.c.) of water given in urgent cases every two hours. If the patient is comatose the specific medication should be administered by rectum.

3. **Arneth's Method in Pulmonary Tuberculosis.**—Increased activity in the production of leucocytes is a manifestation of the reaction of the organism to bacterial infection. In cases with good reaction, a leucocytosis is present. In less favorable cases the production of new leucocytes keeps pace with their destruction, and the leucocyte count is normal. When reaction fails, a leucopenia is present. The loss of the older neutrophiles furnishes an indication as to the amount of circulating bacteria and bacterial toxins. The study which Bushnell and Treuholtz report was purely clinical in its scope, undertaken with a view to determine whether or not Arneth's method might be of practical assistance in the treatment of pulmonary tuberculosis. In a patient with no fever and no moisture in the lungs this method enables one to demonstrate the presence of toxic absorption in the absence of manifest signs with the thermometer and stethoscope. In advanced and active tuberculosis it gives, as a rule, no information we do not already possess. Leucocyte counts are always normal. The following are the authors' conclusions: The index of the normal individual at work is between 60 and 70; with complete rest and abundant food, the index should fall below 60. A tuberculous patient can not, therefore, be considered as entirely free from manifest toxic absorption if his index remains above 60 when at rest. Practically, however, a patient with an index between 60 and 70 may usually be allowed moderate exercise. If the index remains below 60, with moderate exercise, the case is very favorable. Some tuberculous patients work for years with indices above 70. Usually in such a case, some activity persists or a small suppurating cavity is present. In general, however, an index of 70 or more is an indication for absolute or relative rest. Certainly no patient can be considered cured whose index is found to be usually above 70. Too favorable conclusions must not be drawn from an occasional fall in the Arneth index, nor must too great importance be ascribed to minor variations. Thirteen cases are reported.

5. **Hyperphonia.**—This article was dealt with editorially in The Journal, March 28, 1908, p. 1041.

Boston Medical and Surgical Journal.

March 19.

7 President's Address Before New England Pediatric Society. T. M. Rotch, Boston.
8 *Serum Treatment of Epidemic Cerebrospinal Meningitis. C. H. Dunn, Boston.
9 *The Use of Fat-Free Milk in Infant Feeding. C. W. Townsend, Boston.
10 Use of the Roentgen Ray in the Study of Diseases in Children. A. W. George, Boston.

8. **Cerebrospinal Meningitis.**—Since last November, Dunn has used Flexner's antiserum in fifteen cases of epidemic cerebrospinal meningitis, in all but one of which the diagnosis was confirmed by the finding of the *Diplococcus intracellularis* in the cerebrospinal fluid. Eight cases resulted in complete recovery, with no sequels of any kind. Two chronic cases of considerable standing, before coming under observation, resulted in death. Five cases are still pending, four patients being convalescent, the other, a chronic case, having a dubious outcome. He thinks the results in these cases sufficiently good to afford a strong basis of hope that this treatment will prove in cerebrospinal meningitis of value commensurate with that of antitoxin in diphtheria. Though it requires further testing, he thinks that the antiserum should be used as early as possible in every case, lumbar puncture being made as soon as the disease is suspected, and the antiserum being injected through the same needle, without waiting for bacteriologic examination if the fluid obtained is notably cloudy. If after one dose the temperature falls to normal and the symptoms show rapid and progressive improvement, no further dose of antiserum may be necessary. Should the temperature rise, or a lapse occur, it should be treated as for the original attack. If the temperature does not fall, or the symptoms do not improve, the injection should be repeated daily for three days. When no fluid is withdrawn, it is questionable whether or not it is a safe procedure, though Dunn has done it without bad results. He describes the fifteen cases.

9. **Fat-Free Milk in Infant Feeding.**—Townsend's considerations lead to the following conclusions: While fat is necessary to the normal infant, it is more often given in excess than is generally supposed. Excess of fat may cause one or more of a number of symptoms, as, for example, constipation, white and "curdy" stools, a ravenous appetite with atrophy and convulsions. In gastrointestinal disturbances it is desirable to exclude fat. The proteids of undiluted fat-free milk appear to be remarkably well borne even by young infants, and there is an absence of so-called curds from the stools.

New York Medical Journal.

March 21.

11 Progress in Gynecology from a Clinical Standpoint. H. J. Boldt, New York.
12 *Points in Early Diaguosis of Pulmonary Tuberculosis. E. Keating, Chicago.
13 Treatment of Eczema in Infants and Young Children. J. M. Winfield, Brooklyn, N. Y.
14 Value of Stained Smears in the Diagnosis of Diphtheria. E. Burvill-Holmes, Philadelphia.
15 *Symptomatology and Diagnosis of Nephritis. D. Vander Hoof, Richmond, Va.
16 *The Question of Sour Milk. L. Haim, Ithaca, N. Y.
17 Trachoma—Clinical Aspects and Successful Treatment. J. H Egbert, Willimantic, Conn.
18 *How to Estimate the Functional Power of the Heart. P. C Franze, Bad Nauheim, Germany.

12. **Pulmonary Tuberculosis.**—Keating says that medical society discussions of pulmonary tuberculosis indicate that it is difficult for many physicians to erase from their minds the clinical picture of what was formerly conceived to be an early diagnosis of the disease. We are slow to understand that it is not the presence of tuberculous foci that should be cause for alarm, but the manifestation of the infection that should demand prompt and decisive action. The mistaken belief that the tubercle bacillus must be found in the sputum before a diagnosis can be made is responsible for lack of care in clinical examinations, errors in diagnosis, and unnecessary delay in the institution of the proper treatment. The value of the laboratory findings in any disease process should not be minimized, but these are a part only of the evidence and the correlation with the clinical picture is a necessity in arriving at a correct conclusion. He emphasizes the importance of a careful and searching history, mentioning the obstacles often raised by the patient if the object of the inquiry is suspected. The points emphasized are occupation, fresh air in the bedroom, the patient's feeding—is he misled by stomach symptoms and impairing nutrition by light diet?—hemoptysis, night sweats, the liability to become easily tired, especially in the afternoon. Keating then discusses the results of inspection and the early physical signs.

15. **Acute Nephritis.**—Vander Hoof considers his subject under Senator's headings, namely, 1, Acute nephritis, (a) paren-

chymatous, (b) diffuse; and 2, chronic nephritis, (a) diffuse, and (b) indurated. He discusses chronic uremia fully, and states that a large proportion of cases are not diagnosticated, owing to failure to appreciate the various symptoms of chronic uremia, so that the physician's attention is not directed to the renal insufficiency as the cause of ill health. Chronic uremia is a toxemia occurring more or less in all cases of chronic nephritis and with a symptom-complex of considerable diversity. Most disturbances arise in the nervous and digestive symptoms. The motor convulsive symptoms of acute uremia are replaced in the chronic form by mental disturbances; the patients may be apathetic, even somnolent, but sleep is not restful, and even pronounced insomnia may occur. There may be mental confusion, with difficulty in remembering names or recognizing familiar faces; or profound melancholia or mental depression with delusions of persecution. Recurring and persistent headache, frequently occipital, is the commonest symptom. Tonic contractions of different groups of muscles are prominent. Frequently, there are cramps in the calves of the legs, especially at night, and severe and recurring abdominal colic; the pupils are usually contracted, although they dilate in acute uremia. Vertigo is frequent. Various forms of palsies may occur, including strabismus, monoplegia and hemiplegia. Numbness and tingling in the extremities are observed. The disturbances in the gastrointestinal tract are usually periodic; the tongue is heavily coated and there is a foul taste in the mouth. Such symptoms as the foregoing, occurring in persons of the age at which chronic interstitial nephritis is common, should always direct attention toward this lesion, and the presence of increased pulse tension, accentuated second aortic sound, and the history of increased frequency of urination, make the diagnosis very probable, even before the urine is examined. Vander Hoof discusses the eye and urinary conditions, and with regard to the latter says that attempts to estimate the functional activity of the kidneys by cryoscopy, the degree of glycosuria after the use of phloridzin, and the rapidity of the excretion of methylene blue, can not be said to have made for themselves a place of value among our diagnostic aids for the recognition of nephritis.

16. **Sour Milk.**—Haim says that nothing is older than curdled or sour milk, and nothing seems newer than the application which has been made of it. He refers to its use in various forms in patriarchal times, and among the Greeks and Romans; and to its present use in Egypt, the Holy Land, Syria, Anatolia, Turkey, Greece, North Africa, Bulgaria, Armenia, Arabia, Sardinia, Denmark, Norway and Sweden, Russia and India. In all these countries besides being used under various names and in various forms as a food, sour milk has played, and still plays, a great part in empirical medicine. He describes its use in therapeutics, its industrial application, and Metchnikoff's work on it, and points out that milk artificially soured by selected ferments is altogether different from spontaneous sour milk, which, in the absence of any control in its fermentations, may be toxic and present serious dangers of autointoxication. Sour milk, as it is recommended at present, possessing salutary properties which have been proved, is milk which, after being freed of all living germs by sterilization, is soured with a pure culture of specific ferments.

The action of the lactic acid ferments on the three elements of milk is as follows: 1, The casein is coagulated in minute particles, which adhere together and a certain part of it is dissolved; 2, one part of the fat is saponified under the action of lactic acid ferments; 3, by means of one lactase discovered by Buchner, the sugar of milk is converted into lactic acid which does not need any previous digestion in order to be assimilated into the body. He discusses the rôle of yeast in sour milk and its action in the production of alcohol therein, and refers to the frauds practiced on the public, concluding with the following advice: No matter whether the product is manufactured by or under the supervision of a physician, the product should be registered with guarantee of a definite chemical standard and standard of bacteriologic compositions, according to the regulation of the pure food law.

18. **Estimation of the Functional Power of the Heart.**—Franze considers the factors of blood pressure, pulse, respiration, urine, cyanosis and size of the heart, and concludes that Gräupner's method of using the changes in blood pressure after specialized exercises in certain groups of muscles as an aid to examining the heart's power, and the methods by means of the *x*-rays, are the most valuable in themselves. Yet, in his opinion, even taking all symptoms and methods into account, there is no absolutely exact way to arrive at an opinion regarding the functional power of the heart; it can only be estimated with more or less accuracy.

Lancet-Clinic, Cincinnati.

March 14.

19 Résumé of the Modern Teaching on Abortion. J. W. Rowe, Cincinnati.
20 *Recognition and Management of Acute Mastoiditis by the General Practitioner. L. Connor, Detroit, Mich.
21 Mixed Infection in Tuberculosis. H. Schroer, Cincinnati.
22 *Differential Diagnosis of Duodenal Ulcer and Gallstones. W. D. Haines, Cincinnati.

20. Abstracted in The Journal, Nov. 16, 1907, p. 1708.

22. Abstracted in Society Proceedings in The Journal, Jan. 18, 1908, p. 232. This article also appears in *Surgery, Gynecology and Obstetrics*, March, 1908.

Surgery, Gynecology and Obstetrics, Chicago.

February.

23 Nicholas Senn. J. B. Murphy, Chicago.
24 *Chronic Constipation: a Consideration of Its Surgical Treatment. A. Lane, London, England.
25 *Bone Sarcoma: Diagnosis, Prognosis and Treatment. W. B. Coley, New York.
26 General Principles of Abdominal Surgery. R. Morison, Newcastle-on-Tyne, England.
27 Relations Between the Ovaries and Uterus. F. Deals, Ghent, Belgium.
28 Conservative Treatment of Sarcoma. W. W. Babcock and G. E. Pfahler, Philadelphia.
29 Acute Osteomyelitis of the Shaft of the Humerus. Removal of the Shaft. Complete Reproduction of the Bone. C. L. Scudder, Boston.
30 *Transperitoneal Ureterotomy for Ureteral Calculus. G. R. [illegible]den, Jacksonville, Fla.
31 Case of Pubiotomy. T. J. Doederlein, Chicago.
32 *Fracture of the Surgical Neck of the Femur, with Inversion of the Limb. J. D. Bryant, New York.
33 *Fracture of the Femur in Forcible Delivery; Presentation of a Splint. C. R. Robins, Richmond, Va.
34 Résumé of Recent Literature on Pubiotomy. H. F. Lewis, Chicago.
35 Preliminary and After-Treatment of Abdominal Section: Report of 150 Consecutive Cases Without a Death. J. M. Withrow, Cincinnati, Ohio.

24. **Chronic Constipation.**—Lane details in this article the mechanical principles involved in the surgical treatment recommended by him, with illustrative cases, in the *British Medical Journal*, Jan. 18, 1908, and abstracted in The Journal, Feb. 15, page 566. He calls special attention to the liability to ulceration of the stomach in patients suffering from intestinal stasis. He points out that evacuation of the bowels may be increased by the assumption of the supine position, particularly if the foot of the bed is elevated, and suggests that the effect of this position may be the cause of the morning evacuation in civilized life. He refers to the diminution of the respiratory capacity in young people and to the greater seriousness of indigestion in the young than in the adult; to the mental depression, depreciation, and inability to concentrate attention on the part of adults; to the effect of chronic constipation on ovarian conditions and its relation to appendicitis, especially through the conversion, by adhesions, of the appendix into an anchor or guy rope for the cecum. He describes the various operative procedures called for under different conditions.

25. **Bone Sarcoma.**—Coley discusses the treatment of bone sarcoma, particularly with relation to the mixed toxin treatment. He describes, as follows, a new method of preparing the toxin, which he has used almost exclusively during the past six months, and which he regards as more powerful and more efficient than the earlier method. *Bacillus prodigiosus* is grown on agar for ten days. There is then a thick red growth, which is scraped off with glass rods and rubbed up with a mortar and pestle to a smooth, rather thick suspension, physiologic salt solution being used as a diluent. This suspension is sterilized by heat—one hour at 75 C. The total nitrogen per cubic centimeter is determined and the weight of nitro-

gen per cubic centimeter, multiplied by the factor 6.25, gives the weight of proteid present. Thus the weight of *B. prodigiosus* proteid in each cubic centimeter is known, and the suspension is diluted to the required strength before mixing with the streptococcus culture. After mixing and bottling the toxins, the mixture is again sterilized for two hours at 75 C. He describes the method of their use and insists particularly on beginning in every case with a small dose, not exceeding a quarter minim, diluted with a little boiled water.

30. Abstracted in The Journal, Jan. 25, 1908, page 311.

32. **Fracture of Surgical Neck of Femur with Inversion.**—Bryant describes a case of fracture of the surgical neck of the femur with inversion of the limb; a condition of which he had never before seen an instance. He details in tabular form the results of a painstaking search into the literature, which discovered 44 cases of fracture of the neck of the femur with inversion, 15 being intracapsular, 18 extracapsular, while in 11 the variety was not stated. The infrequency of this injury is shown by reference to authorities. He summarizes the reasons for inversion in two classes, academic and those based on observation and autopsy, the latter class including direction of force, periosteal bands, interposition of bone and muscular action.

33. Abstracted in The Journal, Jan. 25, 1908, page 310.

Journal of Medical Research, Boston.

February.

36 *Experimental Studies on Round Ulcer of the Stomach and Duodenum. F. B. Turck, Chicago.
37 *Parasitic Amebas of the Intestinal Tract of Man and Other Animals. E. L. Walker, Boston.
38 *Fats and Lipoids of Malignant Renal Hypernephromas. H. G. Wells, Chicago.
39 *Experimental and Clinical Notes on Chronic Valvular Lesions in the Dog and Their Possible Relation to Future Surgery of the Cardiac Valves. H. Cushing and J. R. B. Branch, Baltimore.
40 Stereophotography of Pathologic Specimens; Improvements in Technic and New Apparatus. L. B. Wilson and H. G. Andrews, Rochester, Minn.
41 *Ocular Tuberculin Reaction. C. Floyd and J. B. Hawes, Boston.

36. **Round Ulcer of Stomach.**—Turck reports results obtained in his further study on experimental round ulcer of the stomach and the duodenum. Dogs were fed with broth cultures of colon bacilli for several months and typical ulcers sometimes causing death from perforation or hemorrhage resulted "in every animal experimented on." When the feeding was interrupted the ulcers would heal, but if the feeding was resumed, large quantities being given, there resulted violent reactions with cerebral and intestinal symptoms followed by death, indicating a condition of increased susceptibility produced by the preliminary feeding. If smaller doses at intervals were given on the resumption of feeding deep chronic ulcers resulted. Two hundred and eighty-six dogs obtained from different sources were examined for spontaneous peptic ulcers, but none were found. The most important result obtained from the work reported in this article seems to be that by carefully adjusting the quantities of colon bacilli fed to dogs, and the intervals between feeding experiments, a chronic condition results in which typical chronic peptic ulcers develop.

37. **Intestinal Parasitic Amebas.**—This is an exhaustive study of the parasitic amebas of the intestinal tract of man and other animals, including several new species discovered by Walker. A new serviceable method has been devised for the cultivation of amebas on agar on cover-glasses which are inverted over a concave slide, thus giving a "hanging-plate culture"—a simple and effective method for studying the life cycle of amebas.

38. **Renal Hypernephromas.**—Wells has analyzed malignant renal hypernephromas with respect to the fats and lipoids which he finds are present in these tumors in about the same proportions as in the tissues of the adrenal and in much larger amounts than in two carcinomas and one sarcoma analyzed. The fatty materials in hypernephromas are essential constituents of the cells and not the result of degenerative changes. It would seem that tumors in different parts of the body offer many interesting problems from the point of view of their chemical composition.

39. **Chronic Valvular Lesions.**—Cushing and Branch, acting on a suggestion of Sir Lauder Brunton that it might be possible to relieve mitral stenosis by surgical measures, have succeeded in obtaining operative recoveries after a considerable number and variety of experimental valvular lesions in dogs made by a direct approach to the valve through the heart wall. "It remains to demonstrate the possibility that an experimentally produced mitral stenosis with compensatory failure can be symptomatically improved by division of the narrowed mitral orifice on the living animal, before attempting by a similar procedure to relieve the corresponding pathologic lesion in man."

41. **Ocular Tuberculin Reaction.**—Floyd and Hawes believe that the ocular-tuberculin test will be of great service when used in conjunction with older methods, which, however, it will not replace; also that it may be of value in acute febrile conditions. They regard it as free from danger to the patient.

American Journal of Medical Sciences, Philadelphia.

February.

42 *Clinical and Pathologic Differential Diagnosis of Diseases of the Female Breast. J. C. Bloodgood, Baltimore.
43 *Fundamental Principles in Treatment of Functional Nervous Diseases with Special Reference to Psychotherapy. J. Collins, New York.
44 *Pathogenesis and Treatment of Neurasthenia in the Young. R. N. Willson, Philadelphia.
45 Nervous Manifestations of Arteriosclerosis. A. Stengel, Philadelphia.
46 *Arteriosclerosis in the Young. F. Fremont-Smith, Washington, D. C.
47 *Lack of Gastric Mucus (Amyxorrhea Gastrica) and Its Relation to Hyperacidity and Gastric Ulcer. J. Kaufmann, New York.
48 *Etiology and Symptomatology of Cerebrospinal Meningitis. T. A. Claytor, Washington, D. C.
49 Complications and Sequels of Typhoid. C. D. Selby, Toledo, Ohio.
50 *Laryngeal Complications of Typhoid, with Report of Two Cases. W. Rieser, New York.
51 Purulent Cerebrospinal Meningitis Caused by the Typhoid Bacillus without the Usual Intestinal Lesions of Typhoid. J. N. Henry, Philadelphia.
52 Chronic Fibrous Myocarditis in Progressive Muscular Dystrophy. C. H. Bunting, Charlottesville, Va.
53 *Certain Unusual Forms of Hepatitis. D. Symmers, New York.
54 Case of Unilateral Mixed Nystagmus Benefited by Treatment. C. A. Veasey, Philadelphia.

42. **Diseases of the Breast.**—Bloodgood discusses intracanalicular myxoma, fibroadenoma, diffuse virginal hypertrophy, malignant tumors, the possible tumors in the breast of women over 25 years of age, solid benign tumors, carcinoma, and its varieties, cystic tumors and sarcoma.

43. **Functional Nervous Diseases.**—Collins' paper aims to present a brief sketch of present-day therapeutic tendencies from the point of view of the practitioner who has much to do with nervous diseases, rather than to give a résumé of therapeutic novelties in neurology. He says that nervous diseases yield more uniformly to treatment than any other class of diseases of comparable nature and severity. Practically all nervous disorders and diseases are chronic. The organic are painful, incapacitating and deforming; the functional are more potent to cause misery and suffering than any other form of disease. While he would not deny that a diagnosis is a most desirable factor in the successful treatment of any disease, he asserts that a correct diagnosis is by no means necessary for the successful treatment of many neuroses. The actual cures undoubtedly affected by faith curists, Eddyites, osteopaths, shrines, charlatans and systems innumerable, render that fact indisputable. No source of knowledge is too mean and contemptible for us to disdain it, neither does it detract from the dignity of our calling to admit the instructive value of these sources. The present rampancy of the supernatural, mediatorial and "miraculous" in the treatment of disease may be interpreted as evidencing: 1, That the mind has a not easily calculated influence over the body, to influence it beneficially or detrimentally (which every one knows or professes to believe); 2, that this influence is being utilized meretriciously by many persons outside of the medical profession; and 3, that ignorance or neglect of the important part played by moral treatment in the cure of nervous disease, necessarily tends to our discredit in the exact ratio in which it tends in the given case to the patient's disadvantage. Not only functional, but

even organic diseases, aside from those dependent on syphilis, may be efficaciously dealt with by this moral treatment, which has been shown experimentally and empirically to restore bodily tone, improve general and local nutrition, add functional potentiality to the will, and aid in dislodging fear and overcoming its infirmity. Collins opposes the claim that it requires special skill to treat nervous disorders successfully, and contends that the general practitioner should study the proper manner of treating them with the same care that he studies infant feeding or typhoid fever. The most important thing is to convince the patient that his disorder is fully understood, which is not the same thing as merely inspiring general confidence in the physician's skill and judgment. It is a sentient condition of the patient that develops unconsciously. Collins is convinced that imaginary maladies are very rare, and that when they occur they are real. Patients are apprehensive of the seriousness of their symptoms, they anticipate disaster and dread impending occurrences, but these are the symptoms, not of an imaginary malady, but of disorders of which fear and want of self-reliance are the principal features. On these principles he considers in detail the subject of neurasthenia and psychasthenia and applies the foregoing doctrines to their treatment.

44. **Neurasthenia in the Young.**—Willson says that at least in the young every instance of so-called neurasthenia is, in the beginning, the result of some definite preventable and discoverable cause, which, if removed in time, will admit of a cure of the patient. He describes four intractable cases treated on the foregoing principles. He says: "Call neurasthenia what one will, or call what one will neurasthenia, the fact remains that it is not even a complete symptom-complex, merely a portion of one, that is founded essentially on a lowered nutrition of not only the nervous system, but of one and all of the tissues and systems of the body, the circulatory system, the bony system, the muscular system, the nervous system also, and above all on altered and diminished food properties of the blood and lymph."

46. **Arteriosclerosis in the Young.**—Fremont-Smith's paper contains a critical analysis of the literature of this subject from all points of view. There appears a remarkable uniformity in pathologic changes in a great variety of conditions. A systematic study of arteritis in the young may prove of distinct assistance in the comprehension of early developments in adult life.

47. **Gastric Mucus.**—Kaufmann says that routine examinations of the stomach contents have hitherto been too much confined to the gastric juice, and that not enough attention has been paid to the protective secretion of mucus and its disturbances. He discusses the recognition of mucus, the lack of mucus, and particularly with hyperacidity, the action of silver nitrate on the secretion of mucus, and the relation of lack of mucus to gastric ulcer.

48. **Cerebrospinal Meningitis.**—Claytor reviews the literature, adds a few observations of his own, and urges that, as it seems impossible to make a diagnosis between meningitis due to the meningococcus and that caused by other organisms, except by spinal puncture, all sporadic cases should be reported. He reports two cases.

50. **Laryngeal Complications of Typhoid Fever.**—Rieser's conclusions are: That pathologic involvement of the larynx is very much more frequent than clinically diagnosticated. Clinically, laryngeal involvement may constitute one of the gravest complications of typhoid fever; the stealthy and sudden onset of edema making it particularly to be dreaded. Early tracheotomy is the rational and life-saving operation and should be performed as soon as stenosis is positively established. The frequency of this complication pathologically, and the possibility of its extreme clinical gravity, warrant its receiving more careful consideration than it has heretofore received in the text-books in discussions of typhoid fever, and at the bedside of the patient.

53. **Hepatitis.**—Symmers describes five cases of a condition anatomically distinct from chronic atrophic cirrhosis of the liver and from the known acute inflammatory or degenerative lesions of this organ. Two types are described, one a simple subacute diffuse hepatitis, and the second, a combined acute and subacute diffuse hepatitis. He considers that it will be justifiable to conclude that a definite anatomic entity exists in the form of an acute diffuse hepatitis, *per se*, and that this lesion is subject to acute exacerbations. It should be assigned to a place midway between atrophic cirrhosis of the liver and the lesion or group of lesions commonly described under the heading of acute yellow atrophy.

New York State Journal of Medicine, New York.

February.

55 *Questions of Broad Consideration, Outside of Technic, That Concern the Organized Medical Profession. F. C. Curtis, New York.
56 *Nihilism and Drugs. A. Jacobi, New York.
57 *County Laboratories and Their Uses—Fifteen Months' Experience. O. J. Hallenbeck, Canandaigua, N. Y.
58 *Warm Versus Cold Anesthetics. J. T. Gwathmey, New York.
59 Puerperal Mastitis, Its Prevention and Treatment. J. A. Schmitt, New York.
60 Legislative Notes. F. Van Fleet, New York.

55 and 56.. Abstracted in The Journal, Feb. 8, 1908, p. 476.

57. Abstracted in The Journal, Feb. 28, 1908, p. 722.

58. **Anesthetics.**—Gwathemey refers to a former paper published in The Journal, Oct. 27, 1906, in which he expressed his preference for warm over cold chloroform. He considers warm chloroform vapor as safe theoretically as cold ether vapor, but can not speak with confidence of it practically. He describes experiments on animals with nitrous oxid and oxygen at room temperature, from which he concludes that warm nitrous oxid and oxygen are at least over twice as safe as gases at their normal temperature and from three to five times as safe as the cold gases. Nitrous oxid and oxygen being already the safest anesthetic, over 40,000 cases having been recorded without a single fatality, it stands in a class by itself. Warm gases are pleasanter to inhale, and the authors conclude that all anesthetics heated to the temperature of the blood are increased in value as regards life without decreasing their anesthetic effect. He has no experimental data on ethyl chlorid, but considers on analogy that the results would probably coincide with those of chloroform, ether and nitrous oxid.

University of Pennsylvania Medical Bulletin, Philadelphia.

February.

61 *Synopsis of Studies in Metazoan Parasitology in McManes Laboratory of Pathology, University of Pennsylvania. A. J. Smith, Philadelphia.
62 *Contributions to Systematic Helminthology. A. J. Smith, H. Fox and C. Y. White, Philadelphia.
63 Biographical Sketch of John Redman Coxe and John Redman.

61. **Metazoan Parasitology.**—Smith gives a descriptive list of seventy-six parasites examined in the university laboratory, with a view to aiding parasitology in determining the range of occurrence of parasites, the variety of hosts in which they have been found, and their habitat in the host. Of vermes four trematodes, twenty-three cestodes, forty-one nematodes, are described, and of arthropoda eight species. The article is illustrated.

62. **Systematic Helminthology.**—Smith, Fox and White give notes of identification of eleven helminthologic species supposed for the most part to be new species.

St. Louis Medical Review.

February.

64 Radium as a Therapeutic Agent. J. W. Wainwright, New York.
65 *How to See All the Organs of the Body with Our Naked Eye. M. I. Knapp, New York.
66 Surgery of the Ureter: A Historic Review. B. M. Ricketts, Cincinnati.

65. **Naked Eye Inspection of Internal Organisms.**—Knapp's startling title does not appear to mean an actual vision of the organs themselves, but rather the education of the senses to an appreciation of their condition, through alterations in the surface unrecognizable by untrained eyes. He asserts that every physician, every student, can acquire the capacity by applying himself assiduously to it. He has been accustomed to make inspection of the entire body a mere routine, insisting on all patients stripping for the purpose. He says: "The

seeing beneath the skin depends entirely on the appreciation of purely physical laws, the thickness of the abdominal wall makes absolutely no difference, in fact, the fatter the person the better we can see. The principles of seeing beneath the skin I have found to be based on these facts: 1. All organs move with respiration, hence the respiratory movements are necessary in order to see the organs. 2. Muscles in a relaxed condition and the overlying skin adapt themselves to the shape of the structures beneath them. 3. Enveloping layers of tissues magnify the size of the organ beneath them or any abnormality of the organ beneath them. Each additional layer of tissue over any irregularity in adapting itself to the contour of this irregularity increases the size and thickness of that irregularity by just so much as corresponds to the thickness of such overlying layer. Hence, any localized thickening of an organ is magnified by the superimposed layers of tissue and can, therefore, be recognized on the skin. For that reason, a fat person shows the outlines better, contrary to the present understanding. An illustration of this is afforded when we palpate the abdominal aorta or the iliac arteries. They appear much thicker to the touch because we have to feel through several layers of tissues and organs. 4. Every line and every unevenness of the skin, either as an elevation or depression, is not a chance product, but the result of a definite cause." He reports six cases of such diagnosis by inspection made in the presence of satisfactory witnesses in public institutions, and subsequently verified.

Pennsylvania Medical Journal, Athens.

February.

67 *Oration on Bacteriology. M. V. Ball, Warren.
68 *Infectious Spondylitis. D. Silver, Pittsburg.
69 *Tendon Transplantation. J. H. Jopson, Philadelphia.
70 *Misapplied Mechanics in the Treatment of Flat Foot. H. A. Wilson, Philadelphia.
71 *Modern Orthopedic Surgery. G. G. Davis, Philadelphia.
72 Case of Acute Gastrectasis Following Typhoid Fever and Premature Birth: Recovery. A. R. Roussel, Philadelphia.
73 Clinical Significance of Pain in the Epigastrium. J. J. Gilbride, Philadelphia.
74 *Too Much Diet and Not Enough to Eat. A. Bernheim, Philadelphia.
75 Epiconus Symptom-Complex in Cerebrospinal Syphilis. W. G. Spiller, Philadelphia.
76 Obstructive Lesions of the Upper Air Passages: Importance of Their Diagnosis and Treatment. F. A. Faught, Philadelphia.

67. **Bacteriology.**—In the oration on bacteriology, Ball, among other things, insisted that the ground work for this study should be acquired in universities or colleges, where the natural sciences are taught by specialists. Medical colleges should not be required to give courses in elementary biology, zoology, entomology and bacteriology. The general practitioner can no longer be expected personally to perform all the tests necessary for the diagnosis of disease, so that clinical laboratories should be established, either at hospitals, or as state institutions, under the charge of experts and should be easy of access to the physician. Medical societies might initiate such undertakings. The methods of the laboratory work should find more imitators in the field of practical medicine.

68 and 69. Abstracted in The Journal, Nov. 9, 1907, page 1625.

70 and 71. Abstracted in The Journal, Nov. 9, 1907, page 1624.

74. **Diet.**—Bernheim says that physicians once in a while should use laboratory ideas and not depend solely on empirical experiments. Whenever a regulation of the ingestion of food becomes necessary for weeks or months, the physicians must see to it that the food is of a kind that will not only still the hunger and quench the thirst, but will feed the body. The general feeling of the patient, and particularly the scale, gives the best assurance for this effect.

Maryland Medical Journal Baltimore.

February.

77 *Treatment of General Suppurative Peritonitis. R. W. Johnson, Baltimore.
78 Propaganda for the United States Pharmacopeia and the National Formulary. J. Ruhräh, Baltimore.
79 What the Druggist Should Do. H. A. B. Dunning, Baltimore.

77. **Suppurative Peritonitis.**—Johnson discusses the changes that have taken place in the treatment of peritonitis during the last few decades, describes the technic of the Murphy method, and says that he has treated a limited number of patients with diffuse or general peritonitis most satisfactorily by Murphy's method. It has taken the despair out of this disease, as antitoxin did out of diphtheria, and has relegated it to about the same category as diphtheria under antitoxin treatment. He heartily commends it for its simplicity, ease of performance, physiologic basis, and last and most convincing, its life-saving results.

Southern California Practitioner, Los Angeles, Cal.

February.

80 *Opsonic Index as a Guide to the Administration of Vaccines. E. L. Leonard, Los Angeles.
81 *Intratracheal Injections in the Treatment of Chronic Respiratory Affections. P. S. Donnellan, Philadelphia.
82 Arteriosclerosis. S. P. Black, Los Angeles.
83 Id. J. M. King, Los Angeles.
84 Id. T. G. Davis, Los Angeles.

80. **Opsonic Index.**—Leonard considers the opsonic index of value in mixed infections, such as occur in pulmonary tuberculosis, sinuses, empyema, inoperable fistulas, indolent ulcers and old infections resisting ordinary surgical and medical treatment. Cultures made separately from the various organisms present will, through the opsonic index, demonstrate the most infective agent. The proper dosage of tuberculin in fluctuating cases of localized tuberculosis, in which the patient is all the time inoculating and reinoculating himself, may be estimated only through observation of the opsonic index. A persistently low index guides to the use of as large a dose of tuberculin as possible consistent with controlling the negative phase. It is of little value for dosage in furunculosis and acne. The errors possibly due to the personal factor, even with laboratory men, render it advisable to take many opsonic indices for their elimination, before treatment is begun. Leonard regards it as of great value in diagnosis and the vaccine treatment.

81. **Intratracheal Injections.**—Donnellan speaks highly of medicated injections into the trachea with an annealed glass syringe, having a barrel of 4 drams (15 grams) capacity, fitted with an asbestos plunger, and reinforced with a metal jacket with revolving collar and finger rings. The cannula is of metal, right-angled, with closed olivary ending, having four fine lateral openings. Anesthetization with 4 per cent. cocain is used; the selected medication is first heated to 100 F. Two drams is about right to begin with, the injection being made slowly under the laryngeal mirror. The injections are not only useless but harmful in acute or subacute affections. Any of the fluid petroleum oils form good vehicles, or pure olive oil or a specially distilled glycerin. Creosote, menthol, camphor, from 1 to 4 per cent. may be added, and in irritable cough 1/8 grain (0.008) of codein; in fetid bronchitis 1/2 grain (0.03) of iodoform or potassium permanganate. Watery or alcoholic solutions should never be used.

Laryngoscope, St. Louis.

January.

85 Clinical Observations in Intracranial Complications of Otitic Origin. J. A. Stucky, Lexington, Ky.
86 Pyogenic Diseases of the Brain of Otitic Origin. J. F. McKernon, New York.
87 An Original Method of Opening the Antrum of Highmore Intranasally, with Exhibition of New Instruments. D. T. Vail, Cincinnati.
88 *Retropharyngeal Abscess. M. A. Goldstein, St. Louis.

February.

89 Persistently Recurring Papillomata of the Nasal Chambers with the Differential Diagnosis of Epithelial Proliferation. J. Wright, New York.
90 General Lymphosarcoma Accentuated in the Pharynx. F. P. Emerson, Boston.
91 Case of Fibromyxoma, Involving the Left Superior Maxilla, Including the Alveolus, Floor, Anterior and Posterior Walls, and of Seven Years' Duration. W. H. Haskin, New York.
92 Intracranial Lesions of Otitic Origin. J. J. Kyle, Indianapolis.
93 Purulent, Hyperplastic and Atrophic Catarrh, Different Stages of One and the Same Disease or Condition. J. North, Toledo, Ohio.
94 Submucous Operation for the Reduction of Hypertrophied Turbinals. C. P. Linhart, Columbus, Ohio.
95 Vaseline Oil in the Dressing of the Radical Mastoid Operation. J. N. Roy, Montreal.

88. **Retropharyngeal Abscess.**—Goldstein reports three cases with comments. In the third case tracheotomy was rendered necessary by rapidly increasing cyanosis. He calls attention to the value of vaporizing compound tincture of benzoin in the room, and near the throat, after tracheotomy, as a preventive of septic bronchitis or pneumonia in the lower breathing tract, which is so liable to occur in young patients after this operation, as well as for its soothing properties. He points out that according to the literature nearly all the reported cases have occurred in children under 5 years of age. This, he thinks, may be logically attributed to the unusual activity of the lymphoid tissue, so that whenever an acute infectious process takes place in the nose, nasopharynx, accessory sinuses, ear, tongue, or larynx, a continuity of lymphoid tissue may readily carry such infection into the depths of the pharyngeal walls. Retropharyngeal lymphangitis without pus formation is of rather frequent occurrence. As to instruments, he considers nothing more serviceable than a slender, sharp-pointed bistoury, guarded and guided by the operator's forefinger. He does not approve of the upright position with the head thrown back, but prefers the patient flat on the back with the head overhanging, so that the outflow of pus may be easily controlled. The incision should be free, deep and long, and as near the median line as possible, to avoid the internal carotid.

95. This article was also published in the *Montreal Medical Journal*, October, 1907.

Journal of Advanced Therapeutics, Rahway, N. J.

February.

96 What Is Pain? An Attempt to Define Its Nature and Origin. F. H. Humphris, Honolulu, H. I.
97 Mechanotherapy of Autointoxication. F. H. Morse, Boston.
98 Cancer and Its Treatment by Cataphoric Sterilization. G. B. Massey, Philadelphia.

Milwaukee Medical Journal.

February.

99 Gastrointestinal Arc. B. Robinson, Chicago.
100 Affinitive Cognates Derived from the Vegetable Kingdom. J. Burke, Manitowoc, Wis.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London.

March 7.

1 Surgery of the Spinal Cord and Its Membranes. D. J. Armour.
2 *Diatheses: The Personal Factor in Disease. D. Duckworth.
3 *Case of Aortic Aneurism, with Extensive Arterial Disease. S. Taylor.
4 *Case of Wertheim's Hysterectomy for Advanced Carcinoma of the Cervix. A. H. N. Lewers.
5 *Hernia of the Iliac Colon. R. A. Stoney.
6 Pathology and Etiology of Intussusception from the Study of 1,000 Cases (concluded). D. C. L. Fitzwilliams.
7 Seven Years' Experience with the Finsen Light Treatment. J. H. Sequeira.
8 Case of Egg Poisoning. A. T. Schofield.
9 Motoring Notes. C. T. W. Hirsch.
10 Warning Against Indiscriminate Use of the Ocular Reaction (Calmette) in the Diagnosis of Tuberculosis. A. M. Ramsay.
11 Case of Poisoning by Gelsemium. J. Bell.

2. See abstract No. 46, in The Journal, March 28, page 1084.

3. **Aortic Aneurism.**—Taylor describes a case, and discusses the various pressure signs—dysphagia, irregularity in radial pulse, inequalities of the pupil, tracheal tugging, the tracheal or expiratory whiff, none of which, however, is pathognomonic of thoracic aneurism, but may be caused by any neoplasms or other tumors, fluid or solid. Notwithstanding the many triumphs of surgery, thoracic aneurism is not in its category. He refers to seventeen methods of treatment, tried under his observation, to secure coagulation, the result being disastrous in every case. He excepts from this adverse opinion ligation of one or more large arteries springing from the arch of the aorta, but discountenances any procedure on the sac itself. He disapproves of the introduction of gelatin injections, and of prolonged rest in bed, with or without large doses of potassium iodid, and cites cases in support of his view. The physician must be candid with the patient and forbid everything that tends to quicken the pulse rate, either in occupation, relaxation or amusement—alcohol, excitement, controversies, etc. The rich patient should retire altogether, however young, and regard the rest of his days as the "evening of life." The poor patient must exchange his occupation for the least energetic one open to him, e. g., that of a time-keeper.

4. **Wertheim's Hysterectomy.**—Lewers divides carcinoma of the cervix into three groups. 1, Cases in which it is at once evident that no operation, however extensive, would be of any use; 2, those in which the growth is in an early stage, and in which it seems probable that either the supravaginal amputation of the cervix or vaginal hysterectomy would be an effective treatment. This group unfortunately contains only a very small proportion of all cases. Lewers has of late years relied exclusively on vaginal hysterectomy for these cases. 3. Those in which the disease has attained a considerable degree of advancement when the patient is first seen. Here vaginal hysterectomy is useless, and Wertheim's hysterectomy is indicated. Its drawbacks are not inconsiderable. It is the most difficult operation in gynecologic work, is necessarily severe as regards the patient, and the mortality, when performed when vaginal hysterectomy is inadvisable, is high. Yet in these cases it seems to be the only treatment offering a fair prospect of relief.

5. **Hernia of the Iliac Colon.**—Stoney describes three cases and discusses the literature. The condition may occur in three distinct ways: 1. The intestine may be drawn into or through the inguinal canal by an extra attachment of the gubernaculum testis. 2. It may be drawn down by a protrusion of the peritoneum covering it in the formation of the sac of an ordinary hernia. 3. There may be a giving away or lengthening of the supporting apparatus of this portion of the intestine, and a subsequent protrusion of it by the expulsive action of the abdominal muscles and diaphragm. This classification corresponds to that of Lockwood for hernia of the cecum. The two main points to attend to in the operation are, first, not to interfere with the blood supply of the loop of intestine, either while trying to separate adhesions, or while dissecting up the posterior wall of the sac above the loop of intestine from the surrounding tissues, for this would mean almost certain gangrene of the gut; and second, an attempt should be made to stitch the cut edges of the peritoneum after the main part of the sac has been cut away, and the gut and remainder of the sac together have been reduced inside the abdominal cavity. It was on these lines that operation was carried out in both the cases reported by Stoney.

British Medical Journal, London.

March 7.

12 *Pulmonary Tuberculosis in Infancy and Childhood. R. A. Young.
13 *Modern Treatment of Surgical Tuberculosis. V. W. Low.
14 *Case of Actinomycosis (Streptotrichosis) of the Lung and Liver Successfully Treated with a Vaccine. W. H. Wynn.
15 Case of Abscess of the Lung Cured by Incision and Drainage. C. H. Cattle and J. R. Edward.
16 Case of Phlegmonous Gastritis. A. J. Hall and G. Simpson.
17 Successful Case of Thoracoplasty for the Relief of Chronic Empyema. J. R. Lunn.
18 Typhoid Carrier of Twenty-nine Years' Standing. G. Dean.

12. **Pulmonary Tuberculosis in Infancy.**—Young points out that the early diagnosis of pulmonary tuberculosis in young children is often extremely difficult, from the non-appearance of sputum, the liability of children to a variety of respiratory affections, the greater proportionate size to which the lesions must attain to become physically demonstrable, and the fact that the incidence often follows infectious disorders, thus diverting attention from its real nature. Young has analyzed the records of 337 cases in children at the Brompton Hospital, for cough, expectoration and wasting, and in only 45 were definite tuberculous signs found; and examination of the sputum confirmed these in only a very small number. The possible methods of infection are: 1, Transmission from mother to fetus *in utero*—congenital or hereditary tuberculosis; 2, inoculation of wounds—inoculation tuberculosis; 3, inhalation of tubercle bacilli in dust—aërogenous or inhalation tuberculosis; 4, the swallowing of bacilli in food, especially milk—ingestion or enterogenous tuberculosis; 5, infection through the ear, Eustachian tube or tonsil. Although congenital tuberculo-

sis has been conclusively proved to occur, by the discovery of the tubercle bacillus in the organs of the fetus and in the placenta and by animal experimentation, this means, as well as inoculation, may be summarily dismissed as a pathologic curiosity. Ear infection, etc., is also probably very limited. The discussion, therefore, rages about the relative importance of inhalation and ingestion infection. Young cites the main evidence on both sides and considers it wise to bear both in mind, and to take preventive measures accordingly. Infancy means high susceptibility from low resisting power, so that very short exposure is a sufficient cause. Inherited predisposition is still a moot point. He cites many striking illustrations to show the part played by defective hygienic and domestic conditions. Typical giant-cell tubercles develop rapidly, with a marked tendency to coalesce. Caseation is almost invariable; calcification and fibrosis are extremely rare; the lymphatic structures are prone to be implicated primarily or early; and there is a strong tendency toward generalization from blood infection. The special characteristics of the disease in infancy and early childhood may be summarized briefly in the statement that the lymphatic system appears to be the most important means of protection, and that when this barrier proves ineffective, through caseation and the subsequent changes, there is a great tendency to rapid unchecked growth, owing to deficient local and general protective reactions. Young describes the types as follows: (a) Tuberculosis of the tracheobronchial glands; (b) acute miliary tuberculosis; (c) acute caseous tuberculosis; (d) chronic or fibrocaseous tuberculosis. A type corresponding to the fibroid tuberculosis of adults can hardly be said to exist. As regards associated lesions in other organs, intestinal ulceration, which is common, he attributes largely at any rate to the swallowing of sputum. He discusses the symptoms and physical signs of the four types and the diagnosis. The cutaneous reaction appears to be of value only in patients under 2 years of age. The ocular reaction he regards as promising, but urges an open mind pending more extended trial. Prophylactic treatment, particularly includes preservation from contact infection. Special care should be taken in regard to nurses and servants, and kissing by strangers should be particularly forbidden. In miliary and caseous cases treatment must be largely palliative and symptomatic. Removal from school, and residence away from a town, in a warm, equable and fairly dry climate—whether sea, inland or mountain is not of vital import, but the life of the child must be as rigidly mapped out as that of an adult in a sanatorium and on somewhat similar lines, while the stay must extend into months or even a year. If there is fever, the patient should be put to rest in bed until the temperature is steady. Breathing exercises are valuable. Diet should be liberal and rich in milk, cream and other fatty constituents; feeding should be regular and at short intervals. Children do not stand overfeeding well, and the appetite must be promoted by ample gentle exercises in the open air. Drugs are but little needed. Troublesome cough, paroxysmal in character, can sometimes be allayed by inhalation of creosote and spirit of chloroform—a few drops are sprinkled on lint. Tuberculin treatment may be used, but only in strictly localized cases and in very small doses, carefully watched by the opsonic index. The doses in the past, he says, have been much too large. The tuberculin method would be more practicable if a simpler measure of its effects than the opsonic index could be found.

13. **Surgical Tuberculosis.**—Low summarizes the treatment in surgical tuberculosis as follows: 1. In all cases open-air treatment should be organized, to meet the circumstances and requirements of the particular case. 2. The patient's powers of resistance to the disease should be periodically measured by suitable blood examination. 3. When the resistance is found to be low and there is no evidence of autoinoculation, use should be made of inoculations of Koch's new tuberculin, in doses that are accurately controlled, both as regards their amount and repetition, by examination of the blood. 4. For patients in whom there is evidence of excessive autoinoculation, absolute rest, with, in the case of a limb, absolute fixity of the diseased part, should be prescribed. 5. In all cases of circumscribed tuberculosis efforts should be directed to increasing the circulation through the infected area. 6. Operative procedure should be directed to the removal of the inert material—whether caseous glands, carious bone or collections of pus—and allowing the access to the infected area of healthy lymph. The necessary operations should be conducted with the most scrupulous asepsis.

14. **Actinomycosis (Streptotrichosis) of Lung and Liver.**—Wynn reports what he supposes to be the first case of this disease treated by bacterial vaccine therapy with a specific vaccine derived from the infecting organism. The result was successful. He discusses the bacteriology of the disease in regard to the various forms of streptothrix, and says that in these cases it will be important in the future to determine whether a vaccine prepared from one of the easily grown species or from a stock laboratory culture will have any effect on an infection caused by another species of streptothrix.

Medical Press and Circular, London.

February 26.

19 Treatment of Pannus Following Trachoma by Inoculating the Eye with Gonorrheal Pus. V. Goldzieher.
20 Tuberculosis of the Kidney. C. J. Symonds.
21 *Grafting of Fibula to Tibia. R. A. Stoney.
22 Record of a Year's Work in the Royal Samaritan Hospital for Women, Glasgow. J. N. Stark.

21. **Grafting of Fibula to Tibia.**—Stoney reports with skiagraphs a case in which, following the method suggested by Goldman of Freiburg (*Lancet*, Jan. 15, 1906), he grafted the upper part of the fibula to the head of the tibia in a patient in whom a considerable part of the shaft of the tibia had been lost by necrosis, leaving the limb useless. The result was good. He notes the similar case published in the *Annals of Surgery*, October, 1907, by J. S. Stone.

British Journal of Children's Diseases, London.

February.

23 *Congenital Syphilis in Infants. G. Carpenter.
24 Bone and Joint Lesions in Hereditary Syphilis. A. H. Tubby.
25 Bone Lesions of Congenital Syphilis. G. A. Sutherland.
26 *Congenital Syphilis. G. Pernet.

23. **Congenital Syphilis.**—In the first part of his paper Carpenter discusses chronic "snuffles," craniotabes, Parrot's nodes, syphilis as a ricket producer, syphilitic epiphysitis, syphilitic splenomegaly, and syphilitic enlargement of the liver. He calls attention to an internal snuffles, the discharge being localized to the posterior nares and the nasopharynx and finding its way into the stomach. Craniotabes is most common in the second and third months—the syphilitic age—and rickets after nine months—the rickety age. It is found in syphilitic fetuses and occurs in syphilitic infants. Carpenter has found it as an isolated lesion in cases in which he has known one or other parent to be syphilitic; also in cases in which he has attended for syphilis a brother or sister immediately preceding the patient; in association with marked anemia responding rapidly to mercurial treatment, and with snuffles. He always suspects syphilis whenever he finds craniotabes. It is a good working hypothesis. Parrot's nodes are found in the rickety, not the syphilitic, age, when the evidence of syphilis obtainable is of the weakest kind; nevertheless he considers them a syphilitic, not a rickety, disorder. He has hitherto looked on syphilis as a producer of rickets, but as he now thinks without any sound reason. It has not been unusual in his experience to find multiple epiphysitis as the sole manifestation of hereditary syphilis. A suspicious attitude of mind is indicated whenever enlargement of the spleen is found during the syphilitic age. Not only are splenic enlargements common during this period, but enlargements of the liver follow them fairly closely.

26. **Idem.**—Pernet objects to the term hereditary syphilis. Heredity means the infection of the human cell ovum by the human cell spermatozoon. He contends that syphilis transmitted to the child is always of maternal origin, and that it is not a direct paternal infection. The mother must be infected before the child can receive it from her. Colles' law is a real law.

Intercolonial Medical Journal of Australasia, Melbourne.

January.

27 *Appendicitis. G. A. Syme.
28 Impressions of Pediatric Work Abroad. H. D. Stephens.
29 Three Cases of Perforation of the Stomach and Intestine. R. A. Stirling.

30 Carbolic-Acid Gangrene. J. Murphy.
31 *Etiology of Summer Diarrhea. R. R. Stawell.
32 Symptomatology and Diagnosis of Summer Diarrhea in Children. P. B. Bennie.
33 *Prevention of Summer Diarrhea in Children. A. J. Wood.
34 Treatment of Summer Diarrhea in Children. F. H. Cole.

27. **Appendicitis.**—Syme details his conclusions from 123 acute cases of appendicitis occurring at the Melbourne Hospital, of which careful records were kept. There were 9 deaths. In spite of the present contrary trend, he favors immediate operation on diagnosis, both as a preventive of peritonitis and because in the hands of competent surgeons such a course would reduce the mortality to practically nothing. He has changed his views on this point slowly, deliberately, and solely as the result of experience. His records show a much less mortality (4.8) in early operation as against the later (8.4), a much shorter convalescence, and in every way the best results. The frequency of recurrence in cases in which he did not operate in previous attacks has also influenced him. When operation was advised in the second attack, the friends have naturally pointed out that recovery has taken place before without operation and have insisted on waiting, sometimes with disastrous results. He speaks highly of Murphy's rectal instillations, every patient so treated having recovered, though some of them were desperately ill. As for the question of waiting in the abscess stage until adhesions shall have formed, it may be the safest plan, but he does not carry it out, owing to the increased difficulty of finding and removing the appendix, the danger of toxemia, the danger of bursting and resultant peritonitis, and the fact that firm adhesions, while useful at the time in limiting spread, may become serious evils later. He deals with the stump by crushing the appendix at its base and inverting by a purse-string suture. The disastrous effect of concretions is referred to, as also the dangers of a kinked and adherent appendix.

31. **Summer Diarrhea.**—Stawell discusses summer diarrhea, which he regards as a fermental diarrhea with enteritis passing on to ileocolitis, not only caused by many organisms of the typhoid and paratyphoid type, but probably due partly to autoinfection, the etiologic factor being an acquired virulence of the *Bacillus coli communis* and kindred organisms. Food contamination of the most subtle description he regards as the prime factor. Sour milk is dangerous, he asserts, not because it is sour, but because the sourness is usually due to staleness or dirtiness. The conclusion is: Boil all food to sterilize it, and then protect it from contamination by flies.

33. **Idem.**—Wood says that mothers must be induced by all means to continue suckling their children through the summer months. Milk obtained some hours after milking should always be scalded before use. Putting milk on ice after it has been allowed to remain warm for several hours will cause slight attacks of diarrhea on each hot day, predisposing to a final severe onset. He condemns nipples, bottle brushes and sucking dummies, and calls attention to the pillow, which is often soiled throughout by the child's vomiting. A jackinette covering beneath the pillow slip will prevent the pillow becoming fouled. Cleanliness of the hands must be instilled into mother and nurse, and they should be taught to keep the napkins immersed in a covered vessel and away from the flies. Frequent cool bathing is recommended.

Clinical Journal, London.

March 4.

35 Carcinoma of the Breast; Its Early Recognition and Treatment. R. H. J. Swan.
36 Cases of Brachial Neuritis. W. Harris.
37 Rôle of the Pneumococcus in Ocular Infections. S. Stephenson.

Annales de Gynécologie et d'Obstétrique, Paris.

January, XXXV, No. 1, pp. 1-64.

88 *Retroplacental Hemorrhage and Medical Responsibility. Pinard.
39 Tuberculosis of the Cervix. (Tuberculose du col de l'utérus.) Delétrez.
40 Two Cases of Papillary Tumors of the Ovary. G. de Rouville and G. Stoltz.
41 *Generation of Gas by Intrauterine Injection of Hydrogen Dioxid. Funck-Brentano.

February, No. 2, pp. 65-128.

42 Appendicitis and Adnexitis. H. Hartmann.
43 *Ectopic Pregnancy at Term with Living Child. (Grossesse extrautérine à terme avec enfant vivant.) Potocki.
44 Experimental Study of Arterial Hypertension and Eclamptic Convulsions. J. L. Chirie.

38. **Retroplacental Hemorrhage and Medical Responsibility.**—A midwife was on trial for having caused the death of a healthy iv-para in labor, by failure to recognize retroplacental hemorrhage. She had ruptured the membranes, as slight hemorrhage had occurred, and all seemed to be going well, but the patient refused to obey instructions and she left the case. The family sent at once for a physician, but he was unable to come, and the second called delayed to write a letter to the authorities denouncing the midwife for deserting her patient. When he arrived he found the patient dead. He made an autopsy and reported to the authorities that death was due to serious hemorrhage from premature detachment of the placenta and that the midwife had overlooked a serious condition and had left a patient in grave danger; lack of proper care, he added, had greatly increased the chances of death. Pinard volunteered his testimony in favor of the midwife, stating that the local physician had misinterpreted the autopsy findings, as they indicated that the woman had succumbed to retroplacental hemorrhage. He presented evidence to show that this condition is exceedingly rare, and that on account of the absence of external bleeding the diagnosis is difficult. The midwife was condemned for malpractice and the minimum fine of $20 was imposed. Pinard considers this sentence unjust and declares that the testimony of a single medical expert is a danger for all members of the medical profession.

41. **Distension of Abdomen with Gas After Intrauterine Injection of Hydrogen Dioxid.**—Brentano reports a case of puerperal fever in which the uterus was curetted on the third day. On account of chills the next day an intrauterine injection was given of solution of hydrogen dioxid diluted one-half. Suddenly the patient complained of intense pain in the lower abdomen, followed by nausea, intense dyspnea and a syncopal condition while the abdomen became rapidly distended with gas. Perforation of the uterus was assumed and the organ was removed by abdominal section, but the patient rapidly succumbed. The uterus was found intact but filled with foam, and the ligaments were covered with bubbles resembling those made by blowing into soapy water through a tube. These bubbles extended into the epigastrium and across to the right iliac fossa. There was no sign of hemorrhage or effusion.

43. **Abdominal Pregnancy with Living Child.**—Potocki's patient was a primipara of 23 and the child, extracted by abdominal section, thrived normally until it was six months old, when it developed convulsions and paralysis. The aspect of the abdomen approaching term revealed the anomalous conditions within, even the position of the placenta with its souffle and thrill. The woman has since been delivered of a living child after a normal pregnancy.

Annales de l'Institut Pasteur, Paris.

January, XXII, No. 1, pp. 1-96.

45 Animal Trypanosomiasis in the Niger District. (La baléri.) G. Bouffard.
46 *General Conception of Antibodies and Their Effects. (Les anticorps des toxines solubles.). M. Nicolle and E. Pozerski
47 Origin of Precipitins. J. Cantacuzène.
48 *Arsenic in Syphilis. P. Salmon.
49 *Staining of the Tubercle Bacillus. (Coloration du bacille tuberculeux.) M. Herman.

46. **Research on Antibodies and Their Effects.**—Nicolle and Pozerski relate the details and conclusions of their long research on the artificial antibodies of toxins, the toxino-coagulins and toxino-lysins, immunity and acquired supersensitiveness in general and for the soluble toxins in particular.

48. **Arsenic in Syphilis.**—Salmon regards arsenic as "the third specific for syphilis," and relates extensive clinical experience with it. He prefers to commence with a large dose, repeated every second day for two or three weeks.

49. **Stain for Tubercle Bacilli.**—Herman insists that the stain he has been using for eighteen years gives better results than the Ziehl or Gram stain, and reveals tubercle bacilli in material in which otherwise only inoculation of animals will give positive findings. He uses a 1 per cent. solution of ammonium carbonate in distilled water, for the mordant, and a 3 per cent.

solution of crystal violet (methyl violet 6 B) in 95 per cent. ethyl alcohol for the stain. The two solutions are kept in separate bottles, well corked. One part of the stain is mixed with three parts of the mordant when ready to use. The tissues are fixed with a saturated solution of mercury bichlorid in distilled water, to which 5 per cent. of glacial acetic acid has been added. The frozen sections are placed in distilled water, taken up on a cover glass; the moisture is evaporated over a water-bath, and when the specimen becomes semitransparent it is ready for the stain. This is taken up in a dropper and seven drops are deposited on the specimen. It is then replaced on the top of the water-bath and one minute after the specimen begins to steam it is placed for a few seconds in 10 per cent. nitric acid and then transferred to 95 per cent. ethyl alcohol; afterward all the decolorizing fluid is rinsed off and it is dried and mounted in balsam.

Presse Médicale, Paris.

February 29, XVI, No. 18, pp. 137-144.

50 The Preceding Condition of Health in Respect to Effect of Industrial Accidents. (L'état antérieur chez les victimes des accidents du travail.) V. Balthazard.
51 Mode of Administration of Lactic Ferments. A. Martinet.

March 4, No. 19, pp. 145-152.

52 Electrolysis in Treatment of Angiomata, Especially in the Parotid Region. P. Redard.
53 *Bronchointestinal Autoinfection in the New-Born. P. Londe.

53. **Bronchointestinal Autoinfection in Infants.**—Londe expatiates on the remarkable way in which gastrointestinal and respiratory disturbances alternate or coincide in very young infants. He thinks that both are due to the same cause, some digestive derangement. Under the influence of inappropriate food the dyspepsia continues and the child may develop diarrhea or bronchitis. In some cases, abrupt arrest of the diarrhea by bismuth is followed by the development of bronchitis, of which there had been no signs before. In the subacute form the bronchitis may drag along for weeks, terminating in winter in bronchopneumonia and in summer in fatal enteritis. A cough in an infant should be regarded as a warning of possible trouble in the digestive tract, and any tendency to alternation in the respiratory and gastrointestinal symptoms should give the alarm of an impending sequence of ills unless averted by prompt treatment. Infants presenting this tendency to morbid alternation of bronchitic and gastrointestinal symptoms may not outgrow this tendency but remain subject to respiratory and intestinal affections even to adult life. Treatment should be directed against the nervous, toxic and infectious factors of the process. The nervous factor includes perversion of the secretions and this requires complete rest of the organs involved. Perversion of the secretions entails autointoxication. He warns in conclusion that it takes at least as long a time to recover from an affection of this kind as it took for the affection to reach its acme, and that this should not be forgotten in treating these infants. Five or six months may be necessary before they are able to tolerate the amount of milk which would be their normal ration in health. The danger of feeding too little is infinitely less to be feared than the danger of overfeeding. Even in primary bronchial affections the conditions in the gastrointestinal tract may aggravate the respiratory process.

Semaine Médicale, Paris.

March 4, XXVIII, No. 10, pp. 109-120.

54 *Retrodisplacement of the Uterus in Young Girls and in Young Wives. (Rétrodéviations de jeunes filles et de jeunes femmes.) R. de Bovis.

54. **Retrodisplacement of the Uterus in Young Girls and Young Wives.**—De Bovis remarks that retrodisplacement in young girls may lead to serious consequences and is frequently the cause or the sequence of painful menstruation. The local conditions should be examined, at least through the rectum, and, if the fundus of the uterus is found protruding into the rectum, the condition should be corrected. This is best done, he thinks, by dilatation with Hegar bougies which favor the development of the uterine musculature and strengthen it, thus rendering menstrual congestion less painful. If fixation is necessary it should be done by abdominal section, which also allows the condition of the adnexa to be examined. His experience has shown that the backward displaced uterus, straightened by a pregnancy, returns to its former retrodeviation after delivery. He reports a number of cases in which pre-existing retrodeviation had decidedly complicated a gonorrheal or other infectious affection and rendered its results exceptionally serious. In a number of cases straightening and fixation of the uterus with mild dilatation was followed by conception in married women who had been sterile for several years of married life, and in whom there had been gonorrheal infection. He ascribes incarceration of the pregnant uterus to retrodisplacement of the uterus long before marriage as the general rule. Retrodisplacement may also induce abortion; the combination of abortion and unusual length of the anterior lip of the cervix suggests pre-existing retrodisplacement. He makes it a rule to try to persuade mothers to allow the condition of the genitalia in their daughters to be examined in every case of obscure dysmenorrhea, to detect and permit correction of the dangerous backward displacement, which is much more frequent, he asserts, than is generally supposed.

Archiv für klinische Chirurgie, Berlin.

LXXXV, No. 2, pp. 343-612. Last indexed February 29, p. 734.

55 *Tests of Kidney Functioning. (Zur functionellen Nierendiagnostik.) E. Liek.
56 Hypoplasia of Contractile Substance in Abdominal Musculature. (Sogenannter Defect der Bauchmusculatur.) F. Pels-Leusden.
57 Treatment of Phimosis. J. Petrivalsky.
58 *Inguinal Method of Operating on Femoral Hernia. (Leistenmethode in der Operation der Schenkelbrüche.) N. Bardescu.
59 Injuries of the Skull in the Hand-to-hand Combats of the Middle Ages. (Schädelverletzungen durch mittelalterliche Nahkampfwaffen.) E. Bircher.
60 Diffuse Hyperostoses of the Skull and Face. (Ostitis deformans fibrosa—Virchow's Leontiasis ossea.) P. Bockenheimer.
61 Treatment of Racemose Arterial Angioma. P. Clairmont.
62 Ultimate Results in 65 Cases of Tuberculous Hip Joint Disease. (Coxitis tuberculosa.) C. Perret.

55. **Tests of Kidney Functioning.**—Liek gives the findings of the functional tests in 21 cases of a tuberculous affection of the kidneys, 22 of pyelitis, 10 of kidney stones, 6 of malignant kidney tumor and 88 of chronic nephritis. Nephrectomy was done in 41 cases, with the loss of one patient in whose case catheterization of the ureters had proved impossible. There was also one fatality from after-hemorrhage among 9 nephrotomies and 2 pyelotomies. The ultimate results of these operations are excellent for the cases in which nephrectomy was done on account of tuberculosis, stones, benign tumors or pyelitis, but the ultimate outcome was bad in malignant disease. Better results will be attained when the functional tests are applied in every case of hematuria, and thus reveal cancer in its incipiency. The findings with the phloridzin, indigo-carmin and cryoscopy tests are given for all this material, the results showing that these functional tests allow much more complete and exact diagnoses than were formerly possible, but too much must not be expected of them. The findings have only relative value, and they are most instructive when compared with each other.

58. **Inguinal Access to Femoral Hernia.**—Bardescu summarizes reports of 22 cases of femoral hernia in which he corrected the condition through the inguinal canal, and commends this technic for several reasons. No recurrence or after-disturbance was observed in any instance.

Beiträge zur klinischen Chirurgie, Tübingen.

January, LVI, No. 3, pp. 581-832.

63 *Treatment of Cicatricial Stenosis of Esophagus with the "Endless" Retrograde Sound. (Behandlung der narbigen Speiseröhrenverengerungen mittels der Sondierung ohne Ende.) V. Lieblein.
64 *Spinal Anesthesia in 500 Cases. (500 Lumbalanästhesien.) Lindenstein.
65 Backward Dislocation of the Ulna and Its Connection with the So-Called Traumatic Ossifying Myositis. (Luxatio cubiti posterior.) A. Machol.
66 Extrauterine Pregnancy. Lindenstein.
67 Statics of Neck of Femur. (Zur statik des Schenkelhalses.) W. Hagen.
68 *Results of Cryoscopy at Krönlein's Clinic. (Kryoskopische Resultate.) H. Fenner.
69 *Injuries of the Vagus and Its Consequences. (Verletzungen des Nervus vagus und ihre Folgen.) A. Reich.

63. **Treatment of Cicatricial Stenosis of the Esophagus.**—Lieblein relates the practical cure of two patients with cica-

tricial stenosis of the esophagus treated by von Hacker's technic of "endless sounding," using a tube with a conical tip. Neither of the patients has had to use the sound for more than six years, and can be regarded as cured. He has found 80 cases on record in the literature in which this procedure was applied through the stomach, but very few writers report the ultimate outcome. The opening into the stomach enables the patient to be well nourished from the start, and it is simpler and less serious than a direct operation on the esophagus. The bibliography on the subject of this "endless sounding" is appended.

64. **Spinal Anesthesia in 500 Cases.**—Lindenstein gives a tabulated oversight over the results, operations and by-effects noted in 500 cases in which spinal anesthesia was employed. The technic failed to induce anesthesia in 13 cases; collapse was observed in 7, vomiting during the operation in 34, and afterward in 54, with headache in 100, that is, in 20 per cent. of the 500 patients.

68. **Cryoscopy in Kidney Affections.**—Fenner reviews the findings with cryoscopy of the blood and urine in 47 cases of various kidney affections and in 1 of tuberculous peritonitis. It is the best method at our disposal, he thinks, for obtaining an insight into the conditions in regard to osmosis in the kidneys and their functional behavior. It must be considered in connection with the amount of urine and the preceding intake of fluids, and it does not supplant but merely supplements other methods of clinical investigation.

69. **Injuries of the Vagus and Their Consequences.**—This communication from von Bruns' clinic summarizes from the literature 11 cases of accidental injury, 44 of resection or severing of the vagus and 24 of irritation of this nerve, with 4 additional cases of this kind from von Bruns' clinic. Reich's experiments demonstrated the feasibility, the harmlessness and the good practical results possible with temporary exclusion of a given stretch of the nerve by prophylactic, non-irritating blocking of the nerve by local cocainization above and below the menaced or injured stretch. If symptoms of irritation have already become apparent, and persist notwithstanding removal of the cause, prompt relief can be obtained by severing the nerve. Vagotomy is in itself, Reich states, a harmless procedure which does not entail symptoms on the part of the heart, respiratory organs or digestive tract, but merely permanent paralysis of the vocal cords. When the vagus has been divided during an operation, it is wise to suture it if possible. On the other hand, traumatic irritation of the vagus is liable to induce very severe symptoms on the part of the heart and respiration, ranging from a slight drop in the blood pressure and slowing of the pulse rate to sudden actual arrest of the heart; there may also be convulsive coughing or dyspnea, diminished frequency and depth of inspirations or total arrest of respiration. These symptoms are the result of reflex irritation of the inhibiting centers for the heart and respiration in the medulla oblongata or of the centrifugal heart fibers, and are not due to reflex spasm of the glottis. When a part of the vagus is threatened, the prophylactic exclusion of this stretch by temporary, local cocainization of the nerve above and below the part involved will prove useful. If symptoms of irritation develop, vagotomy should be done without delay.

Deutsche medizinische Wochenschrift, Berlin.

February 27, XXXIV, No. 9, pp. 361-400.

70 *Treatment of Acute Gastric Ulcer. (Behandlung des akuten Magengeschwürs.) C. A. Ewald.
71 *Gastric Ulcer Simulating Cancer. (Magengeschwür und Magenkrebs.) W. Alexander-Katz.
72 Percussion of Right Margin of Heart. (Perkussion des rechten Herzrandes.) F. Moritz.
73 *Slanting of the Rima Glottidis and Deviation of Larynx and Trachea in Diagnosis of Pulmonary Tuberculosis. (Schrägstand der Stimmritze, etc., bei Lungentuberkulose.) G. Baer.
74 Hemolytic Action of Fibrin. S. Bergel.
75 *Stimulation of Diaphoresis in Insufficiency of the Kidneys. (Anregung der Diaphorese bei Niereninsuffizienz.) M. Georgopulos.
76 Method of Operating for Phimosis. A. Pollak.
77 Trigeminal Neuralgia as Consequence of Retention of Tooth. (Trigeminusneuralgie als Folge von Zahnretention.) Treymann.
78 The Operative Era in Obstetrics. (Alfred Hegar, "Die operative Aera der Geburtshilfe.") W. A. Freund.
79 Does Mercurial Treatment of Syphilis Influence Development of Metasyphilitic Nervous Affections? A. Spindler.

70. **Treatment of Acute Gastric Ulcer.**—Ewald gives the particulars of his technic of treating acute gastric ulcer. Tardy hemorrhage was observed in 4.8 per cent. of 166 cases, and in 3 per cent. of a previous series of 482 cases. He noticed that these hemorrhages occurred exclusively when food was taken by the mouth and vanished when nothing was given by the mouth and the patient was nourished only by the rectum. He gives a tablespoonful every two hours of a decoction of 10 sheets of gelatin in 200 gm. of water, to which are added a tablespoonful of citric acid, a teaspoonful of sugar and 10 drops of a solution of ferric chlorid, the whole warmed, in case of recent hemorrhage, until it is fluid. Nutrient enemata are mainly useful as supplying fluids to the organism, he says, the amount of nourishment that can be thus supplied is very small.

71. **Gastric Ulcer Simulating Cancer.**—In the case reported a x-para of 46 had had symptoms for eight years which rendered the diagnosis of cancer almost certain, the only evidence against it being the favorable course of the affection. She has gained considerably in weight recently and is at present free from disturbances although still anemic.

73. **Slanting of Rima Glottidis and Deviation of Larynx and Trachea with Pulmonary Tuberculosis.**—Baer found that the laryngoscope revealed in many cases that the trachea and larynx were dragged to one side by the shriveling processes in pulmonary tuberculosis. The rima glottidis was found slanting in 27 per cent. of 200 tuberculous patients examined.

75. **Diaphoresis in Kidney Disease.**—Georgopulos warns that diaphoresis, while removing part of the toxins circulating in the blood, leaves in a more concentrated form those that remain. For this reason he advocates supplying the system with water to take the place of that lost by diaphoresis—the amount is easily determined by weighing the patient before and after the sweating procedure. In case functional tests show that the kidneys are able to eliminate water freely, there need be no restriction of the intake, but if the kidneys are insufficient in this respect the amount of water to be allowed must be carefully determined for each individual case. In case of a tendency to dropsy the amount of water allowed should be smaller than the amount excreted through the skin. At the same time, the physician should be guided by the clinical symptoms. If they indicate that the tendency to dropsy predominates, then the intake of water can be safely restricted, but if uremic symptoms predominate, then it is best to disregard the dropsy and allow freer ingestion of water. The danger of uremia is more urgent in the cases without dropsy. These conclusions are based on extensive experimental research and clinical experience as well as the work of others in this line.

Fortschritte der Medizin, Leipsic.

January 10, XXVI, No. 1, pp. 1-32.

80 *Radiating Sympathetic Pain in Internal Affections. (Ueber den ausstrahlenden "sympathetischen" Schmerz bei Inneren Krankheiten.) von Criegern.
81 Cure of Mycosis fungoides under Roentgen Treatment. H. Hübner.

January 20, No. 2, pp. 33-64.

82 *Five Cases of Progressive Paralysis in Children. F. Bachmann.

January 30, No. 3, pp. 65-96.

83 Education, etc., of Mentally Abnormal Children. (Soziale Fürsorge für geistig abnorme Kinder.) W. Fürstenheim.
84 Stones in Kidneys and Ureters. (Steinkrankheit der Nieren und Harnleiter.) Kümmell.

80. **Radiating Sympathetic Pain in Internal Affections.**—The radiating sympathetic pain is generally on the same side, and the regularity of the routes of radiation suggests some anatomic basis—possibly, von Criegern thinks, the sympathetic nerves accompanying the arteries. All the points to which the pain radiates are connected by arteries, and the vascular affections offer the most instructive types for study of this sympathetic radiation. Pain originating in the intestines is usually experienced in the center of the abdomen, although the actual cause may be far to one side. If the peritoneum is involved the pain is liable to radiate. Lead colic is an exception to this rule, the pain usually radiating to the connected vascular system. This point may be useful in differentiating lead colic. Working people sometimes complain of pain without any cause being found to explain it, and the diagnosis of "rheu-

matic pains" is made. Autopsy frequently reveals some unsuspected internal affection, gallstones, scars of gastric ulcers, arteriosclerosis, or occasionally urinary calculi, in progress or healed, which were evidently the cause of the trouble. The internal affection may have long subsided, but the sympathetic pain may persist indefinitely afterward, as trigeminal neuralgia from the carious tooth may continue after extraction of the tooth. If the internal affection is suspected, appropriate treatment of it may cure the sympathetic pain. This may also explain the benefit by derivation—such as venesection or hydrotherapy at distant parts of the vascular system in certain internal affections.

82. **Progressive Paralysis in Children.**—In the five cases encountered by Bachmann last year syphilis was the predominant factor, either inherited or acquired. Two of the mothers were tabetics. All the children had been normally intelligent before. The pupils were immovable and more or less dilated, differing from the contracted pupil of adults. The tendon reflexes were exaggerated or lost, but the bladder and rectum functions are still intact in all but one case. Lymphocytosis was noted in the cerebrospinal fluid in three cases, and the Nonne globulin reaction was positive in all. One of the children has shown an unmistakable remission in the symptoms during the last three and a half months, and is now able to read again and to remember things, taking a more active interest in his surroundings. Bachmann queries whether cases of such remissions of paralysis may not have been incorrectly differentiated in the past as "imbecility" or "idiocy," when in fact the child was suffering from progressive paralysis. In any event, he adds, physicians should examine for progressive paralysis when teachers complain of a sudden decline in the mental activity of a child.

Jahrbuch für Kinderheilkunde, Berlin.

February, LXVII, No. 2, pp. 131-260.

85 Medical Inspection of Schools in Scandinavian Countries. (System der Schulärzte.) A. Johannessen.
86 *The Line on the Nails in Infants. (Die physiologische Nagellinie des Säuglings.) B. Schick.
87 *Cerebrospinal Meningitis. W. E. Tschernow.
88 The School and Infections Diseases. (Schule und Infektionskrankheiten.) R. Schultz.

86. **Significance of Changes in the Nails in Infants.**—Schick refers especially to the line running across the nail which is found constantly on the finger-nails of infants under three months. Similar lines may be observed on the nails of adults after typhoid fever, pneumonia, etc., or in children after measles or scarlet fever. The line has hitherto been accepted as a sign of inherited syphilis, and it is most marked and lasts longer, as a rule, under these circumstances, but it is also a constant finding in healthy children. Schick explains the line as the result of some disturbance in the nutrition of the nail matrix. The line does not become manifest until four or five weeks after the disturbance occurred. The change from intrauterine to extrauterine existence is sufficient to account for the nutritional disturbance in the nails of infants, and the age of the infant can be approximately computed from the distance between the line and the base of the nail. The average in 250 infants was 1 mm. for at least 28 days of life; 2 mm. for at least 7 and at most 12 weeks of life; 3 mm. for at least 8 weeks; 4 mm. for at least 8 weeks, and 5 mm. for at least 10 weeks. The nail line was missing in only 3 instances; the atrophy or premature birth of the infants explaining the absence of the line in these cases. The oldest infant with the line was 103 days old. The nail below the line was always normal in the healthy infants. In case the line is too indistinct for certainty, the nail can be brushed with ink, wiped off afterward; this shows up the irregularities in the nail very clearly.

87. **Cerebrospinal Meningitis.**—Tschernow reports his experiences with 24 cases of cerebrospinal meningitis in children at Kiev. He did not find that lumbar puncture gave relief or that medication by lumbar puncture was any improvement over by other routes, but the patients were not inconvenienced by it, and he asserts that it is actually indispensable for the differentiation of the affection. The greatest benefit in treatment was always derived from baths at 30 or 32 R. (99—104 F.) once or twice a day. Agitated patients, sometimes screaming with headache, quieted down and slept for an hour or so or longer after the baths; occasionally this effect of the baths persisted after the patients awoke. The bath proved most effectual in this respect in the earlier weeks of the disease. Subcutaneous injection of morphin also proved valuable, in addition to the use of ice, cold alkaline water and champagne in case of vomiting; inhalation of oxygen was also used. Chloral combined with the morphin tranquillized the patients more quickly than the bromids. Rest and careful nursing are important. One patient, a girl of 11, had two attacks, an exacerbation and frequent convulsions during the course of six months, but then recovered complete health, with strength and intelligence unimpaired. No case of direct contagion was observed.

Medizinische Klinik, Berlin.

March 1, IV, No. 9, pp. 283-320.

89 *Case of Motor Apraxia with Postmortem Findings. A. Westphal.
90 *Seven Cases of Sarcoma Developing After Trauma. K. Vogel.
91 Unilateral Reflex Immobility of the Pupil in Oculomotor Paralysis. G. Abelsdorff.
92 *Non-existence of Ptosis of the Stomach. (Gibt es eine Ptose des Magens?) F. M. Groedel.
93 *Mountain Air in Exophthalmic Goiter. (Höhenluft bei Morbus Basedowii.) B. Stiller.
94 Instrument for Obtaining Scrap of Stool for Examination. (Stuhlentnehmer.) T. J. Sato.
95 Instillation of Fibrolysin in the Conjunctival Sac. (Fibrolysineinträufelungen in den Bindehautsack.) Windmüller.
96 *Connection Between Disturbances in the Upper Air Passages and Affections of the Urogenital Apparatus. (Zusammenhang von Störungen in den oberen Luftwegen mit Krankheiten des Urogenitalapparates.) J. Sendziak.
97 *What Conclusions Are Justified by the Serum Diagnostic Measures in Syphilis? (Wassermannsche Reaktion.) F. Lesser.
98 Origin and Development of Mercurial Inunction Treatment of Syphilis. (Quecksilberschmierkur bei der Syphilis.) P. Richter.
99 Organization of Medical Inspectors of Schools in Germany. (Vereinigung der Schulärzte Deutschlands.) Samosch.

89. **Pathologic Anatomic Basis for Motor Apraxia.**—In the case described by Westphal there were no evidences of focal disease found at autopsy, but only considerable internal hydrocephalus. The ventricle was enlarged more on the left than on the right side. It seems, therefore, that internal hydrocephalus is able to induce the clinical picture of motor apraxia as well as of aphasia and other apparently focal affections.

90. **Sarcoma and Trauma.**—None of the seven patients whose cases are described by Vogel was insured against accidents, and consequently there was no extraneous inducement to connect the sarcoma with the preceding trauma. In three instances the testicle had been crushed; in another case, a woman of 40 had been hit in the breast by the corner of a piece of furniture while it was being moved. In another case a man of 27 was hit on the right shoulder by a falling box and sarcoma developed in the clavicle. The other patients were 65, 33, 35, 30 and 10 years old. No recurrence has been observed after radical removal of the sarcoma except in the case of mammary sarcoma which had been of exceptionally rapid malignant growth, the entire left mamma having been transformed into a hard tumor within four months of the accident, with enlarged glands in the axilla. Recurrence was soon observed and the patient died in three months after the extensive operation. The growth was a small-celled, round-celled sarcoma.

92. **Non-Existence of Ptosis of the Stomach.**—Groedel argues to prove that there is no such thing as ptosis of the stomach. The pyloric region is alone involved.

93. **Advantages of Mountain Air in Treatment of Exophthalmic Goiter.**—Stiller recalls that he preached the importance of mountain air in the treatment of this affection as long ago as 1888, but little notice was taken of his assertions at the time. Recently, however, Eichhorst, Erb and others have been reporting wonderful cures of exophthalmic goiter by this means. Stiller regards a sojourn in the mountains as an important factor in the treatment of functional nervous affections in general and especially in exophthalmic goiter. One of his patients improved extraordinarily during a few weeks each summer at an altitude of about 2,800 feet, but the symptoms of exophthalmic goiter returned during the winter at home in Budapest. One year the trip to the mountains was omitted and by the end of the following winter the patient seemed to

be in the terminal phase of cardiac deficiency; the heart was very much dilated, with anasarca and ascites, hydrothorax and hydropericardium. As a last resort she was taken to an altitude of about 3,400 feet in the Carpathian Mountains, and kept in the open air, without drugs. She returned in the autumn free from any tendency to dropsy or exophthalmic goiter symptoms, and lived for fifteen years until death from an intercurrent brain affection. Stiller says that he did not dare to publish this, his first experience, but he was soon able to repeat it. His second patient was a neurasthenic woman who developed acute exophthalmic goiter with great dilatation of the heart, anasarca and ascites. She spent the summer among the foothills of the mountains and returned in the fall with the syndrome much aggravated. Stiller then advised her to go to an altitude of 3,400 feet and spend the winter in the open air. She returned in the spring rejuvenated and all symptoms of the exophthalmic goiter had vanished. She has been permanently healthy during the twenty years since, but spends every summer at an altitude of from 3,400 to 4,400 feet. He has since had occasion to verify again and again the remarkable curative influence of mountain air on exophthalmic goiter, amounting to complete cures in a number of cases and notable improvement in nearly all. The sojourn in the mountains must be of several months' duration and it is generally necessary to return for several years in succession to render the cure permanent. It is his impression that better results may be anticipated in the cases with dropsy than in the well compensated, chronic cases. He believes that the heart affection in exophthalmic goiter has its roots in neuropathic soil and thus stands on another basis than *ab ovo* organic heart affections. He remarks in conclusion that it seems paradoxical to send a patient with failing compensation into rarefied mountain air, but the unquestionable success of the measure in exophthalmic goiter suggests whether our traditional views are correct, after all, and whether mountain air might not prove beneficial in other heart affections with failing compensation.

96. **Disturbances in the Upper Air Passages Connected with Affections of the Urogenital Apparatus.**—Sendziak points out the connection between many disturbances in the upper air passages and affections in the urinary or genital apparatus, and reviews this connection in detail, believing that it is important not only for diagnosis but also for treatment and prognosis. Epistaxis occurring in the course of interstitial nephritis is usually bilateral, and the flow of blood is not restricted to certain points but exudes over the entire mucosa. The nasal mucosa may also appear unusually pale, owing to the general anemia. These symptoms of bleeding and pallor may be still more marked in the mouth and throat. The base of the tongue may be the seat of varices and the palate and uvula may be red and swollen as in case of uricemic arthritis, or there may be edema of these parts. Tonsillitis is such a frequent forerunner or accompaniment of nephritis that Adler advises examination of the urine in every case of tonsillitis. There is also the specific uremic stomatitis and pharyngitis with the smell of urine, ammonia, in the breath. Membranous glossitis has also been observed in the course of kidney disease. Edema of the larynx or trachea has sometimes been observed as the first sign of acute nephritis, and it is liable to recur during its course.

97. **What Has Been Learned from the Serum Diagnosis of Syphilis.**—Lesser refers especially to Wassermann's technic for serum diagnosis and states that it teaches that the virus may persist active for years after infection even when there are no apparent manifestations of its presence. He also states that in the majority of syphilitics, specific syphilitic processes occur long after infection which mostly escape clinical diagnosis. Everything to date seems to demonstrate that the Wassermann diagnostic reaction indicates an existing syphilitic process in the organism. A negative response, however, does not indicate that the syphilis is necessarily cured. Energetic mercurial treatment attenuates or abolishes entirely the specific reaction. The positive response to the diagnostic serum test in tabes and progressive paralysis teaches that these affections should be regarded as a special phase of syphilis, a fourth stage, following on the ordinary third stage.

Monatsschrift für Geburtshülfe und Gynäkologie, Berlin.

February, XXVII, No. 2, pp. 187-296.

100 Venereal Diseases and Matrimony. (Geschlechtskrankheiten und Ehe.) W. Scholtz.
101 Membranous Dysmenorrhea. (Endometritis exfoliativa.) F. Hitschmann and L. Adler.
102 Clinical Contribution to the Crusade Against Uterine Cancer. (Kampf gegen den Gebärmutterkrebs.) E. Konrad.
103 Important Information to be Learned from Cystoscopic Examination in Respect to the Prognosis of Abdominal Operations for Cancer. (Was leistet die cystoskopische Untersuchung zur Prognosenstellung der abdominalen Krebsoperation?) F. Fromme.
104 How Long Should Women Be Kept in Bed After Childbirth? (Bettruhe im Wochenbett.) E. Martin.

Münchener medizinische Wochenschrift.

February 25, LV, No. 8, pp. 377-432.

105 Hypertrophy and Correlation of Organs. (Hypertrophie und Organkorrelation.) R. Rössle.
106 New Prospects for the Further Development of Roentgen Diagnostics. H. Rieder and C. Kästle.
107 Bacteriocydin in Perhydrase Milk. H. Much.
108 Hyperdactylia from Standpoint of Embryology. (Entwicklungsgeschichtliche Analyse der Hyperdaktylie.) H. Braus.
109 *Tuberculous Rheumatism, According to Poncet. P. Esau.
110 New Pavilion Exclusively for Prostitutes with Venereal Disease at the Clinic for Cutaneous Diseases, Frankfurt a. M. H. Hübner.
111 Zinc Glue Dressings. (Neuer Zinkleimverband.) O. Betz.
112 Adjustable Wall Support for Roentgen Tubes. (Wandarm für Röntgenrohren.) R. Pflugradt.
113 Comparative Tests of Tuberculin Reactions in Children. F. Reuschel. Commenced in No. 7.
114 Apparatus for Suction Treatment in the Middle Ages. (Saugbehandlung im Mittelalter.) J. Schuster.

109. **Tuberculous Rheumatism.**—Esau gives the particulars of a case which corresponds with Poncet's description of tuberculous rheumatism. The patient was a child who developed an affection in both knees and ankles, with acute and subacute exacerbations, accompanied by occasional high fever and considerable disturbance of the general health. The right hip joint and the cervical vertebræ also became affected. The affection gradually subsided, the involved joints healing with contracture in some, solid fibrous ankylosis in others and bony ankylosis in the hip joint, while one ankle and the spine healed with complete restitution of function. No infectious disease had preceded the joint trouble. The symptoms excluded acute articular rheumatism, as also the absolute inefficacy of remedies for the latter. Poncet explains the affection as a simple, purely inflammatory and sterile process, due to the action of tuberculosis toxins which destroy the cartilaginous covering of the joints similarly to the metabolic products of the gonococci. Symmetrical joints are usually affected and the outcome is better in the cases in which the synovial membrane is mainly involved. The prognosis is bad when the process is not so much in as around the joint, without effusion, which entails a tendency to ankylosis. The whole process is so peculiar that Bouveyron regards it as a special reaction to the infection in certain cases, analogous to the lupous reaction. The great benefit in the case reported from application of suction hyperemia justifies the application of this measure on a wide scale. Constriction hyperemia did not seem to benefit, but the application of large suction glasses evidently contributed to the favorable outcome for the joints to which it was applied. It can not accomplish anything in bony ankylosis and under any circumstances it always requires great patience and perseverance as well as intelligence, but the results amply justify its application in conjunction with orthopedic measures as needed.

Virchow's Archiv, Berlin.

February, CXCI, No. 2, pp. 171-410.

115 Bone and Connective Tissue Inclusions in Cancer. (Knochen- und Bindegewebseinschlüsse in Krebsperlen.) J. Erdheim
116 Proliferation of Epithelium in Embryonal Human Esophagus. H. Schridde.
117 Reticulate Arrangement of Striated Muscle Fibers. (Netzförmige Anordnung der quergestreiften Muskelfasern.) R. Thoma.
118 *Arteriosclerosis After Injections of Adrenalin. N. Waterman.
119 Affections of Vessels from Effect of Poisons. (Studien über Gefässerkrankungen durch Gifte.) A. Bennecke.
120 Origin of Miliary Tubercle of the Lungs. (Intimatuberkel in den kleinen Lungenarterien.) H. Toyosumi.

118. **Arteriosclerosis from Injection of Adrenalin.**—Waterman's experimental research showed that the arteriosclerosis induced in animals after injection of adrenalin closely resembles ordinary arteriosclerosis in man. He is inclined to ascribe the effect to a direct toxic action on the walls of the vessels.

Wiener klinische Wochenschrift.

February 20, XXI, No. 8, pp. 247-276.

121 *Behavior of Chromophilous Tissue under Influence of Anesthetics. (Verhalten des chromaffinen Gewebes bei der Narkose.) H. Schur and J. Wiesel.
122 Influence of Toxins on Breaking Up of Albumin by the Cell. (Einfluss der Toxine auf den Eiweissabbau der Zelle.) L. Hess and P. Saxl.
123 Bactericidal Properties of Pyocyanase. H. Raubitschek and V. Russ.
124 Action of Subcutaneous Injections of Pyocyanase. O. Kren.
125 Cutaneous Reaction to Tuberculin and to Tubercle Bacilli Filtrates in 145 Cases. (Allergie und Tuberkulinfiltratproben nach v. Pirquet-Detre.) P. Heim and K. John.
126 Contralateral Reflex in the Legs of Children. J. Brudzinski.

February 27, No. 9, pp. 277-308.

127 *Examination of Five Castrated Males. (Untersuchungen an Skopzen.) J. Tandler and S. Gross.
128 *Precipitation in Tuberculous Serum. E. Stoerk.
129 Applicability and Importance of the Complement Binding Reaction in the Diagnosis of Syphilis. R. Müller.
130 Serum Diagnosis of Syphilis. (Porges-Meier and Klausnersche Reaktion.) Nobl and Arzt.
131 Movable Heart and Neurasthenia. (Wanderherz und Neurasthenie.) M. Herz.

March 5, No. 10, pp. 309-344.

132 *Functioning of the Intestines in Elderly People. (Funktionsprüfung des Darmes bei alten Leuten.) H. Schlesinger and A. Neumann.
133 Productions of Antibodies After Experimental Injury of the Blood-forming Organs by Roentgen Radiation. (Antikörperbildung nach experimenteller Schädigung des hematopoetischen Systems durch Röntgenstrahlen.) E. Benjamin and E. Sluka.
134 Diagnosis of Chronic Pentosuria: Two Cases. B. Vas.
135 Sanitary Conditions in Persia. Feistmantel.
136 *Ocular Reaction to Tuberculin in Urology. (Konjunktivalreaktion in der Urologie.) F. Necker and R. Paschkis.
137 *Simplified Technic for Plugging Small Bone Cavities. (Mosetigs Knochenplombe.) B. Mayrhofer.

121. **Behavior of Easily Stained Tissues Under Influence of Anesthetics.**—The experimental research described apparently demonstrates that under the influence of a powerful anesthetic the chromophilous cells give up their secretion in excessive amounts to the blood and become exhausted thereby. They recover from this exhaustion in the course of a few hours. A striking hypoplasia of this chromophilous tissue seems to be a constant accompaniment of the status lymphaticus (Wiesel, Hedinger), and the exhaustion of this tissue under the influence of an anesthetic may help to explain the frequent deaths of such individuals during general anesthesia. Parkinson has also recently reported that he was unable to obtain the staining reaction in the medulla of the suprarenals in two fatal cases of postoperative shock.

127. **Studies of Effect of Castration on Males.**—Tandler and Gross relate that there is a religious sect in Russia, the Skopetzy, who make a practice of castrating the members. There is a colony of these people in Bucharest, and the authors had opportunity to make a physical examination of five. The results confirm their previous conclusions in regard to the effects of castration on man and animals, as they relate in detail. The Skopetzy in Roumania are thriving, the colony in Bucharest owning and driving most of the cabs.

128. **Precipitation in Tuberculous Sera.**—Stoerk states that it is possible to obtain a precipitate in the serum of tuberculous patients by adding to it the sediment obtained by evaporating the ether from an ethereal extract of a filtrate of tubercle bacilli suspended in physiologic salt solution. The sediment is mixed with 0.5 per cent. carbolized physiologic salt solution, and is then added to the tuberculous serum. A flocculent precipitate is then thrown down, while no precipitation is observed in non-tuberculous serum. He is convinced that some lipoid constituent of the tubercle bacilli induces the precipitation, just as lecithin induces precipitation in syphilitic sera with Porges' technic.

132. **Defective Digestion of Meat in the Elderly.**—Schlesinger and Neumann report the findings after the Schmidt-Strasburger test diet and estimation of the functioning of the digestive tract in thirty persons over 60 years old, all free from digestive disturbances. The teeth were imperfect in a few and some were hospital and others private patients. But the results of the tests harmonized to a remarkable extent in each instance. They showed that the connective tissue ingested was not utilized and was refound practically unmodified in the stools. Starch, on the other hand, was digested with remarkable thoroughness, in comparison with the digestion of starch in the young. Raw, rare and smoked meats passed comparatively unmodified through the body, but well done meat was digested. Even finely chopped raw meat escaped digestion.

136. **Ocular Reaction to Tuberculin in Urologic Cases.**—Necker and Paschkis report that inoculation of animals confirmed the positive findings from instillation of tuberculin into the eye in every case, while inoculation proved negative in every case of negative ocular reaction. They examined 42 patients with affections of the urogenital tract and had only one positive response among 23 supposedly non-tuberculous patients. They consequently commend the ocular test for dubious cases of urinary affections with hematuria or pyuria or rebellious cystitis, which so frequently masks a tuberculous process in the kidney. A positive response to the test imposes the necessity for inoculation of animals or an exploratory operation.

137. **Simplified Technic for Mosetig Filling for Bone Cavities.**—Mayrhofer comments on the rapidity with which the Mosetig filling cools and hardens before it can be fitted into the cavity, thus failing its aim, which is to fill every crevice of the cavity with a fluid mass which solidifies later. He uses a filling made according to the formula: Iodoform, 10 parts; sesame oil, 15 parts, and spermaceti, 30 parts. This is kept in an ordinary unguent jar. A small metal rod is heated in a flame and some of the hard mass in the jar is stirred and worked soft with the hot rod. The amount to be used is taken up on a heated spatula and pushed into the cavity with another heated spatula. By this means the filling is softened and kept soft and the cavity filled with the soft mass with no fear of its hardening during the manipulation. He has never applied this technic to large cavities, but has found it admirably adapted for plugging small cavities, always adhering strictly otherwise to Mosetig's directions. They were summarized in THE JOURNAL, Feb. 18, 1905, page 583.

Gazzetta degli Ospedali, Milan.

February 2, XXIX, No. 14, pp. 137-152.

138 *Fatal Angina Pectoris Without Lesions in the Coronaries. (Vasospasmo con esito letale.) G. Galli.
139 *"Intermittent Claudication" of the Spinal Cord. G. Poggio.
140 *Exploratory Puncture of the Bone Marrow. (Studi sulla patologia del midollo osseo umano vivente.) G. Ghedini.
141 Viscosity of the Blood in Relation to Changes in Blood Pressure. (Il coefficiente di viscosita sui valori di pressione.) C. Rubino.
142 Influence of Thiosinamin on Peritoneal Adhesions. U. Gervino.

February 9, No. 17, pp. 169-184.

143 Case of Pneumoconiosis. E. Maragliano.
144 Secondary Dermatoses. E. Calcaterra.
145 Action of Tubercle Bacilli Cultivated in Collodion Sacs in the Peritoneum of Dogs on the Defensive Properties of the Serum. C. P. Goggia.
146 Tertiary Syphilitic Fever. G. Piccinini.

February 16, No. 20, pp. 201-216.

147 *Surgery of the Brain. (Chirurgia cerebrale.) D. Maragliano.
148 *Kernig's Sign in Vertebral Affections. G. Salmoni.

February 23, No. 23, pp. 233-248.

149 Hypertrophic Sclerosis of the Liver of Uricemic Origin. G. Baccelli.
150 *Diagnosis of Brain Tumors. (Tumori cerebrali.) F. Senna.
151 Tubercle Bacilli in Urine in Pulmonary Tuberculosis. M. Biagi.
152 Pure Aortic Stenosis. G. Tondi.

138. **Fatal Spasm of the Coronaries.**—The patient in the case reported by Galli was a man of 50, robust but somewhat addicted to alcohol, and once a year taking a course of sanatorium treatment for this addiction. After his usual daily walk of an hour or so he returned to the sanatorium, where Roentgen examination of the heart showed normal outlines, although the temporal arteries were somewhat tortuous, and the pulse rate 80. In the evening he won a game of chess and drank a little mild beer, soon after which an attack of angina pectoris—the first he had ever experienced—proved rapidly fatal. The heart and coronaries were found normal.

139. **Intermittent Claudication of the Spinal Cord.**—Poggio reports two cases of disturbance in the functions of the spinal cord from paroxysmal deficient blood supply. The motor disturbances were alike in both cases and both patients were cured by antisyphilitic treatment. There were no vasomotor symptoms during the attacks, and there were no signs of

arteriosclerotic changes in the legs, but exaggeration of the reflexes during the attacks and imperious desires to urinate testified to involvement of the medulla. The recurring spastic paraplegia simulated myelitis, although the return of normal conditions during repose contradicted this assumption. One patient had also actual colics, the pains resembling those of tabes, differing only in their progressive frequency without tenderness on pressure on the large abdominal vessels, and without any connection with the food. Both sensory and motor disturbances subsided simultaneously under antisyphilitic treatment.

140. **Exploratory Puncture of the Bone Marrow.**—Ghedini expatiates on the importance of the information liable to be derived from study of the bone marrow, and describes the simple electric trephine and needle which he uses for exploratory puncture. The little operation is well tolerated by the patient and has not the slightest injurious by-effects. He is now studying by this means the behavior of the bone marrow in various infectious diseases as well as in actual blood affections.

147. **Brain Surgery.**—Maragliano's experience in the four cases described and with others indicates that complete restitution need not be anticipated in cases of injury to the cortex in which motor paralysis develops at once after the trauma. In one of his cases a sarcoma was successfully removed from the brain, but the patient succumbed to local recurrence not long afterward.

148. **Kernig's Sign in Spinal Affections.**—Salmoni reports five cases of vertebral tuberculosis and one of chronic vertebral rheumatism, in all of which Kernig's sign was present, as also in some cases of sciatica. In six other cases of the same affections the sign could not be elicited. He ascribes the sign to the muscles, regarding it as a phenomenon of muscular origin, connected with the elasticity of the muscles. The elasticity may be reduced from lesion of the muscular fibers themselves or it may become insufficient from the new conditions created by the rigidity of the spine. Consequently, he does not attribute any special diagnostic value to it. The muscles involved are those which normally are less elastic than most of the others.

150. **Diagnosis of Brain Tumors.**—At autopsy in Senna's first case a psammomatous fibroma was found in the right frontal lobe, below the middle part of the ascending frontal convolution. It had developed soon after a supposed trifling injury to the region, and caused no symptoms for a long time except extreme somnolence and progressive weakness. The possibility of a tumor had been rejected on account of the absence of headache, vertigo, vomiting and convulsions. Toward the last, left hemiplegia and slight deviation of the head to the right had been noticed, but no mental disturbances. The pituitary body was apparently normal. In another case a fibrous tumor was found in the sella turcica, probably originating in the pituitary body, with partial erosion of the bone and compression and displacement of the optic commissure. The tumor was adherent to the brain, which was slightly hyperemic. The symptoms in this case had been neuritis of the optic nerve, with atrophy of the papilla and mental decay, but no headache, vomiting, convulsions or localized paralysis, no acromegaly or other sign of involvement of the pituitary body, and no tendency to somnolence. In these two cases, as also in some others in his experience, the syndrome was far more characteristic of a slow encephalitic softening process than of an intracranial tumor. In another case reported in detail, softening of the brain from encephalitis and thrombosis in the corpora quadrigemina and optic thalamus induced a series of symptoms suggesting a brain tumor in every respect, even including neuropapillitis. The duration of the affection aids in differentiation: the encephalitic process proved fatal in his two cases in about two months. In another case the intense headache, inability to stand, continuous vertigo and tendency to fall backward, with other symptoms, suggested a cerebellar tumor. The patient was a woman of 45, apparently free from arteriosclerosis or apoplexy and from neuropapillitis, but with slight atrophy of the papilla and signs of gastric catarrh. Under tentative treatment addressed to the gastrointestinal tract, the symptoms promptly subsided and the patient has been in good health since.

Policlinico, Rome.

February, XV, Surgical Section, No. 2, pp. 49-96.

153 False Diverticula of the Appendix. R. Malatesta.
154 Stovain Spinal Anesthesia. (Rachistovainizzazione.) G. Vincenzo. Commenced in No. 1.
155 *Iodin in Treatment of Tuberculous Epididymo-Orchitis. G. Finocchiaro.
156 Mechanism of Action of Stasis Hyperemia in Infections. G. Fichera. Commenced in No. 1.

February 23, Practical Section, No. 8, pp. 229-260.

157 Case of Intestinal Intussusception. A. Ando.
158 Malta or Mediterranean Fever.
159 "Anguish Neurosis" or Freud's Neurosis. (Nevrosi d'angoscia.) S. S. Lavagna.

March 1, No. 9, pp. 261-292.

160 *Tuberculous Osteomyelitis of the Condyles of the Femur. F. Durante.
161 Prophylaxis of Laceration of the Perineum. G. Massimi.
162 The Scapulo-humeral Reflex. (Riflesso scapolo-omerale.) B. Cicaterri.

155. **Iodin in Tuberculous Epididymo-orchitis.**—Finocchiaro reviews the history of treatment of tuberculosis of the testicle, and reports excellent results from the local injection of iodin as practiced by Durante. The inflamed epididymis rapidly subsides in size and becomes transformed into indolent fibroid tissue, thus healing the tuberculous process as well as if it had been excised, while there is none of the demoralizing effect on the patient of operative measures. An average of about 30 local parenchymatous injections are required, commencing with a few drops of a 1 per cent. solution of iodin in distilled water, with potassium iodid for a solvent. The number of drops is gradually increased, the aim being to spread the fluid evenly through the tissues while avoiding the induction of hemorrhage into the tissues. This local treatment is supplemented by general measures against the tuberculosis and internal administration of iodin to keep the body under the influence of the drug. Twelve patients thus treated have been restored to health and good spirits and have gained in weight; three typical cases are reported in detail. This method of treatment was applied to a number of rabbits previously infected in the testes with tubercle bacilli. The experimental findings as well as the clinical experiences, it is said, all speak in favor of the benefits of this method of treating tubercular epididymo-orchitis as the healing resembles that of the natural healing of tuberculous processes. The prompt change in the character, the patient losing his irritability and becoming cheerful, is a presumptive sign of restoration of normal conditions in the internal secretion. In two cases the tuberculous affection of both testicles not only healed, but the normal function was restored, a number of normal spermatozoa being found in the seminal fluid. Durante has long been using iodin in treatment of surgical tuberculous processes in the bones, etc., obtaining results, it is claimed, superior to those of radical operations. The iodin stimulates the tissues to increased resistance and phagocytosis, while it attenuates the virulence of the bacilli. Applied to tuberculous epididymo-orchitis, the article concludes: "The iodin treatment restores to society men, not eunuchs."

160. **Osteomyelitis of the Condyles of the Femur.**—Durante operates in tuberculous osteomyelitis of the condyles of the femur—after failure of other measures—by turning back a McKenzie flap, the patient being under the influence of spinal anesthesia and the blood expelled from the limb with an Esmarch bandage. He then cuts away the condyles to form an obtuse angle, the point upward, and cuts the head of the tibia to fit into this obtuse angle. The cartilaginous part of the patella is resected and the spine of the tibia is sawed away to leave a small flat surface. The cavities left by excision of any small tuberculous foci soon fill up with a growth of bone. Absolute hemostasis is necessary for perfect healing of the cut surfaces of the bone. When the patella is replaced on the flat surface prepared for it on the spine of the tibia, and the flap of soft parts is replaced, a nail is driven through the soft parts and patella into the tibia, not removed until consolidation is complete. The limb is immobilized for a time after the operation in a Macewen splint. A typical case is related in detail, with an illustration of the technic.

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Original Articles

PANCREATITIS RESULTING FROM GALL-STONE DISEASE.

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In December, 1907, we (W. J. and C. H. Mayo) made a collective investigation of our operative experience in the surgery of the upper abdomen. Among other statistics compiled it was found that in 2,200 operations on the gall bladder and biliary passages the pancreas was coincidentally affected 141 times (6.1 per cent.). As the total of all pancreatic diseases operated on was only 168, the interesting fact was brought out that 81 per cent. were due to or accompanied by gallstones.

In 268 operations on the common and hepatic ducts the pancreas showed disease in 18.6 per cent., against 4.45 per cent. where the gall bladder only was involved. In 124 cases the head of the pancreas showed evidence of inflammation, while in only 17 cases was the entire organ affected.

The pancreas is the great abdominal salivary gland, and it lies in a most protected situation. No other organ in the body, which has as valuable a function, is so little liable to intrinsic disease. Its natural defenses have but one single defect, and that is the mechanical association of the main pancreatic duct with the common duct of the liver.

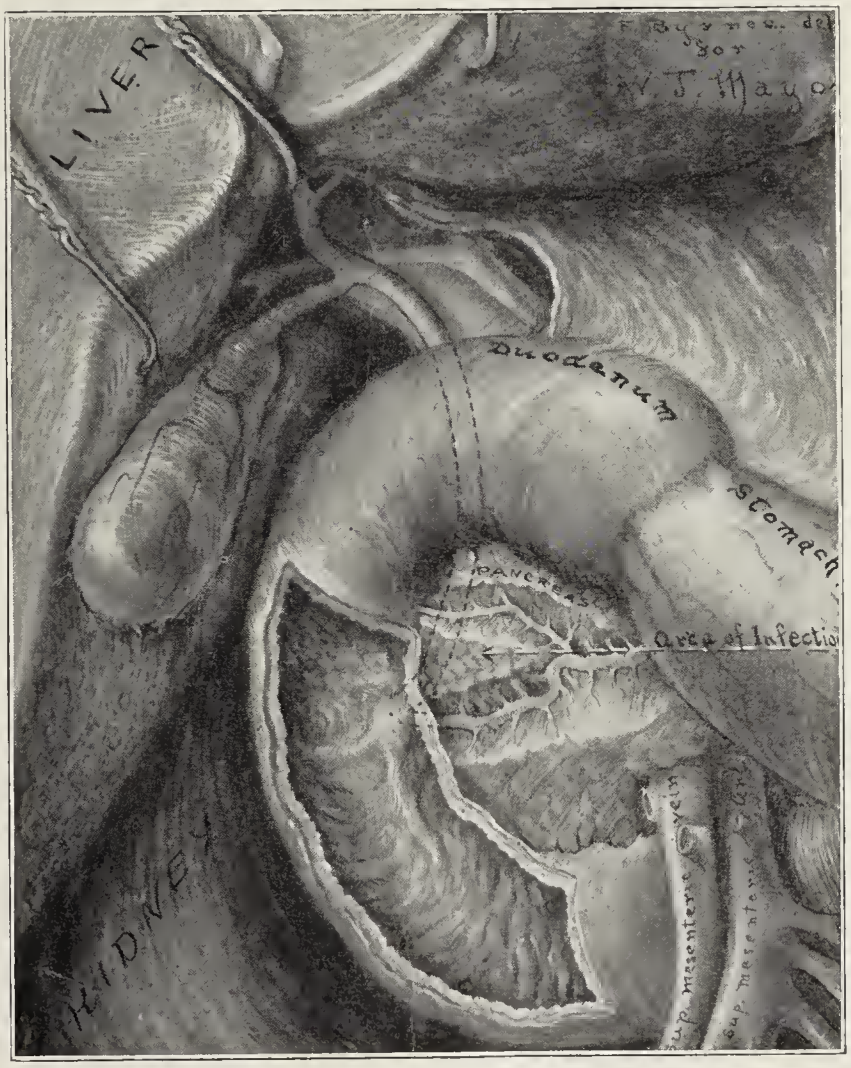

Fig. 1.—Showing the normal relation of the biliary and pancreatic ducts to the pancreas and duodenum.

The stomach and duodenum above the common duct, and the liver and pancreas, have the same embryologic origin from the primitive fore-gut. These organs are associated in their physiology and pathology and are concerned in the preparation of food for digestion. The force which correlates their function is chemical through the harmonious action of their secretions rather than nerve impulses (Starling).

The control of the pylorus and its output depends on the rapidity with which the acid chyme is neutralized in the upper duodenum, by the pancreatic and biliary secretions (Pawlow). The presence of chyme in the upper duodenum stimulates those duodenal secretions on which the secretory functions of the pancreas depend, while the bile activates the pancreatic juices and adds greatly to their digestive effect.

The derivatives of the mid-gut consist of the intestines which lie between the common duct and the splenic flexure of the colon and are concerned in absorption. The solids are very largely taken up in the small intestine; the fluids, which are chiefly from the pancreas and liver mechanically float the solid matter to the ileocecal valve, and bring every part of the mucous membrane in contact with the intestinal contents. This fluid, now of no further mechanical use, is reabsorbed in the head of the colon. The storage function of the intestine begins at the splenic flexure, continues to the rectum, and is derived from the primitive hind-gut. The influence of chemical stimulation (hormones) is the potent one between the beginning of the pyloric end of the stomach and the sigmoid.

In embryology, function is more permanent than form. The small intestine, morphologically, begins at the pylorus, but functionally it begins at the common duct. The large intestine begins at the ileocecal valve, but as a reservoir it begins at the splenic flexure of the colon. The muscle which was at one time to be found at the beginning of the antrum of the stomach, has disappeared, but physiological contraction still begins at this point. The cecocolic sphincter is also gone, but muscular contraction here still holds the fluids in the cecum during absorption.

In this whole process the pancreatic secretions are the most important, and in the diagnosis of pancreatic lesions a study of the intestinal functions, as evidenced in the feces, is the most important means of differentiation.

The pancreas begins as diverticulæ from that part of the lower end of the primitive fore-gut which is to become the upper duodenum. During the fourth week of fetal life these buds project into the posterior mesogastrium and form the two primary lobes of the pancreas, each with its own duct. The two lobes eventually coalesce, and the lower, or duct of Wirsung, becomes the main excretory channel. The duct of Santorini opens anterior and above the duct of Wirsung, and in nearly half the cases is able to maintain pancreatic excretion (Fig. 2). Neither of the ducts of the pancreas have valves, but the ampulla of Vater is provided, and into that little cavity, in conjunction with the common bile-duct, the duct of Wirsung normally opens. This latter feature is found only in the carnivora and in the omnivora.

In 62 per cent. of human subjects the terminal third of the common duct is imbedded in pancreatic tissue, while in 38 per cent. it lies behind the pancreas in the groove between it and the duodenum (Helly). Therefore, sixty-two times out of a hundred any structural change in this portion of the pancreas will interfere with the liver excretion through the common duct, giving rise to jaundice, while a stone in the terminal portion of the common duct, or infection caused by stone in any portion of the bile tract, exposes the duct of Wirsung, and through it the pancreas, to infection. If a stone in the common duct compresses the duct of Wirsung the safety of the patient may depend on the possible presence of a patent duct of Santorini, or if the stone lies in the papilla the bile may force its way up into the duct of Wirsung and set up a chemical pancreatitis.

In this unfortunate association of terminal facilities the large percentage of known diseases of the pancreas have their etiology (Opie).

The "triangle of pancreatic inflammation" is that part of the head of the pancreas which lies between the duodenum on the right and the ducts of Santorini above and Wirsung below. Mr. Snyder Philips has shown (Fig. 1) that catarrhal jaundice, especially the epidemic form, is probably due to pancreatic disturbance and is similar to such inflammations of the parotid gland as mumps.

ACUTE AND SUBACUTE PANCREATITIS.

Our knowledge of acute pancreatitis is largely due to that eminent American physician, Reginald Fitz, to whom we also owe the pathology of the appendix and of Meckel's diverticulum. If the inflammation is acute, hemorrhagic pancreatitis may result and possibly the whole pancreas be destroyed in a few hours. If the process is less acute, suppuration may take place or local disease of the blood vessels will permit bleeding into the pancreas, the so-called "pancreatic apoplexy." We have met with the late results of this latter condition in two cases.

The most interesting feature of acute pancreatitis concerns fat necrosis, a disseminated necrosis of fat due to the escape of pancreatic ferments which involve, to a greater or less extent, the omentum, mesentery, retroperitoneal and other adipose tissues. In two of our cases there was partial suppression of urine, accompanied by delirium and a semi-comatose condition lasting several days. It was found on operation later that the kidney outline on each side was lost, evidently by the effect on the perirenal envelopes of the fat-splitting ferments.

The pancreas in the fetus is an intraperitoneal organ. At birth its posterior peritoneum has become converted into connective tissue, but the area of distribution both within and without the peritoneal cavity of pancreatic leakage suggests the influence of the fetal condition. Fat necrosis is probably the result not of normal pancreatic secretions, but rather of pancreatic juice which has become activated by associated ferments either from the bile or from the duodenal mucous membrane.

In 172 resections of the stomach we have lacerated the surface of the pancreas many times, and in eight instances have removed portions of the gland, but in no case did fat necrosis follow.

There is undoubtedly an exaggerated idea as to the fatality of fat necrosis. The majority of our patients were operated on not in the acute stage, but in the subacute stage after the patients had become more or less convalescent. Our knowledge heretofore has come largely from the dead-house, and as only fatal cases were discovered the disease has appeared a very fatal one.

Acute pancreatitis has a sudden onset and is ushered in by agonizing pain in the upper abdomen, with collapse, followed by extreme prostration. The pulse becomes quick, there is some elevation of temperature, with nausea, vomiting and rapid abdominal distension. The acuteness of the symptoms suggest obstruction, which is belied by the ability to secure the passage of flatus. The patients are usually elderly, obese and often have alcoholic histories.

On opening the abdomen the pancreas is found greatly enlarged, softened and indefinite in outline, with more or less free peritoneal fluid and pea-like areas of fat necrosis. If gallstones exist they should be removed quickly and the gall bladder drained. In all cases where free fluid is found in the peritoneal cavity temporary abdominal drainage should be established (Woolsey). Of three acute cases of pancreatitis, two patients recovered, one patient died. Nine subacute cases all recovered.

CHRONIC PANCREATITIS.

The greatest interest in connection with gallstone disease concerns the chronic forms of interstitial pancreatitis, of which Reidel reported six cases as early as 1896. Our knowledge of the chronic variety is, however, largely due to the work of Robson, who reported the first operative case in 1900. Robson states that 60 per cent. of his operations for the removal of common duct stones showed an associated chronic inflammation of the pancreas.

Mild infection and interference with drainage appear to be the main etiologic factors and the "triangle of infection" is usually involved early, thus compressing the common duct in the 62 per cent. of cases in which its terminal third is embedded in the head of the pancreas. There are two forms of interstitial pancreatitis, the interlobular and the interacinar. The interlobular is fortunately the one most often associated with gallstone disease. In this type the pancreas is enlarged, nodular, rough and to the "feel" greatly resembling cancer. In the interacinar form the pancreas feels smooth and tough and is extremely liable to be associated with glucosuria. The reason for this lies in those peculiar bodies of ductless gland tissue which are to be found throughout the pancreas, and are named after their discoverer the islands of Langerhans. These little cell masses, which derive their blood supply from the vessels of the pancreas but have no connection with the pancreatic ducts, in some way appear to control carbohydrate metabolism, and when destroyed or compressed, as occurs in the interacinar form, diabetes may result. They can be compared to the relation of the parathyroids to the thyroid gland.

The interlobular form, however, may also gradually progress until the gland substance is involved with development of secondary diabetes. Robson found sugar in the urine in 6 per cent. of his common duct cases, which disappeared after operation.

CLINICAL COURSE AND SYMPTOMS.

Chronic interstitial pancreatitis may extend over years of time without producing such symptoms as readily to differentiate the complication from the original disease, but if its possibility is borne in mind and careful search made, evidence can be elicited to show the nature of the disease, and if pancreatic changes are present it indicates an early resort to surgical interference.

Jaundice is one of the most marked symptoms and may last for months or years. The emaciation is more extreme and the pigmentation of the skin is more marked than in simple uncomplicated common duct stones (Robson). As the antecedent disease is most often gallstones, an early history of this condition can usually be obtained. If the stones are in the common duct Courvoisier's law holds good, and in 86 per cent. of the cases the gall bladder will be found contracted. A distended gall bladder may occur if the biliary passages are normal, but such distension, with jaundice, usually indicates cancer rather than chronic pancreatitis.

In a thin patient the enlarged pancreas can sometimes be felt as a hard mass lying transversely across the upper abdomen. Careful examination of the stools gives much important evidence. They are pasty, very large on account of undigested food and contain quantities of fat. Even if there is no jaundice the bile, which without pancreatic juice gives only a light yellow color to the stool, is not sufficient to stain the great quantities of fat which are passed off, so that frequent large, light colored, greasy motions, without jaundice, are indicative of pancreatitis. Estimation as to the quantity of stercobilin should be made. Undigested muscle fiber can often be detected in the stool.

Mr. Cammidge has pointed out that certain crystals are to be discovered in the urine in pancreatic inflammations, and that if detected they are pathognomonic. The Cammidge test is a slow and laborious one and has been more successful in the hands of its originator than with others. Our experience with it, while not extensive, seems to bear out much of his claims for it.

We have not found that the presence of chronic interstitial pancreatitis has greatly influenced the prognosis after gallstone operations, although there is undoubtedly a much greater tendency to hemorrhage than without the pancreatic complications. For this reason we have used either the chlorid or lactate of calcium to assist coagulation of the blood before and after operation. We are, however, in doubt as to its actual value.

The necessity of clearing out all of the calculi, especially from the common duct, can not be emphasized too strongly. Stones are especially liable to be lodged under the overhanging head of the enlarged pancreas, so that they may easily be overlooked, as we have found by experience. As a matter of fact, neither probe nor scoop can be depended on to "feel" a gallstone in this situation, and we have never rested satisfied until we have freely opened the common duct and, if possible, inserted a finger into its lumen, making sure that no gallstone has escaped detection. In the same way, in the majority of cases, the hepatic duct and the entrance to its right and left primary divisions can be searched for calculi having their origin in the gall bladder, but which have been crowded back into the hepatic ducts.

After clearing the ducts of stones a large malleable probe should be passed through the common duct into the duodenum so as to secure good thorough dilatation to permit the escape of any hepatic duct stones which may come down later. Hepatic duct stones, as a rule, are not large, and if free drainage into the duodenum exists, even for a few days, they may find their way out; otherwise they might be retained in the common duct, necessitating secondary operation, as occurred in five of our cases.

Eloesser has recommended that the third portion of the common duct be stretched to loosen up the pancreatic adhesions. Robson points out that free drainage for the bile is essential, and in most cases this alone seems to be sufficient for cure. Cholecystostomy or cholecystenterostomy are the indicated procedures. The latter operation has the advantage of equally free drainage and at the same time maintaining the influence of the bile in intestinal digestion. In our experience, when the common duct contained stones the removal of them with temporary external drainage has resulted in the symptomatic cure of the pancreatitis. If there are no stones in the common duct or gall bladder, other things being equal, we have preferred cholecystduodenostomy, and out of twenty-four cholecystenterostomies nine were performed for this cause.

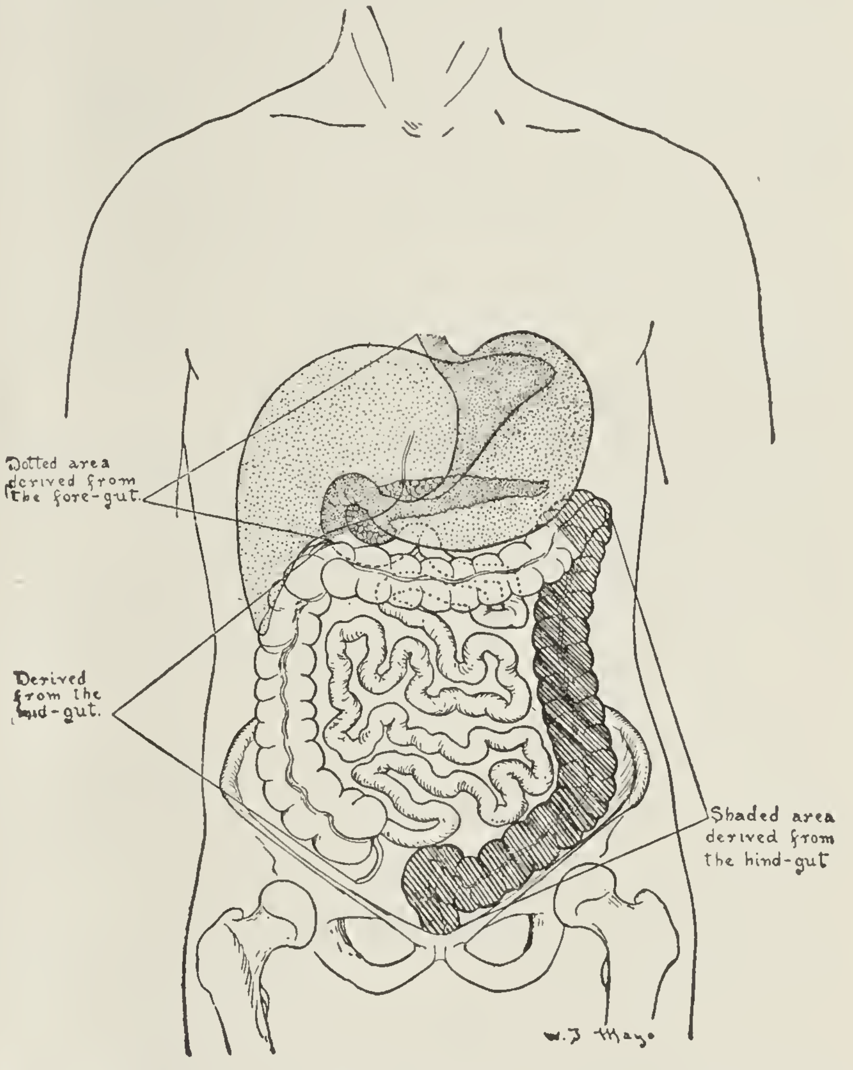
Dotted area derived from the fore-gut.
Derived from the mid-gut.
Shaded area derived from the hind-gut
W. J. Mayo

Fig. 2.—Showing the embryonal origin of the gastrointestinal tract.

It will be noticed that where Robson found that in 60 per cent. of his cases of stone in the common duct pancreatitis existed, we have found it in only 18.6 per cent. This difference depends somewhat on the personal equation of the surgeon, as on the operating table the diagnosis is made from the "feel" and character of the enlarged gland. We have only classified as chronic pancreatitis those cases in which the pancreas was so definitely enlarged that there could be no possible doubt but that the disease actually existed. Undoubtedly by a more careful examination of the urine and stool Mr. Robson and Mr. Cammidge have been able to make the diagnosis in cases we have heretofore overlooked.

DETECTION OF THE EMOTIONS BY THE GALVANOMETER.*

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In 1890 Tarchanoff published in *Pflüger's Archiv* a paper describing experiments with a galvonometer in series with the human body. Changes in the electromotive force with resulting deflection of the galvanometer occurred when the face, ears or feet were tickled, and when various sense organs were stimulated. He noticed that actual stimulation was not necessary; the effect would appear when the person merely imagined the irritations. He observed, moreover, that the recollection of any kind of strong emotion produced the same effect. Ordinary intellectual exercise had no effect unless it was accompanied by exertion. Expectant attention had, however, a marked effect—a fact explainable if we consider attention as one of the emotions. Tarchanoff believed that the current sent through the galvanometer was due to a secretory current of electricity produced by the action of the sweat glands.

This paper by Tarchanoff was really a model piece of investigation. I read it and admired it not long after it was published; but my work led along other lines and, like everybody else, I forgot all about it.

In 1897, Sticker, of Vienna, repeated Tarchanoff's work, and concluded that the current was due not to activity of the sweat glands but to changes in the capillary circulation. In 1892, Somner, of Giessen, made similar experiments, but came to no conclusion. In 1905 the fundamental fact was rediscovered by a Swiss electrical engineer, E. K. Miller. This started Veraguth and Jung, of Zürich, on similar lines. Extensive investigations were now undertaken by Dr. Jung in the Psychiatric Institute at Zürich. One of his papers has been published in the *Journal of Abnormal Psychology* (Boston), February, 1907. Peterson and Jung applied the method to normal persons, and to various forms of insanity, such as dementia præcox, hysteria and paranoia.

Professor Peterson and I are now at work with the method along several lines, of which I may mention the following: 1. The attempt to construct a self-registering instrument that shall be as complete and handy as a chronoscope. 2. To definitely settle what bodily changes produce the electrical effects. 3. To classify and analyze emotional persons. We do not, however, propose to touch the problem of the analysis of the emotions themselves. This must be the work of the laboratory psychologist who has plenty of time to deal with normal persons. Medical men have so much material with diseased and abnormal minds that we can work most profitably on the pathologic side.

The apparatus employed is a moderately sensitive galvanometer with two electrodes and a battery. The current is sent through the hands of the person tested. When the hands are placed on the electrodes a small current passes through the body, and the galvanometer shows a deflection. The deflection can be seen by reflecting a beam of light on a screen. A sudden deep breath or a cough causes an increased deflection after a latent time of two to five seconds. Expectation of a pin prick, for example, causes a deflection. So does any real or imagined emotion. When I flash a light into the eyes of the person or make a threatening gesture, or act as if I am to stick a pin into him you notice that the spot of light moves distinctly. The same happens when I ask him questions that are likely to arouse emotions, such as, "Who is your worst enemy?" "Did you ever lose any money?" "Are you married?" You notice one defect of the method, namely, that it shows the presence of an emotion, but does not indicate what kind it is.

We have now to consider the problem of what causes the changes in the amount of current allowed to pass through the body. We would naturally think at first of vasomotor changes, as in blushing. When we blush the capillaries are dilated, the skin becomes more filled with fluid and its electrical resistance is, therefore, less. But, when the arms are bound with Esmarch bandages so that no blood flows through them, the result remains the same. Therefore, the cause does not lie in vasomotor changes.

We next think of involuntary muscular movements. But we can make fairly great changes of pressure on the electrodes without producing noticeable deflections. Moreover, the hands can be placed in vessels of water where small movements would have no effect; the emotional deflection remains the same.

We might suppose that the emotion produced an actual excretion of sweat on the skin, whereby the electrical resistance would be diminshed. We all know how anxiety will cause the brow to perspire, and that horses sweat with terror. But this is ruled out by the experiments with water electrodes.

We finally come back to the original supposition of Tarchanoff, that the change is due to the activity in the sweat glands. This may occur in two ways. The increased activity may produce an increased quantity of liquid in the lower layers of the skin, whereby the electrical resistance is reduced. Or, since the increased activity must result in altered electromotive forces, these may vary the amount of the current flowing through the body. This is the theory of Tarchanoff. For my own part, I do not see why such electromotive forces always add themselves to the current sent through and never oppose it; that is, an emotion always increases the deflection, thereby showing that more current passes. We thus seem forced to the conclusion that the variations are in the electrical resistance.

Some people have objected to the sweat glands being dignified into organs of the emotions. But dignity does not exist for science. It has been shown that the sphincter of the bladder registers most delicately both intellectual and emotional activity, and that the digestive movements of the duodenum (as observed with x-rays) are violently affected by disagreeable emotions. The sweat glands are certainly worthy of attention.

I must not omit to point out the practical application of the method. Dr. Peterson and I use the apparatus almost daily in our medical practice. For the nervous patients who come to us it is just as necessary to know how emotional they are as it is for the general practitioner to know how high is the temperature in a case of fever. Moreover, in many cases it is necessary to find out what experiences in the past or present life of the patient produce emotions. For this purpose the patient sits at ease, with hands on the electrodes. Various words are spoken, or topics of conversation are brought up; the galvanometer shows when a sensitive subject has been touched.

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* Address before the New York Academy of Sciences, Nov. 25, 1907.

87 Madison Avenue.

PLAGUE AMONG RATS IN SAN FRANCISCO.

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The following notes on epizootic plague in rats are published in the belief that they may prove of interest to other workers.

It will be observed that the relative merits of the microscopic and naked-eye methods of detecting plague in rats have been thoroughly tested. Our data are drawn from the microscopic and anatomic appearances of 14,184 rodents examined between Sept. 13, 1907, and Jan. 14, 1908. We agree with the last Indian Commission[1] in their belief that the naked-eye method alone furnishes enough data to pass on a rat as being plague infected or not. Like them, however, we preferred to combine the two methods first in order to rule out any fallacies which might be introduced by unknown local conditions. So far no disease of rats has been encountered which could possibly cause confusion, with the exception of a few instances which will be cited below under "Diseases in Rats Resembling Plague."

METHODS OF EXAMINATION EMPLOYED.

The rats were brought daily from the various district headquarters and entered serially in a book, where notes were recorded concerning the address of the rat, its species, etc. After being tacked out on a shingle, each rat was completely dissected by Mr. A. Venzke, who gained a great experience in similar work under Dr. Currie, Public Health and Marine-Hospital Service, during the previous epidemic in San Francisco.

A smear from the spleen of each rat was examined microscopically, and whenever the anatomic conditions indicated, from the glands, liver, heart's blood, etc.[2]

Whenever suspicious bipolar staining bacilli were found their pathogenicity was tested by rubbing a bit of the tissue to be tested into a lightly scarified area (about an inch square) on the abdomen of a guinea-pig, rabbit or white rat. These animals have been named in the order in which they have proved most satisfactory. In addition, if the condition of the rat warranted, cultures from the spleen and heart's blood were made on + 1 agar slants. On the death of the experimentl animal, note was always made of a typical local reaction at the point of vaccination. However, this proved unnecessary, for we have had no mortality from plague among our stock guinea-pigs, nor have we found fleas on them. The experimental animals have been kept throughout in screened jars.

Cultures obtained from the spleen and heart's blood of the rats, and from the experimental animals, were then further tested for the production of typical involution forms on salt agar. We have grown the cultures to be so tested for twenty-four or forty-eight hours at 37 degrees C. on + 1 agar, containing 2 to 3.5 per cent. sodium chlorid.[3]

In a number of instances the cultures so tested have been retested for pathogenicity. We have not been able to test for the production of stellactites in oiled bouillon owing to the vibration of our laboratory building.

OBSERVATIONS IN DETAIL.

Bearing in mind the statement made by Hetch and Otto[4] that in rats experimentally infected through the oral and intestinal mucosa, plague bacilli could be found in greater numbers in the liver than in the spleen, we examined smears from both these organs in a series of 1,200 rats. The results did not justify the additional labor. Anatomic conditions which would possibly indicate the natural occurrence of intestinal infection in rats have been encountered in only one instance:

No. 2816. *M. decumanus;* sick when caught; glands not enlarged; spleen enlarged and congested; right lung whitish, and contains calcareous particles; liver shows many pinpoint yellowish foci of necrosis. Typical bipolar staining bacilli were very much more numerous in the liver than in the spleen. A guinea-pig was inoculated subcutaneously with an emulsion of the liver on Oct. 16, 1907. Died on Oct. 18, 1907, with typical anatomic reaction at the point of inoculation, glands and spleen. Cultures from the guinea-pig proved to be *B. pestis.*

Table 1 will indicate the number and kinds of rodents examined between Sept. 13, 1907, and Jan. 14, 1908, and the per cent. found infected.

TABLE 1.

Species.[5]	Total No. Examined.	Species, Per Cent.	Total Infected.	Infected, Per Cent.
Mus decumanus........	13,982	98.79	139	0.99
M. rattus..............	105	0.73	1	0.95
M. r. alexandrinus.....	51	0.35	2	3.84
M. musculus...........	16	0.11	0	0
Totals	14,184		142	

It is evident that the most common rat in San Francisco is *M. decumanus,* and that the greater number found infected are of this species.

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1. Jour. Hyg., 1907, vii, 324.

2. In our routine staining, we have found Wright's, Jenner's and the carbol-thionin stains very satisfactory, but prefer the following thionin-methylene blue combination, devised by R. A. Archibald, D.V.S. It stains almost instantaneously, either after or without fixation by heart.

Solution 1.		Solution 2.	
Thionin	.5	Methylene blue	.5
Phenol cryst.	2.5	Phenol cryst.	2.5
Formalin	1	Formalin	1
Water	100	Water	100

Dissolve for 24 hours; mix equal parts and filter.

3. We have noted that plague cultures will not give typical involution forms in twenty-four hours on 2 per cent. sodium chlorid agar under certain conditions. This is when the salts which precipitate out of bouillon on its cooling are filtered out before the addition of the agar. However, the presence of 3 per cent. sodium chlorid obviates this difficulty.

4. Klin. Jahrb., 1903, ii, No. 3.

5. The following characters, somewhat roughly stated, will serve for the routine differentiation of these three species:

M. decumanus: The Norway rat. Often reaches a great size, tail about the same length or shorter than body, heavily built, coat of coarse gray hair, ears smaller in proportion to size than in the next two species.

M. rattus: Of more slender and delicate proportions than *M. decumanus,* tail about an inch longer than body, coat of fine grayish brown or brownish black hair.

M. rattus alexandrinus: The Egyptian roof rat or white bellied rat, resembles *M. rattus* in general appearance except that the hairy coat on the whole under surface of the body is pure white with sharply demarcated borders.

The Norway rat, according to D. S. Jordan (Manual of the Vertebrates of North America), was introduced into America about 1775, whence it has practically expelled *M. rattus.* The latter species is the ship rat, *par excellence,* though the other two species also occur on ships. Most of the *M. rattus* brought to us have come from ships or wharves, though a few have been caught a mile from the docks. A few young of the variety, *M. r. alexandrinus* have been caught a mile or so inland, showing that this variety probably breeds on shore to a small extent.

Complete postmortem notes on 88 "positive" rats show that 74 of these had enlarged and congested glands; 13 of the 74 showed a typical primary bubo (6 inguinal, 1 submaxillary, 1 axillary). Only 28 presented the characteristic anatomic picture of general subcutaneous congestion, enlarged and congested glands, splenic tumor and hydro- or hemo-thorax. The inguinal glands, either alone or along with other glands, were enlarged and congested in 47, the axillary glands in 30, and the submaxillary glands in 33 instances. No single characteristic abnormality invariably occurred in the rats of this series, as shown by Table 2.

TABLE 2.

	Times present.
Subcutaneous injection	52
Enlarged congested glands	74
Enlarged congested spleen	60
Hydro- or hemo-thorax	63
Liver mottled with focal necroses	13

Most of the 88 rats were fresh; only 7 showed much postmortem decomposition, and in these typical bacilli were fairly numerous, either in the spleen or in a gland.

While the aid of a microscope can not always be dispensed with in determining whether a rat is infected with plague or not, the following instances will emphasize the relatively greater value of naked-eye postmortem appearances:

No. 11,597. *M. decumanus.* Marked subcutaneous injection, all regional glands enlarged, spleen twice normal size, fluid in thorax, surface of liver roughened. Smears from spleen showed very few clumps of solid staining rods, not resembling *B. pestis* morphologically. Smears from the glands showed no bacteria. Cultures from the spleen gave a pure growth of *B. pestis.*

No. 11,267. *M. decumanus.* Subcutaneous injection, submaxillary and right and left inguinal glands enlarged and congested, enlarged dark spleen, liver mottled with foci of necrosis. Some bacilli which did not present a typical bipolar stain were found in spleen smears. A guinea-pig vaccinated with spleen tissue died of typical plague in four days. Cultures from the guinea-pig showed the presence of postmortem invaders besides the fine colonies of *B. pestis.* The latter produced typical involution forms on salt agar.

VIRULENCE OF BACILLUS OF NATURAL RAT PLAGUE IN SAN FRANCISCO.

From Table 3 it will be seen that the bacillus of natural rat plague in San Francisco is quite as virulent as the strains tested in Bombay.[6]

TABLE 3.

Animals used, method of Inoculation.	Time preceding death in days.	Average time preceding death in days.
74 Guinea pigs, vaccinated	2-8	4.9
19 Guinea pigs, inoculated subcutaneously	1-8	3.4
10 Rabbits, vaccinated	2-8	4.7
12 White rats, vaccinated	3-5	3.5
3 White rats, inoculated subcutaneously	3-6	4.

CHRONIC PLAGUE IN RATS.

It may be well to emphasize here the occurrence of certain involution forms of the *B. pestis* in the tissues of human beings and rats. These are the so-called yeast-form or, better, as styled by the last Indian Commission, "coccoid" form of the bacillus. We have examined the buboes of several humans where the organism appeared as thousands of pale circular discs, of slightly greater diameter than that presented by the bipolar-staining rod form. We have encountered these "coccoid" forms in the splenic abscess of one case of chronic plague, and in one case of acute plague in rats, as follows:

No. 10,019. *M. decumanus.* Cervical bubo, liver mottled, spleen congested and on section a small abscess was found at one end. Smears from splenic abscess showed numerous typical bipolar staining rods along with numerous "coccoid" forms. A few groups of typical rods were seen in smears from the liver, none in the gland smears. A guinea-pig, vaccinated with the contents of the splenic abscess on Dec. 16, 1907, died on Dec. 20, 1907, with the typical anatomic findings of plague. Cultures from the guinea-pig gave typical involution forms on salt agar.

No. 18,780. *M. decumanus.* Marked subcutaneous injection, left inguinal and axillary glands much enlarged and deeply congested, fluid in thorax, spleen very red but not much enlarged. Smear, "spleen," full of "coccoid" forms; smear, "gland," shows enormous numbers of bipolars and "coccoid" forms. Guinea pig vaccinated 2/11, dead 2/14, typical anatomically. Rat cultures look like plague. Involution forms on salt agar.

DISEASES IN RATS RESEMBLING PLAGUE.

As already stated, we have encountered a few rats, which were suspicious anatomically and microscopically, from which the *B. pestis* was not isolated. In certain instances a typical reaction was produced in guinea-pigs by vaccination or inoculation, but the organisms isolated failed to give the biochemical tests for *B. pestis.* We have not had time to work over this material carefully and can not state yet whether the fault was technical or whether some other organism was responsible for these failures. However, we can cite one instance of a rat which presented an anatomic and microscopic picture which might have been confusing had not the animal and bacteriologic tests been made. The notes on this rat are as follows:

No. 15,670. *M. decumanus.* Subcutaneous congestion well marked all over abdomen and neck, submaxillary glands enlarged and congested, liver dark and swollen, spleen large and dark red, lungs congested in areas, left lung adherent to thoracic wall, no fluid in thorax, pericardium thickened and congested, and, in it, just to the right of apex of heart, is a tumor-like swelling about ¾x½x¼ of an inch, filled with a greenish yellow caseous pus. Microscopically the pus contained thin, curved and straight rods, with metachromatic granules, resembling the granular forms of the diphtheria bacillus. The submaxillary gland contained numerous rods about the size of the typhoid bacillus, varying somewhat in length and often presenting a typical bipolar staining.

A white rat vaccinated with the submaxillary gland was chloroformed and found perfectly normal six days later. Pure cultures of a non-motile member of the colon group were obtained from the submaxillary gland, i. e., the bacillus coagulated milk, produced indol and fermented dextrose, levulose, lactose, galactose, saccharose, maltose and manite with gas production, but produced neither acid nor gas from inulin. It grew luxuriantly on 3.5 per cent. salt agar, and produced no involution forms. An agar slant of subcultures injected intraperitoneally into white or wild rats (*M. decumanus*) produced a hemorrhagic peritonitis with septicemia. In smears from these experimentally infected animals the morphologic resemblance to *B. pestis* was striking. The abscess in the pericardium was due to an organism probably identical with *Mycobacterium pseudotuberculosis* (Kutscher).[7] A considerable number of chronic subcutaneous and visceral abscesses in rats, due to this organism, have been encountered.

SUMMARY.

While we have not given the details concerning all of the rats we have tested by bacteriologic and animal inoculation experiments, we have to agree with the last Indian Commission that, with experience, the chances of missing a plague-infected rat by the naked-eye method of examination alone are extremely small. Recently we have abandoned the wholesale preliminary

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6. Jour. Hyg., 1907, vii, 358.

7. Chester, F. D.: Manual of Determinative Bacteriology, 1901, p. 355.

microscopic examinations and substituted the anatomic dissections followed by the bacteriologic and animal tests of anatomically suspicious rats.

Of 14,184 rodents examined, 98.97 per cent. were *M. decumanus;* 0.73 per cent. *M. rattus;* 0.35 per cent. *M. rattus alexandrinus,* and 0.11 per cent. *M. musculus.* By far the greater number found infected were *M. decumanus.*

A brief summary of the anatomic and microscopic characters of acute and chronic plague in rats is given with the citation of specific instances.

The results of animal inoculation experiments show that the bacillus of natural rat plague in San Francisco is quite as virulent as the strains tested in Bombay by the last Indian Commission.

OCULAR ROTATIONS IN PARESIS.*

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At the last meeting of this Section our honored chairman, speaking of the ocular muscles, stated: "One . . . who has spent much time in investigation and has written largely in expression of his views recently said at the close of a most interesting address, 'I feel as if I were only on the threshold of this study'," and also quoted another ophthalmologist as saying: "Ophthalmology is finished, you will find nothing new in it." These quotations are certainly reasonable cause for further thought on the ocular rotations, and perhaps the last word has not been said on this interesting subject. Carl Weiland may well ask: "Are our present ideas about the mechanism of the eye movements correct?" Furthermore, since the discussion of the paper, "Some Axioms Concerning Ocular Rotations," by our present chairman, Dr. G. C. Savage,[1] I have felt much interested in the subject of the rotations of the eye as it moves about in the field of version; the action of the ocular muscles in causing these rotations, their points of action and the phenomena presented by their pathologic condition—paresis. A careful study of the various writings on this subject has not rendered the matter at all clear to me, even though our chairman has stated that his conclusions are axioms.

To present one's individual opinions on this subject in a clear and concise manner is difficult, and to demonstrate any theory is more so, especially when we find so many diversified writings on the ocular rotations and the diagnosis of paresis. I may state that this paper will refer to eyes that have normal rotation about the center. It will deal with the subjects of increased or diminished rotation as found in that anatomic condition causing heterophoria and that pathologic condition causing paresis, with the phenomena pertaining thereto.

I wish to lay special stress on the term paresis in this paper. In complete paralysis of an eye muscle it does not seem to me that there can be any question as to the diagnosis, but in paresis the subject, according to the schemes of the writers of all our text-books, seems to be extremely complicated. I understand that neurologists make a clear distinction between these two terms, and, according to my views, the distinction between paralysis and paresis of the ocular muscles should be clear and well defined.

In paralysis we have "the suspension or abolition of a functional power, especially in the nervous system, in which case there is a temporary or permanent loss of power of motion," etc. (Foster), while in paresis we have "an incomplete paralysis, especially when not associated with any demonstrable organic change" (Foster). Furthermore, I do not think that paresis should be classed under the conditions of heterophoria. I would consider heterophoria as an inability of the ocular muscles to perform a certain function. It is due to certain conditions, anatomic rather than pathologic, in which the muscle fails to act to its normal extent in the field of version. Hence I would call attention to the last two terms, as they apply with particular force in a study of the rotations of the eyes.

In paralysis the function of an ocular muscle is completely lost and the visual line must rotate or deviate in the direction of the muscles antagonistic and remain in that position. An exception to this is found in ophthalmoplegia externa, in which motion is completely lost in all directions and the eye remains fixed. In paresis the function of the ocular muscle is but partly destroyed and the visual line fails to turn in the direction of the paretic muscle beyond the median line of the orbit with a consequent diplopia. In heterophoria, with normal acuity of vision, we do not have diplopia when the look is in infinity. I state this again for the reason that it has been said that a diagnosis of paresis is made when the eyes are directed to the upper part of the field of version, with the visual line directed strongly to the right or left. It is also stated that in one of these positions the superior rectus acts as an elevator of only one eye, while the inferior oblique of the fellow eye raises the visual line (Duane, in Posey and Spiller). I can not agree with this proposition, as paresis of the inferior oblique, if it does occur, must cause diplopia with decided tipping of the image toward the side of the paretic muscle.

The most essential point to establish is the position of the eyes when at rest, with the look in infinity, in which the ocular muscles are in a state of normal tonicity. This position of the eyes is now well defined by all ophthalmologists as the first or primary position and one from which the eyes may be moved by the normal function of the ocular muscles to any secondary position in the field of version. Now, in this study of the ocular rotations and the primary position it must be understood that the position of infinity is not at twenty feet, but is any point in space, as a star. I wish to make this distinction, as practically we do have a certain amount of convergence at twenty feet, the usual distance for testing the vision. Furthermore, another essential is the visual acuity which must be at its best. In other words, in testing the eyes for the ocular rotations the visual acuity must not be reduced by any artificial means. Visual acuity reduced by mechanical means may be permissible at times, but it is not essential.

Bearing these two points in mind, we are now prepared to consider the rotations of the eyes, not from the standpoint of the rotations of a rubber ball or other artificial apparatus, but simply from an anatomic and a clinical point of view.

It seems to me like "carrying coals to Newcastle" to come before this association of ophthalmologists and speak of the anatomy of the orbits, but I wish to make some suggestions for your consideration in reference to the points of action of the ocular muscles as given in the latest publications on this subject. We find in the text-books that the origins of the ocular muscles, except that of the inferior oblique, are at the optic foramen, at the posterior part of the orbit, and that the muscles are inserted into the sclera at their respective points of attachment. All this is true, but are these points of origin and insertion also their points of action? This seems to me an important question and on its correct interpretation will depend our ideas of the mode of action of the ocular muscles. It is conceded that the origin of each of the four straight muscles is at the optic foramen, but let us trace the course of one of these muscles to its insertion. For illustration I shall refer to the superior rectus. This muscle and the other recti occupy almost the entire apex of the orbit, but quickly separating from the others the superior rectus passes upward toward the upper part of the orbit just beneath the palpebræ superioris and. surrounded by its sheath, it soon becomes tendinous. This sheath is formed of fibrous, inelastic tissue, from which strong expansions of the same inelastic tissue pass off laterally and in all directions to the bones of the orbit and to the lids and conjunctiva (Dwight in Norris and Oliver's System). The external portions of these expansions form the external palpebral ligaments. As the superior rectus reaches the back part of the eyeball it becomes tendinous and, entering Tenon's capsule, passes to its insertion into the sclera, 7 mm. from the upper edge of the cornea. From this we may note that a section of the orbit made 5 mm. behind the globe of the eye will present the appearance as shown in Figure 1.

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*Read in the Section on Ophthalmology of the American Medical Association at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

[1] The Journal A. M. A., Aug. 4, 1906.

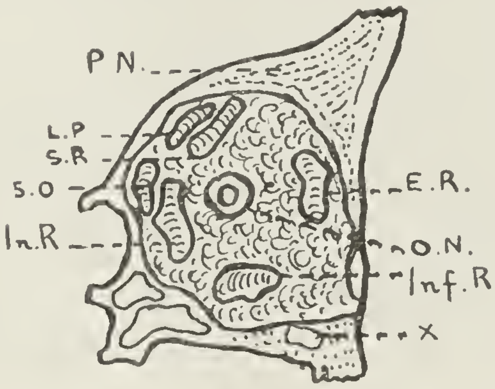

Fig. 1.—Frozen section of orbit 5 mm. behind globe. (From Norris & Oliver's system.) L. P., levator palpebræ superioris; S. R,. rectus superior; S. O., obliquus superior; In. R., rectus internus; E. R., rectus externus; O. N., optic nerve; Inf. R., rectus inferior; F. N., frontal nerve.

The orbit being filled with fat, connective tissue and the expansions from the sheaths of the muscles and Tenon's capsule, it seems to me that the muscle and tendon of the superior rectus can have little, if any, lateral movement when the muscle contracts or when the visual line is rotated inward. The diagram (Fig. 1) taken from frozen sections shows that the superior rectus, while it can move its insertion backward or forward, moves the central part of the muscle but very slightly in a lateral direction as it is held in its position by the sheath which is attached to the walls of the orbit by these expansions of inelastic fibrous tissue. If this idea of the anatomy of the orbit is correct, and I see no reason why it should not be, then one of the points of action of the superior rectus and the other straight muscles of the eye, can not be the fibrous ring that surrounds the optic foramen, but must be at the point of the sheath just behind the globe, as shown in the section. Now when the eyeball is strongly adducted, or, in other words, turned to the limits of the inner part of the field of version, the tendon of the superior rectus will pass through its sheath at the back part of the globe almost like a pulley at right angles to its primary line of action. We have, then, these two points of action of the superior rectus: Its insertion into the sclera anteriorly and the position of the sheath at the back part of the eyeball posteriorly. In this connection it is to be noted that the same argument will apply to all the straight muscles of the orbit which take their posterior points of action from their respective sheaths about 5 mm. behind the eyeball.

It seems to me that this is a most important anatomic proposition and one that, so far as I have discovered, is not mentioned by any of the writers on the rotations of the eye in the orbits. I have been led to a study of these anatomic conditions because, I think, they have special importance in the consideration of the rotations or movements of the eye in the field of version and particularly so in the phenomena that may be presented in all paretic conditions of the eye muscles. Furthermore, I quote from one who has written extensively on this subject this statement in reference to the action of the superior rectus: "When the eye is adducted the muscle (superior rectus) will be nearly at *right angles* to the anteroposterior axis of the eye and hence will have little or no action as an elevator."[2] I would also refer to an article by Dr. D. K. Shute[3] on ocular rotations, in which is found the same statements in reference to the anatomic arrangements of the eye muscles, giving the muscle plane of the superior rectus as follows: "The lower edge of the muscle plane extends from one immovable point (the center of origin of the muscle) to another immovable point the center of rotation of the eye. But the upper edge of this muscle plane makes varying angles with the median plane, "as while the center of origin is immovable its center of insertion is very movable." Shute furthermore states: "The lower edge of this muscle plane forms a fixed angle with the median plane (27 degrees for the recti) whether the eyes be in the primary position or whether they be abducted or adducted."

This is undoubtedly true, but does the upper edge of this muscle plane always form the same angle or any other angle to the median plane? This is the important point and the sum and substance of this paper, because I am convinced that, while the points of this vertical plane of the superior rectus are as above stated, yet when the eye assumes any secondary position the upper edge of this plane then becomes completely obliterated and the essential points of the vertical plane of the superior rectus become, first, a fixed point, the center of rotation; second, a slightly movable point, situated in the sheath of the muscle a short distance behind the eyeball, and, third, a freely movable point, the insertion of the muscle into the sclera. Now, under these anatomic conditions, if my contention is correct, while the posterior portion of the muscle plane changes very slightly, the anterior portion or that portion anterior to a point in the sheath about 5 mm. behind the eyeball, changes according to the rotation, but in all positions of the look is practically in the vertical plane of the globe. I am fully aware that this assertion may deny that the superior and the inferior recti, to which the same argument applies, have only a slight tendency to tort or turn the eye on its sagittal or anteroposterior axis even when the eye is adducted thirty or forty degrees inward. In Figure 2 the conditions as interpreted by Duane and others are shown at A; at B is shown my idea of the anatomic conditions.

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[2] Duane, in Posey and Spiller, p. 190.

[3] N. Y. Med. Jour., Aug. 18-25, 1906.

In explanation of these drawings it will be noted that in A, the two points of action of the superior rectus, we find to be the optic foramen at x and the insertion of the muscle at y′ and y^2, so that, when the eye is adducted 50 degrees from the primary position, the portion of the superior rectus just back of the eyeball must pass from the position a to b. If this be true, I can not understand how this lateral motion can take place, considering the extremely slight resistance the globe of the eye, resting on a cushion of fat and tissue, can possibly offer against the pull of the superior rectus when contracted. It seems to me very doubtful if such action can occur, considering that fibrous bands pass from the sheath of the muscle to the bones of the orbit and the parts surrounding it. On the other hand, looking at Figure 2, B, we find that if these fibrous bands do tend to keep the muscle sheath almost stationary in the upper part of the orbit, that is to say, so that the muscle can not move in a lateral direction at a, then the points of action of the superior rectus must be at a and y′ and y^2, as shown in Figure 2 B. Consequently, when the superior rectus is contracted by the stimulation of the third nerve, steadied by the tonicity of the internus and the externus and its vertical meridian always corrected by the action of the obliques, it must act as an elevator in all parts of the lateral field of version.

Now, all this brings forward the question: Does the inferior oblique tend to turn the visual line upward; that is, does it assist or take the place of the superior rectus when the visual line is turned in any part of the field of version? We may answer that question by asking another: Is the elevating action of this muscle needed or necessary in the ocular rotation? As I have just stated, the slightest touch on the eyeball will move it from any position, and consequently the slightest action of the superior rectus will raise the visual line to any part of the field. Therefore, the supposition that the inferior oblique of the left eye is an elevator when the eyes are turned to the right, and not the superior rectus, is beyond my understanding and hence, in my opinion, the position of the images, in the upper part of the field of version, can not indicate a paresis of the inferior oblique. Thomas Dwight,[4] writing of this, says:

> Theoretically this is tolerably certain, but practically it is to be remembered that it is very unlikely that one, or even two, of these muscles ever act alone. The accuracy of any movement is due not alone to the pull of the muscle to which it is usually ascribed, but also to the graduated resistance of the antagonist. Probably the simplest movement of the eye is made by the more or less active concurrence of all the muscles.

This is probably true, but we must consider that this "active concurrence" means that, while certain muscles turn the globe, that the other muscle assists only so far as may be necessary to keep the eye steady and the vertical meridians parallel to each other in all parts of the field of rotation. Studying the question from this anatomic standpoint, we now come to the normal action of the ocular muscles in reference to the movements of the eye in certain parts of the field of version, except those of the direct vertical and horizontal rotations. As an illustration of what I consider the true physiologic action of all the ocular muscles, I would refer to the action which takes place when the eye is rotated upward and outward by the action of the superior and external recti. I can not improve on the excellent illustration[5] of this action given by Dr. G. H. Price, Nashville, Tenn., at the last session of the Association during the discussion of Dr. G. C. Savage's paper, and to this explanation I would refer the reader, as it is too extensive for insertion in this paper.

Now, following this theory of the eye movements, it is to be noted that as the visual line goes upward its vertical meridian tends to tort inward, which action is corrected by the inferior oblique, and as it goes outward the external rectus tends to tort the vertical meridian outward; this action being corrected by the superior oblique. Now, perhaps this action takes place according to the law of Listing, which I will discuss later; that is to say, about an axis at right angles to its lines of direction. But it is by the action of the superior and the external recti alone that this movement is accomplished, and the only action of the oblique muscles is to correct any torting of the vertical meridians from the vertical plane of the orbit, and in this function these oblique muscles keep the vertical meridians of the two eyes parallel.

In other words, the obliques do not tend to turn or to move the eyeball on its center of motion either upward or outward, but simply correct the tendency of the vertical meridians to deviate inward or outward as the contraction of the straight muscles moves the visual line in the desired direction or from point to point. I fully concur with Dr. Price in his exposition of this subject.

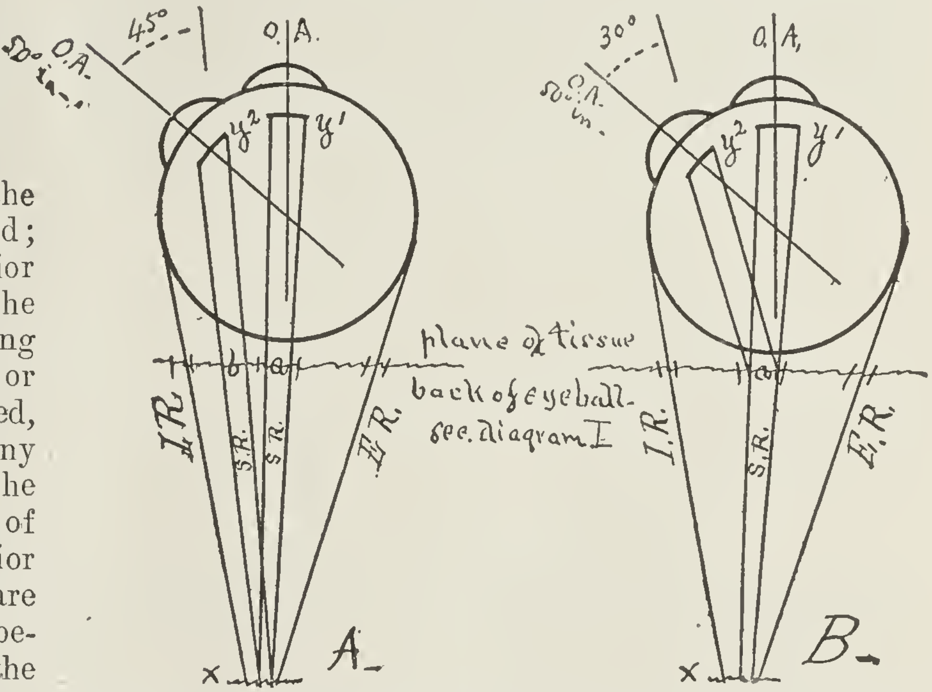

Fig. 2.—A. Action of superior rectus as interpreted by Duane and others. B. Author's idea of the action of the superior rectus.

It is natural to suppose that the eye when changing the line of vision from one point to another will move the visual line along the shortest route, and probably it does, but this condition has not yet been fully proved, though often asserted, except for the horizontal and vertical meridians. In these two meridians we know the direction of the eye movements from the after images produced by looking at a small but intense electric light. When the eye is moved horizontally the line of after images will always be perfectly horizontal and we find the same phenomenon in the vertical meridian. When, however, the eye seeks some other position in the point of vision as in an oblique direction, it is doubtful if it does move along the shortest route. Tschering[6] says:

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[4] In Norris and Oliver's System, p. 98.

[5] Trans. of Section on Ophthalmology of A. M. A., 1906, 432; and The Journal A. M. A., Aug. 4, 1906.

[6] Physiological Optics, p 293.

> The best method of studying this question (ocular rotations) would probably be to bring the look quickly from one point to another, leaving the eye exposed to a pretty intense light. The after images of the luminous source then assume the form of a line which permits some conclusions as to the nature of the movement.

Why Tschering did not illustrate this phenomenon in his classic work on physiologic optics I do not know. Following out his suggestion and my own previous experiments, it seems to me that when the look passes in an oblique direction, as up and out, the line of after images is not a straight line from point to point, but forms a slight curve with its concavity downward. When the look is directed from the first position to a point upward and to the right the line of after images is curved downward and to the left (Fig. 3). Each minute after image shows the several positions at which the eye must have made an exceedingly momentary stop. This impression of the after images was fully confirmed at the same time by Dr. E. M. Alger at the New York Postgraduate Hospital.

Now, this seems to show that the look does not always seek the shortest route when passing from point to point nor will it follow a line. It has been proved that if we draw a long curved line, and as the look follows it photograph a spot of light on the cornea, it will be found that the look does not follow the line according to its curvature, but jumps from point to point in an irregular manner until the image of the complete line has been impressed on the retina. It may be noted, therefore, that, except in a perfectly vertical and horizontal direction, when the eye movements are controlled by two or more of the straight muscles, all the lines of direction are exceedingly irregular.

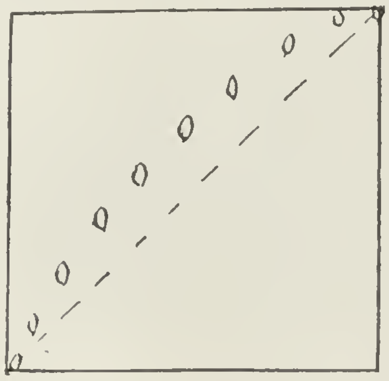

Fig. 3.—The eyes going up and to the right along the line of the diagonal of the square, the after images present the curves shown—down and to the left.

These irregular movements, it seems to me, are fully and completely accounted for by the action of the straight muscles only, the function of the obliques being simply to hold or to control the vertical meridians and by this function always to keep these vertical meridians parallel to each other during these movements. In other words, I can not consent to the proposition that the obliques are endowed with two distinct functions, that of moving the eyes in the field of version and that of keeping the vertical meridians in their correct position. They have only one nerve supply and, as Flint says, "We can not, as a rule, cause only a portion of a single muscle to contract." How, then, can a muscle have two distinct functions?

As a possible exception to the above I may mention the action of the internal recti. The action of adduction of convergence being normal, there may be an evident paresis. But this action, while unique, may readily be understood from the fact that we do have two distinct central nuclei controlling the action of this muscle, namely, that of adduction and that of convergence. Tschering[7] says "the muscles make possible the rotation of the globe around any axis. . . . It seems, indeed, that all six muscles are concerned each time the eye makes any motion." Very true, but, as Price has shown, the straight muscles can "make possible the rotation of the globe around any axis" and the only physiologic action of the obliques is to correct any tendency to tipping of the vertical meridians as the globe turns about any possible axis by the action of any one, two or three of the straight muscles of the eye.

It does not seem to me that these propositions can, in any way, be antagonistic to the well-known law of Listing, which says: "The eye may be brought from the primary position to any secondary position by a rotation around an axis perpendicular to the two successive directions of the visual line" (Tschering[8]). Hence a careful inspection of B (Fig. 2) will show that the obliques are not essential to any necessary rotation nor can I conceive of any possible axis around which the eye can not turn by the action of the straight muscles alone.

Now, what is the normal rotation of the eyeball with reference to the movements of the visual line in the various parts of the field of version? The examination of this field should be principally objective and must be scientifically and accurately measured, not by the usual method of having the eye follow the finger or other object, as all these methods, while useful, are not strictly accurate. For this purpose I know of no instrument so useful, accurate and scientific as the tropometer of Stevens, with which we find the direct inward rotation to be 55 degrees, the outward 50 degrees, the upward 33 degrees and the downward 50 degrees. I think that we may accept this as the standard of normal rotation and any material change in these figures in our examinations must indicate some condition of heterophoria or a paresis.

In this connection it should be fully understood that in certain cases of muscular anemia these figures may be much reduced, but always show a relative change; that is to say, a little more inward rotation than outward and somewhat more downward rotation than upward without any pathologic condition whatever.

For the objective examination of the power or equilibrium of the obliques, both in normal and in pathologic conditions, I think the clinoscope is best. It will demonstrate any tendency to declination of the vertical meridian from the normal, but I have not found these measurements of practical value in my clinical work, though they are so strongly advocated by Stevens.

Paralysis, according to the definition previously given, may be left out of this question, as it is evident that a complete paralysis of any of the ocular muscles is quickly and objectively shown in all cases. I wish to refer to the common use of this term, however, as frequently given in text-books, in which the writers refer to paralysis of a muscle when there may be only a paresis or a deficiency of rotation in certain extreme parts of the field of rotation. Furthermore, for the purpose of correct clinical diagnosis, I would draw a clear and distinct line between the terms paresis and heterophoria. Paresis is an incomplete paralysis, in which there is some pathologic condition as its primary and essential cause. This cause may exist at any point throughout the course of the nerve supply from the cerebral center to the peripheral ends of the nerve which controls the action of the muscular structure. On the other hand, in heterophoria, as I understand it, there is an abnormal functional condition of a muscle, not due to any pathologic condition of the muscle, but to an abnormal development or an abnormal insertion of the muscle into the sclera.

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[7] Physiological Optics, p. 289.

[8] Physiological Optics, p. 200.

Now we may not study a paresis of an ocular muscle simply from a clinical standpoint in reference to any deviation from the primary position? We must then consider the various phenomena that may be presented in our patients, with a full realization that we are examining the functions of a human eye and not the possible rotation that may be shown by a rubber ball with a knitting needle axis.

Consider the eyeball as a distinct human organ, controlled by a psychologic process not fully understood, delicately poised against its cushion of fat and tissues so that the slightest disturbance of any portion of its muscular apparatus will disturb the entire economy of the organ. Consider, further, these photographs of the ocular movements when the eye follows a curved line and these after images when the eye moves its visual line in space and then we shall make our differential diagnosis of paresis and of heterophoria much more exact and complete, though we may come in opposition with Listing's law and the schemes of our text-books.

The diagnosis of paresis of the different muscles of the eyeball, according to the various methods and schemes as laid down for our study in writings and text-books, is complicated and difficult to understand. I do not think that mnemonics will help us much, as, to my mind, they seem to be arguments made and elaborated from a mechanical device and not from clinical conditions.

I feel assured from my past limited experience that in the early stages of all cases of paresis there must be a decided diplopia if the eyes are fixed in the first position; that is, when the look is in infinity. I know that this assertion has been previously advanced by other writers, notably Linnell, and I would insist on its being the first and most important point in the diagnosis of the slightest paresis of any ocular muscle. We must concede this point, as, I think, it must be the crucial test between that of a pathologic condition and that of an abnormal anatomic condition; in other words, the differential diagnosis between paresis and heterophoria. I would say, too, that when the eyes are in the primary position, with full acuity of vision, there must be paresis if diplopia is proved, while in certain abnormal conditions, as in heterophoria, diplopia is present or may be produced by certain procedures that reduce the visual acuity, but that this diplopia does not in any way indicate paresis. I would illustrate this by the diplopia in cases of heterophoria shown by the use of the red glass or even by the Maddox rod.

Certain other phenomena have a prominent place in the text-books in reference to paresis. I refer to the crossing of the images and to the tipping of one of the images in certain pareses when diplopia is present in certain parts of the field of vision. I may well ask if these phenomena, when present in a case of paresis, are worth our serious consideration. The latest testimony on this subject says that the tipping in many cases may be due to a primary declination of the vertical meridian. Consequently "the failure of uniformity (in this symptom) may militate against the correctness of the diagnosis," and "unfortunately . . . these conditions (also crossed diplopia) are not always uniform from the fact that homonymous diplopia is sometimes found with paresis of the inferior rectus and crossed diplopia with paresis of the superior oblique."[9] Fuchs states that "all paretic conditions may be complicated by heterophoria." This complication makes all schemes for the diagnosis uncertain. Swanzy, in reference to the diagnosis of paresis of the superior oblique and the inferior rectus, says: "It is only necessary to remember that in one case the images are crossed, but that the tipping of the images is the same."

In a case of paresis of the inferior rectus recently examined I found no tipping of the image of the paretic eye, yet in a case of paresis of the superior oblique I found very decided tipping. This patient was seen at my clinic at the New York Post Graduate Hospital, and at the examination the images of the candle were slightly crossed with decided tipping of the image of the paretic eye. This was shown with the upper end of the candle leaning inward toward the median line, which, according to the laws of projection, shows a rotation of the upper part of the vertical meridian outward. The superior oblique is the only muscle that controls this function and the diagnosis was confirmed.

I shall not dwell on the diagnosis of paresis of the internus, nor that of the externus, as in a paretic affection of these muscles the diagnosis is comparatively easy by the usual subjective and objective tests. This is particularly so when the tropometer is used to confirm the subjective symptoms. I would state, however, that I have never noticed the tipping of one of the images so frequently referred to in the text-books.

We have remaining the elevators and depressors of the eye or the superior and the inferior recti, and the diagnosis of paresis of these muscles, according to the formulas or schemes usually given, is difficult and it is hard to determine just which muscle is affected. Yet to me it does not seem that it should be so nor that the diagnosis should be so complicated if we leave out of the question the tipping and the crossing of the images.

Take, for instance, the diagnosis of a paresis of the inferior rectus from a study of the schemes of the text-books in paresis of this muscle and that of the superior oblique. Starting from the first or primary position, we have diplopia in both conditions, but in the case of a paresis of the oblique there is also a decided tipping of the image. In paresis of the inferior rectus, Mauthner and others state that we also have tipping of the image toward the temple; but does it tip in paresis of the inferior? Only lately I examined a case of paresis of the inferior rectus, and at no position, near the region of the primary position, was there any tipping of the image of the paretic eye. I know that one case does not prove a condition, but if we do have this tipping of the image must we not eliminate any cyclophoria as a complication? My experience has shown that the examination of the field of version with the tropometer will at once locate the paretic muscle.

Granting the above, it seems to me that we can consider a paresis of the obliques in a few words. It is almost universally conceded that the essential action of the obliques is to keep the vertical meridian of each eye parallel to the median plane of the body, or, in other words, one vertical meridian parallel to the other. Consequently the slightest pathologic condition, at any part of their nerve supply, must result in a loss of this verticality of one of the meridians with consequent tipping of one of the images. Now this may be associated with some slight horizontal diplopia due to the disturbance of the entire ocular apparatus from the impairment of so important a function by the paresis. Whether the diplopia is homonymous or heteronymous makes little difference, as I think that this will depend simply on some pre-existing heterophoria and consequently is not essential to a correct diagnosis.

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[9] Text-book of Ophthalmology, p. 462.

The nerve supply of the superior oblique comes from the fourth nerve or patheticus, while that of the inferior oblique comes from a branch of the third nerve or motor oculi. Hence we can readily appreciate that a paresis of the superior oblique will be much more frequent than that of the inferior oblique and clinical statistics prove this. In my experience, considering this contention as to the diagnosis. I doubt some of the reports of a paresis of the inferior oblique. I have never seen such a case; why, I do not know, as even in paresis of all the other branches of the third nerve I have not noticed any special tipping of the image of a candle.

Considering the unique action of the obliques, and apart from any action they may have in moving the visual line in the field of version, the diagnosis of a paresis becomes comparatively easy. In such a case as paresis of the superior oblique, even if it be complicated with positive declination (Stevens) there may possibly be a slight vertical or crossed diplopia. But there is a very decided tipping of the image of the candle when this is used as a test of the diplopia; one image will appear vertical and the other leaning or tipped toward the median line of the head. We then rapidly decide to which eye the candle that leans belongs and we have only to remember the laws of projection for the indications of the muscle affected.

Suppose there is a paresis of the right superior oblique, then the vertical meridian of that eye must lean outward from the action of the inferior oblique, and as the rays from the upper end of the candle will fall on the lower and outer part of the retinal field they will be projected upward and inward so that, to the patient, it will appear to lean to the left. This is a subjective test, but it can be fully and objectively verified by the examination of the declination of the vertical meridian with the clinoscope of Stevens. All this will apply to a paresis of the inferior oblique, but this condition is too infrequent to require a detailed description. Linnell says: "If the left eye sees the leaning candle and the inclination is toward the right, the affected muscle is the superior oblique of that eye. If it leans toward the left the affected muscle is the inferior oblique of that eye."

If we accept the foregoing method of diagnosis we may leave out of consideration the action of the obliques in paresis of the straight muscles, except so far as that the paresis of any eye muscle may disturb the harmonious action of all the muscles.

SUMMARY.

All tests for paresis must be made with the look in complete infinity and with full acuity of vision.

We must have a standard of the field of version for comparison of any deficiency of rotation.

The straight muscles are capable of moving the eyes in any part of the field of vision and from one part of the field to another; in other words, in no part of the field will the straight muscles fail to act according to their usual function.

The obliques take no part or action in the rotation of the eyes in the field of version; in other words, the oblique muscles do not elevate or depress the visual line.

A distinct line must be drawn between paresis and heterophoria as shown by the diplopia; in the first by diplopia in infinity and in the second by the possible diplopia with reduced vision.

In the consideration and diagnosis of paresis we may exclude the condition of crossed or homonymous images and also the tipping, except in a pathologic condition of the obliques.

The individual muscles of the eyes are not endowed with two distinct functions, as they have but one nerve supply, except possibly in the action of convergence and inward rotation due to two distinct nerve centers.

The points of action of the straight muscles of the eyes are the insertions and the sheaths of the tendons as they are situated in the orbit just behind the globe.

CONCLUSIONS.

I feel that these conclusions are correct and offer them as my personal experience in the field of ocular rotations and paresis, because in this manner they have impressed me during my clinical work. As they are so much at variance with the usual teachings of the text-books and of the writers on ocular paresis, I trust that they will meet with an open discussion. If I have written a word that will make the subject more clear I shall feel that this paper and work have not been in vain.

I close this paper with these words of Gasser: "In the physical architecture of the eye alone is written large that Nature is an idea; a constructive, creative development; an evolution of which we are a related part."

DISCUSSION.

DR. ALEX. DUANE, New York City, said that while the sheaths of the muscles are connected with the orbit by delicate septa, and anteriorly by various fibrous bands (check ligaments), this fibrous apparatus is not so arranged as to form an unyielding plane close behind the eye, such as there would have to be for the muscle to remain rigid in its posterior portion and be reflected in its anterior portion, in such a way as Dr. Valk depicts in his Figure 2B. What, he asked, are the actual functions of the muscles, as determined by the sure test of clinical experience? If the superior oblique is not a depressor, how does it happen that a traumatic paralysis, which, it is absolutely certain, is limited to this muscle, causes a marked vertical diplopia indicating that the affected eye is too high? And if the inferior oblique is not an elevator, how does it happen that a tenotomy of this muscle causes the eye to drop, as shown by the marked and characteristic diminution produced thereby in a vertical diplopia already present? A farther and convincing proof that the inferior oblique is an elevator can be had, if the tendon of origin is picked up and traction made on it before it is divided. Such traction causes the eye to roll decidedly up and moderately out.

Again, he asked, if, as Dr. Valk's theory demands, the superior rectus acts as an elevator equally whether the eye is directed in or is directed out, how does it happen that when a tenotomy or similar cause produces a paralysis surely limited to the right superior rectus, the limitation of movement and the vertical diplopia are mainly confined to and increase very greatly in the right upper quadrant of the field of vision and are comparatively slight and ultimately *nil* in the left upper quadrant? This is a fact which can be verified, and surely indicates that the superior rectus lifts the eye but little when the latter is directed inward. And if this muscle does not act to lift the right eye when directed inward, what muscle can lift it except the inferior oblique? The same query holds for the inferior rectus, paralysis of which causes a diplopia which is marked in the outer lower quadrant and is almost *nil* in the inner and lower quadrant. In this latter part of the field the eye can still move freely down, although the inferior rectus is paralyzed. How can it do so, unless there is another depressor besides the inferior rectus? Dr. Valk, he said, further argued that the superior and inferior recti have no torsion action, this being the exclusive property of the obliques. But Dr. Duane has repeatedly seen a pathologic torsion of at least 10° develop as the immediate result of an isolated traumatic paralysis of the superior rectus, and in one case, at least, this was one of the most disturbing effects of a complete tenotomy of the muscle. If the muscle has no torting action, how can paralysis of it produce torsion?

Dr. G. C. Savage, Nashville, Tenn., finds the diagnosis of paralysis and paresis of the ocular muscles exceedingly easy. It can be made in the shortest kind of time and with the greatest certainty. There must be double vision in some part of the field, when there is a paralyzed or paretic muscle. This doubling always takes place in the direction of the action of the diseased muscle. All one needs in making a diagnosis is a candle and a horizontal line. The candle alone is necessary in the paralysis or paresis of a lateral muscle. Both a candle and the line should be used in diagnosing a paresis of the elevator or depressor muscles of the eye. If the candle doubles in the right field horizontally, the doubling becoming more and more as the candle is moved towards the right, one knows that the diseased muscle is on that side of its eye, corresponding to the direction of doubling; that is, it is either a right externus or a left externus. The eye that sees the candle furthest removed from the median plane is the eye to which the diseased muscle belongs. If the right eye sees the candle furthest removed, it is the right externus. If the left eye is the one that sees the furthest removed candle, the diseased muscle is the left internus. If there is no lateral diplopia, then no lateral muscle is involved. If the doubling exists only beneath the horizontal plane, the affected muscle is a depressor, the eye seeing the lower candle is the one to which the diseased muscle belongs. If this be the right eye, then it is either the right inferior rectus or right superior oblique. To determine easily which of these two muscles is the one involved, the candle may be put aside and the patient asked to look at a horizontal line on the blackboard. With the head depressed, he will see only one line. With the head elevated, he will see two lines, the lower one being false. The false line, belonging to the right eye, will lean in one direction or another, and this leaning determines which of the two muscles is involved. If it leans towards the right, it is the inferior rectus, if it leans towards the left, it is the superior oblique that is paralyzed or paretic.

Dr. Wendell Reber, Philadelphia, called attention to the value of the maddox rod in the estimation of paresis, especially as to torsion. It is a very easy matter, he said, to have the rods marked off with a little white ink, and estimate the torsion in all cases of paresis, particularly of the superior or inferior rectus or of the obliques.

Dr. Francis Valk, New York City, stated that he had tried to make the subject of his paper practical so that it could be understood. He has been in doubt over and over again in these cases, and that is what prompted him to bring this matter up for discussion. It seems to him that traumatism of, say the superior oblique, would so change the motility of the eye that that might give many symptoms. As to paralysis by complete tenotomy, Dr. Valk has seen complete tenotomies performed, and the motility remained just the same over and over again, so that he does not think that is a point in diagnosis. As to Dr. Savage's remarks, he said that it must be remembered that in all cases there may be cyclophoria complicating the paresis, then the tilting of the image amounts to nothing. Dr. Valk still holds to the opinion that the inferior oblique is not an elevator of the eye.

Sources of Tuberculosis.—It is the overcrowded dwellings of the poor that we have to regard as the real breeding-places of tuberculosis; it is out of them that the disease always crops up anew, and it is to the abolition of those conditions that we must first and foremost direct our attention if we wish to attack the evil at its root and wage war against it with effective weapons.—Dr. Robert Koch.

THE TREATMENT OF INTERSTITIAL KERATITIS.*

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I have not attempted an academic paper on the treatment of interstitial keratitis, but have rather endeavored to give a paper based on clinical observations; and in order to get the conclusions and opinions of others, the following questions were addressed to thirty representative ophthalmologists in as many different sections of the country:

1. *What local measures other than those for the alleviation of symptoms have you used in the treatment of interstitial keratitis?*
2. *To what extent have any of them contributed to the shortening of the inflammatory stage?*
3. *Do you administer iodids during the inflammatory stage? In your opinion do iodids, given during the inflammatory stage, aid or retard recovery?*
4. *What, in your opinion, is the best method of administering mercury?*
5. *What is the average duration of the inflammatory stage in your practice?*

The answers to questions one and two were surprisingly uniform. Subconjunctival injections, cold water dropping, massage, ointment of yellow oxid of mercury, electricity, dionin and many others received honorable mention, but doubtful recommendation; and not in one single instance was there a clear convincing statement that any of them had contributed to the shortening of the inflammatory or progressive stage of the disease, showing conclusively that I am not alone in the opinion that local measures (except those for the alleviation of symptoms and complications) are of no value during the stage of infiltration and vascularization.

The answers to the third question with few exceptions coincided also with my opinion that iodids internally are useless, if not positively harmful during this stage.

A large majority of the answers to the fourth question indicated preference for inunction in the administration of mercury.

The answers to the fifth question could be divided into two classes: Those from men who assume that congenital syphilis is the sole cause of interstitial keratitis and treat it accordingly, and those from men who assume that there are other causes for this disease and who do not rely on antisyphilitic treatment alone. It is a significant fact that the former, as a rule, gave the average duration of the inflammatory stage in weeks, while the latter gave it in months; therefore, the majority, I think, will agree with me in the assertion that the treatment of interstitial keratitis resolves itself into the treatment of congenital syphilis, with appropriate measures for the relief of its most prominent local symptoms, the combating of complications arising from involvement of the uveal tract and for the more rapid and complete clearing up of the corneal opacities. The treatment of congenital syphilis as well as of the acquired variety consists mainly in the judicious administration of mercury with the most careful attention to diet and hygiene, and I contend that the most stubborn and persistent cases will yield to scientific endeavor in that line. Unfortunately, however, a great many of us have fallen into the habit of empirical application of routine methods in the treatment of syphilis instead of making a careful study of each case and meeting all its indications. Hence, one may read in almost any textbook on this subject something like the following confessions of failure:

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*Read in the Section on Ophthalmology of the American Medical Association at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

"Mercurial treatment, which is of such marked service in acquired syphillis, is here ordinarily less efficient;" and "Many cases of interstitial keratitis, even under the most careful treatment, run a course which is not essentially different from what would have been the case without any treatment at all."

Both of these conclusions are erroneous and are the result of empiric methods in the treatment of this disease. For instance, a great many men give large doses of iodids along with mercury without any fixed idea or purpose, simply as a routine practice. This, in my opinion, is entirely wrong. Careful observations have forced me to the conclusion that iodids have no place in the treatment of interstitial keratitis during the stage of infiltration and vascularization, mercury alone being the essential drug, and it must be given with the utmost discrimination, each case being a law unto itself. The toleration for mercury must be carefully estimated from time to time, for it varies in a given individual as well as in different ones. It must always be pushed to the limit of toleration until the infiltration and vascularization have been definitely arrested.

I am convinced that it is the condition of mercurial saturation in a patient that combats syphilis rather than the drug itself, and if one would have results, that condition must be maintained with the utmost nicety, varying the amount administered from day to day if necessary. Mercury as a specific, like other antitoxins, should have no fixed dose. Of the many methods that have been devised for administering it, inunction of a carefully prepared blue ointment is, all things considered, the most satisfactory and the most effective. It can be obtained at drug stores in gelatin capsules containing a definite amount of the drug; the capsules keep it fresh and soft under all conditions. Administration by mouth is the least satisfactory method of all, as it interferes materially with the digestion and assimilation of food, irritates the alimentary tract and in many instances is not absorbed at all. Hypodermic administration of mercury, while effective, is impracticable unless the physician attends to it personally, and it is extremely painful and terrifying to a child.

In my practice the inunctions are given on alternate nights after a hot soap and water bath and are not confined to any one part of the body; on the contrary, the ointment is distributed over a large area with gentle rubbing occupying not longer than fifteen minutes. A suit of union underwear is then put on and worn continuously until the time for the next inunction, when a hot soap and water bath is again given; the process is repeated on alternate nights, increasing or decreasing the amount administered as the symptoms of mercurial saturation indicate, endeavoring at all times to keep the patient just on the verge of absolute ptyalism. In children under ten years of age the initial dose is 10 grains, increased to 15 or even 20. In children over ten years of age and in adults the initial dose is from 10 to 30 grains, increasing to 60 in adults and from 20 to 30 in children. This is continued without intermission until the progressive stage has been permanently arrested (a fact easily determined by the abatement of the characteristic symptoms); then an intermission of from ten to fifteen days is ordered. Up to this time no iodids are given under any conditions. When the administration of mercury is resumed it is commenced again with the initial dose and increased to one-half of the maximum given during the inflammatory stage. If by this time there are no signs of renewed infiltration and vascularization the iodid of iron is given in liberal doses, together with the continued administration of mercury.

From the beginning the patient should be in a hospital, but should not under any conditions be confined to a dark room or even to the house; on the contrary, should be allowed full out-door liberty, with suitable protection from light. The diet should be principally milk and eggs; cod liver oil is useful but not essential; and if the patient is much run down stimulants are ordered in the form of a milk punch three or four times a day. The patient should be frequently weighed, and an occasional blood count will give valuable information. The tincture of the chlorid of iron is often given during the active treatment and seems of great benefit when indicated. In my experience patients under this régime gain rapidly in weight, health and strength, the vascularization and infiltration of the cornea are limited, and if the case is seen early the inflammatory stage rarely extends over four or five weeks.

For the relief of the local conditions all the methods that are applicable to other inflammations of the cornea and uvea are beneficial in these cases. Hot applications are always grateful and are well borne. Leeching will often relieve the most aggravated cases, but never so promptly as in acute inflammations; leeching also aids in securing dilatation of the pupil, which in itself relieves pain. Of the mydriatics I prefer atropin, but in these cases it must be used in stronger solution than in ordinary acute conditions, as the iris is usually very rebellious, and with the best endeavors the physician will not be able to maintain a complete relaxation of the iris and ciliary body during the active stage of the disease.

To facilitate resolution and clearing up of the inflammatory deposit, ointment of yellow oxid of mercury, calomel dusted into the conjunctival sac and subconjunctival injection of normal salt are useful, but rarely necessary, the clearing up process usually progressing very satisfactorily under the constitutional treatment.

After recovery the patient should be kept under observation for about six months at home and should take moderate doses of mercury by the month with intermissions and liberal doses of iodid of iron, together with good nourishing diet and full out-door liberties.

DISCUSSION.

Dr. Hiram Woods, Baltimore, said that the treatment of interstitial keratitis presents five definite factors: 1. Alleviation of symptoms. 2. Prevention of extension to deeper tissues. 3. Promotion of absorption of exudate. 4. Constitutional treatment of underlying cause. 5. Prevention of relapse. Bandages must be excluded on account of the catarrhal conjunctivitis apt to follow their use. Cocain gives only temporary relief from the photophobia and may be harmful. Holocain is a little better, for it is free from this danger, but its analgesic properties are no more reliable or permanent. Canthotomy or canthoplasty sometimes affords relief when blepharospasm is marked. An old and almost discarded remedy is a seton, placed in the skin of the temple just above the hair margin. In a case of distressing photophobia, the patient obtained definite relief after everything else had failed. Atropin seems to be the one reliable agent in alleviating symptoms; its benefit coming probably from abolition of pupillary action, and reduction of iridic hyperemia. From heat or cold he has never had the least help save during the time of application, and this, he believes, is more due to exclusion of light than to either agent.

Leber expressed the opinion that interstitial keratitis is itself secondary to uveitis. Dr. Woods has been able to study a few cases during the initial stage of circumcorneal injection and slight haziness, and he never saw anything to substantiate Leber's view. The chorioidal exudate must be looked for carefully, and he has often seen it in a position corresponding to the site of the episcleral thickening. So far as his observation goes, involvement of the uvea, especially in young children, is secondary to iridic hyperemia, following, sometimes very rapidly, the circumcorneal injection of keratitis. If this be the pathologic order, early and energetic use of atropin is indicated. Sometimes, in spite of its use, the pupil shuts down, and synechiæ form. Absorption of corneal exudate depends largely on constitutional treatment. Yellow oxid ointment often increases discomfort by setting up conjunctival irritation. Whether it hastens vascularity, is questionable. Dr. Woods thinks that it has such a tendency sometimes. Dionin has never yielded him results. The point of resistance is soon reached, though this may be postponed if, as suggested, a 2 per cent. solution be used, and discontinued for two or three days, while still effective. He has thought in a few cases that absorption was promoted by subconjunctival injections of normal salt solution.

Dr. Woods' opinion regarding local remedies is that atropin is the only one of use as a routine procedure; that yellow oxid ointment and subconjunctival injections of salt solution are occasionally useful, and are worth trying. He has had no experience with electricity. After all, interstitial keratitis is but a symptom, and to dismiss the patient as cured, when the symptom disappears, is unscientific. It is his custom to see that the child is put in the hands of the family physician before he passes from his own, to correct refraction errors carefully, and to retain, so far as possible, supervision of school work.

DR. W. H. ROBERTS, Pasadena, Cal., said that congenital syphilis is by far the most common cause of this disease. It is generally admitted that mercurials are of less value in the treatment of hereditary syphilis than in the acquired form. Not infrequently a cachexia exists in patients suffering from interstitial keratitis, which makes it inadvisable to push mercury, and in whom the iodids act like a charm. Dr. Roberts uses the iodids from the beginning, frequently combining mercury with them in the form of gray powder or the protoiodid. He doubts very much if constitutional treatment has any material effect on the disease. If it does, why will the second eye so frequently go through all the stages of the inflammation after that in the first has begun to subside, and the patient is thoroughly under the influence of mercury, or the iodids, or both?

DR. HERBERT HARLAN, Baltimore, called attention to a case he reported several years ago. A child, 10 or 12 years old, who was in the worst stage of interstitial keratitis, happened to have an attack of measles and in a few days was cured. Dr. Harlan has known of four other cases in which an attack of measles had cut short the interstitial keratitis. He has since tried to expose such patients to measles, but in almost every case found that the child had already had the disease. He has tried jequirity in a number of cases and has obtained benefit from it. He makes an infusion and uses it until he gets the characteristic jequirity membrane on the conjunctiva.

DR. A. A. HUBBELL, Buffalo, approves of the local treatment mentioned by Dr. Woods. The local application of hot water he believes to be very efficacious in this disease. He makes an application of moist heat for from one-half to one hour at a time, three or four times a day. If he had to choose between the constitutional treatment and the use of moist heat and atropin, locally, he would choose the latter.

DR. E. J. BERNSTEIN, Kalamazoo, Mich., uses dionin together with subconjunctival injection of salt solution as a routine treatment in all inflammatory diseases of the anterior part of the eye. He has not had any cases of inordinate pain, and he has used subconjunctival injections for ten years.

DR. R. S. LAMB, Washington, D. C., reported excellent results from the use of dionin in powdered form. He also uses subconjunctival injections, and there is no pain from them, but there is pain with dionin. In the early stage he prefers dionin.

DR. H. H. MARTIN, Savannah, Ga., said that he has never seen a case in which there was anything to lead him to believe that tuberculosis was the cause, but he is open to conviction on that point. He thinks that interstitial keratitis is a constitutional disease and should be so treated.

DISTURBANCE OF NITROGENOUS METABOLISM IN EPILEPSY.

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The absence of any constant anatomic lesion in idiopathic epilepsy has given rise to the toxic theory of epilepsy. According to this theory, the seizures and other manifestations of this disease are due to the formation and periodic accumulation of poisonous products of metabolism.

This theory gains plausibility from the well-known fact that there are many substances which, if introduced into the circulation of an animal either by ingestion through the alimentary tract or by hypodermic injection, can cause epileptiform seizures, and that some of these substances are analogous or even identical in composition with some of the products which are constantly formed in the animal organism in the course of normal metabolic changes.

Further corroboration of this theory is found in the fact that disorders of the excretory organs, especially of the kidneys, such as bring about a retention of excretory substances, frequently give rise to epileptiform convulsions. Finally, normal urine has been found to produce convulsions, if injected into the circulation of an animal in sufficiently large quantities. In other words, the facts on which is based the toxic theory of epilepsy are, first, that the nervous system reacts by convulsions to various poisonous substances, and second, that such substances are produced in large quantities in the animal organism.

This led to special investigations of the urine and blood of epileptics. Voisin and Péron[1] made the interesting observation that the urine of epileptics voided immediately prior to a seizure or a series of seizures is hypotoxic as compared with normal urine, while that voided immediately after a seizure or series of seizures is hypertoxic.

Still more significant are the investigations of Krainsky.[2] This observer injected into the subcutaneous tissues of a rabbit 2 c.c. of defibrinated blood obtained from a patient in status epilepticus; about three minutes after the injection the animal had a severe epileptiform seizure followed by paralysis of the posterior extremities; ten other such seizures occurred during the first four days, at the end of which time the animal died. A similar result was obtained in another experiment in which only 1 c.c. of defibrinated blood was injected. Control experiments showed that blood obtained from epileptics in the interparoxysmal periods had no such toxic effect on rabbits.

Krainsky then made chemical analyses of blood obtained from epileptics during major seizures and found it to contain from 5.6 mg. to 8.5 mg. of ammonia per 100 c.c., whereas normal blood contains only about 1.3 mg. of ammonia per 100 c.c.

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[1] Arch. de Neurol., vol. xxiv, p. 178.
[2] Neurol. Centralbl., 1897, p. 697.

These findings led him to formulate the theory that the phenomena of epilepsy are due to a disorder of nitrogenous metabolism. He points out the well-established fact in physiology that in the process of conversion of proteid material into urea, ammonium salts, particularly the carbamate of ammonium, are formed as intermediate products; the final conversion of ammonium salts into urea occurs largely in the liver, and the experiments of Hahn, Massen, Nencki and Pawlow show that if the liver is thrown out of action by the establishment of an Eck's fistula, ammonium salts rapidly accumulate in the blood and give rise to convulsions, ataxia, somnolence and coma. Krainsky's hypothesis advanced in explanation of the phenomena of epilepsy may be stated as follows: For some reason, in the organisms of epileptics, the conversion of ammonium salts, which are formed in the course of metabolic changes, into urea is incomplete; there is a periodic accumulation of these salts in the blood, giving rise to seizures during which the conversion into urea is completed. Further, it has been shown by dietetic experiments that epileptics have a marked intolerance to any excess in the proportion of nitrogenous material in their food, such excess invariably giving rise to an increase in the frequency and in the severity of the seizures.[3]

The interesting findings of Krainsky have led me to undertake to determine whether in epilepsy the excretion of ammonium salts in the urine varies in any way from that observed in health, and if so, whether the variations bear any relation to the seizures. The object of my investigation has been not to estimate the total quantity of ammonia excreted by epileptics in twenty-four hours, but to determine how the rate of excretion of this substance varies immediately preceding and immediately following seizures.

This problem presented some difficulties, the first of which was to obtain the specimens at the proper time. Seven cases of idiopathic epilepsy were selected for the investigation. To obtain the specimens before seizures the nurse was instructed to allow the patients to void their urine regularly every two hours; all the specimens thus obtained were saved separately in a refrigerator and further protected against putrefaction by the addition of some crystals of thymol; when a seizure occurred all the specimens were thrown out, with the exception of one or two specimens which were obtained last preceding the seizure, and these were analyzed.

To obtain the specimens after seizures the nurse was instructed to allow the patients to empty the bladder as soon as possible after the seizure; this urine was in each case thrown out, as it consisted, obviously, not only of urine excreted by the kidneys after the occurrence of the seizure, but also of a variable amount of urine excreted by the kidneys and collected in the bladder prior to the seizure, namely, during the interval which elapsed from the time the last specimen was voided until the time the seizure occurred. It is quite evident that the analysis of such a mixture of urines excreted before and after the seizure would be to no purpose. But after the bladder had been thus emptied immediately after the seizure the specimen obtained from one-half to two hours later was saved and analyzed.

It seems to me that in any investigation of the relation of the excretion of any substances in the urine to the seizures the specimens for analysis should be obtained in the manner just described to avoid the fallacy of analyzing a mixture of urines excreted before and after seizures together with urine excreted during an interval between seizures.

Another difficulty which was encountered in the investigation was in the fact that the specimens which were obtained varied enormously, as one would, indeed, expect, in amount as well as in concentration. It was necessary to obtain figures which could serve for a comparison with a more or less constant normal standard.

As is well known, the quantity of nitrogenous material excreted in the urine varies greatly as a result of variations in diet, and to some extent also as a result of variations in the amount of exercise; it also presents diurnal variations which are independent of either diet or exercise; but the ratio between the amount of nitrogen excreted in the form of ammonia and the amount of total nitrogen in the urine varies but slightly in different individuals, and still less in the same individual at different times.

In a series of very carefully conducted analyses of urines from seven normal individuals, published by Folin,[4] comprising the analyses of thirty-six different specimens of urine, the amount of nitrogen excreted in the form of ammonia was found to be from 2.7 to 5.7 per cent. of the total nitrogen—a maximum variation of 3 per cent. in seven different individuals. The maximum variation in any one individual, however, was from 3.0 to 4.3 per cent., that is to say, only 1.3 per cent.; the average variation in the seven cases was still less, namely, 0.98 per cent. The figures of Folin are in agreement with those of other investigators and may be accepted as representing the normal standard.

My method of procedure was, therefore, as follows: Specimens of urine were obtained from seven selected cases of idiopathic epilepsy in the manner already described; in each specimen the amount of total nitrogen per 1,000 c.c. was estimated, also the amount of nitrogen in the form of ammonia; the ratio of nitrogen in the form of ammonia to the total nitrogen was calculated for each specimen and compared with that of other specimens as well as with the normal standard.

There is but little to be said with regard to the chemical technic. The total nitrogen was estimated in each case by Kjeldahl's method. For the estimation of ammonia a slight modification of the method of Folin was employed. In this method the ammonia is expelled from a measured quantity of the urine to be examined, previously alkalinized, by means of a current of air produced by an ordinary water pump, and conducted through a tube into a measured quantity of a volumetric acid solution, which is then titrated. In the description of his method Folin directs that a strong current of air be passed for an hour and a half through the alkalinized urine. To test the accuracy of this method I subjected two portions of a solution of ammonium sulphate in water to analysis—one portion by the method of Folin and the other by ordinary distillation. I found that, under the conditions of temperature, water pressure, etc., existing at our laboratory, all the ammonia was not expelled from the solution by Folin's method in an hour and a half, but that it required from four to five hours. In all cases, therefore, I allowed the air current to pass through the urine for six hours.

These figures show, in the first place, that the ratio of the quantity of nitrogen in the form of ammonia to that of total nitrogen is apt to vary in epileptics much more than in normal individuals. It will be remembered that the greatest variation in any of the normal individuals whose urines were analyzed by Folin was 1.3 per cent., while the average variation was less than 1 per cent. In our Case 1 the amount of nitrogen in the form of ammonia varied from 3.6 per cent. to 8.3 per cent. of the total nitrogen, a variation of 4.7 per cent. In Case 2 there was a variation of 1.5 per cent. In Case 3 there was a variation of 2.4 per cent. In Case 4 a variation of 1.1 per cent. (only two specimens were examined in this case). In Case 5 (exhaustion following status epilepticus) only one specimen was examined. In Case 6 there was a variation of 2.2 per cent. In Case 7, a variation of 2.9 per cent.

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[3] Merson: The West Riding Lunatic Asylum Medical Report, 1875. Rosanoff: Jour. Nerv. and Mental Dis., December, 1905.

[4] Amer. Jour. of Insan., April, 1904, p. 699.

Date, 1906.	Urine voided.	Total N in gms. per 1000 c. c.	NH$_3$ in gms. per 1000 c. c.	Percentage of NH$_3$.
CASE 1.—H. K.				
September 26	8:45 a. m.	1.836	0.086	4.7
Convulsion at 12:30 p. m. Convulsion at 2:45 p. m. Convulsion at 4:45 p. m.				
September 27	8:45 a. m.	8.061	0.667	8.3
Convulsion at 9:45 a. m. Convulsion at 11:50 p. m.				
September 28	8:50 a. m.	12.850	0.974	7.6
Convulsion at 11:40 p. m.				
September 29				
Convulsion at 3:10 a.m.	8:45 a. m.	1.916	0.137	7.2
September 30	8:50 a. m.	15.085	0.903	6.0
October 1	8:45 a. m.	2.873	0.115	4.0
October 2	8:45 a. m.	7.502	0.268	3.6
October 3	8:40 a. m.	1.836	0.083	4.5
November 3	1:10 p. m.	6.024	0.335	5.6
Convulsion at 1:50 p. m.	2:05 p. m.	9.917	0.605	6.1
	3:30 p. m.	9.228	0.510	5.5
CASE 2.—J. L.				
November 3	11:00 a. m.	7.368	0.295	4.0
	2:00 p. m.	5.974	0.247	4.1
Convulsion at 2:30 p. m.	3:30 p. m.	5.974	0.295	4.9
	4:30 p. m.	7.173	0.247	3.4
CASE 3.—F. G.				
November 1	11:20 a. m.	5.416	0.311	5.7
Convulsion at 1:20 p. m.	1:42 p. m.	6.651	0.430	6.5
	3:40 p. m.	8.256	0.335	4.1
CASE 4.—M. C.				
October 29	6:00 a. m.	7.169	0.398	5.5
Convulsion at 2:00 p. m.	4:10 p. m.	9.160	0.605	6.6
CASE 5.—C. K.				
November 9	8:00 a. m.	4.500	0.358	8.0
Exhaustion following status epilepticus.				
CASE 6.—F. F.				
November 4				
Convulsion at 3:50 a. m.	6:00 a. m.	7.260	0.581	8.0
November 6	5:45 a. m.	5.386	0.311	5.8
CASE 7.—C. S.				
October 29	11:00 a. m.	7.638	0.247	3.2
Convulsion at 11:55 a. m.	2:00 p. m.	4.978	0.199	4.0
October 30	10:00 a. m.	9.658	0.454	4.7
Convulsion at 1:03 p. m.	2:30 p. m.	6.950	0.335	4.8
October 31	5:25 a. m.	8.981	0.406	4.5
Convulsion at 6:45 a. m.	7:40 a. m.	6.273	0.382	6.1

It is further to be observed that these striking fluctuations in the ratio of the amount of nitrogen in the form of ammonia to the amount of total nitrogen bear an absolutely constant relationship to the seizures, namely: immediately preceding a seizure this ratio corresponds to the normal, while immediately following a seizure or a series of seizures this ratio invariably rises, often far above the normal standard. In my investigation I have not met with a single exception to this rule, as the figures in the tables will show.

What conclusion is to be drawn from these observations? I can not at present interpret fully the results obtained in this work. But it can now be considered as fully established that nitrogenous metabolism as it occurs in epileptics presents definite and striking variations from the normal and that these variations occur in constant connection with the seizures.

INTUSSUSCEPTION AND ITS CAUSE.

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If autopsies could be obtained, I am sure that we should find intussusception a frequent cause of death in infants and young children who die, after a few days' illness, with acute intestinal disturbances.

The following case in a 3-year-old boy, seen Aug. 22, 1906, with Dr. Shrimpton, is unusual and throws light on the cause of intussusception:

Patient.—Daniel P., born May 19, 1903; forceps delivery; weight, 7 pounds; two pounds lost during first week.

History.—At about three months abnormal development of the head began, with jutting in the frontal region. This continued with intervals of apparent quiescence, for the first eighteen months of the child's life. A lateral curvature of the spine was evident as soon as he began to sit up, and the pelvis was tilted in such a manner that when the trunk was perpendicular there was a deviation of the lower extremities from the median line, the angle being sufficient to interfere with walking. Five months before my visit he had an attack with vomiting pain, constipation and great thirst. This lasted nearly forty eight hours, but there were no symptoms of shock and the child suddenly recovered.

Present Illness.—I was called to see him Aug. 22, 1906, and learned that he had complained of pain in the stomach for one week, and that on the day previous to my visit he had vomited once and had been given a good dose of castor oil. There was nothing unusual in the character of the vomitus until the morning of my visit, when it had become bloody. All day he had manifested much shock but had made no complaint of pain. An enema was given without result. The bloody vomiting was repeated and the shock continued with great thirst.

Examination.—I saw him at 7 p. m., at which time his temperature was 100 F., pulse ranging from 120 to 135, and respirations 36. The abdomen was soft and not tender or distended, and no mass could be felt; there was no discharge from the anus, and no tenesmus. The vomitus seemed like very fine, thin coffee grounds and evidently contained blood. He was sent to the Good Shepherd Hospital for observation; examination of the blood showed 27,000 whites and examination of the vomitus showed blood. At 11 p. m. he was failing rapidly and was very restless; there was much shock, no pain. Rectal examination gave a feeling above the examining finger as of collapsed intestine, and the usual elastic feeling of distended intestine was lacking.

Diagnosis.—Obstruction high up. On account of the age of the child, intussusception seemed most likely.

Operation—12 p. m. The stomach having been washed out, I made an incision below the umbilicus; I picked up the cecum and found it collapsed, and also found a very small enteric intussusception just above the ileocecal valve, trying to push through the valve, evidently becoming ileocolic (Fig. 1). I remarked that it was very strange that with the obstruction so low down there should be such shock and bloody vomiting, and such a soft and natural abdomen, and that so small an intussusception could cause such pronounced symptoms. I picked up the ileum to illustrate the distended bowel above an obstruction, and found the intestine not distended, but collapsed. I therefore followed up the collapsed bowel and found another enteric intussusception in the jejunum (Fig. 2). About a foot of the intestine was involved and telescoped into a typical sausage-shaped tumor 2½ inches long. Above this place the intestine was distended and filled with bloody fluid, and at the intussusception the mesenteric vessels were dark and the mesenteric glands enlarged. The telescoped intestine was milked back and as the damage to the bowel did not seem very great, it was covered with omentum, and the abdomen closed. The child went home in a few days and gradually regained his usual condition.

Subsequent History.—Five weeks later the boy had an attack of complete obstruction. The symptoms were: Temperature, 98.6 F.; pulse, 120 to 140, vomiting, distension of abdomen and decided colic with coils of bowel showing through upper abdomen. The abdomen was again opened, and at the site of the old trouble the intestine was bent on itself and was adherent to the mesentery. I broke up adhesions, repaired damaged places and closed the wound. Two days later, the distension, which had not passed away, was becoming extreme, colic and vomiting were returning, and the pulse was getting very rapid; I therefore took out the upper stitch and punctured the distended intestine, making a fecal fistula. The child was relieved, and next day had a natural bowel movement; six weeks later the wound had entirely healed. It is interesting to note that with obstruction from the intussusception, there was no distension, but that with an obstruction from an adhesion at the same level, the distension was extreme, so that the coil of distended bowel could easily be seen through the abdominal wall.

From Nov. 6, 1906, to June 7, 1907, the boy improved and grew strong, but never had satisfactory digestion; and, although the fecal fistula saved his life and healed spontaneously, eight months later I was compelled to open the abdomen again and cut a band which connected this part of the intestines with the operation scar, causing another acute obstruction. No adhesions were visible and the intestines seemed normal; the recovery was good and he was soon home again. The improvement, however, lasted only six weeks, for on August 15 he was again seized with pain, bloody vomiting, and the other symptoms of obstruction. He was rushed into the hospital and the abdomen was again opened. The sites of previous repairs were evident and satisfactory—no adhesions or bands were found at any place. The junction of collapsed and distended bowel was found at a point about three feet from the duodeno-jejunal angle, where an intussusception was again beginning to form, presenting a most interesting and instructive condition (Fig. 3). The intestine at this place was paralyzed and bulged; above it was distended, and below it was collapsed to a ribbon one-half inch in diameter. The paralyzed portion was bulged, especially on one side, and was two and one-half inches in diameter for about three and one-half inches in length, and that above was distended to about one and one-half inches in diameter. The paralyzed intestine was thin and pale, and evidently the blood supply was cut off, as the vessels of the mesentery for several inches were dark red and gorged, and evidently thrombosed, and the mesenteric glands were enlarged. At the junction of the paralyzed and collapsed portions the constriction was extreme, almost as if a string had been tied around the bowel. The distended bowel above was beginning to push into the bulging and paralyzed portion below, making a collar one-half inch wide, and the whole process was evidently the beginning of an intussusception. An intussusception in this case was not the cause of an obstruction, but was resulting from an obstruction due to paralysis of the bowel from interference with the blood supply. As a resection was out of the question on account of the condition of the patient, I made a tuck in the intestine, turning in the part that seemed to be paralyzed, milking out its contents until it showed no sign of collapse. The child died in twenty-four hours, one year almost to a day from his first attack. Autopsy showed enlarged mesenteric glands and a ballooned intestine with damaged mesenteric vessels.

Summary.—A 3-year-old boy with a hydrocephalic head and a crooked spine had an attack of obstruction of the bowels with bloody vomiting. Operation disclosed small enteric intussusception (Fig. 1), and complete sausage-shaped intussusception (Fig. 2). He lived about one year and again was seized with the same condition. Early operation showed the blood vessels of the mesentery blocked and the corresponding segment of bowel badly distended, with the intestine above pushing into it as if to reinforce the weak segment by the invagination (Figs. 3 and 4).

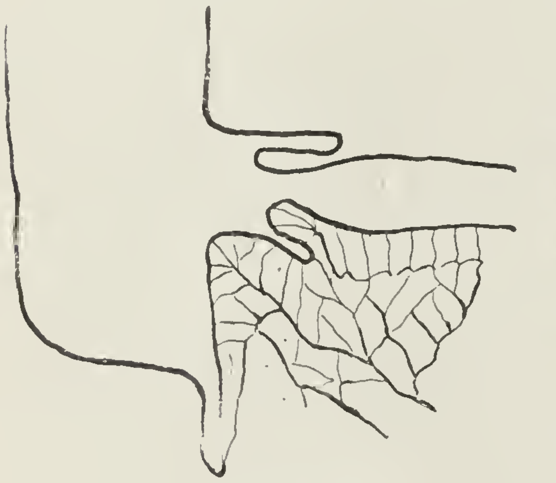

Figure 1.

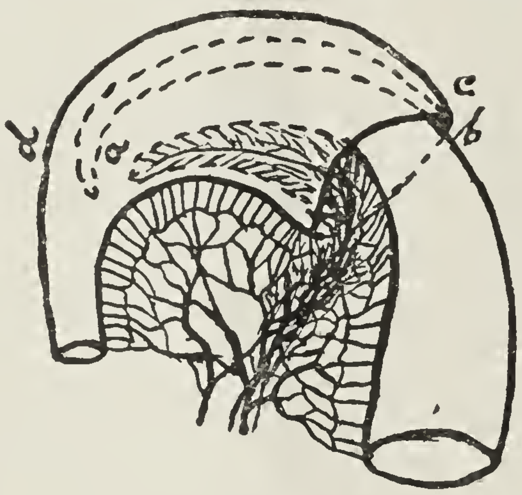

Figure 2.

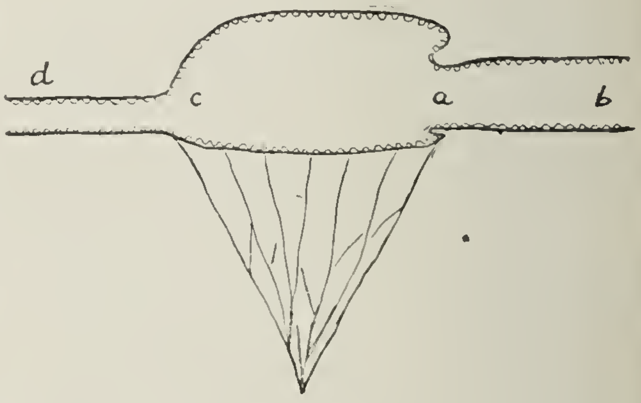

Figure 3.

Fig. 1.—Small enteric intussusception close to the ileocecal valve.

Fig. 2.—Sausage-shaped intussusception found in jejunum. Drag on the mesentery curves tumor and pulls apex against side of the intussuscipiens causing much of the obstruction. Condition of the mesentery bad; intestine full of bloody fluid.

Fig. 3.—Bulging intestine (c a) with damaged mesentery; a b, distended intestine; d c, collapsed intestine.

CONCLUSIONS.

The typical symptoms of intussusception are pain, shock, small bloody mucus stools with tenesmus and characteristic tumor. In this case, pain was not a prominent symptom, and there was no discharge from the bowels, no inclination to move the bowels, and no tumor could be felt, even under an anesthetic. A child may have bloody mucus stools without intussusception, and, on the other hand, an intussusception may slough away without the appearance of bloody stools. The usual ileocecal intussusception forms a palpable tumor, but an enteric intussusception may be so small or high that a tumor can not be appreciated. In this case, an unusual symptom was present—frequent bloody vomiting. Conclusions were reached about as follows: The shock and thirst and bloody regurgitant vomiting show that some strangulation has occurred high up in the intestine. The lack of distension, fever and tenderness exclude inflammatory troubles. The age of the patient and the moderate character of the pain would indicate intussusception.

In regard to the cause of intussusception, observation and experiment show that invagination is of frequent occurrence and is easily produced by slight irritation of the normal intestine, the bowel above rolling into the segment below and emptying itself as in a movement of the bowels. Treves goes so far as to hold that many attacks of indigestion may be due to a temporary invagination of the bowel, in which case the circular fibers below rapidly contract and reduce the intussusception before adhesions form between the layers. Whatever would prevent the reduction of this physiologic invagination would produce a true pathologic intussusception.

There are two theories of the cause of intussusception: spasm and paralysis. The first theory holds that, for some reason, a local spasm is set up in the bowel and a violent contraction takes place, and this point is made the apex of an intussusception by passing into the intestine below or having the bowel below drawn up outside.

It is an interesting fact that an annular growth, such as a cancer, does not produce intussusception, and I have never heard of intussusception following the use of a Murphy button, but in the case of a cancer the intestine above would tend to distend from overloading and that below to collapse from non-use, so that the intestine above could not get into the collapsed intestine below.

The other theory is that of paralysis. A certain section of bowel is paralyzed by interference with its nerve or blood supply. It, therefore, becomes distended and the bowel above is pushed into it. The frequency of pedunculated tumors at the apex of the intussusceptum is given as the chief argument in favor of the theory of spasm. It seems to me, however, that only after the intestine below the attachment of the tumor has become tired out from its spasm until it is paralyzed could the invagination occur. Allowing that the irritation of the pedunculated tumor could lead to a physiologic intussusception, I can not see how spasm could cause peritonitis, which would produce adhesions and prevent a reduction, and thus make a pathologic from the physiologic intussusception. In case of distension from paralysis, however, the blood supply of the peritoneum is interfered with, and enough peritonitis produced to bind the layers together and prevent a spontaneous reduction.

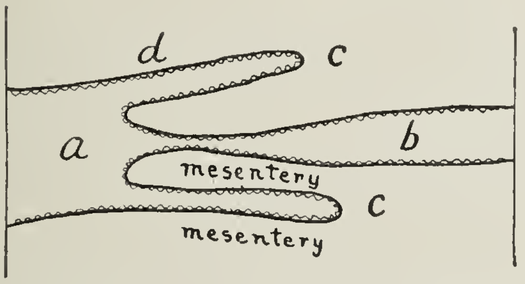

Fig. 4.—Damaged bowel and mesentery pushed in between two layers of normal intestine as outer layer of intussusceptum; ac and ab have peritoneal surfaces in contact adhering as intussusceptum, which Nature endeavors to throw off as slough.

This case supports the theory that intussusception is due to paralysis. The strangulation of the blood vessels was out of all proportion to the condition of the bowel and was evidently the cause and not the result of the intussusception. The intestine opposite the strangulated mesentery was bulged and the gut above was working into it.

Repeated observations have shown that the middle tube or layer of the intussusception is edematous and often gangrenous. This is generally attributed to pressure by the outside layer, but the inner tube gets even more pressure and, therefore, the explanation is unsatisfactory. It will be noticed by comparing Figures 3 and 4 that if the apex of an intussusception travels twice as far as the length of the paralyzed portion of the bowel it will have folded this paralyzed portion as the middle layer of the intussusception between two tubes of healthy intestine. I do not think the intussusception is formed without cause and that the middle tube is then diseased by pressure, but I believe that a portion of the bowel is damaged by interference with its blood supply, and bulges and is about to perforate, and that the intussusception is the result and is Nature's effort to reinforce this weak piece by splinting it between healthy layers from above and below. Instead of being the cause of the obstruction this invagination supports the weakened intestine, often allowing a restoration of the blood supply, after which Nature will reduce the intussusception. On the other hand, if the damage is great and adhesions form, and a reduction is impossible, Nature will make an effort to unite the neck of the intussusception to the healthy bowel above, so that there may be no leak when the gangrenous intussusception sloughs away.

This case supports the theory that intussusception is caused by paralysis of a portion of bowel by interference with its nerve or blood supply.

PASSIVE HYPEREMIA OF THE LUNGS AND TUBERCULOSIS.

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Rokitansky, in 1846, enunciated the theory that those diseases of the heart which are accompanied by chronic passive congestion of the lungs exclude tuberculosis of the lungs. This view was soon found to be too extreme, for numerous exceptions to the rule were reported, and many observers would allow no truth to the statement whatever. Thus, Norris, in 1904, believed there was little, if any, protection afforded against tuberculosis by hyperemia, and there is no unanimity on the subject at present. It was this supposed protective action, however, which led Bier to the idea of employing passive hyperemia in the treatment of surgical inflammation, and, in view of the success of this method, it seems worth while to take up the subject afresh.

It will not be practicable to enter into a long consideration of the literature. My own studies, as will appear later, seem to show an evident protective action, and I shall, therefore, start with the hypothesis that such an influence is probable, and endeavor to explain discrepancies and answer all objections.

One reason for the differences of opinion in this matter is readily apparent. The value of statistics depends very largely on the care with which they are put together, far more than on the size of the figures. Of course, other things being equal, the larger the material on which they are based, the more accurate the statistics. But in large statistics, it too often happens that the data are so heterogeneous that a proper classification is impossible. A careful perusal of the literature shows that the authors invariably neglect to state the amount of tuberculosis present in the material from which their cases are gathered. Further, in those cases showing both heart disease and tuberculosis, they usually omit to state the grade in which either disease is present. These facts speak for themselves. It is evident that if passive hyperemia has any effect at all, it will be greater in a severe valvular lesion than in a slight one, and that a latent or torpid tuberculosis of the lungs, found in connection with heart disease, does not necessarily mean that passive hyperemia has had no influence on the process. Two other things are possible: Either the tuberculous process was already in the lungs when heart disease was acquired, and the hyperemia has had an antagonistic effect; or congestion has not prevented infection, but has modified the course of the disease, nevertheless.

There are, however, a few cases in the literature in which, with mitral stenosis and passive congestion, there has been widespread phthisis, which has been the cause of the fatal issue. The very fact, however, that these cases have been reported shows their rarity. Two explanations are possible: Either the infecting germs were of a high degree of virulence, or the subject was so weakened by disease, insufficient food, or bad hygiene, that passive hyperemia was unable to prevent the spread of the tuberculous process. And some effect might be ascribed, even in such cases, to the congestion, for the tuberculosis here is never of the florid, galloping variety, with extensive caseous pneumonia, but always shows a considerable amount of fibrous tissue, that is, an attempt at healing.

My own material has been derived from the records of the Massachusetts General Hospital, the Boston City Hospital, and the Long Island Hospital of Boston. I have taken only cases that came to autopsy, for in others there is always the chance either that tuberculosis may be overlooked, or that it may supervene later, after the patient has passed from observation. Mitral stenosis has seemed the best form of heart lesion to study, because it is easily recognized, and because it is usually very chronic in its course and accompanied by a considerable degree of hyperemia. Only cases presenting well-marked stenosis of the mitral valve have been selected.

The statistics are based on 1,900 autopsies at the Massachusetts General Hospital, 1,811 at the City Hospital, and 529 at the Long Island Hospital. The two first named hospitals aim to exclude phthisis, while the Long Island Hospital takes in large numbers of consumptives. The City Hospital protocols show a large number of children dying of contagious diseases, so, for the sake of uniformity, all children under the age of 12 have been excluded from consideration. When the word tuberculosis occurs alone, tuberculosis of the lungs is meant. Other forms of tuberculosis are not dealt with in this article.

In regard to the amount of tuberculosis in this material, the figures given later represent the frequency with which tuberculosis was noted at the postmortem table, but do not, of course, represent its true frequency, for the attention of the pathologist was not usually directed to finding minute lesions. And it is well known that if the autopsy is performed with this special aim in view, the percentage of tuberculosis found increases very greatly, up to over 90, as recent investigations have shown. The fact, however, that the autopsies were performed under the supervision of Dr. F. B. Mallory at the City Hospital, and Dr. J. H. Wright at the Massachusetts General Hospital, is a guarantee of the thoroughness and uniformity with which they were done.

The cases showing tuberculosis of the lungs are divided into three groups, viz.: (1) healed, (2) inactive or latent, and (3) active tuberculosis. The first group includes scars in the apices and calcified nodules; the second, cheesy areas with fibrous capsules, cavities with fibrous walls and no signs of fresh processes, and fibroid tubercles; the third, all conditions with fresh tubercles or caseous pneumonia.

The cases of mitral stenosis are arranged in two groups: (1) Severe, including those with mitral orifice admitting only a finger tip (i. e., about 5 cm. in circumference) or smaller, and (2) moderate, embracing those cases with less obstruction.

At the Massachusetts General Hospital the incidence of tuberculosis of the lungs was 17.6 per cent. There were 66 cases of mitral stenosis, of which 30 were moderate and 36 severe. Five cases in all showed traces of tuberculosis; the disease in 2 was healed and in 3 it was inactive. There was *no active tuberculosis* present, although the whole material at this hospital showed 10 per cent. of active processes. The percentage of tuberculosis for all the mitral cases was 7.6; that of the severe cases, 5.5; that of the moderate cases, 10. To sum up: There was less than half as much tuberculosis among the mitral cases as in the whole material, and it was entirely either of the healed or latent variety.

At the City Hospital the results were similar, but somewhat less striking. The incidence of tuberculosis was 22.1 per cent.; of active processes, 8.3 per cent. There were 54 cases of mitral stenosis (23 moderate, 31 severe), with seven showing signs of tuberculosis, i. e., 13 per cent., or a little more than half the general percentage. The severe cases showed again a low figure, 6½ per cent., less than one-third of that in the moderate class, where the high percentage of 21.7 was noted. The cases of tuberculosis were divided as follows: two active, 2 latent and 3 healed. Of the active cases, only one was clinically phthisical, showing physical signs in the lungs and tubercle bacilli in the sputum; the autopsy revealed a fairly extensive process in one lung, with a cavity measuring 2x3 cm. and consolidated areas in the upper lobe up to 9 mm. in diameter, but with considerable connective tissue around them. There was a complication with cirrhosis of the liver, which is known to favor the development of tuberculosis. The other case showed an insignificant but fairly fresh process at each apex.

It will bring out better the marked protective action of mitral stenosis, if we consider separately the severe cases, of which there were 67 in the two hospitals. Four showed tuberculosis, or 6 per cent., of which 2 were healed and 2 latent. *There was no active tuberculosis.* In other words, the percentage of active tuberculosis in the material from which they were drawn was 9; that of the cases with marked stenosis was zero. If we subtract the cases of healed tuberculosis, we find 3 per cent. of tuberculosis among these severe mitral cases, as against 14.4 per cent. among the general material, or about one-fifth as much.

The Long Island Hospital material differs in two points from the others; it contains a very large percentage of tuberculosis, 45.2, with 23.4 per cent. of active processes, and but little valvular disease. Of the eight cases of stenosis, 6 were moderate, 2 severe. The former had 50 per cent. of tuberculosis, but, significant fact, there were no active processes; *all were healed or latent.* The same description applies to all—small cheesy nodules at the apex, surrounded by fibrous tissue. Of the two severe cases, one case showed puckered scars at the apices, the other no traces of tuberculosis. Thus we find, in a material teeming with consumption, the protective action of mitral stenosis manifest.

I have tried to ascertain the part played in this immunity by chronic passive congestion, by noting in this series the condition of the lungs at autopsy, but the results have been disappointing. In this connection it should be noted that the presence of signs of passive hyperemia postmortem does not enable us to tell how long the condition existed before death, for these signs may be produced in a comparatively short time, probably in a week.

The facts, then, are the following: Ninety-six cases with passive hyperemia showed 11½ per cent. of tuberculosis; 26 without it showed only 3.8 per cent. This discrepancy is confined, however, to the moderate cases, for the severe class showed 60 cases with hyperemia, with 5 per cent. tuberculosis; 7 cases without hyperemia, with 14 per cent. tuberculosis. Too much weight should not be attached to these figures, for, as we have seen, the lesser degrees of stenosis afford only a moderate protection against tuberculosis, and the cases without hyperemia are almost too few to base deductions on them.

In order to form some idea of the effect of passive congestion of the lungs in general, I have collected the cases at the City Hospital showing this condition, 229 in all. The percentage of pulmonary tuberculosis among them was 12.1, a decided reduction from the general percentage of 22. There were only 4 active cases, or 1.7 per cent., as against 8.3 per cent. in the general material.

I believe that the foregoing statistics show very clearly that mitral stenosis affords a marked relative immunity against tuberculosis of the lungs, which is in proportion to the grade of the lesion, and that if infection does take place it usually runs a mild course, with a strong tendency toward cure. The smaller number of cases of tuberculosis among the mitral patients can not be ascribed to their greater youth, for their average age is 43, an age at which the majority of tuberculous infections has already taken place.

It remains to consider whether this immunity is due to passive hyperemia or to other factors. It might be claimed that it was a result of the so-called rheumatic diathesis. There seems to be an hereditary transmission of the tendency to acquire rheumatic diseases (which are the chief cause of valvular lesions), and it might be the case that such a constitution conferred a relative immunity to tuberculosis. This question, so far as I know, has never been investigated, but granted that such were the case, it would not explain why the more severe grades of mitral stenosis should show such a high degree of immunity as compared with the lesser grades.

Another factor to which the protective influence might be ascribed is that of cardiac hypertrophy. I have looked up the cases of cardiac hypertrophy secondary to arteriosclerosis and to renal disease, and of the type denominated simple or idiopathic, and have found no lessened frequency of tuberculosis among them. The nephritic group, however, showed a very interesting relation to passive hyperemia of the lungs, for of the 41 cases in which this condition was present, there was only 14.6 per cent. of tuberculosis, and all in a healed form, while those without congestion (71 cases) showed 32.5 per cent. of tuberculosis.

It is evident, therefore, that the immunity can not be owing to hypertrophy in general. But in the class of cases just considered the left ventricle is chiefly, though not entirely, the seat of the hypertrophy, while in pure mitral stenosis it is mainly the wall of the right ventricle that undergoes enlargement.[1] And it might, therefore, be surmised that the increased arterial pressure in the lungs, to which the hypertrophy of the right ventricle is secondary, was the factor of importance. But we have no analogy for such a supposition and no facts to support it.

At this point, a theory first enunciated by Potain,[2] and later amplified by Teissier,[3] should be mentioned. These writers describe a type of "pure mitral stenosis, with marginal inflammation of the valve, leading to a stenosis without regurgitation. There is no history of a preceding rheumatism or other febrile affections. The valve curtains remain smooth and are merely glued together at the margins. They claim that this condition is a tuberculous inflammation, secondary to tuberculosis of the lungs, or, according to Teissier, to tuberculous toxins, which may even be inherited in cases of scrofula, chlorosis and "lymphatism!" The mitral stenosis, in its turn, modifies the course of the pulmonary tuberculosis by the production of passive hyperemia. Their hypotheses, ingenious as they are, are not supported by much evidence, and I have been unable to find any such instances among those cases in this series which were complicated with tuberculosis.

A process of exclusion leads us to the belief that the active agent in the immunity under discussion must be passive congestion of the lungs. And such an influence seems entirely reasonable, for the researches of Bier and his pupils have shown that passive congestion has a marked action to check not only inflammations due to the common pyogenic bacteria, but also those due to the tubercle bacillus, as in infections of the bones and joints. This action is apparently largely due to certain substances contained in the blood serum, the so-called alexins and antibodies, partly, no doubt, to the increased number of leucocytes present in the congested tissues. In the case of the lungs it is possible that the increase of connective tissue and of elastic fibers might play a part.[4, 5]

It may be objected, however, that hyperemia of the lungs is absent in compensated mitral disease. This is rather difficult to answer, for the clinical methods of detecting this condition are inadequate. It is fairly certain, however, that hyperemia may exist for some time before the congestive bronchitis appears, and the ease with which these patients suffer from cyanosis and dyspnea on trifling exertion would seem to point to the presence of congestion of the lungs.

But apart from its theoretical interest, the question is of practical importance, both as to prognosis and treatment. And, indeed, even in diagnosis, mistakes are not rare, the bronchitis of mitral disease, if accompanied by hemoptysis, being mistaken for tuberculosis.

With regard to prognosis, it may be said that a patient with well-marked mitral disease probably will not acquire tuberculosis of the lungs, and if he does, will probably die of the cardiac lesion, not from tuberculosis.

It is from the therapeutic standpoint, however, that the subject derives its chief importance, and I shall, therefore, conclude with a brief sketch of the attempts made to produce hyperemia of the lungs artificially. Jacoby recently advocated the reclining posture, with the feet elevated, claiming thus to obtain the desired effect. But the position is uncomfortable, and it is doubtful if much congestion is produced. Wassermann was the first to propose the method of obstructed respiration, but his method involved breathing through the mouth, and was unpractical for that reason.

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[1] Twenty-one cases of mitral stenosis in this series, which were without complications of a nature to lead to left-sided hypertrophy, showed an average thickness of the right ventricle of 5.1 mm., and of the left ventricle of 11.5 mm., with an average weight of the heart of 445 gms. That is to say, marked hypertrophy of the right ventricle, little of the left.

[2] Rétrécissement mitral et tuberculose. Gaz. Hebd. de méd. et de chir., 1891, p. 441.

[3] Des lesions de l'endocarde chez les tuberculeux. Diss. Paris, 1894; Rapports du rétrécissement mitral pur avec la tuberculose. Clin. méd. de la Charité, 1894, p. 913.

[4] Ribbert (H.): Path. Histologie, 1896, p. 299.

[5] Pearce (R. M.): Proc. Phila. Path. Soc., n. s., iv, p. 215.

Recently Kuhn,[6] from Leyden's clinic in Berlin, has proposed a mask for the production of hyperemia. It consists of a light apparatus which fits in the nose and mouth, with an arrangement of valves by which inspiration, which is nasal, can be impeded to any desired amount. Expiration, on the contrary, is unobstructed and takes place either through the nose or the mouth. The effect of impeded inspiration is to produce negative pressure in the thorax, lasting almost throughout inspiration; the inspiratory muscles are brought into strong contraction, inspiration is prolonged, and the rate of respiration lowered. The most important effect, however, is the marked aspiration of blood from the right side of the heart into the lungs, due to the prolonged negative pressure. The lungs are, therefore, supplied with an increased amount of blood. Moreover, since expiration is not obstructed, it will be short, and the blood will not have time to escape entirely to the left side of the heart. Thus, after wearing the mask for a while, a considerable degree of congestion is obtained, as has been proved by animal experimentation.

This hyperemia differs, of course, from the passive congestion of heart disease, in that there is no obstruction to the pulmonary circulation. The increased amount of blood in the lungs is of the greatest benefit, for it is conceded that it is the relatively poor supply of blood or lymph to the apices which predisposes those parts to tuberculosis.

As to the results obtained with Kuhn's mask, the following claims are made: Cough is allayed, dyspnea diminished, and a gain in weight almost invariably takes place. Most interesting is a marked increase in the number of the red cells in the peripheral circulation, at first temporary, later permanent, and probably due, as in high altitudes, to the lowered pressure of the air in the lungs. Actual cure is claimed for favorable cases, but a more extensive trial will be necessary before a final opinion can be reached.

SUMMARY[7] AND CONCLUSIONS.

One hundred and twenty-eight cases if mitral stenosis at autopsy showed a much lower percentage of pulmonary tuberculosis than the material from which they were drawn. Those cases with a high degree of stenosis were more free from tuberculosis than those with a moderate stenosis, and were entirely exempt from *active* tuberculosis.

A person with mitral disease is less liable than others to acquire tuberculosis of the lungs, and if he does, the pulmonary disease usually runs a mild course, with a strong tendency toward cure.

This relative immunity is to be ascribed to passive hyperemia of the lungs consequent on the mitral lesion.

There is a possibility that artificially induced hyperemia of the lungs may be a valuable adjunct in the treatment of pulmonary tuberculosis.

In concluding, I wish to express my thanks to Drs. F. B. Mallory, J. H. Wright and G. B. Magrath for placing the autopsy records at my disposal.

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[6] Eine Lungensaugmaske zur Erzeugung von Stauungshyperemie in den Lungen. Deutsche med. Wochschr., Sept. 13. 1906. p. 1486: Die Vermehrung der roten u. weissen Blutkörperschen. u. s. w., durch die Lungensaugmaske, u. s. w., Münch. med. Wochschr., Aug. 27. 1907. p. 1713.

[7] The following references may also be consulted on this question. The list is not exhaustive, but it includes most of the important contributions on the subject:

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Special Article

THE OLD BLOCKLEY HOSPITAL: ITS CHARACTERS AND CHARACTERISTICS.[*]

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PHILADELPHIA.

I hesitate to address this audience to-day. I can honestly affirm that I was loth to accept the invitation. I have spoken to you so frequently in the past that my views must have grown threadbare by repeated application. The few damaged goods that the show window contains to-day are familiar to you all. You will be justified in regarding me as like Tennyson's brook—not that "I come from shady spots," not that "I bring the sweet forget-me-nots that bloom for happy lovers," and certainly not that "I bicker down a valley," but that I do "go on forever." You have heard it all before, and just as the frightened jockey, spoken of by Holmes, "breathed a prayer, from scraps of oaths he used to swear," so I must formulate an address from scraps of speeches I used to make.

I would note in passing that it was scarcely fair on the part of my good friend, Dr. Stahl, to call public attention to my increasing years by scheduling my personal reminiscences of Blockley as "Historical Remarks." First getting me to speak, and then advertising me in this remarkable way, bears a strong resemblance to the conduct of the liquor known as gin, which, you will recall, Josh Billings says "has a heap of resolution and cussed little judgment." I am, therefore, driven to be, for a brief time, a historian.

THE BUILDING OF BLOCKLEY.

Seventy-three years ago this same Blockley Almshouse was completed and ready for occupancy. It then stood on a tract of 187 acres. In 1834 the Almshouse was moved from Eleventh and Spruce streets to its present site, and in that year the institution was first called Blockley, from the township in which it was placed. Blockley was in Philadelphia County, but not within the limits of the city of Philadelphia. The term city did not signify the entire county until the consolidation of all the districts was effected in 1854, the year in which Robert T. Conrad, poet, statesman, patriot, jurist, playwright and orator, was elected mayor—an office that in those days was highly honorable, and was highly honored among men.

The region west of the Schuylkill got its name long before William Penn crossed the Atlantic. This name was given it by Captain Warner, a soldier of the army of the grim old protector, Oliver Cromwell. When Richard Cromwell fell from power Captain Warner fled from England, came to America, and settled on the western bank of the Schuylkill, near what is now Girard Avenue bridge. The only other inhabitants of what is at present the city of Philadelphia were a few Swedes, in Weccacoe. Warner named the region he inhabited Blockley, after his old home in England.

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[*] Address delivered on the Twenty-first Anniversary of the Association of the Residents and Ex-Residents of the Philadelphia Hospital, Nov. 12, 1907.

In 1834 the hospital side was supposed to accommodate 400 sick; and to be able to care for 200 more, if necessary. The change of location from Eleventh and Spruce streets to the western bank of the Schuylkill was much opposed by many medical men, on the ground that the great distance of Blockley from the medical schools would make it difficult of access to students, and would seriously interfere with clinical instruction. A portion of the answer made to this objection by a committee of the Guardians of the Poor is a splendid masterpiece of colossal stupidity, and proves that among the governors of the institution there must have been then, as there usually have been since, individuals who had attained the last possible degree in the way of being asses. The guardians did not think that clinical lectures on medical cases could be of any use whatever. They said: "But, except that the lecture is made more imposing by the subject of it being present, and possibly the students' attention to the case being fastened by the display, we know of no benefit which can accrue from it which would not equally result from the case being lectured on in the absence of the patient, from the notes of the physician, which form, in reality, the basis of the lecture." Think of it! Clinical teaching of no value, when among the teachers were Samuel Jackson, Hugh L. Hodge, William H. Gerhard, Samuel George Morton, Jacob Randolph, William E. Horner and Richard Harland! The audacity of a non-medical board in settling a medical question offhand, and with *ex-cathedra* authority is not the calm impressiveness of profundity, but is rather the complacency of a hog in his wash, a complacency by no means unusual even at the present time, in city officials of all grades.

When the hospital was first opened it was far out, and it certainly was difficult of access. Encompassing it was a high board fence; and the gate of entrance was at the northeast corner of the grounds, on Darby Road. One who wished to reach Blockley from the city could cross over Market Street bridge in a lumbering bus (neither the Chestnut Street nor the South Street bridge was then built), or he could take a rowboat at South Street and be ferried over to the almshouse wharf.

All along the river front were meadows, which were protected from the river by a bank containing sluice gates. It was the custom to open these gates in winter, flood the meadows and let them freeze. From the frozen meadows, ice, richly endowed with bacteria, was cut for the use of the patients. Over in the region of the Franklin Field of the present day, was the potter's field of that day. Those of us who recall the opening of Thirty-third Street to Spruce will remember the finding of many skulls and other ghastly osseous reminders. The stone barn that stood until such a recent period on Thirty-fourth Street was erected in the same year as was the almshouse. It was not, as many used to think and say, an ancient building of an old estate.

How we got here and when we came here, however, really matters little. Here we are; and surely this institution, whatever it may or may not be, is one of the most interesting places in the world.

FEATURES OF PROGRESS.

The most obvious feature of progress is the growth of the great centers of population; and, year by year, a larger percentage of our population live in cities. This tendency excited apprehension as long ago as the time of Henry VIII.; for Hugh Latimer complains, in one of his sermons: "Now we have taken up whoring in towns, instead of shooting in the fields." The chief reason for the growth of cities is stern necessity. Men must work to live, and must live near their work, if they would have employment; and the remarkable counterfeit of public service furnished by the misnamed Rapid Transit company, and by other common carriers, does not encourage people to live far away from their work. All of us, in modern life, have the disease from which Cortez said that his followers suffered. He told the Mexicans, "I and my followers have a certain disease of the heart, and gold helpeth it." The majority of the people in the city are there to seek the remedy of Cortez, and comparatively few of them find it. If a person dwells in a city long, he gets what might be called the city habit, a craving for the excitements of city life, which in its intensity resembles the craving for drink. If he leaves the city, it calls to him its imperious mandate to return. Dr. Johnson felt this craving, for he said he loved the very smoke and dust and mud and roar of London, and hated to be away from them.

As the shadow accompanies the substance, so poverty accompanies progress; and in a city poverty assumes its deepest dye and most certainly gives birth to its deformed children—Vice and Crime. A city is a vast laboratory. Human beings are the chemicals. Nature makes daring experiments, finds strange affinities, and repulsions from chance juxtapositions; and obtains products, sometimes beautiful, occasionally useful, but more commonly useless or injurious or even terrible.

THE VICTIMS OF PROGRESS.

Blockley is the microcosm of the city. Within these gray old walls we find all sorts of physical and mental diseases; and also a multitude of specimens of those social maladies that degrade manhood, undermine national strength and threaten civilization itself. The sufferers from social maladies are often the helpless victims of progress. Here is drunkenness; here is pauperism; here is illegitimacy; here is madness; here are the eternal priestesses of prostitution, who sacrifice for the sins of man; here is crime in all its protean aspects; and here is vice in all its monstrous forms.

And what a multitude of strange characters, of eccentric persons, of interesting individuals, reside here! What differences of disposition! What a clash of rival interests! What a conflict of motives! What contrasts of conduct are to be observed! Here are legends without number, and ghost stories without end. How many high ambitions must have dissolved here! What a multitude of souls must have passed into infinity to the tolling of the Blockley clock! How many persons, once prosperous and prominent, who had once loved their illusions and cherished their enthusiasms, have come here, sad and disillusioned, to die! Some of you will, perhaps, remember the son of a great American admiral; the German baroness; the ex-professor of Trinity College, Dublin; the soldier of Napoleon; and the snuff-taking, shriveled old hag, who had once been the charming sweetheart of a great American statesman, and had had her famous salon in the city of Washington—a salon in which had gathered the leaders of the Senate-House in the days just before the Civil War.

Here are some actually crushed by misery; some grown apathetic through continued misfortune; some fierce and resentful under Fate's injustice; some acquiescent and even well satisfied with a pauperism that means a warm bed at night, tobacco, a full belly, and conversation with agreeable companions on a sunshiny bench. Each one of the last named class believes that the world owes him a living and he comes here to collect it. Even here are rival ambitions; for some covet the captaincy of the slop buckets, and some the captaincy of the clothes room. Each petty official has his little court with its busy courtiers, who flatter, intrigue and caress. Here we see in full, rank development the tale-bearer, the scandal-monger, the back-biter, the slanderer and the liar. Here are some who seek health, and some who wish for death. Here come the physician, to treat and to teach, and the student, to observe and to learn. Here come charity, to relieve, and religion, to console, and the foul blight of municipal politics, to annoy, to hamper and to curse; and here, among some of the most unfortunate and some of the worst men living, comes woman, white capped and cheerful, to comfort and to bless.

BLOCKLEY POLITICS.

In my days as a resident physician, something over twenty years ago, there were several features of the place that attracted my particular interest and have remained long in my memory. One of the chief of them was Blockley politics, as applied by Blockley politicians.

Blockley, in those days at least, was a striking example of the errors, the stupidities and the villainies of municipal polities. In Blockley, politics come and go, sometimes better, sometimes worse. At present, having had a succession of four excellent medical directors, we are reasonably respectable; but some time in the future we shall probably relapse, go off on another debauch of corruption, and see the institution, as of old, reeling down the editorial pages of the newspapers. When the naked arm of public theft is again permitted to plunge to the shoulder, unchecked, into the coffers of the treasury, then will return in full strength the genuine Blockley politician, in all his foulness, stupidity and arrogance. Then, once more, we shall see the old-time spectacle, the struggle between the rival forces of light and darkness, between the Ormuzd and the Ahriman of Persian tradition. Then once more we shall see on one side the miserable, suffering poor, and on the other the spoilsman and the boss. In such a contest there is no doubt where we belong.

Politics was once referred to as a noble occupation. Our modern city legislators (many of them are law sellers rather than law givers), would doubtless be surprised to learn that the object of government, according to Aristotle, is to make a small city great and a great city greater. Themistocles knew this long before Aristotle had founded the science of politics. The present idea, however, among many, is, that rulers should strive to make a great city small by perverting its resources and diverting its energies from things noble to things base; and that the proper instinct of a politician is not patriotism, but is to sail for a "divvy" as a bee for a buckwheat patch. I do not delve among dusty records simply to find globules of poison or cakes of gall. I know politics is not an occupation for a lotus-eater; I know that leaders must and should exist; but I am so old-fashioned as to wish that leaders would not have written legibly over the portals of their houses the motto that is still seen on the floor of a Pompeian house: "Lucrum Gaudium," which is to say, "Gain is pure joy."

Many of the Blockley politicians of former days acted on this saying as an unbreakable rule of life. The time has been when the foulest politics dominated here, and did it often in murderous form. Then medical appointments were always made purely for personal and political reasons. In those days epidemics raged in these wards, and the grim specter of sepsis was a haunting terror to those who performed the operations of surgery. Here were patients actually hungry. Here was scurvy, which should never arise, except in a beleaguered town or among a castaway crew. Here was puerperal sepsis, claiming its horrible contribution. Here the unfortunate insane were placed on weekly exhibition in a public hall, to which sad festivity, visitors with cards of admission, from guardians and councilmen, came to satisfy morbid curiosity. At the very time that the sick poor were lodged without blankets, so that they had, in the words of Job, "no covering in the cold," the steam yacht of the "boss" would be drawn up to the almshouse wharf, to be stocked with coal, provisions, liquors and cigars, preliminary to a wild bacchanalian cruise.

To such things did politics bring us in the past. We all of us think with affectionate remembrance of that brave and good and great man, then a physician in this hospital—one who is a member of this association now—who dared to protest publicly against those whom he designated as the "board of buzzards," and who called this institution "a whited sepulcher filled with dead men's bones." We all remember how he defied authority, and how he was removed from office for daring to tell the truth. We can learn from these few facts what will become of this place, if the politician ever succeeds in again getting the upper hand here, particularly if no one proves as brave as H. C. Wood.

THE BLOCKLEY POLITICIAN.

The Blockley politician of those days was well worth a study. He almost commanded affection, for the same reason that animals commanded the affection of Walt Whitman, "for not one of them is respectable or industrious throughout the whole earth." Let me sketch for you the Blockley politician as I knew him, and as some of us may know him in the future, if he is ever again permitted to dominate here.

He was strictly practical. He never chased any rainbows. He had no ideals. He regarded reform as the maunderings of the imbecile or the obsession of the wicked. He liked to speak of "snivel" service reform. He was a true Bourbon, who learned nothing and forgot nothing. There was never the remotest chance that he would undergo a change for the better. He was like a canal-boat horse, so used to walking on the level lowlands that you could never teach him to mount a hill.

The views of these persons were well voiced, on one occasion, by the superintendent. I referred him to scripture for the statement that a good name is better than great riches, and he said: "That may be all true, but it does not carry so many divisions." The Blockley politician was as utterly insensible to all criticism as a stone dog would be to a vote of thanks. The only thing he was afraid of was the anger of the great boss; and he would fly from this like an ignorant savage frightened by a comet, and might fall into a hole as he ran. He always had a great deal of improper pull, and never enough reasonable and judicious push. He was always puffed up by deceit, but not propped up by it. He resembled a corkscrew in the fact that the more crooked he was the more pull he had. You could no more expect a really good thing from him than you could expect to get peaches from a gate post or beefsteak from a nightmare. He was from 5 feet 6 to 5 feet 10 high, and from 10,000 to 20,000 dollars short. As a rule he could consume a considerable amount of liquor. He was apt to boast that whisky never gave him a head, which only goes to prove that whisky is not more powerful than the Almighty.

If he had possessed a coat-of-arms it would have been a plain, ordinary crook. He was called a "Poor Guardian," probably because he did some of the poorest guarding on record. He was always liable to take a trip to Canada on the advice of his lawyer, and not of his physician; for he was prone to have a leg in the board room and one in the Eastern Penitentiary. Like Leonidas, he held a pass; but it was a railroad pass, and even his pulse beat with a dead beat. He never wore gloves, and I do not know why his critics should do so. He seldom wore cuffs, and his wrists always presented a neglected and undecorated appearance without handcuffs. He was apt to boast that he was self-made, and I always regarded it as noble of him to assume the responsibility. He kept his party faith, and everything else he could get his hands on. His parents were poor, but Irish. He was skilled in the fundamental branches of addition, subtraction, division and silence, and in the gentle domestic arts of perjury and blackmail. When he saw a "divvy" going on in the neighborhood he could cry out as did Hotspur:

"I am on fire
To hear this rich reprisal is so nigh, and yet not mine."

RESULTS OF MISRULE.

Let me give you some examples of what the result of such rule was. I fancy most of you remember the dreadful fire in the Insane Asylum in February, 1885—a fire in which twenty-two persons were burned to death. I suppose that many of you know why it happened; for that fire was caused by the politicians of the Board of Guardians of the Poor as truly as was every other calamity that affected this institution. When I became chief resident physician of the insane department I was able to gather this story from the minute book of the committee on the insane department. I found that on a certain date an attendant had been discharged for brutally beating a patient; and that at the very next meeting of the committee he had been restored, uncensured, by a motion of a politician in the board. Again, after a few weeks, he had been a second time discharged for brutally beating a patient; and again, at the next meeting, he had been reinstated, on a motion of the same politician in the board. Then he was thanked by the board for having discovered a fire and extinguished it; and then the other fire, which he did not extinguish, happened. From it he ran, like the miserable cur and coward that he was. The story of that poor insane colored boy, Nadine, was the truth; and that attendant had lighted those fires or had had them lighted for him, intending to extinguish them and gain credit with his political lords and masters, and also to destroy officially the able and kindly gentleman who was then physician-in-chief of the insane department, and who lately died while chief of the Norristown asylum. When the politicians responsible for this dreadful crime wake in the night "and see the dying night-lamp flicker and the shadows rise and fall," even they, at times, must hear those twenty-two dead men knocking at their doors.

I can relate another incident to show the tendency of some of these agreeable personages. I was called from my bed one midnight, and there I found a member of the Board of Guardians of the Poor, accompanied by a female, not of doubtful character, and both of them under the influence of liquor. He said to me: "Open the cell doors and let the lady see the lunatics." I replied: "I do not see any lady," and he said: "There she is." I remarked: "She is there now, and so are you; but you are both going to leave, or I will have you put out. I do not open a door to display a lunatic to you or your drunken companion." He said: "I will have your job in the morning," and I replied, "All right, come out and get it." When morning came he was there, but not after the job. The wish that was pre-eminent in his mind was that I should have no interviews with the newspaper men.

I was asked by a guardian to discharge a most decent attendant on the charge of drunkenness. The man never drank, but that made no difference. He had voted "wrong" at a primary. I was expected to discharge him because the guardian had voted for me. But, gentlemen, he was not discharged while I remained in the institution.

SOME GOOD POLITICIANS.

I want to make some exceptions to this general condemnation of members of the Board of Guardians of the Poor. I wish to mention one of them who was a politician, but a politician of a different breed from these men—a man who never in his life had any connection with a dirty dollar; a man who was kindly, charitable, generous and warm-hearted; one who was always touched by a tale of distress; and one who made every effort, while he was in this institution, to benefit the unfortunate patients and to aid the medical staff. He went from here to the state Senate at Harrisburg, and from there to Washington to fill in Congress the seat of Samuel J. Randall; and he is still living, a respected business man, in the city of Philadelphia. I refer to the Hon. William McAleer.

Another whom I would mention with kindly affection was that prince of good fellows, the late John Huggard; and then I must come to that most interesting, eccentric and lovable personality, Mr. McMurtrie, the distinguished lawyer. He had been elected during a temporary attack of mental aberration on the part of the city, when it got under the charge of the reform element. He hated hospitals and was rendered unhappy by the sight of sick people; but he took the appointment as a call to duty, and he rigidly obeyed it. I can recall with amusement the time when the Committee on the Insane Department appointed Mr. McMurtrie to receive the Joint Committee of Councils, which once a year visited this institution. This committee would come out and be alcoholically entertained by the superintendent. They would then aimlessly wander about, here and there; and afterward write a report as favorable as though they owned the place and wanted to sell it. Mr. McMurtrie was entirely childlike as to the nature of this committee. He came out to meet them with dignity and solemnity; but when he saw them in the hall, he took a single look, and then burst forth in rage. He said: "I came out here as an official of the city of Philadelphia to receive other officials of the city of Philadelphia; but I did not come out here to receive, speak to, or mingle with a damned set of drunken blackguards." Thereon, in a furious passion, he clapped his hat on his head and departed, leaving the amazed councilmen speechless with astonishment. A highly interesting, an honest and a redoubtable personality.

Some of the facts related above show us where our duty lies. We must always strive to keep the political "old man of the sea" from hanging about our neck. If I had my way I would strike the whole accursed system dead.

THE NON-MEDICAL SUPERINTENDENT.

In the days of which I speak the superintendent was the mouthpiece of the board, and was in charge of the entire institution and everyone in it. The physicians were as completely under his orders as were the gate-keepers and the watchmen. To have medical men, performing medical duties, under the charge of a non-medical man always works badly, and is provocative of endless trouble and manifold misunderstandings; for how can one who knows no more of medicine or of the needs of the sick than a dog does of the pons asinorum, a Hottentot of the Westminster Confession, a mule of geometry, or a ward boss of the true and the good and the beautiful, be expected to reach proper conclusions on medical matters of the first importance?

As a matter of fact, the superintendent never did reach wise conclusions. On one occasion, after ruminating for some time on greatness, he decided to personally make the transfers and discharges in all the departments, including the insane department. He butted into the diet question, with lamentable results. His views about ventilation, or, rather, lack of ventilation, were archaic and peculiar; and, as a result, the men's out-wards were as foul and ill-ventilated as the ark must have been. He personally selected the brand of whisky to be given the sick; and it was not the same brand, by long odds, that was given the visiting councilmanic committees and other political lights. He apportioned the amount of bedclothes with the same liberality with which certain bigoted Christian sects deal out salvation. He stimulated difficulties in the medical staff, and a complaint against a doctor was a badge of favor for the one that made it. He undertook, with wondrous enthusiasm, the arduous and well-nigh hopeless task of regulating the morals, pruning the language, controlling the views, and abolishing the late hours of unregenerate resident physicians. He was distinctly not a hospitable man, and it took an interview and a derrick to extract from him permission to let a guest stay in the doctors' dining room for a meal.

The meals that were served in that dining room were very far from appetizing or attractive. The coffee was gloomy, the vegetables were genuine antiques, the eggs had seen better days; when you tried the butter you always found it guilty; cold meat was hurriedly served by hot waitresses. This lack of hospitality arose from a perverted sense of economy. The superintendent was economical of hospitality, just as he was economical of the truth. He was liberal in promises and mendacities alone, and most of his promises were mendacities.

As a rule, the average superintendent of those days was addicted to the free and unlimited coinage of mendacities, without the consent of any other nation. His official court of doorkepers, panhandlers, hall men, runners, gatekeepers and understrappers was a hotbed of gossip and scandal. It was filled with flying rumors. Once in a while one of the rumors might be regarded as religious; for it would, perhaps, be confirmed. The night watchmen were argus-eyed for residential derelictions; and one's condition on mounting the high steps at night was guessed at and reported on by a groggy old reprobate, who possessed a red and watery eye and smelled like a distillery. Yet these poor, miserable, abject creatures were made masters of and presumed to think themselves superior to such men as the younger Gross, Ludlow, Tyson, Pepper, White, Horatio Wood, and all the visiting staff. Why, Dr. Horatio C. Wood, standing on the wooden floor of the old arena of the clinic room, was a better and greater man, a thousand times over, than all the politicians combined that ever misruled a municipality.

I have known many former superintendents, and in the foregoing remarks have sketched a type rather than an individual. They were apt to become infected, more or less, with that petty spirit of tyranny which so often grows in ignoble breasts, when given absolute power over other persons. Their most distinguishing characteristics were poverty of heart, meanness of motive, and feebleness of understanding. The one that went to jail was by no means the worst of the lot.

Going to church used to be a favorite amusement with many of the patients. The venereal patients attended religiously. As iodoform was then a popular drug, you could smell these patients a long time before they appeared. As I have said on a former occasion, I used to wonder whether this was the far-famed "odor of sanctity."

I was once the recipient of many attacks from members of a sanctified society, who used to come here to regenerate the patients. These attacks alleged that I did not send enough insane patients to church on Sunday. I was ordered to send more; and the superintendent, exercising his profound knowledge of insanity, picked out the ones that were to go. The custom was for the attendants to place the patients in the room, and then loaf around the doors, smoking, chewing, swearing and telling stories, while waiting for those that were to conduct the services to arrive. The superintendent's selections were not fortunate, the services were of necessity abandoned and ever afterward I was permitted to indicate those suited to receive religious consolation.

The clergy of the house were of some interest. One of them was of an affectionate nature, and was observed administering the kiss of peace in the kitchen of the women's nervous ward. One of them would not enter the venereal ward, even if the patient were dying there. One of them dined at the doctors' table, where he would eat like Mr. Shadband.

"Some love the matin chimes which tell
The hour of prayer to sinner,"

but he found much more to his taste

"The midday bell
Which marks the hour of dinner."

I pause for a moment, in recalling one of them who was here then, and, I am glad to say, is with the institution still. I pause at the consideration of him, because I realize that I have never known in life a kinder or more charitable man. He is of the very best type of the good priest. He has no thought but for the duties of his charge; and he has such a generous amount of warm human blood in his veins that his personality is a cordial, and his greeting a charm against the blues. I take off my hat with respect and affection to our old friend, Father McIlhone. Long may he live!

A FEW NOTABLE CHARACTERS IN BLOCKLEY.

A few characters of that day I would particularly mention. One was the strange personage who kept the gate between the men's out-wards and the hospital. He was so fat that he could scarcely move, even with the aid of a cane; and when he sat down in his little house he completely filled it. He had been quite a notable character, in his day, in the southern part of Philadelphia, and still retained the cordial friendship of Bill McMullin and other illustrious lights. He liked to talk about the old times when he kept a saloon near the old Navy Yard; when he was a leader in the festivities of the first of the year, down in the Neck; and when he played remarkable practical jokes on all his friends. He went out but twice a year, New Year's and the Fourth of July, and after each outing he returned in a condition wonderful to behold. It required the united efforts of all the hall men to get him up the front steps. He and I were on the best of terms; and when I left here he said: "I am going to send you lots of practice." I asked: "Pete, how do you propose to do it?" He replied: "I will do it by sending you my friends; for there is not a thief, there is not a gambler, there is not a thug, there is not a street walker in the whole district of Southwark as isn't my warm personal friend."

I should like to pause to speak of the man who kept the clinic gate, and kept it with the rigid loyalty with which Horatius kept the bridge. He would not have admitted his own grandmother, had she been dropping with exhaustion; and many were the conflicts he had with residents who sought to elude his vigilance in order to escape a critical inspection in the front office.

When I became physician in the insane department I had the good fortune to have a panel gate through the fence on Thirty-fourth Street—a gate that I alone used. It was a source of unending conflict between the superintendent and myself; for he used to nail it up at intervals, and I always kept a convenient axe with which to break it open.

Another interesting personage was the old gambler whose political friends had secured for him quarters on the medical floor, with permission to go out whenever he pleased. He was full of reminiscences of the newspaper men, politicians and business men with whom he had cast the dice and for whom he had turned the wheel. He used to tell interesting stories of how the money that was taken from the beneficial saving fund by Big Frank and Ned McGee was used to establish a gambling room at Fifth and Library streets; how all the police officials knew it; and how many of them used to go to this room to play.

Another interesting personage was the old man who, as a mere boy, had fought in the armies of the Great Napoleon. He had been on the march to Russia; he had been in the Battle of the Nations at Leipsic; he had been in that frightful series of battles when the emperor was driven back to his capital, and had fought finally on the disastrous field of Waterloo. When I knew him his mind had gone down in the wreck and ruin of dementia. It was hard to extract anything from him, but he still had gleams of remembrance and love for the remarkable personality that passed from among men on the island of St. Helena in 1821.

A man I was fond of then and am fond of now was dear old "Tom" Owens, who always had a $5 to loan a resident in difficulties. I love still to shake him by the hand.

The institution, at the time of which I speak, contained, as it doubtless contains now, some of the most talented drinkers and ablest bacchanalian artists in the community. The barbers got drunk whenever possible, the carpenters were drunk at every opportunity, the tailor was always drunk, and the painter was never sober. The man who had charge of the dead-house had illuminating episodes of alcoholic exaltation, which were among the most remarkable that I had ever witnessed, and presented strong suggestions of the alcohol from broken specimen bottles.

The insane department, after the fire, was a dreadful place. There were no open wards; the crowding was fearful and insanitary in the extreme; and it was necessary to have two patients to a cell. Frequently they would fight during the night; and I got to regard it as an ordinary, every-day occurrence to get out of bed at midnight, put on a pair of trousers, and wade into a terrific combat. It was a dangerous place. People threw things over the walls and lunatics picked them up. We had to search each patient every night; and we frequently found on them matches or pointed pieces of iron, with which they could do great mischief. On one occasion a man attempted to kill me with a bill-file that he had found and secreted.

One of the interesting lunatics was Melchizedek, the prophet of the Lord—the blind man, who used to pass his time reading large books for the blind, and whose favorite amusement was to locate a visitor by his voice and then heave a huge folio in the hope of hitting him.

Another interesting character was a man who believed he was the savior of mankind. He endeavored to cultivate the appearance that he thought appropriate to the part. One day he issued an edict that no one should wear a hat in his presence. He wrote this out on a piece of paper, signed it with the name that he regarded as his, and nailed it on the wall. A few minutes later another patient with the same delusion, and with a hat on his head, came in and stood directly beneath the edict. The writer of the notice called the attention of the other lunatic to it. The second one slowly and carefully read it, and then said that he had issued no such order. The first one told him that of course he had issued no such order, because he would have had no right to do so. Thereupon they flew at each other like wild beasts. We separated them with difficulty, and it was never afterward possible to let these two apostles of peace and good will loose in the yard at the same time, for fear they would tear each other apart.

In those days I labored under a permanent financial stringency. There was an individual of the tailor persuasion who was unduly anxious to collect a bill, and he wrote me that he was coming to the institution the following morning at 9 o'clock to collect it. At that time the office opened directly into the corridor of a ward, and this ward was used as an exercise ground for a number of violent patients. I directed the gate-keeper that when the tailor arrived, the door was to be opened; he was to be ushered into the corridor, and the door was then to be immediately closed. I heard the bell ring; I heard it close. In a few seconds the tailor, absolutely breathless and at full speed, appeared in my office, with no single ambition in life except to get out again at the first possible moment.

We had a man who used to have fits. He became much attached to me, and made me a Christmas present of a complete list of his fits for an entire year. We had another man who had been appointed an attendant at 10 o'clock in the morning and had become a raving maniac by 6 o'clock the same evening. We had a woman who would break up glass with her foot and seek an opportunity to throw it in your eyes. We had the pope of Rome; we had the first case of katatonia reported in the United States; we had a notable clerk, with a famous bulbous nose, who was addicted to inebriating himself by drinking the compound tincture of cardamom. In the laundry were non-insane women who got drunk on every occasion, and fought one another indiscriminately. In the kitchen was the traditional ill-tempered cook, who was a blazing terror when in liquor, which was frequently.

An interesting character was a man who had been brought here with his memory a blank. He did not even remember his childhood. His memory gradually and slowly filled in from two points: From the time when he had shot himself with a pistol, backward; and from childhood, forward. He got back to the fact that he had been a locomotive engineer on the Sunbury railroad; he got forward to the fact that he had left school and become a wiper on the railroad; but he never filled up the intervening gap.

A BRILLIANT INSANE INVENTOR.

Among the patients was a man to whom I became much attached. I took him out of the hospital, after I left there, and made him clinic orderly at Jefferson. He was closely connected with me for a number of years, and was one of the finest characters I have ever come in contact with. He remained insane to the last, but this had no effect whatever on the practical conduct of his affairs. He was the only productive lunatic I have ever encountered. He devised the method of making catgut that we still use in the Jefferson Hospital. He taught himself chemistry until he became a skilled chemist. I am satisfied that he discovered argon a full year before Lord Rayleigh, and by the same method that the latter followed. He had succeeded in treating cottonseed oil so that an expert could not differentiate it from olive oil—a process that must have been worth millions—and that died with him. He devised what is known as ethereal soap, which is largely used by medical men and by veterinarians. He had a method for soldering aluminum, and a multitude of other processes that he declined to write down.

This man's birthplace was in Ireland. He obtained a good common school education in Birmingham, Eng.; became a gunner in the British navy; passed some time in Egypt, during the rising under Arabi Bey, and went to India, where he was station master at Bundelcohr, on the Trans-Indian Railroad. There he became completely imbued with the most curious Indian mysticism. He came to America as an agent for a sewing machine company, and was finally brought to Blockley suffering from an attack of maniacal excitement that terminated in paranoia. There have been few men in life whom I have learned to love so well.

All these things, all these people, and all these incidents come back to me now, as I stand in this clinic room and think of those days, more than twenty years ago, when I was a resident physician; of "those brave days, when I was twenty-one." There is something indescribably sad in looking back to this time, the time when I was young and brave and gay and full of hope; when responsibility sat lightly; when genuine black care was unknown; when the future seemed rich in promise; when I still believed that the race went to the swift and the battle to the strong; and when the pathway, even though domed by the stormy cloud, was spanned by the rainbow.

To turn back to those days is to turn back to good companions, loyal friends, honest efforts, generous impulses, convivial gatherings, and happy meetings; to song and story; to jest and laughter; to evenings that were all too short, and to mornings that were bright with joyful anticipations. A wave of tenderness and regret sweeps over me as I look back on myself and my colleagues. Each of us hugged to his breast some dear delusion. Then we had the courage to fight, the chivalry to make another's cause our own, and the hope that made the future rich in golden hues. Then we could catch the reflection of the skies, even in the stagnant pool of Blockley. Then we could hear real music, in the trees which were playmates of the wind and were ever singing beneath the silent stars. Then our eyes were princely with courage; our foreheads were royal with truth. Honor was an instinct, and enthusiasm ran hot in the blood.

In retrospection there is tenderness for what we were; there is regret for what we have lost: for in losing generous and unselfish youth, we have lost more than we can ever gain. Look at us now! As Carlyle says: "It is a sad sight." We have gained some substantial things, but we have lost the glory that once was ours, and will never come to us again. We are stained by worldly contact; we deliberately correct generous impulses by cynical analysis; we shrink from the conflicts and the knight-errantry of old. The world disenchants us after we know it. The prizes of life too often prove but Dead Sea apples which turn to dust in the hand. The idols that we thought to worship are all too often made of gilded clay. As we stand on the heights of middle age and look about us on the world, many of us will be disposed to cry:

"Here meanness wins; here vice comes from her hiding;
  Here profit is the teaching of each school;
In pulpit, market, senate-house, abiding,
  We hear the jingling cap-bells of the fool."

Our own views of our own work have undergone mighty changes.

"Once I compared it with the world's neglect,
  And proudly said—it is better than they see.
Now! I observe it tainted with defect
  In the broad light of what it ought to be."

As I drift down the river and look backward toward the spring of life, and think of the cheerful alacrity with which the crystal water flowed when near its source, I cry out:

"Give me the old enthusiasms back;
Give me the ardent longings that I lack,
  The glorious dreams that fooled me in my youth;
The sweet mirage that lured me on its track;
  And take away the bitter, barren truth."

Peculiarities of Cerebral Gummata.—Dr. J. S. Collier in the *Proc. Royal Society of Medicine*, January, 1908, states: 1. The differential diagnosis between syphilitic and non-syphilitic tumors of the brain can only be arrived at clinically from the results of antiluetic treatment, and the diagnosis so obtained is far from certain. 2. Syphilitic cases of acute onset, characterized by absence of any localizing symptom and by the severity of the general symptoms, including optic neuritis, are probably cases of acute hydrocephalus resulting from syphilitic ependymitis. 3. Certain changes of a fibroid nature occurring in a cerebral gumma may cause a regular increase in the symptoms, in spite of treatment and the persistence of local symptoms. 4. In cases in which symptoms increase in spite of treatment, surgical interference at an early date is advisable, either for the purpose of relieving urgent symptoms and allowing an exact diagnosis of the nature of the growth to be made by the microscope, or for the purpose of extirpating the gumma when this procedure can be carried out without causing great damage to important regions of the brain.

Clinical Notes

TOXEMIA OF INSANITY.

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In the field of psychiatry, alienists are practically agreed as to the predisposing causes of insanity, but when the exciting or immediate causes are considered a wide diversity of opinion is found. The generally accepted theory is that the exciting cause has a physical basis; and this view has been greatly strengthened by the writings of Kraepelin and the researches of Bruce, Morro, Blin and others.

Too much evidence has been produced in favor of the theory of autointoxication and a toxemia to be rejected without investigation. That the condition known among American authorities as primary dementia, and by the Germans and French as dementia præcox, is the result of a toxemia, seems to be fairly well established. That acute and agitated melancholia and mania are caused by profound changes in the metabolism of the body by some toxic agent, an examination of the blood changes seems to justify. As a contribution to this theory, I submit a few cases for consideration.

TABLE 1.—Blood Findings in Katatonia.

	A.	B.	C.	D.	E.	F.	G.
Blood pressure	115	126	125	122	132	132	112
Hemoglobin, per cent	80	80	80	80	90	80	90
Erythrocytes	4,577,000	4,438,000	4,360,000	4,875,000	4,368,000	4,150,000	4,629,000
Leucocytes	10,800	10,000	11,600	13,500	13,100	10,200	10,600
Polymorphonuclears, per cent	67	69	72.6	64.9	70.8	57.7	70.4
Mononuclears, per cent	2.8	2	.7	3.1	......	......	......
Lymphocytes, large and small, per cent	28.4	22.9	20.2	21.1	23.8	38.2	21.3
Eosinophiles, per cent	1.2	5.3	6	10.4	4.4	4.1	7.4
Transitionals, per cent	3	......	5	5	.1	......	......

A, F and G are females; C and E are of the perambulatory, stereotypic variety; B and D of the stuporous form; Cases F and G were of only six months' standing; the other 5 cases were chronic ones. The ages of the patients ranged from 18 to 35 years.

TABLE 2.—Blood Findings in Katatonia.

	H.	I		J			
		January.	February.	October.	November.	December.	January.
Hemoglobin, per cent	75	80	80	83	70	80	90
Erythrocytes	6,316,000	5,400,000	5,600,000	4,687,000	5,800,000	....	5,764,000
Leucocytes	11,224	12,900	13,800	8,050	8,533	6,700	6,000
Polymorphonuclears, per cent	47	48.6	59.9	71	60.8	62	47.9
Mononuclears, per cent	14	.6	......	1.7	......	4	19
Lymphocytes, large and small, per cent	35.5	45	25.8	16.9	29	23	24.5
Eosinophiles, per cent	2.5	5.2	9.9	3.9	7	5.6	4.1
Transitionals, per cent	......	2.5	3.3	5.6	2.9	2.4	......
Basophiles	1.6	......	1.1	......	......	2.4	3.1

While in charge of State Hospital No. 4, at Farmington, Mo., I selected seven cases of katatonia for investigation. The cases might be termed classic, as the characteristic symptom-complex was present in each. Dr. Frank L. Long, pathologist to the hospital, made the blood analysis as presented in Table 1:

The striking feature of these analyses is the leucocystosis, the relatively low polymorphonuclear percentage, and an eosinophilia. The only exception is that of A., who has a normal eosinophile percentage, but was in an advanced stage of tuberculosis when the count was made. The subnormal red count and low blood pressure are also to be noted. The blood in all the cases was taken from three to four hours after meals.

Since taking charge of State Hospital No. 2 at St. Joseph I have continued the investigation through Dr. A. B. McGlothlan, pathologist of the hospital. The cases selected were like the first seven, well-marked cases of katatonia.

Patient.—H. has been in the hospital five years—a chronic case. He sits in a chair with his head between his knees, or his head resting on the back of the chair and face everted, for hours. There is complete mental and motor inhibitions; he never moves unless forced to do so. Occasionally he starts a rhythmical side to side movement of his head and continues it for hours. He has not spoken a word for four years.

Blood Examination.—The blood count shows a leucocytosis, a very low polymorphonuclear percentage, increased mononuclear count and lymphocytes, with a moderate eosinophilia. It is a hopeless case.

Patient.—I. is an Italian, laborer, aged 27. When I first observed him he was standing motionless, except for a rotary movement of his head, as if on a vertical axis. He would stand and swing his head rapidly for hours. Why he did not become dizzy and fall is a mystery. His habits were filthy, he had an aversion for clothing, was careless and speechless. His food was smeared over his clothing, and his saliva and secretion from his nose dripped constantly on his shirt front.

Blood Examination and Course of Disease.—When the January blood count was made, an improvement had begun and speech returned; stereotyped movement in walking still persisted. The leucocytosis, the low polymorphonuclear percentage, the high lymphocyte count and the eosinophilia at this stage were very evident. He continued to improve. His mental processes were good. He spoke English; there was no stereotypism, but a slight excitement continued. The condition continued for several weeks, when, in February, he became excitable and would speak only in Italian, and some rhythmical movements of the head began. A count was immediately made which revealed some interesting facts, viz.: A marked leucocytosis and eosinophilia. The parallelism of motor and mental conditions with the blood condition was at least surprising.

Patient.—J., male, aged 20, is a school teacher. When he entered the hospital he was in the maniacal stage of the disease. The October blood count was made as the mania was subsiding. There was no special deviation from the normal, except an eosinophilia. In November, he passed into the katatonic state, with its stereotyped gestures and postures. At this time the hemoglobin percentage was low, there was a decrease in the number of polymorphonuclear cells, and a marked eosinophilia. During December and January he showed marked improvement in every way. The katatonic condition subsided, his mental condition became fair, with slight confusion and slow association of ideas. The blood count for these months showed a low percentage of polymorphonuclears and an eosinophilia. The prognosis is not good. There is a mental deficiency.

TABLE 3.—Blood Findings in Katatonia.

	Nov.	Dec.	Jan. 1.	Jan. 16.	Feb. 4.
Hemoglobin, p. c.	95	90	90	80	80
Erythrocytes	....	5,500,000	5,500,000	5,500,000	...
Leucocytes	7,050	3,550	4,800	6,500	8,080
Polymorph., p. c.	55.5	43.2	67.5	60.3	75.2
Mononuclears, p. c.	....	4.6	2.7	6.5	9.2
Lymphocytes, p. c.	39.5	23.9	24.3	36	10.6
Eosinophiles, p. c.	2.4	2.3	1.3	1.2	...
Basophiles, p. c.	1.2	1.1	....	....	...
Transitionals, p. c.	1.2	4.6	4	2.1	2.1

Table 3 shows the blood findings of a boy 17 years of age. His physical appearance was excellent on admission to the hospital. He was suffering under delusions of persecution and of poisoning, and he had some homicidal tendencies. He was not maniacal, but represented a condition that, under the old nomenclature, would be termed a primary dementia. In a few weeks he passed into the stuporous state of katatonia, was speechless, sitting in one place with his head in his hands, and often between his knees. This passed on to refusal of food and emaciation. He was put to bed and forced alimentation was employed.

Blood Examination and Course of Disease.—The first blood analysis was made at the beginning of the stage of stupor in November. The only characteristic of this count was the low polymorphonuclear percentage, and a slight eosinophilia. About the middle of December he lay in bed perfectly inert, speechless, with his eyes closed, and would indicate by restlessness, the necessity of emptying the bladder or bowels. He was very much emaciated and great difficulty was experienced in feeding him. The blood count at this time revealed a remarkable condition of the white cells, as shown in Table 3, a hypoleucocytosis, with reduced percentage of polymorphonuclears, slight eosinophilia and increase of transitionals. While the hypoleucocytosis might be due to the lack of nourishment, yet there evidently was going on either a rapid destruction of white cells or an arrest in their production, a profound katabolic condition.

January 1: His condition, from a clinical standpoint, was unchanged. The same inertia, speechlessness, emaciation, etc., were present, but the blood count on that day began to show an improvement, as shown in the increase of all the white cells and a decrease in the eosinophiles.

January 16: There was an improvement clinically. While still speechless he became restless. The blood count was in keeping with this change.

January 18: Two days after the blood count was made, he arose from his bed, went to the table at meal time, filled his hands with potatoes and bread, ate all he had, lay down and passed into stupor. The next day he made what seemed to be a purposeless attack on a patient. On the following day he picked up a chair and smashed a window. These actions seemed purposeless. He began to eat everything set before him, devouring it more like an animal than a human being. His symptoms began to improve in every respect, and by February 1 he was up, dressed, walking about the ward, eating properly and conversing with the attendants in a perfectly rational manner.

February 4: The blood count was taken in what now seems a recovered condition. This count was startling when compared with the others, and showed a remarkable contrast. The white cells were about normal, possibly a slight increase of the polymorphonuclears, and the eosinophiles were absent. Owing to the short period elapsed since then it would be absurd to predict that this young man had made a complete recovery, but his mental and physical condition is in harmony with the condition of the blood.

I have no deductions to make from the facts presented, as they are too few to warrant a conclusion, but the leucocytosis, the low polymorphonuclear percentage, and the eosinophilia persisting in the chronic cases are, at least, peculiar. The blood changes that are coincident with the clinical changes and the decrease and final disappearance of the eosinophiles in the patients who improved, and in the patient who seemingly recovered, together with the leucocytosis and eosinophilia in patients who had relapses point to the scientific fact that there is a physical basis, an autointoxication of toxemia, in insanity.

Rôle of Trauma in Breast Tumors.—H. P. Cole, in the *Mobile Medical and Surgical Journal*, states that while trauma is probably a rare factor in the formation of either benign or malignant tumors of the breast, injury frequently calls attention to a previously existing abnormal condition.

SUPPURATION AND NECROSIS OF THE LABYRINTH; OPERATION; RECOVERY.

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Last summer I was fortunate in having the opportunity to observe a case of suppuration of the labyrinth in which I was able to make a definite diagnosis, with subsequent operation and ultimate complete recovery.

Patient.—M. P., a female, unmarried, 19 years of age, was seen in consultation with Dr. Croston of Haverhill.

History.—At six weeks of age she had a right otitis media suppurativa. The ear continued to discharge for eight or nine months, when there was a succession of small postaural abscesses which were lanced by the family physician. The abscess eventually healed. The ear, however, continued to discharge, more or less, for four years, when she was seen by Dr. Clarence Blake, to whom I am indebted for the following record: "I saw M. P., 4 years of age, March 17, 1893, on account of a suppurative process in the right ear, with sequestrum formation on the posterior canal wall. This sequestrum measured six by eight millimeters in superficial area, and extended to a depth of four millimeters into the cancellated structure of the bone. The operation consisted in its removal and the curetting of the resultant cavity down to firm tissue, with uneventful healing."

Following this operation the ear was dry for six years. In the fall of 1899, following an attack of grip, the right ear began to discharge freely, no other aural symptoms being present. The discharge continued during the winter, and early in the spring (1900) she was taken suddenly with severe headache, vertigo, nausea and vomiting. At this time she could walk with difficulty, but found that it was impossible to go up or down stairs. She was confined to her bed for several days owing to the nausea and headache. The vertigo was in no way influenced by the position of the patient. In so far as can be ascertained, there was no elevation of temperature. The symptoms gradually disappeared, and she was up and about within ten days. The hearing, which was impaired before, was not noticeably diminished by this attack.

Several weeks after this attack she discovered that when she attempted to lift anything or leaned far forward, she became very dizzy and would have to lie down for half an hour to an hour, at the end of which time she felt all right. This latter, together with a profuse discharge, continued with no other symptoms for two years. In the spring of 1902, following slight exertion, she was taken with very marked vertigo, nausea and headache, referred especially to the occiput. The loss of equilibrium was so great that she was unable to stand without support, everything seemed to be revolving about her as the center. There was no temperature nor chills, and the character or amount of the discharge changed in no way. The vertigo was present at all times, and was in no way affected by position. There was at this time slight diminution in the hearing.

During the last six years similar attacks have occurred at intervals, and the vertigo has been present to a greater or lesser degree since the very severe attack in 1902. The discharge from the middle ear has been constant, at times very foul and at other times mucoid in character.

Four or five months ago she noticed that the vertigo was more marked, and that she was not quite sure of herself when walking. At this time, she found, in leaning over her bed, that on reaching an angle of about 80 degrees, her sense of equilibrium was lost; she then experienced a whirling sensation and fell forward on the bed. This occurred not once, but invariably, and the patient tried it repeatedly. This whirling sensation was accompanied by slight nausea which passed off in a few moments.

There was an increasing tendency, on the least exertion, to

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* Read at the Annual Meeting of the Eastern Section of the American Otological, Rhinological and Laryngological Society Boston, Jan. 5, 1908.

a slight loss of equilibrium, and a sensation as if the objects around her were moving in their own horizontal planes about her as a center.

Three weeks prior to August 19, she was taken with a severe chill, lasting for twenty minutes; the temperature was not ascertained, very severe shooting pains radiated from the right ear toward the occiput, there was a fainting sensation, with nausea, and occasional vomiting. The loss of equilibrium was so marked as to confine the patient in bed; there seemed to be an irresistible force causing her to whirl toward the right, and at the same time she would fall, or, to describe it more accurately, collapse. All objects, even the floor and ceiling, seemed to be revolving to the right, that is, toward the affected ear. The whirling sensation was not affected by her position and was present with the eyes open or closed. The slight hearing which had remained in that ear was lost entirely. There have been no subjective noises in the ear within the patient's memory.

The very acute symptoms disappeared in six or seven days. The equilibrium improved somewhat, so that the patient was able to walk with some guidance; the sense of elevation was almost entirely lost, so that she stubbed her toes and found great difficulty in going up or down stairs. The headache lost its shooting character, became dull and grinding, but was not definitely localized. The bewilderment of which she complained during the last year had become very much more marked, and everything seemed confused.

Examination.—As she walked into my office her gait and general attitude immediately suggested a case of cerebellar abscess which we see not infrequently. She was a well developed, and to all outward appearances, a very healthy girl. When she stood with her feet and knees together she could stand perfectly still, but as soon as she deviated from that position, she lost her equilibrium and fell, if not supported, everything seeming to whirl to the right, carrying her with it. There was slight nystagmus to the left. The finer co-ordinated movements were normal, as were the reflexes.

Posterior to the auricle and over the right mastoid bone there were several small cicatrices. There was no tenderness nor edema over the mastoid, nor were there any enlarged cervical glands. A very profuse creamy discharge, foul in odor, filled the right external auditory canal. When this had been removed the canal walls were found slightly congested, but with no apparent infiltration. The membrana tympani was absent, as also were the ossicles. The internal wall of the middle ear was covered with granulation tissue of considerable thickness. The outer wall of the epitympanum was necrotic. No bare bone could be felt over the promontory, but the probe was passed through the fenestra rotunda and its withdrawal was followed by the escape of a small amount of pus.

Operation.—The usual mastoid incision was prolonged above in the line of the zygomatic process so that the auricle might be drawn downward and forward. The cortex was very rough and the periosteum was elevated with difficulty.

In doing the Stacke-Schwartz operation, the bone was found to be sclerosed to a very marked degree, there being no cancellar tissue whatsoever in the mastoid portion. (This being the case I decided to make a very small cavity in this portion.) The antrum not being found at the usual depth and in the usual position, I decided to expose it by following along the posterior canal wall; this latter was removed by means of the rongeur and chisel. The space usually taken up by the antrum was found to be filled by firm ivory-like bone, similar to that of the mastoid bone and contiguous with it. The facial ridge was shaved down as close as possible to the descending portion of the facial nerve. The horizontal semicircular canal was literally carved out of the firm bone surrounding it, there being no cancellar tissue surrounding the prominence, as is usually the case. It was very evident that there was no erosion or necrosis of this canal, externally at least.

The outer wall of the epitympanum was removed to a level with the tegmen, granulations were removed from the epitympanum, and the tegmen smoothed off with a curette; apparently there was no exposure of the dura. The hyotympanum was also curetted and leveled with the floor of the canal.

The Eustachian tube was curetted, removing the granulations and mucous membrane. The whole cavity was packed with pledgets of cotton, saturated with adrenalin solution, for a few minutes, to control the hemorrhage from the granulations in the middle ear.

The bleeding having stopped, I was able to examine thoroughly the inner wall, which was covered with granulations. The stapes was not found, but the fenestra ovalis was filled with granulations through which a small silver probe was readily passed into the vestibule; the withdrawal of this probe was followed by the escape of a small amount of pus.

The facial nerve, covered by granulations, was found exposed posteriorly and superiorly to the oval window, the intervening bone having been destroyed by necrosis, thus making the nerve one boundary of the niche; the anterior bony edge of the niche was soft and necrotic. The silver probe passed readily through the round window, the edges of which were very soft and punky. The small bridge of bone between the fenestræ was *in situ*, and was removed by means of a small gouge chisel. This bridge having been removed, the opening was enlarged by removing the outer wall of the vestibule and the lower portion of the promontory with the gouge (and curette) thus exposing the whole vestibule and the beginning of the first whorl of the cochlea.

The vestibule was completely filled with granulations and pus; these were removed with a small curette and the inner wall exposed, but no fistulæ were discovered. The cochlea was cleaned out as far as exposed, but I did not care to risk further exploration of this part, owing to the danger of injury to the modiolus and internal auditory canal internally, the carotid artery anteriorly, or the jugular below.

The horizontal semicircular canal was now further isolated by removing the bone well forward to the Fallopian canal, the prominence was removed by means of a chisel, the applied force being in the plane of the canal and above the Fallopian canal so as not to involve the nerve. The lumen of the canal, on being exposed, could be differentiated in no way from the firm white surrounding bone, except by its outlines; there was apparently no fluid present nor were there granulations or blood. A small silver probe was passed through the canal and into the vestibule, passing around the small bridge formed by the ductus Fallopii. I did not feel justified in opening the other two canals as I felt that if the horizontal was not involved in the necrosis, the others had, in all probability, escaped, and that the infection was limited to the vestibule and cochlea.

The cavity was next swabbed out with alcohol. A Körner flap was made from the membranous and cartilaginous canal, the whole cavity was firmly packed with small pieces of iodoform gauze in such a manner as to hold the flap in position in apposition with the posterior wall of the mastoid cavity. The original incision was closed by interrupted silk worm gut sutures. There was a good recovery from ether.

August 20.—There was a great change in the mental condition of the patient; the utter bewilderment and confusion which had been present for two years or more had disappeared entirely. As she aptly expressed it, "It seems as though I were in another world where everything is quiet and peaceful." The vertigo, which had been constant, was not present when she lay perfectly quiet; there was no headache and the nausea was no longer present. The loss of equilibrium on the other hand was more marked than before the operation, it being impossible even to sit up in bed without support, the sensation being similar to that experienced in a small boat in a choppy sea, unattended, however, by nausea. Slight nystagmus to the left persisted. Considering the granulations on the facial nerve and the manipulations in their removal, it is surprising that there was no facial paresis. The outer dressings were changed and she was given ten grains of potassium bromid every four hours, and liquid diet for twenty-four hours. She complained of no discomfort during the day and slept well that night.

August 21.—The equilibrium was slightly improved, as she could raise herself to a sitting position and retain it without support; this exertion was accompanied by a whirling sensation, but there was no nausea. There was retention of the urine, requiring catheterization; otherwise she was very comfortable

August 23.—The improvement of equilibrium continued, and she was able to stand alone but could walk only a few steps without support. There was no headache or nausea and there was no return of the confusion present before the operation; the retention of urine persisted till this morning. She sat up in bed with little or no discomfort.

August 26.—Patient was up and about the room, and walked into the next room with no difficulty whatsoever; her equilibrium was practically normal; there was no vertigo whatsoever; there had been no headache or nausea since the operation, one week before. She could lean far over and regain the vertical position without difficulty and without experiencing the whirling sensation of which she complained previously. The outer dressing was changed twice during the week, but the packing in the cavity was in no way disturbed. The temperature had not been above 99 F. since the operation.

August 27.—I decided to risk a skin graft, and on August 27, one week after the original operation, the patient was again etherized. The packing was removed from the cavity, which was found to be perfectly clean with granulation tissue springing up throughout. The Körner flap was firmly adherent to the posterior wall of the mastoid cavity. One large graft, two by three inches, was taken from the right thigh, and this was placed in the ear on a plug of gauze. The posterior incision having healed by first intention, the sutures were removed.

August 31.—Since the skin graft four days ago, the patient has complained of no pain, nor has there been any rise in temperature, consequently the dressing has not been touched. This morning I removed the gauze plug, on which the graft had been inserted, and the cavity was perfectly clean, the graft apparently having taken. The cavity having been dried out carefully by means of cotton pledgets, was left exposed to the air, the patient having no dressing whatsoever on the ear.

September 2.—The cavity has been dried out twice daily, there being only a very slight moisture; the graft has apparently taken over the whole cavity. The patient is up and walking around, experiencing no discomfort whatsoever; there is no vertigo or headache, and her equilibrium is perfect.

The radical cavity was dried out daily for seven days, at the end of which time it was perfectly dry and the whole cavity completely epidermatized.

September 9, twenty days after the original operation, the patient was discharged well, and told to report in ten days, which she did. The cavity was found in the same condition as when last seen.

To-day, four months after the operation, she is in perfect health with the exception of a total deafness of the right ear. There has been no return of the vertigo nor loss of equilibrium.

416 Marlborough Street.

ACUTE ASCENDING PARALYSIS (LANDRY'S PARALYSIS?).

E. D. BLACK, M.D.
LAS VEGAS, N. M.

Acute ascending paralysis with a fatal termination in less than thirty-six hours, occurring in a boy 8 years of age, is so unusual that the following case is worthy of record:

E. V., Mexican, aged 8 years; one of eight children; family and personal history negative; an unusually strong robust child; never had an acute illness of any sort. During the week preceding the onset of the present illness he had three slight attacks of epistaxis. Other than this the case presents no history of possible prodromal symptoms.

Sept. 15, 1907, the child played about the home as usual. After the evening meal he romped with an older brother, using boxing gloves. The mother states that he engaged in this play for five or ten minutes. He was perspiring some after the exertion of the play, but otherwise appeared as well as usual; went to bed about 8 p. m. About 1 a. m. his mother called him, asking him to bring her a drink. This he did, appearing perfectly well.

At 6 a. m. (September 16) the family arose. When the boy attempted to stand he fell forward, complained of no particular pain, but was unable to stand. During the forenoon bowels and kidneys acted as usual; no nausea or vomiting. About 3 p. m. the mother noticed he had difficulty in moving his arms. He ate a hearty supper; during the early hours of the evening he urinated voluntarily, but his bowels moved normally. During the night he was very restless, calling repeatedly to his mother to change his position, complaining of vague pains in and about the knees.

The next morning (September 17, 9 a. m.) I was called to see him, the first medical attention the boy received. I found temperature, 99.2; pulse, 88, of good volume and rhythm; heart and lungs negative; abdomen negative; pupils equal, reacted normally to both light and distance; respiration was slightly labored; speech difficult; swallowing did not seem difficult, and there was no regurgitation. Further examination revealed a flaccid paralysis involving both the lower and upper extremities, with the exception of the deltoid muscles.

Tests for anesthetic areas showed almost complete anesthesia of the lower extremities. Reflexes were abolished. In the upper extremities sensation was not entirely abolished, but a delay in transmission (?) was apparent, with complete loss of reflexes. The sphincters were still unaffected, as was evidenced by mother's statement that at 8 a. m. he had urinated voluntarily.

Regarding the case as one of infantile paralysis (rather unusual in its onset and extent of involvement), I ordered mustard plasters applied to the spine, castor oil, one ounce by mouth, and an enema of sterile water to be given at once. Potassium iodid, gr. 2, every six hours, was to be given later.

About 11:30 a. m. I received a telephone message that the boy was very low. Arriving at the home at 11:45 a. m. I found him dead.

According to the mother, about 10 a. m. speech became impossible, breathing became extremely labored, and attempts at swallowing were followed by regurgitation. He did not have convulsions.

A brief summary of the case shows an acute, rapidly progressing, ascending paralysis of the flaccid type; anesthesia and loss of reflexes in affected extremities; no involvement of sphincters; bulbar symptoms being the last to appear; less than thirty-six hours in duration from onset to fatal termination. The clinical picture certainly conforms closely to what is known as Landry's paralysis.

The age of the patient is a point of interest, the majority of cases having been observed in patients 15 to 30 years of age. The entire absence of prodromal symptoms is also interesting, as most authors describe a train of symptoms which usually precedes the development of the paralysis.

Unfortunately, no argument could persuade the family to allow a necropsy.

CASE OF TONSILLOLITH.*

JAMES M. ANDERS, M.D., LL.D.
Professor of Medicine and Clinical Medicine in the Medico-Chirurgical College.
PHILADELPHIA.

The following case, being unique in certain particulars, is well worth recording. Although the patient had previously been under my care, I had not the opportunity of seeing him during the illness briefly narrated below:

Patient.—D. M., aged 59 years; occupation, commercial salesman; height, 5 feet 10 inches; weight, 160 pounds.

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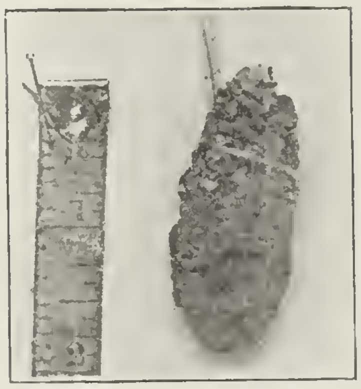
* Read before the Pathological Society of Philadelphia, Jan. 23, 1908.

Family History.—Parents both deceased, mother dying of "black measles," father of "creeping palsy" at 73 years. One brother died at 45, from acute articular rheumatism, complicated by endopericarditis and subcutaneous rheumatic nodules. Another brother, though living, has had severe acute articular rheumatism. Among maternal ancestors there is a history of several instances of tuberculosis.

Previous History.—Had most of the diseases of childhood. At about 30 he had typho-malarial fever; at 41 had acute articular rheumatism. Four years ago he had a recurrence, and two years ago had the last attack. Dating from his first attack of acute articular rheumatism he has been a sufferer from tonsillitis, for many years annually, and at previous periods at longer intervals. Mr. M. always led an exemplary life, although exposed to an unusual degree to the elements. He uses neither alcoholic stimulants nor tobacco, and tea and coffee only sparingly. Very little attention has been paid, however, to either systematic physical exercise or diet.

The present trouble began insidiously three or four months ago, with an occasional intimation of pain and irritation in the neighborhood of the right tonsil and also in a corresponding portion of the neck of the same side; this was fugitive but tended constantly to recur, and during the last three weeks of his indisposition, the local disturbance became markedly aggravated. There was intense pain on deglutition so that swallowing was exceedingly difficult, and, curiously enough, solids were more easily ingested than fluids. The local physician prescribed flaxseed poultices with a view to relieving the localized pain and discomfort, and two days following the commencement of their use, the patient became aware of the presence of a hard foreign body which projected into the throat from the same side. This immediately occasioned severe coughing, and with the aid of frantic voluntary efforts the large mass of calcareous hardness was soon dislodged. There was practically no bleeding at the time of or following the expulsion of the specimen. A local examination made three months after the tonsillolith had been expelled (the time at which I first saw the patient) revealed on palpation with the finger tip, a slight, though distinct, depression between the palatine arches. Very little change from the appearance of the opposite side could be detected with the naked eye. The weight of the specimen is 189 grains; and it measures one and seven-eighths inches in its greatest diameter (see illustration). Chemical examination of the specimen was not undertaken for fear of destroying its contour.



While the formation of tonsillar concretions is a not uncommon condition, often found in hypertrophied tonsils and at operation, the termination in spontaneous expulsion of very large concretions, comparatively speaking, is of rare occurrence. In a vast majority of cases they are small or of medium size, and give rise to no symptoms, but when, as in my case, they attain to enormous dimensions, they produce irritation and even ulceration in the surrounding tissue. The most prominent symptom of this condition is dysphagia, which was the principal complaint of my patient. My own specimen is chiefly interesting on account of its huge size.

Dr. Chevalier Jackson[1] exhibited a tonsillolith before the American Laryngological, Rhinological and Otological Society, May 30, 1904. It weighed 147 grains, and the patient gave the history of having, ten years previously, expectorated a stone, which was about the size of a split pea, originating from the same structure. Girou[2] records an instance of what he terms a voluminous calculus of the tonsil, which, however, weighed but 2 grams, 50 milligrams.

So far as I have been able to determine from an examination of the literature, no case in which the tonsillolith had attained to the size of my specimen has been recorded. The mode of formation of these calcareous concretions is well understood; they are the result of calcareous degeneration of retained tonsillar secretion. Entering into their composition are principally calcium carbonate and phosphate. The *Leptothrix buccalis* has been found within tonsilloliths, but this organism is too commonly found in the mouths of healthy individuals to permit the conclusion that it has etiologic significance.

DIPHTHERIA CONTRACTED FROM A DOG.

F. H. BRANDT, M.D.

BOISE, IDAHO.

It is well known that diphtheria may be transmitted by domestic animals by way of fur, particularly by animals coming in close contact with people during attacks of diphtheria. Having traced the source of infection to the throat of a dog, I am prompted to report the following cases:

Case 1.—*History.*—Jan. 14, 1908, I was called to attend a girl, aged 11, who complained of having pain in the neck and right arm.

Examination.—Temperature and pulse were normal; the throat showed some congestion, with two very small blisters on the left anterior pillar, but no other deposit. The next day the temperature was 99.5 F. and pulse 110, somewhat irregular. Throat inspection showed two white spots where the blisters had been the day before, and four other spots on the left tonsil. The glands at the angle of the jaw were enlarged, more so on the left side. A smear was made at once for bacteriologic examination, which showed many Klebs-Loeffler bacilli, which responded to both the Loeffler and Gram stains.

Treatment and Result.—Five thousand units of concentrated antitoxin were given. The temperature that night went up to 101.5 F. Ten hours later, 3,000 units more were given, as not enough effect was seen from the first dose. The case cleared up rapidly after this, and the throat was clean on the fourth day. Convalescence was uneventful, with the exception of some galloping heart action about two weeks later, which readily responded to rest and medication.

Remarks.—An immunizing dose of antitoxin was given to the other members of the family. The father complained of a sore throat at the time, but the condition cleared up in a day or two. Only the mother was quarantined with the sick girl, the suite of rooms being entirely separate from the rest of the house. The younger daughter was properly cleansed and her wearing apparel fumigated, and she was allowed to live in the other part of the house on account of just having been released from a quarantine for chicken-pox, of which she had quite a severe form. Two weeks after the last quarantine, fumigation was again carried out by the board of health. The day following, this family moved into their new house, freshly calcimined and painted, and owing to my advice, this house was fumigated as a preventive measure.

Case 2.—*History.*—February 8, three and a half weeks after the beginning of the last case of diphtheria, I was called to see the other girl, aged 7, who had suddenly been taken ill with fever, nausea and vomiting.

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[1] Trans. Amer. Laryng. and Otol. Soc., 1904.

[2] Bull. et Mem. Soc. Anat. Paris, 1905, lxxx.

Examination.—Temperature, 103 F.; pulse, 110. The throat was congested, but there were no deposits. There was much vomiting, of a bilious character, and with this tenderness over the abdomen and some tympanites. This attack was so similar to some previous intestinal disturbance that calomel and salts were given, and the further development of the case was watched. The next morning the patient felt better; temperature was 101 F. and the pulse was better. The throat, however, showed a membrane over the left tonsil, with glandular enlargements, which left no doubt in my mind that we had to do with another case of diphtheria, and this theory was corroborated by bacteriologic examination.

Treatment—Six thousand units of antitoxin were given and caused a rapid, partial clearing. An additional spot was found on the anterior pillar on the third morning when I gave 3,000 units more—a dose which proved sufficient.

Being at a loss to know the origin of this case, inquiries were made and a smear was made from the other girl's throat, in which I could not detect diphtheria bacilli. I was then told that their dog, a large Scotch collie, had been taken ill five or six days previous to the first girl's illness, with a sore throat so severe that he could hardly utter a sound and swallowing was distinctly difficult. After a few more days locomotion became very difficult and they would find him lying around the house, apparently unable to move, so they chained him up. Medicine was administered to the dog in the form of pills, and given mostly by the older girl until she took sick. After moving to the new house this dog was the constant companion of the girls, being in the house with them most of the time.

Then I made several smears from the dog's throat for a bacteriologic examination and found a number of colonies of bacilli corresponding to the organisms found in the girl's throat. This was repeated the next day. with similar results. On this evidence we had the dog killed by the health department, at which time I laid open the throat of the animal and secured cultures on blood serum from six different parts of the throat. Eight hours later a bacteriologic examination was made of the still invisible growth, which showed an almost pure culture of the same organism found before. These bacilli stained both by Loeffler's and Gram's methods. After twenty-four hours there was a distinctly visible growth. Little granules along the streaks, slightly raised at the edges, of a cream color, with a glistening surface. A bouillon culture was made from this and incubated for forty-eight hours. At this time a slight cloudiness was seen, with a flocculent deposit at the bottom. Two guinea-pigs were inoculated, to the amount of 1/200 of their body weight. Four hours later I gave one of them 2 000 units of concentrated antitoxin for control purposes. The second pig showed some depression after the last injection, but was perfectly well the next morning and remained so until it was killed for postmortem examination. The other pig showed signs of sickness on the third day. became worse on the fourth and fifth days, and on the next two days could hardly move. On the eighth day it showed some improvement, so I decided to make a postmortem examination of both of the animals.

Pig No. 1, which received only a culture, showed a patch somewhat resembling a diphtheritic membrane an inch and a half in diameter, with the center slightly liquefied at the site of injection. Surrounding this could be seen some injection of blood vessels. Bacterial examination of this patch showed again the Klebs-Loeffler bacilli in large numbers but of small size. There were also present large numbers of leucocytes, a majority of them having undergone degenerative changes. Other macroscopic changes could not be found in the liver, spleen, kidneys or in the intestines.

Pig No. 2 receiving both the culture and antitoxin, did not show a membrane, but, instead, a fibrosis an inch in diameter, with reactive inflammations, was found at the place of injection. No other changes could be made out. Bacteriologic examination of the fibrous patch gave negative findings.

CONCLUSIONS.

1. From the history of the dog there seems to be no doubt that he had diphtheria, accompanied by partial paralysis.

2. The first case probably came from the dog, coming on a short time after the beginning of the dog's illness. The possibility of the dog contracting the disease from the first case is impossible, since the dog was not allowed in the house after the girl took sick, and a strict quarantine was kept.

3. The second girl contracted the disease from the dog, being with him most of the time, and in spite of having received 1,000 units of antitoxin three and a half weeks before.

4. That the infection might have come from the other girl's throat is hardly possible: since strict gargling was kept up, and a bacteriologic examination at the time of the second girl's illness showed absence of diphtheria bacilli.

5. Finding the bacilli in the dog's throat, obtaining a blood serum culture from this, furthermore a bouillon culture, injecting this into two guinea-pigs, producing a typical membrane in the one and preventing the formation of a membrane in the other by the use of antitoxin, leads me to believe that the dog was the source of these two cases of diphtheria.

Influence of the Eye on the Ear.—Rollet was examining the eyes of a patient when the latter suddenly complained of buzzing in both ears as the light from the ophthalmoscope reached the fundus. This occurred on several repetitions of the ophthalmoscopic examination, the ears otherwise and at other times being apparently normal. He summarizes also some cases from the literature in which deafness was observed in connection with inflammation of the eye or with muscular contraction or with a luminous impression. In his communication on the subject to the *Revue Hebd. de Laryngologie*, December 28, he gives examples to illustrate the close connection between the organs of sight and hearing. A lesion of the eye, disturbance in accommodation, or mere reduction of visual acuity may induce a reflex deafness from a phenomenon of inhibition or a reflex irritation manifested in vertigo and buzzing, with or without more or less deafness. These phenomena of irritation are comparable to the sympathetic irritation which precedes the development of sympathetic ophthalmia. The experiences related also seem to indicate that the muscle of the stapes may contract simultaneously with a contraction of the orbicularis of the lids, and thus induce tinnitus. His own case shows that a luminous impression may induce a sensation of sound in the superior centers, a phenomenon exactly comparable to that known as "colored audition."

The Patient's Confidence.—It is impossible to write out a formula of conduct and attainment that will insure success in the acquirement and permanent possession of the confidences of patients and their friends. There are unlettered physicians exercising unethical conduct toward both patients and fellow practitioners who acquire easily and hold strangely enough the unwavering faith of a large patronage, but these are very few in number. The explanation of the success of such men is business acumen and strong personality to inspire and retain confidence along with the doing of many things necessary and unnecessary.—*Leucocyte.*

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[*For other information see second page following reading matter.*]

SATURDAY, APRIL 11, 1908.

PHYSICIANS IN SOUTH AFRICA.

The Daily Consular and Trade Reports[1] has an article on the subject of physicians in the Transvaal, which will be of interest to medical graduates who may possibly think of the opportunities usually believed to exist in South Africa, and also to physicians in this country generally, because of its professional character. There has been a feeling that the medical profession in this country is becoming overcrowded and that South Africa is a new country, and young physicians have looked longingly in that direction. In reply to many inquiries from young men about to graduate from American medical schools who think of taking up a medical career in the Transvaal, the United States Consul at Pretoria wrote as follows with regard to medical conditions in that colony:

"During the past few years a number of physicians with American degrees have made inquiries about the opportunities presented for the profession in this consular district, they having read in the newspapers and magazines the word-paintings of optimistic writers and become imbued with the desire to engage in practice here.

"To each and every one the reply has been: It is necessary for any practitioner wishing to establish himself in South Africa, first to secure a degree from a medical school within the confines of the British Empire. It is a strict law that prohibits all outsiders from entering British South Africa to engage in the practice of medicine or dental surgery. It is true, though, that a few American physicians who practiced in the Orange River Colony and the Transvaal before the Anglo-Boer war have been permitted to continue their practice, but these exceptions are not numerous.

"In the whole of British South Africa there are not over 1,000,000 white people, 300,000 of whom are living in the Transvaal, but since the intense financial depression that has hung over this country for the past year and a half there has been a great exodus of the white race from every colony, while the Asiatics have been pouring into some of the coast provinces by the thousands. Instead of welcoming an increase in the medical profession, the Transvaal Medical Society is using every endeavor to prevent the uninitiated from coming among them."

The consul points out that though the Rand has the high death rate of 18 per 1,000 as against only 11 per 1,000 in the surrounding districts, the physicians in the gold fields there find that the field is very much overcrowded. "An unusually large proportion of South Afrikanders take to medicine and law." The membership of the Transvaal Medical Society numbers nearly 400. The white population of the Transvaal is a little less than 300,000. There is about one physician, then, for every 750 persons. Allowing for natural differences, the consul says, such as the fact that the country doctor in South Africa has to deal with great distances and a sparse population, the ratio is greater than in any other country. It would not, therefore, be wise for anyone, educated in an American medical school, to go to the trouble of securing a British degree in order that he might practice in one of the South African colonies.

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[1] March 24, 1908.

THE FEEDING OF SCHOOL CHILDREN.

The recent discussions in this country as to the propriety of feeding school children, when necessary, at the public expense, lend interest to an editorial in the March *Practitioner* concerning a similar proposition now being urged on the London County Council. The *Practitioner* confesses that the London proposal is "a little difficult to criticize." On the other hand, we have a step tending strongly toward the pauperization of the community; on the other, the health of children, the "helpless objects of irresponsible parents,"—i. e., the health of the future citizens of the community—is at stake. "The problem is, therefore," says the *Practitioner*, "how to do the best for the children without striking a blow at family life or relieving the parents of a burden which it is their duty to bear." In its desire to aid in the solution of this problem, the *Practitioner* points out that there are two classes of children whom the taxpayers may fairly be asked to help: those whose parents, through misfortune, can not do their duty by them, and those whose parents are so poor that, though they do their best, they can not do enough. The real crux, however, arises in the case of "children of drunken or lazy parents who grossly neglect a duty which it is perfectly within their power to perform." The *Practitioner* thinks that "the best course would be to alleviate the sufferings of the children, but concurrently to take legal proceedings against the parents for not discharging obligations for which they have made themselves responsible."

It would seem that in such cases as the last there can be no real dilemma. The public interest in, and duty to, the children seem clear. The case as stated indicates that family life is practically dead—or, perhaps in some cases only in a cataleptic condition, but as good as dead so long as the trance continues—as it is; the parents are virtually criminals. It is difficult to see, therefore, what real objection can exist to removing the children entirely from their parents' control and making them state wards; at the same time, compelling the parents to do state work, in reformatories or otherwise, thus earning their own and their children's keep.

This would solve the problem so far as the children, and also so far as the incorrigibles among the parents, are concerned. It would probably act more powerfully than any other measure toward curing those in whom the sense of parental responsibility is only dormant; and last, but by no means least, the dread of what might happen would in all likelihood prove what is far better than any cure, a prophylactic, in cases that are only on the borderland of the disease.

AGE AND WORK.

In a recent magazine article[1] Dr. W. A. Newman Dorland discusses the "Age of Mental Virility with an Inquiry into the Records of Achievements of the World's Chief Workers and Thinkers." The article considers about four hundred distinguished men, whom everyone will concede as having done work surpassing their fellows, in regard to the age at which each did his work, the age when the career of each began, and the length of time each lived. It thus constitutes an answer to a great many questions that frequently have been under discussion. The men have been chosen from practically every kind of achievement and they fall roughly into two classes, the thinkers and the workers; that is, the men who did excellent work in literature, philosophy and other purely intellectual departments, and those who were inventors or founders of methods or the organizers of great institutions. There seems to be no doubt, therefore, that the subject matter is reasonably complete and that the conclusions reached may be depended on as representing the realities of life and of history.

The first, and probably the most interesting phase of the records is the time at which each man began his career. Practically each was what would be called a very young man when he began the special work that was to make him distinguished. The average initial age of the four hundred records is twenty-four. As Dr. Dorland comments, it is suggestive that the workers began earlier—at twenty-two—than the thinkers, whose average stands at twenty-six. Composers of music were by far the youngest, the average age at which they began being only seventeen; as might be anticipated, actors followed them very closely at eighteen. It is more of a surprise, however, to find that jurists and divines are associated with artists and warriors in the initiation of their life-work at twenty-two; dramatists and playwrights follow at twenty-three. Curiously enough, physicians and surgeons are associated in this record with poets, inventors, chemists and physicists in beginning their careers at an average age of twenty-four, and this is a middle period between the youngest and the oldest years of initial effort.

After the record of initiation of life-work probably the most interesting feature of this study is the duration of their various careers. In the four hundred records analyzed the average duration of the mental activity was forty years; for the thinkers thirty-nine, and for the workers forty-one years. This is what might be expected since the workers began their careers as we have noted a little earlier in life. The duration of activity is the shortest for poets, satirists and humorists; possibly artificial interference in the terminations of these careers has vitiated the statistics. Scientists generally had an average duration of life-work of something more than forty years. Under these circumstances it is extremely interesting to find that the lives of physicians and surgeons of distinction were well above the average since their careers lasted forty-six years. Only astronomers and mathematicians lived longer than physicians once they began their life-work and they lived but a year longer.

The length of life enjoyed by each of these distinguished men is perhaps one of the most remarkable features of the records, since there is a common impression that intellectual work has a distinct tendency to shorten life. About one-third of the four hundred died between the ages of sixty and seventy; more than one in every five lived well into the eighth decade, while about one in every fifteen lived beyond this age. Only 10 per cent. died under fifty and about 20 per cent. between fifty and sixty; 85 per cent. of the whole number lived beyond the fiftieth year and nearly one in every three beyond the span of life allotted by the Psalmist. It is evident that the ordinary impression is not founded on fact and that most great men have in them, not only the faculty of doing good work, but also the faculty for long life. These two qualities, indeed—long life and great work—would seem to be to a noteworthy degree inter-related, that is, both of them are probably dependent on a superabundant original store of vitality in the individual.

Most interesting of all is the length of the period of supreme mental activity which these men were granted in many cases. In every line of accomplishment some of them did excellent work well beyond the age of seventy-five, more than would be expected when beyond eighty, and a few patriarchs succeeded in noteworthy accomplishment even beyond the age of ninety. Gladstone became premier for the fourth time at eighty-three. Ranke, at eighty, began his History of the World, intending to complete a volume a year for fifteen years; he lived to finish twelve volumes, dying at the age of ninety-one. At eighty-nine Michelangelo painted some of his fine canvasses, while von Moltke at the age of eighty-eight was chief of staff of the Prussian army, and Pope Leo XIII still a vigorous ruler, with no sign of intellectual decrepitude, when well past ninety. Titian at ninety-eight painted his Battle of Lepanto, and Chevreul, the great scientist, whose untiring labors in the realm of color have so enriched the world, was busy, keen and active when death called him at the age of 103. Evidently work does not shorten life but probably prolongs it. The records show that precocity does not mean degeneracy and the doctrine that work that one cares for is a tonic and a precious stimulant must be accepted.

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[1] Century Magazine, April, 1908.

THE LAYMAN AND THE GREAT AMERICAN FRAUD.

The series of articles which appeared in *Collier's Weekly* some two years ago under the caption "The Great American Fraud," aroused no little trepidation among the "patent-medicine" men whose atrocious villainy was so thoroughly and so mercilessly exposed. But these men were hopeful, for they felt that the articles, appearing as they did in a weekly paper, would be ephemeral, that the sensation created would be effaced by newer topics, and that when the articles came to an end the indignation they aroused would pass into that oblivion in which so many reform movements find a resting place. This, in fact, might easily have occurred had it not been for the general awakening of the national conscience and the renewed interest on the part of the public in campaigns against frauds of all kind.

The splendid work done by Mr. Adams, it seemed to us, was deserving of the widest possible publicity in a more permanent and accessible form, that it might be of future as well as of present value. With this object in mind, permission was secured from *Collier's Weekly* to reproduce these articles in pamphlet form. It was anticipated that the demand for them would be limited to physicians, but such did not prove to be the case. While many physicians have obtained these pamphlets, the demand from this source did not prove so great as was anticipated. On the other hand, orders began to come in from the beginning from lay societies and individuals. Such orders have steadily increased. The first edition was soon exhausted, as also a second, and a third, and now the fourth edition is in preparation. Probably for every pamphlet sold to physicians, sixty or seventy-five have been sold to laymen.

One layman deserves especial mention. This gentleman, who has retired on the honors of a successful business life, said in his first communication that he wanted to devote the rest of his life to doing good and that he did not know what better work he could do than to circulate these "Great American Fraud" reprints. His first order was for one thousand copies, and his last order now brings the total number of copies ordered by him up to a little over thirty thousand. He is very careful not to have his name known in connection with the matter, lest his business—or rather the business of his children—would be injured by the "patent-medicine" men if they knew he was doing this work. He is at present distributing the pamphlet to the students of selected educational institutions, so that young men may have a knowledge of the selfish and cold-blooded conspiracy against the public health on the part of nostrum makers. Through the munificence of this gentleman, between two and three thousand public and other libraries in the majority of the states in the Union have already been put in possession of copies for the enlightenment of their patrons. In this distribution he has been ably assisted by the Department of Medical Temperance of the National Woman's Christian Temperance Union.

The gratifying and encouraging feature connected with the circulation of these enlightening pamphlets is that whereas it was anticipated that they would be utilized by physicians only, it transpires that it is aroused laymen, and not physicians, who are making use of them. The far-reaching effect of this enthusiastic lay cooperation in the education of the public regarding this cruel fraud can hardly be overestimated.

CANCER RESEARCH.

The reports of the Cancer Laboratory of the New York State Department of Health, for 1904-5 and for 1905-6, recently published, indicate the direction in which the investigation of this important problem is moving, and give at least an outline of the problems which the investigation may be expected to solve. The principal reports deal with the spontaneous cure of cancer and with the occurrence or production of immunity in experimental animals and with the question of the contagiousness of malignant tumors.

These reports are by Gaylord and Clowes and consist of a paper in the 1904-5 report discussing the presence of an immune body in the serum of mice which have recovered from cancerous tumors, and another paper in the 1905-6 report citing the evidences of the spontaneous cure of these tumors in mice and a collection of clinical cases from the literature. The authors have been able to find fourteen cases of well-authenticated cures, in which tumors, proved to be carcinoma by histologic examination, have disappeared. In addition, eight cases are reported in which there was little doubt of the correctness of the diagnosis although it did not rest on histologic evidence.

These articles furnish evidence that the malignant growth can be resisted by the organism under certain circumstances. In other cases, an arrest of the growth occurs, but afterward the immunity is lost and the tumor begins to grow again. Spontaneous cure of mice occurs in about 23 per cent. of cases, the chances of cure being inversely proportional to the size of the tumor. The experiments seem to indicate that the immunity is secured by the development of some immunizing substance in the body of the affected animal and this immunity can be conveyed in a minor degree by injection of the serum of an immune animal into the body of a susceptible animal. The investigations indicate that the cure of the malignant growth is secured, not by cytolysis, but by some process which restores the aberrant cells to their normal functions. The immunity appears to result from the actual growth of the tumor in the organism as the injection of nucleoproteids derived from the most malignant tumors failed utterly to confer immunity. Mice which have recovered from malignant tumors are not reinoculable with tumors of the same virulency, and show resistance to those of a greater degree of virulency.

The article by Gaylord and Clowes showing the communicability of cancer is reprinted from The Journal,[1] and describes the infection of mice with tumors from being placed in infected cages.

The reports present an important contribution to the literature of cancer research and indicate the possibility of a final solution of the problem of immunity, although the discovery of the cause of malignancy seems to be still in the distant future. The results already attained and the importance of the end in view warrant the continuance of the work and should stimulate other investigators to repeat and extend these experiments.

THE LEGAL DETERMINATION OF INSANITY.

Public sentiment is rapidly developing an opposition to the present methods of procedure in the trial of criminal cases in which abnormal mental conditions form a factor. The legal methods at present pursued are an inheritance from the days of the old English common law, under which an individual accused of insanity was treated as a criminal and put on trial as though accused of some violation of the law. The absurdity of present methods has been emphasized of late by several conspicuous examples. Not only have medical journals reiterated statements long accepted by the medical profession, but editors of lay newspapers as well have been moved to comment on the need of reform. A particularly timely comment appeared recently in the San Francisco *Chronicle,* which said editorially: "If the criminal is insane, let him be committed to an asylum. If he is not insane, let him be brought to trial and dealt with according to the law and the evidence. It is a travesty on justice to submit the question of sanity or insanity to an ordinary jury on the testimony of paid experts, as to the probable mental condition of the person committing a certain act under circumstances described in a 'hypothetical question,' which it may take fifteen minutes to read and which only a highly trained intellect can follow and comprehend. An insane person ought not to be tried for crime at all, and if the plea of insanity is raised in a criminal case it should be passed on by qualified authorities before any trial is held." The *Chronicle* has adequately summarized the fallacies of present court procedure. Insane individuals should be given proper treatment rather than be subjected to the mental strain and excitement of a protracted trial. The question of insanity, however, should be determined prior to the trial and not as a part of it. The absurdity of submitting a pathologic question to an ordinary jury is only equaled by the absurdity of propounding to partisan experts absurd hypothetical questions the answers to which have been determined before the questions are put. A legal system which lacks an impartial method of determining mental conditions and moral responsibility is as deficient as would be a legal organization which had no machinery for carrying its decrees into effect. It is time the pathology of the dark ages was eliminated from modern jurisprudence.

MALARIA IN ANTIQUITY.

A British scholar, Mr. W. H. S. Jones, has published an essay, reviewed in *Nature,*[1] arguing that the decline of Greek greatness in the fourth century B. C. was due to the introduction of malaria. The original suggestion seems to have been due to Major Ronald Ross, and Mr. Jones has sought through Greek literature for references to malaria and finds, with a single exception in the Iliad, none earlier than 422 B. C. The word πυρετός. used generally in the plural, for malaria, occurs in the "Wasps" of Aristophanes at that date, and later becomes common, together with the word μελαγχολία, which he interprets as signifying the malarial cachexia. He concludes that malaria was prevalent in many parts of Greece from the fourth century B. C. onward, and that the change noted by historians in the Greek character at that time can be partially attributed to this cause. By a curious slip of the author or his reviewer this introduction is credited to Greek slaves or perhaps to Carthaginians coming from Italy, where, it is later stated, malaria probably did not exist much before 200 B. C. so far as evidence obtained by similar research shows. If this were so, it would appear that we must look elsewhere for the source of the Greek infection. It would appear not at all improbable that malaria was not so widely prevalent on the shores of the Mediterranean in the best days of the classic civilization as it has been since, but it is doubtful whether or not satisfactory evidence to that effect can be obtained from the literature of antiquity. It is, however, a legitimate field for speculation and if research of this kind will throw light on history it is worth encouraging.

A NOTEWORTHY DECISION TO PROTECT WOMEN.

An Oregon statute limiting the hours of women's labor has been declared constitutional by the United States Supreme Court in a unanimous decision. Of course this applies particularly to the employment of women in occupations outside of house duties in which hours of labor can hardly be successfully limited by law. As the old saying is: "A woman's work is never done," that is, it is practically continuous. There is a great difference, however, in the driving yet monotonous task of the factory and employment in household labors, so far as woman's welfare is concerned, and it is worth especially noting that in this case the physical welfare of women was the main point in the argument for the state. The brief contained, it is said, 113 pages, of which two were given to legal points and the remainder to stating the facts as to women's labor and its effect on health and motherhood. The future of the race was held to be imperiled if legal restrictions could not be imposed on the exploitation of women's labor. The decision is considered as one of far-reaching importance as regards future legislation on regulation of employment of women and children and as establishing the principle that the state can constitutionally control such matters affecting the physical welfare of future generations. The state's brief, giving the medical facts bearing on the employment of women in the industries, it is said will be printed for general distribution by the Russell Sage Foundation for the improvement of social conditions.

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[1] Jan. 5, 1907.

[1] March 19, 1908.

RECENT MERGERS IN MEDICAL EDUCATION.

Two weeks ago we referred to the merger of the Medical Department of Hamline University with the College of Medicine of the University of Minnesota, which left one medical school in Minnesota, and that one the Medical Department of the State University. And now we are glad to record[1] another important merger or union of medical teaching institutions. Some two years ago the various regular medical schools of Indiana, at a great sacrifice on the part of many members of the faculties of these institutions, gave up their existence and merged into the Medical Department of Purdue University, the object being to unite all the medical schools of the state into a medical department of one of the universities. This attempt failed, however, and there have been two schools, one connected with Purdue University and the other with Indiana University, both being really state supported institutions. Persistent efforts on the part of a few public-spirited men in the profession, with the cooperation of the presidents of the two universities interested, have at last succeeded in accomplishing what was attempted two years ago. By agreement between the two universities, it has been determined to establish a single medical department in connection with the University of Indiana, the Purdue University voluntarily giving up its medical department. As we understand it, the arrangement adopted for the new school is that known as the Cornell plan. The medical school proper—the clinical work—will be at Indianapolis, but the student will have the privilege of taking the first two years of the medical course either at Bloomington, the seat of the State University, or at Indianapolis, as preferred. The mergers in these two states have been brought about through a recognition of the increased demands of modern medicine and show what splendid spirit of self-sacrifice is being manifested in the endeavor to attain higher medical standards.

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1. Indiana News, page 1199.

Transplantation of Blood Vessels.—C. C. Guthrie, in the *American Journal of Physiology*, states that a segment of cat's aorta transplanted between the ends of the divided common carotid artery of a dog was [illegible] by direct examination at the end of fifty days to be adequately performing its new circulatory function, and apparently to be in good condition; while a segment of rabbit's aorta similarly placed in another dog showed similar results at the end of thirty-one days.

Medical News

COLORADO.

Insists on Having Appendix.—A druggist of Denver is said to have refused to pay a local surgeon, who removed his appendix, until the surgeon produced the appendix. The surgeon is said to have thrown away the appendix, and to have brought suit against the druggist for the amount of his bill, which was $225.25.

Jury Disagrees in Malpractice Suit.—In the case of Mrs. Belle-Howard, Denver, who is said to have sued Dr. Frank M. McCartney for $25,000 for malpractice, based on alleged failure to diagnose appendicitis, and improper care of wound after operation, the jury is said to have disagreed after a deliberation of 26 hours, standing 9 for the defendant and 3 for the plaintiff.

CONNECTICUT.

Medical Society Incorporated.—The Waterbury Medical Association filed a certificate of incorporation, at the office of the Secretary of State, March 23, the object being to "establish the practice of medicine and surgery in Waterbury, on a respectable footing, mutual improvement, and to promote good standing with each other."

Popular Lectures.—The Bridgeport Medical Association has joined the Bridgeport Scientific and Historical Society this season in its series of popular lectures, which have been well received and very successful. Of the series of nine lectures, six were given by physicians on subjects of such character as to enlighten the public on matters of hygiene, sanitation and prevention of infectious diseases.

Infectious Diseases.—During February, there were reported 3 cases of smallpox, with no deaths; more than 434 cases of measles, with 13 deaths; 197 cases of scarlet fever, with 8 deaths; 3 cases of cerebrospinal fever and 6 deaths; 119 cases of diphtheria and 18 deaths; more than 35 cases of whooping cough, with 6 deaths; 36 cases of typhoid fever, with 14 deaths, and 54 cases of tuberculosis.

February Deaths.—There were 1,511 deaths reported to the State Board of Health in February, equivalent to an annual mortality of 17.7 per 1,000. Of the deaths, 253 were of infants under 1 year; and 82 of children from 1 to 5 years of age, equivalent to a total percentage of 22.2. Chief among the death causes were: Pneumonia, 191; diseases of the nervous system, 167; heart diseases, 150; consumption, 118; influenza, 96; and accidents and violence, 65.

DISTRICT OF COLUMBIA.

Donation to Hospital.—At the annual banquet of the Georgetown University Hospital, held February 22, Abraham Lisner, a guest, offered a donation sufficiently large to pay for the construction of the greatly desired new building. This addition to the main building of the hospital will be 30 by 60 feet, 5 stories in height, and will cost from $25,000 to $30,000. Two operating rooms in the building will be furnished by Dr. George M. Kober.

ILLINOIS.

Physicians' Club Election.—At the annual meeting of the Canton Physicians' Club, Dr. W. E. Shallenberger was elected president; Dr. James E. Coleman, vice-president, and Dr. Martha A. Richardson, secretary.

Personal.—Dr. Robert A. Kerr, Peoria, who was taken ill with heart disease and became unconscious at the Creve Coeur Club March 21, has recovered.——Dr. Harriet Hook, an attaché of the Illinois Institution for Feeble-Minded Children, Lincoln, is said to have resigned on request of the civil service commission.

Smallpox.—Smallpox is reported from Monee.—Smallpox has broken out in Lyons Township, Cook County.——On account of the prevalence of smallpox the mayor of Hillsboro has ordered all churches and places of public gathering closed.——Eureka claims that it has only 3 cases of smallpox instead of the large number reported in the daily press.——At Chenoa 4 cases of smallpox are reported.

Chicago.

Deaths of the Week.—During the week ending April 4, 637 deaths were reported, 23 fewer than for the preceding week and 49 fewer than for the corresponding week of 1907, the respective annual rates being 15.33, 15.89 and 16.97 per 1,000. Chief among death causes were: Pneumonia, 99; consumption, 59; nephritis, 51; violence (including suicide), 44; heart disease, 43, and cancer, 30.

Personal.—Dr. Guy W. Wagner, who has been ill with pneumonia for two months, has recovered and resumed practice. ——Dr. Arthur W. Meyer of Johns Hopkins University, Baltimore, has been made professor of anatomy, and Dr. Alfred U. Richards of Columbia University has been made professor of pharmacology in the Northwestern University Medical School. ——Dr. Dudley Jackson, for five years superintendent of Wesley Hospital, who has resigned and resumed private practice, was presented with a silver loving-cup by the employés of the institution, March 31.

Contagious Diseases.—There is a marked improvement in the diphtheria situation, the 57 cases reported being 48 fewer than for the preceding week and 31 fewer than for the corresponding week of last year. Scarlet fever shows a slight increase, there being 93 cases as against 84 in the preceding week, but 71 fewer than in the corresponding period of 1907. A total of 309 cases of measles was reported during the week, 14 more than for the preceding week and 183 more than for the corresponding week of last year. Only one case of smallpox was discovered during the week. There are now 16 cases of smallpox at the Isolation Hospital.

INDIANA.

Personal.—At the annual meeting of the Physicians' Defense Company, held in Fort Wayne, March 10, Dr. Miles F. Porter was re-elected president.

Illegal Practitioner Fined.—J. H. Coleman, Bloomington, charged with practicing medicine without a license, is said to have pleaded guilty March 20 and to have been fined $25 and costs.

Instruction of Medical Officers.—At the school of instruction for medical officers of the Indiana National Guard, held in Indianapolis, March 20, the rôle of flies, mosquitoes, malarial germs and company cooks in connection with disease, was considered.

Physician Sues Physician.—In the Superior Court at Fort Wayne, March 23, Judge O. N. Heaton refused to issue an injunction to prevent Dr. Joseph D. Morgan from practicing medicine in Monroeville and its vicinity. Suit was brought by Dr. James C. Cowan, who alleged that he had bought Dr. Morgan's practice in Monroeville, with the understanding that the former owner should not interfere.

District Society Organized.—The physicians of Clay, Parke, Vermillion, Vigo and Putnam counties met in Terre Haute March 11 and organized the Fifth District Medical Society, with the following officers: Dr. Fred C. Dilley, Brazil, president; Drs. Eugene Hawkins, Greencastle, and Charles M. White, Clinton, vice-presidents; Dr. Randolph J. Gillam, Terre Haute, secretary, and Dr. Myron A. Boor, Terre Haute, treasurer. A constitution and by-laws was adopted. The society is to meet in March and May, the spring meeting being always held in Terre Haute.

February Diseases and Deaths.—During February 3,396 deaths were reported, or 123 more than for the corresponding week of last year. The most prevalent diseases were: Influenza, pneumonia, bronchitis and tonsillitis. The annual death rate for the state was 15.8 per 1,000. Of infants under one year of age there were 444 deaths, or 13.7 per cent. of the total, and of individuals 65 years and over, 1,153 died, or 35.8 per cent. of the total number. Pneumonia caused 509 deaths; consumption, 398; influenza, 332; violence, 146; cancer, 124; measles, 53; typhoid fever, 47; diarrheal diseases of children, 37; diphtheria, 25; scarlet fever, 15; whooping cough, 14, and cerebrospinal meningitis and puerperal fever, each 13. One death was reported from smallpox during the month.

Union of Two Indiana Medical Colleges.—An agreement has just been made whereby the Indiana Medical College, the School of Medicine of Purdue University, will merge with the Indiana University School of Medicine, the new school thus formed to bear the latter name. The complete text of the agreement between the two schools is as follows:

> The efforts of Indiana University and of Purdue University to promote medical education in this state through co-operation with the members of the profession and with existing proprietary medical schools have been undertaken in good faith and with the one aim of establishing this important branch of professional training on a sound educational basis. Indiana University has sought for many years to establish and develop such a department in which efforts it has encountered many obstacles but has made continuous progress. Purdue University entered this field only when convinced that a service could be rendered to the profession and to the state by the tender of its offices in consolidating existing courses and aiding in the evolution of a single, strong medical school at Indianapolis under the auspices of the state and with the co-operation of other educational interests, a task which was undertaken only after it seemed that other efforts in this direction had failed.
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> Out of these efforts by the two institutions had grown an unfortunate controversy which operated to confuse the situation and becloud, in the minds of the public, the true relations of the universities. In the belief that the present conditions are delaying the educational progress and interfering with the highest functions of the two universities the logical conclusion follows that the two medical schools now in operation in Indianapolis under the direction of the two universities should be united in one school, and that this should be under the exclusive control of one or the other of these universities.
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> Since Purdue University has at no time regarded a department of medicine as an essential part of its program, and, on the other hand, Indiana University believes that it has been especially charged with the responsibility for such instruction, the latter institution has been selected to proceed in the matter, and the trustees of the two universities have this day mutually agreed to the following conditions to which the faculties of their respective medical schools assent, namely:
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> To a union of the two medical schools under the direction of Indiana University.
>
> To a selection of the faculty of the new school with due regard to the members of the present faculties.
>
> And to the maintenance of a complete medical course in Indianapolis as well as the two-year course in medicine at Bloomington.
>
> Only in this way does it seem feasible to accomplish the ultimate purpose of developing for the state a sound system of medical education, which has been the aim of both parties in their efforts in the field, as well as to promote the harmonious and friendly relations so essential to the proper discharge of the functions of both universities.
>
> It is hoped, therefore, that the citizens of the state, whether remotely or intimately interested in this question, will accept the above decision as evidence of the disinterested motives of these institutions, and their desire to serve the state with undiminished energies.
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> W. L. BRYAN,
> President Indiana University,
> W. E. STONE,
> President Purdue University.
>
> Indianapolis, April 4, 1908.

IOWA.

Personal.—Dr. A. L. Wright, Carroll, local surgeon for the Chicago & Northwestern Railway Company, who was seized with an acute attack of appendicitis, March 14, and underwent operation at St. Anthony's Hospital, Carroll, on the same day, is reported to be convalescent.

Communicable Diseases.—The high school of Auburn was closed March 18 for a week, on account of the prevalence of a rash, the nature of which was not determined, among the children. ——Several cases of typhoid fever have appeared at Hampton. ——There have been no new cases of diphtheria at Iowa City, but the quarantine at the fraternity house is still in force. ——Two smallpox cases are reported from Davenport. ——A case of smallpox was discovered on a street car in Des Moines, and the patient was removed to the Isolation Hospital. ——The public schools of Belmond have been closed on account of the prevalence of smallpox. ——About 15 cases of smallpox are reported from Pleasant Township, near Ottumwa. ——An epidemic of smallpox is reported from Waterville.

MARYLAND.

Baltimore.

Physician Wins Suit.—The suit against Dr. Robert W. Johnson for $10,000, for alleged improper and unskilful treatment of a broken ankle, has been decided in favor of the defendant.

Suits Against Hospitals.—A patient at Franklin Square Hospital has brought suit against that institution for $10,000 damages, for injuries alleged to have been received by the application of a hot-water bag while the plaintiff was under the influence of an anesthetic. ——Another patient has sued the same hospital for $5,000, for failure to cure him by an operation for hernia.

MISSISSIPPI.

University Medical Department Removed.—The trustees of the University of Mississippi, on March 13, by a vote of 8 to 7, agreed to accept the offer of Vicksburg to donate to the university its Charity Hospital, in the name of the state, and as a part of the medical department of the university. It was also agreed by the County of Warren and the city council of Vicksburg to continue their annual appropriations to support the institution.

NEW JERSEY.

Opposed to Lodge Work.—The Bayonne County Medical Society, at its meeting March 19, adopted resolutions amending the by-laws so as to restrict its members from doing lodge work.

Accused Physicians Discharged.—The coroner on March 9 discharged Dr. Charles Whitehead, Vineland, said to be known as Dr. Charles Johnson, Philadelphia, accused of causing the death of Helen Thorpe by an operation, as there was no evidence to connect the physician with the death.——Dr. Johannes Braun, Passaic, alleged to have obtained money received in trust, was acquitted in the Court of Sessions March 4.

Personal.—Dr. Thomas J. Smith, president of the board of managers of the State Epileptic Village, Skillman, has resigned.——Dr. John A. Beck of the Gloucester board of health is seriously ill with typhoid fever.——Dr. Harry Jarrett, Camden, who has been seriously ill with pneumonia, is now reported to be improving.——Dr. Lewis R. Souder, Atlantic City, has been re-elected physician of Atlantic County.——Dr. Walter B. Johnson, president of the Paterson Hospital Association, has resigned.

NEW YORK.

Clinical Society Organized.—The active and consulting staff of Paxton Hospital, Utica, at a meeting held March 26, organized a clinical society with the following officers: President, Dr. James H. Glass; vice-president, Dr. C. A. Baldwin; secretary, Dr. Frederick H. Brewer, and treasurer, Dr. John Groman.

The Harburg Bill.—Mayor McClellan has signed Coroner Harburg's bill to prevent the embalming of the body of any person dying under suspicious circumstances without the permission of the coroner. The penalty for violation is imprisonment for not less than one year or a fine not exceeding $500, or both fine and imprisonment. This bill awaits only the governor's signature to become law.

To Amend New York City Charter.—A bill has been introduced into the legislature amending the city charter so as to take from the county superintendent of the poor of New York City, and the overseers of the poor in other counties in the city, the care of the insane in Manhattan and Bronx boroughs and to transfer it to the trustees of Bellevue and the Allied Hospitals, in Kings, Queens and Richmond boroughs to the commissioner of public charities.

Antituberculosis Campaign in Rochester.—Under the auspices of the Rochester Public Health Association, the traveling tuberculosis exhibit of the State Department of Health was at Rochester from March 30 to April 3. The lectures, illustrated by stereopticon views, were given twice daily, and a mass meeting is to be held at the Lyceum Theater April 6, at which the principal address will be given by Dr. S. A. Knopf, New York City, on "Everybody's Duty in the Fight Against Tuberculosis."

Personal.—Dr. Daniel S. Burr has been appointed health officer of Binghamton.——Dr. John Dugan has been appointed health officer of Albion, vice Dr. Arnold E. Wage.——Dr. Horace L. Leiter, Syracuse, has been appointed physician to Onondaga County penitentiary, vice Dr. Louis Wheeler, Pompey.——Dr. Arthur A. Gillette has been elected president; Dr. Thomas G. Nock, vice-president, and Dr. James H. Whaley, secretary-treasurer, of the medical staff of the Rome City Hospital.——Dr. Royal E. Cochrane has been re-elected health officer of Penfield.

Epidemic Diseases.—Scarlet fever has developed among pupils of the public school in Bolivar.——Six cases of smallpox have been reported in Fayette.——The smallpox epidemic at Waterloo is reported to be abating.——There have been 4 cases of smallpox at Ogdensburg, all said to have been imported from Canada.——There are reported to be more than 200 cases of measles in Binghamton.——Concordia College, Hawthorne, was closed March 31 in order to prevent the spread of diphtheria among the students. It was said that one-seventh of the students had to undergo treatment, and while the first case developed ten days previous to closing the school, several new cases were reported on April 1.

New York City.

Will Enlarge Infant Asylum.—Plans have been filed for the enlargement of the New York Infant Asylum, at Amsterdam Avenue and Sixty-first Street. Three stories will be added at a cost of $30,000.

Harvey Society Lecture.—The Harvey Society lecture on April 11 at the New York Academy of Medicine is by Prof. E. A. Schafer of the University of Edinburgh on "Artificial Respiration in Man."

Endowed Beds for Physicians.—St. Luke's Hospital has received $20,000 from Maria L. Campbell as an endowment fund for beds in that institution for the exclusive use of physicians. Any physician may avail himself of one of these beds by applying to the superintendent of the hospital.

Many Bequests to Charity.—By the will of the late Dr. John Ordronaux the following bequests are made to hospitals: New Amsterdam Eye and Ear Hospital, New York City, $6,000; Nassau Hospital, Mineola, L. I., $6,000; Flushing Hospital, Flushing, L. I., $6,000; Jamaica Hospital, Jamaica, L. I., $6,000; Norton Hospital, Taunton, Mass., $6,000, and Mary Hitchcock Hospital, Hanover, N. H., $6,000.

Hospital Annex Opened.—The new annex for contagious diseases connected with the German Hospital was formally opened March 27. It is a two-story structure containing 16 rooms and cost $30,000, the greater portion of which was donated by Jacob Ruppert. There is a separate ventilation system for each room and the air before entering a chimney passes through a flame that kills all microbes.

Benefit for New Maternity.—A vaudeville entertainment was held in the Grand Central Palace for the benefit of the Jewish Maternity Hospital, at which about $10,000 was raised. This money will be applied at once to the alterations now in progress in the buildings on East Broadway which are being converted into a maternity hospital at a cost of $30,000. The nursery in connection with this institution will be opened in about six months.

City to Have New Tuberculosis Hospital.—Following the request for an appropriation for funds to build a new hospital for consumptives on Blackwell's Island, Comptroller Metz made a trip of inspection of the island and found 800 patients in the tuberculosis department where there should be only 350. In one room he found 190 patients huddled together, and in the corridor there were 50 beds with no spaces between them. The appropriation will undoubtedly be made.

Epidemics in Children's Institutions.—At St. Malachy's Home, in East New York, there is an epidemic of measles following an outbreak of scarlet fever.——The Home for Destitute Children, in Sterling Place, and St. Mary's Home for Boys and Girls, in Dean Street, are struggling with epidemics of measles.——The Home for Friendless Children has an epidemic of chickenpox. All of these institutions are overcrowded, which makes it impossible for them to care for the children properly.

Osteopaths Not Physicians.—Acting Corporation Counsel George L. Sterling, in arguing that osteopaths should not be registered as physicians by the board of health, recommended that they should not be considered physicians within the meaning of the law in case of death of a patient, and that the whole question be investigated and passed on by a court. His opinion reads that "the practice of osteopathy is mentioned as distinct from the practice of medicine. The holder of a license to practice osteopathy is not allowed to practice medicine except so far as osteopathy enters the field of medicine. The holder of such a license derives from the act no new right except the privilege of practicing osteopathy, provided neither drugs nor surgical instruments are used."

Contagious Diseases.—There were reported to the sanitary bureau for the week ended March 21, 507 cases of tuberculosis, with 168 deaths; 397 cases of diphtheria, with 53 deaths; 1,607 cases of measles, with 33 deaths; 961 cases of scarlet fever, with 37 deaths; 27 cases of typhoid fever, with 4 deaths; 21 cases of whooping cough, with 3 deaths; 10 cases of cerebrospinal meningitis, with 9 deaths, and 218 cases of varicella, a total of 3,748 cases and 307 deaths. There were also reported for the week ended March 28, 1,813 cases of measles, with 38 deaths; 1,113 cases of scarlet fever, with 40 deaths; 539 cases of tuberculosis, with 200 deaths; 405 cases of diphtheria, with 58 deaths; 22 cases of typhoid fever, with 4 deaths; 17 cases of cerebrospinal meningitis, with 8 deaths; 15 cases of whooping cough, with 3 deaths, and 135 cases of varicella, making a total of 4,059 cases with 351 deaths.

PENNSYLVANIA.

To Fight Tuberculosis.—The Health Department, in conjunction with the State Board of Charities, is organizing a campaign against tuberculosis among the inmates in prisons, charitable institutions and almshouses. The reporting of such cases has always been part of the medical officers' duty in these institutions, but now the state authorities intend to take steps leading to the adoption of new methods for combating the disease.

Philadelphia.

Changes in Hospitals.—Dr. Joseph Neff has made the following appointments: Dr. Samuel S. Woody, formerly physician in charge at the Mary Drexel Home, appointed chief resident physician at the Municipal Hospital to succeed Dr. Franklin B. Royer, resigned; Dr. Edward K. Mitchell made third assistant resident physician on the non-salaried staff at the Municipal Hospital, to succeed Dr. Charles J. Swlam, promoted to second assistant resident physician, and Dr. Henry J. E. Newman appointed resistrar at the Philadelphia General Hospital, to succeed Dr. Charles M. Montgomery, resigned.

Bequests.—The will of the late Kate O'Keefe devises $1,000 to the St. Vincent's Home Maternity Hospital, and after making bequests to other institutions and a few private bequests, the residue of the estate is left to the Free Hospital for Poor Consumptives.

Officers Elected.—At the annual meeting of the Philadelphia Alumni Association of the Medical Department of the University of Pennsylvania, held on March 21, the following officers were elected: President, Dr. J. Allison Scott; honorary vice-president, Provost C. C. Harrison; vice-presidents, Drs. Richard C. Norris, Howard Sipple and De Forest Willard; treasurer, Dr. Herbert B. Carpenter; secretaries, Drs. Benjamin F. Stahl and William S. Ray; and executive committee, Drs. Louis Adler, Clarence P. Franklin, David Parrish, George B. Wood and Louis A. Salade.

TENNESSEE.

Medical Society Meeting.—At the meeting of the Humphreys County Medical Society, held in Waverly, March 9, the society was reorganized, with the following officers: Dr. Jasper N. Smith, Cuba Landing, president; Dr. D. C. K. Binkley, Denver, vice-president; and Dr. John A. Sugg, Bold Spring, secretary.

Medical College Chartered.—The charter of the Nashville Medical College was registered March 13. The capital stock of the college is $2,300 and the incorporators are: Drs. Hilliard Wood, Paul F. Eve, William E. McCampbell, James S. Ward, Perry Bromberg, Robert O. Tucker, Daniel B. Blake and William D. Haggard.

Douglas Memorial Services.—The physicians and surgeons of Nashville held memorial services, March 10, for the late Dr. Richard Douglas. Dr. Richard A. Barr spoke on "Dr. Douglas as a Surgeon;" Dr. Perry Bromberg, on "Dr. Douglas as an Author;" Dr. George H. Price, on "Dr. Douglas as a Man;" Dr. William H. Witt, on "Dr. Douglas as a Teacher," and Dr. Holland M. Tigert gave "Personal Reminiscences of Dr. Douglas."

Epidemic Diseases.—Maryville reports 8 cases of cerebrospinal meningitis with 4 deaths. Two other cases have occurred in the county, with one additional death.——Measles is reported to be epidemic at Yokely and Watertown.——Smallpox is reported from Obion County.——The isolation hospital at Murfreesboro has been full of smallpox patients for almost three months. Five new cases were found March 18.——There are said to be about 20 cases of smallpox on Kelley's Creek, near Elkton.

Personal.—Dr. Frank A. Washburn, Nashville, underwent a serious operation at the Colorado Sanitarium, Boulder, March 12.——Dr. M. M. Butler, Bristol, was presented with a gold-headed cane by the Bristol Medical Society, March 25, in honor of the seventieth anniversary of his birth.——Dr. Hardin P. Cochran, Franklin, has been elected, by the Williamson County Medical Society, a delegate to the International Congress on Tuberculosis, and Dr. Kirby S. Howlett, Franklin, a delegate to the Tennessee State Medical Association.——Dr. Cummings Harris has been appointed a member of the Memphis Board of Health.

TEXAS.

Personal.—Dr. Carolina A. Loomis, formerly of San Angelo, has entered on her duties as assistant physician to the State Lunatic Asylum, Austin.——Dr. Thomas J. Milner has been appointed smallpox physician of Greenville County.

Communicable Diseases.—An epidemic of diphtheria is reported from Chilton.——Several cases of smallpox are reported among negroes at Nacogdoches.——Smallpox is reported in 51 counties of the state, with a total of 569 cases, almost all of mild type.——There are 15 cases of smallpox quarantined at Sabinal.——There are said to be 25 or 30 cases of smallpox in Troupe.

Quarantine On.—At the instance of State Health Officer Brumby, Governor Campbell has issued the annual quarantine proclamation, which became effective March 15. The law is effective on the Gulf Coast and Rio Grande border. The quarantine has been put in force two weeks earlier than usual, owing to the prevalence of sporadic cases of yellow fever in Cuba.

Sale of Medical Certificates.—J. J. Davis, special agent of the state medical board, is said to have filed a complaint against a Denison physician, the charge growing out of the disposition of certificates from the old medical board, which was in existence prior to July 12, 1907, when the present medical act went into effect. Large numbers of these certificates, which had been ordered to be destroyed, were, it is said, sold to persons who desired to practice medicine, bringing prices ranging from $50 to $500.

VIRGINIA.

District Society Organized.—On March 5, 45 members of the Medical Society of Virginia met in Newport News and organized the First District Medical Society, electing Dr. John W. Ayler, president, and Dr. John R. Bagby, secretary, both of Newport News.

Richmond Deaths.—During February there were reported 235 deaths in Richmond, equivalent to an annual death rate of 26 per 1,000. Chief among death causes were: Pneumonia, 49; tuberculosis, 21; heart diseases, 20, and bronchitis and nephritis and violence (suicide included), each 10.

New State Board of Health.—In accordance with the provisions of the bill adopted by the recent session of the general assembly, the governor has made the following appointments to the State Board of Health: Dr. Ennion G. Williams, Richmond, health commissioner; Drs. George Ben Johnston and Stuart McGuire, Richmond, at large; Dr. Samuel W. Hobson, Newport News, first district; Dr. Charles R. Grandy, Norfolk, second district; Dr. John B. Fisher, Midlothian, third district; Dr. William F. Drewry, Petersburg, fourth district; Dr. Lewis E. Harvie, Danville, fifth district; Dr. Rawley W. Martin, Lynchburg, sixth district; Dr. Samuel P. Latane, Winchester, seventh district; Dr. William M. Smith, Alexandria, eighth district; Dr. James H. Dunkley, Saltville, ninth district, and Dr. Reid White, Lexington, tenth district. The bill provides for a commissioner with a salary of $3,500 a year; one assistant commissioner, $2,500 a year; one bacteriologist, $2,500 a year; one clerk, $1,200 a year, and such other clerks and assistants as may from time to time become necessary. The members of the board receive no salary, but are paid a per diem of $8 when on duty.

Contagious Diseases.—Diphtheria in malignant form is said to have broken out in Middlesex County, where 5 deaths have occurred, and 20 persons are now in quarantine.——Diphtheria is reported to be epidemic in Lovettsville, in Lowden County. The public schools of Lovettsville, and schools and churches in the neighborhood, have been closed in consequence of the disease.——There are said to be about 2,000 cases of German measles in Richmond.——On account of the refusal of certain persons living southeast of Roanoke to submit to vaccination, and because of several cases of smallpox in that section, policemen have been stationed at each point leading to the suspected territory, to prevent persons entering or leaving Roanoke by these routes.——The public schools of Bowling Green, which have been closed for more than a month on account of the prevalence of smallpox, have been reopened.——The graded schools of Craigville, Augusta County, were closed March 16 on account of the prevalence of smallpox. There are said to be 4 cases in the village.——Smallpox is said to be increasing in Upper Spottsylvania, and compulsory vaccination is contemplated.

GENERAL.

Reception at Hospital.—The medical officers of the Division Hospital, Manila, gave a reception to the Philippine Islands Medical Association and delegates at the hospital February 27. A clinic was held in the morning, after which luncheon was served.

Dr. Koch Arrives.—Dr. Robert Koch and wife arrived at New York from Bremen on the *Kronprinzessen Cecilie*, April 7. It is the first visit of the eminent scientist to this country. The German Medical Society give a banquet in honor of Professor Koch April 11.

Countries Quarantined.—Since March 12 Cuba has decreed quarantine with reference to yellow fever against Guatemala, Honduras, Nicaragua, Costa Rica, Panama (the Canal Zone being excepted), British, Dutch and French Guiana, Brazil, Trinidad, Curacao and Barbados. No quarantinable disease was reported for the week ended March 14 at Cienfuegos, Havana, Matanzas or Santiago.

Graduation Exercises.—A class of 31 was graduated from the United States Navy Medical School, Washington, at its annual commencement exercises, March 30. Surgeon-General Presley M. Rixey presented the diplomas, and Dr. Hobart Amory Hare, Philadelphia, Surgeon-Colonel William G. McPherson, Royal Army Medical Corps, and Medical Director John C. Wise, U. S. Navy, dean of the school, delivered addresses.

Tardy Recognition.—The senate on March 30 passed a bill to increase the pensions of the widows of the late Major James Carroll, surgeon, U. S. Army, and Jesse Lazear, acting assistant surgeon, U. S. Army, to $125 a month each, in special recognition of the services of their husbands in discovering and demonstrating on their own persons the truth of the theory of the transmission and propagation of yellow fever by mosquitoes.

Personal.—Passed Assistant Surgeon B. J. Floyd, U. S. P. H. and M.-H. Service, has been authorized, on request of the government of Ecuador, to assume the duties of sanitary director of work to combat plague in the city of Guayaquil.——Surgeon J. H. White, U. S. P. H. and M.-H. Service, was detailed March 11, with the consent of the Guatemalan government, to consult with and advise the officials of the United Fruit Company at Puerto Barrios, Guatemala, relative to measures to be taken for the improvement of sanitary conditions at that port.

Coming Meeting.—The ninth annual meeting of the American Therapeutic Society will be held at the Bellevue-Stratford Hotel, Philadelphia, May 7-9, under the presidency of Dr. John V. Shoemaker, Philadelphia. On the first day a symposium on diseases of the vascular system will be held; on the second day a symposium on the treatment of tuberculosis, and on the third day a symposium on Roentgen-ray therapy. On the second evening the president's reception is to be held at his residence, 1805 Walnut Street, and on May 9 the annual banquet at the Bellevue-Stratford.

FOREIGN.

Three Hundred and Fiftieth Jubilee of Jena University.—The festivities are to commence July 31, and reproductions of historic events, market festivals, torchlight processions, etc., are to accompany the dedication of a new university building and to do honor to the numerous guests from abroad who have been invited.

Annual Meeting of the British Medical Association.—The seventy-sixth annual meeting of the British Medical Association will be held at Sheffield, in July. The president's address will be delivered Tuesday, July 28, in the Firth Hall of the University of Sheffield, and the sections will meet on the three following days. The address in medicine will be delivered by James Kingston Fowler, M.D., F.R.C.P., and that in surgery by Rutherfoord John Pye-Smith, F.R.C.S.

The Smallpox Epidemic in Japan.—Dr. Cummings of the United States Public Health and Marine-Hospital Service, reports that the epidemic of smallpox still persists and has spread all over the empire. In Tokyo, alone, from January 1 to March 4, there were 952 cases, 789 of which were still under treatment; in the province of Hyogo, which includes the city of Kobe, there were 4,798 cases. Other districts suffered almost as severely. Dr. Cumming calls attention to the fact that the disease exists at coaling stations for vessels for the Philippines and American ports.

Plague in Ecuador.—Minister Fox reports that plague has been officially recognized at Guayaquil and that measures are being taken in Quito for prevention of the disease. A temporary hospital is being erected outside of Quito, and the cremating oven at present existing is being repaired. The market place is to be cleaned and repaired. All medical men are required to report immediately any suspicious cases which they may see, and a penalty is provided in case of wilful noncompliance with this order. Circulars are being distributed, giving the public instructions regarding the sanitary measures to be taken in the homes, including extirpation of rabbits and guinea-pigs. Inspectors are to be appointed to make house-to-house inspections. All organic matter in rubbish heaps is to be destroyed and all refuse is to be treated with lime.

The Schaudinn Medal in Microbiology and the Schaudinn Atlas.—An international committee has been appointed to take charge of the awarding of the medal to be awarded periodically, as a memorial to Schaudinn, to the individual who has contributed most to the progress of microbiology. Wilson and Novy are said to be the members of the committee appointed in this country, with Koch, Ehrlich, Hertwig and Bütchli in Germany; Manson, Ross, Nuttal and Ray-Lankester in Great Britain; Laveran, Metchnikoff, Roux and Blanchard in France; Celli, Golgi and Grassi in Italy; Kitasato and Ishikawa in Japan; Kopke in Portugal, Oswaldo Cruz in Brazil, Paltauf and Heider in Austria, and Wladimiroff and Schewiacoff in Russia. The medal is to be awarded this year for the first time. The Atlas of Etiologic and Experimental Research on Syphilis has recently appeared, dedicated to Schaudinn's memory. It has been published under the auspices of the German Dermatologic Society with E. Hoffmann, who was associated with Schaudinn in the research that resulted in the discovery of the pale spirochete, as compiler and editor. The publication of the atlas with its thirty-four plates was materially aided by the generosity of a layman, E. Simon.

Damage Suit Against the German Association to Promote the Material Interests of the Profession.—Of the 25,000 German physicians who are eligible to membership in the "Leipziger Verband," 20,000 are already enrolled, and 3 physicians, with a clerical force of 25, devote all their time to the business of the central office of the organization. It has recently concluded terms with four large commercial organizations in regard to satisfactory remuneration for medical assistance, as also with several navigation companies. One of the innovations recently introduced by the league is the holding of a series of lectures once or twice a year on subjects affecting the material interests of physicians, ethical questions, the medical aspect of industrial accident insurance, etc. Every week the league publishes in the leading medical papers an advertisement headed "*Cavete*," giving merely a list of towns. A line below warns physicians not to accept positions at these places without conferring with the secretary of the Leipsic league. At each of these towns there is still pending some conflict between the municipal authorities or sickness insurance societies and their medical officers. The mayor of one German city recently brought suit against the organization, claiming damages on account of this warning. He had advertised for a physician for a certain public hospital, but this hospital was on the list, and there were no applicants for the position. The remuneration was satisfactory to the profession, but there were still unsettled difficulties between the mayor and the hospital staff in regard to the duties of the latter. He sued the league for damages, as he was unable to supply the hospital with due medical attendance, but the case was decided against him, the judge finding that there was nothing in the warning which could be construed as conflicting with good citizenship.

LONDON LETTER.

(*From Our Regular Correspondent.*)

London, March 21, 1908.

Death of a Doctor from Blood Poisoning.

Dr. G. G. Elliott, London, died at the Metropolitan Hospital from blood poisoning which originally began four years ago after operating on a child for empyema. After undergoing about twenty operations he apparently recovered and was about to buy a practice when the old trouble asserted itself. He returned to the hospital, where he died in less than a week.

The Fly Nuisance.

The public health committee of the London County Council has just issued a report stating that during the summer months of each year the council receives complaints of nuisance experienced from flies. These complaints have increased of late years, owing, no doubt, to the attention which has recently been directed to the possibility of the spread of infection by flies. The health officer was instructed to make investigations into the extent to which nuisance from flies was produced by accumulations of offensive matter, and in the report now presented Dr. Hamer states that he selected in different parts of London 12 centers at each of which businesses were conducted which might be assumed to be favorable to the breeding of flies. Included in these centers were refuse depots and dust wharves, a manure depot, stables, cowhouses, offensive trade premises and a jam factory. During the last week in June and the whole of August, September and October, observations were made in ten or more living rooms at varying distances from each center. From these observations it was manifest that accumulations of manure and, in less degree, of house dust and other refuse, promoted the fly nuisance, which was noticeable not only in the immediate neighborhood, but at a distance of 2,000 yards or more. The value of the by-law which prohibits the deposit near houses of offensive refuse for more than 24 hours is thus apparent.

The Treatment of Tuberculosis in the Army.

The committee appointed by the war office on the treatment of soldiers invalided for tuberculosis has issued a preliminary report. The members of the committee think that the practicable methods of treatment resolve themselves into three: 1. To continue the present method, viz.: to discharge at once from the army any man who is suffering from tuberculosis of the lungs, to discharge him from hospital as soon as he is fit to travel and to disown all further responsibility for him. 2. To provide a central military sanatorium for tuberculous patients to which all soldiers suffering from the disease should be sent for treatment. 3. To use existing civil sanatoria in all parts of the country by reserving in each a number of beds at the expense of the army funds and to transfer soldiers who are suspected of having the disease to the available institution nearest their own homes. The last method is recommended. At present no provision is made for soldiers invalided for tuberculosis. They are not awarded pensions unless they have earned such by length of service or it can be proved that the disease was due to service or climate. The object of the present system is to remove men suffering from the disease from contact with other soldiers, and its adoption was followed by a great reduction of the proportion of cases of tuberculosis in the army. But the stringency of this system has been greatly mitigated by the army physicians and by the assistance of private persons. The committee is of opinion that the state should admit responsibility for the men and that treatment on an organized basis should be provided. The proposal to provide a central military sanatorium was rejected. In America it was held to be unsuccessful and to have given results inferior to those obtained in civil institutions. The committee is strongly of the opinion that the army, which has recognized and protected soldiers from the dangers of tuberculosis, should not merely transfer that danger to the civilian population, but should accept the responsibility for preventing the spread of the disease to the latter. This must involve a large expenditure. The cheapest and most effective course appeared to be that recommended. It is recommended to sanction an annual expenditure not exceeding $100,000.

Cancer Research at the Middlesex Hospital.

Alone among the general hospitals of the metropolis the Middlesex devotes special wards to the treatment of sufferers from cancer and special laboratories to investigation of the disease. The work done recently at the hospital has been of great importance. During 1907 the number of patients admitted has been unusually large—191 against 159 in the previous year. Speaking at the annual meeting of the governors of the hospital, Mr. Pearce Gould, senior surgeon, dwelt on the value of the researches which had been carried on. The director of the laboratory, Dr. Lazarus Barlow, has been selected to deliver a course of lectures at the Royal College of Physicians in 1909, which will deal with some of the results obtained in the laboratory. One of the workers, Dr. Letch, has been appointed director of the newly established cancer research laboratory in Dundee. The researches of Mr. Simpson Handley, another worker, have shown that cancer spreads locally by the lymphatics to an extent which has not been suspected and has suggested a considerable modification of the operations performed for its removal. Finally, another worker, Mr. Victor Bonney, has shown in his Hunterian lectures at the College of Surgeons that cancer never attacks perfectly healthy tissues, but is in all cases preceded by definite changes.

Fund Opened for Mr. Hall Edwards, the Victim of the X-Rays.

The case of Mr. Hall Edwards of Birmingham, one of the pioneers of the radiographic work in this country, has been described in The Journal. As the result of his work he has developed cancer on both hands. It has been found necessary to amputate one hand and it is feared that he must lose the other, which will prevent him from working. It is proposed to establish a fund to put him beyond the reach of want, and for this purpose a local committee has been formed at a meeting presided over by Sir Oliver Lodge. About $3,000 has been promised. An account of some of the other workers who have fallen victims may be of interest. Dr. Blacker of St. Thomas' Hospital for many months worked in his laboratory in his shirt sleeves, heedlessly exposing arms and hands to the rays. Soon he noticed that his hands were becoming burnt and decided to take precautions; but it was too late. One hand ulcerated rapidly and cancer developed before any one recognized the malignancy of the *x*-ray dermatitis. Amputation of one hand was performed, but without avail, for the glands of the axilla were affected, and he died. About the same time other workers began to notice the first signs of dermatitis. Mr. Hillier, the chief laboratory assistant of Mr. Cosser, the maker of *x*-ray apparatus, was attacked within 3 or 4 months of Roentgen's discovery. The dermatitis has progressed with relentless severity, and although he has not exposed his hands to the rays for several years the disease is still progressing in spite of treatment. A short time ago the development of cancer necessitated removal of the second finger on one hand, and it is only by the greatest care that the skin is prevented from ulcerating. As it is, there are several suspicious nodules on both hands, which will probably have to be removed. Another case is that of Stow, one of the assistants in the light department at St. Bartholomew's Hospital. He was one of the early workers with the *x*-rays and developed dermatitis. About 18 months ago he had to have one finger amputated and was given long leave of absence; but in spite of this, ulceration has progressed and 3 more fingers have been amputated. Unfortunately, the skin is healing very badly and it is feared that a more drastic operation will have to be performed. Mr. Harnack, an assistant in the light department at the London Hospital has also suffered badly and lost a hand through the disease. Mr. H. W. Cox, another maker of *x*-ray apparatus, has lost a finger and is now developing severe ulceration on the chin.

DUBLIN LETTER.

(*From Our Regular Correspondent.*)

Infant Mortality in Ireland.

Encouraged by the apparent success of her campaign against tuberculosis, Lady Aberdeen has inaugurated a movement with the object of lessening the infant mortality of Ireland. The infant death rate of Dublin is unduly high for a city where practically no married women are employed in manufactures, and there is no doubt that ignorance is the chief cause. As a first step toward dissipating this ignorance, a series of public lectures is being given on the hygiene of the home and the care of the infant. Mr. Nathan Strauss of New York has offered to provide for the city a complete milk-sterilizing plant, and it is intended to start an infants' milk depot on the lines of the "*Gouttes de Lait,*" which have become so popular on the continent.

Tuberculosis in Ireland.

During the past six months much interest has been aroused in Ireland on the subject of tuberculosis, and many plans have been set on foot to check the disease. In no country is such activity more needed. The death rate from tuberculosis in Ireland is alarmingly high, 11,756 in 1906, and 15.8 per cent. of all deaths are due to this cause. In Ireland, too, the victims of tuberculosis are, for the most part, adults in the vigor of life, wage-earners, and not, as in England and Scotland, children of tender years. No serious steps have been taken, however, to deal with the disease. In this, as in all matters of public health, Ireland lags behind every country in Europe, with the possible exception of Russia. Dublin, with a death rate a week or two ago, of 3.3 per cent. per annum, has not a whole-time medical officer of health, and as yet has never seriously tackled any problem of public health. Throughout the country matters are worse. Most of the sanitary work is in the hands of the poor law medical officers, who are neither expected nor desired to regard the care of the public health as one of their serious duties. For their work as sanitary officers they are paid salaries varying from $25 to $100 a year, and they are dependent for their living on private practice. It is no wonder, therefore, that sanitary work is in a backward condition. The local government board, which is the central authority charged with the supervision of public health work, has been as supine as the local authorities. It has contented itself with despatching at long intervals various circulars on sanitary subjects. Within the last few months, however, the Countess of Aberdeen, wife of the present Lord Lieutenant of Ireland, has thrown herself heartily into a crusade to awaken public interest and instruct public opinion on the subject of tuberculosis. In the first place, with the help of an advisory committee of medical men, she organized, in connection with the international exhibition held last year in Dublin, a tuberculosis exhibition. In addition to the exhibits, a series of popular lectures was given by leading medical men, the inaugural lecture being delivered by Professor Osler. When the time came for the exhibition to leave Dublin, it was transported to Belfast, and later to Cork, Limerick and other towns. In fact, it has already visited, or will shortly visit, nearly every town of any size in Ireland. At each center, popular lectures have been given in connection with the exhibition. As a result, a considerable degree of public interest has been aroused, and much discussion is going on as to the best means of combating the disease. At the same moment, the chief secretary has promised legislation to give further powers to the local sanitary bodies, and to make tuberculosis a compulsory notifiable disease.

Therapeutics

[It is the purpose of this department to outline an up-to-date management of disease, to suggest scientific treatment for diseased conditions, and to present prescriptions that are simple, useful and palatable. Prescriptions are written in both the metric and apothecaries' systems, but the amounts of the ingredients are NOT exact translations of one system into the other, but quantities convenient for pharmacist and physician. It should be understood that solids are weighed in grams or fractions of grams, while liquids are measured in cubic centimeters; that a teaspoon holds five cubic centimeters, i. e., more than a fluid dram, hence a 100 cubic centimeter preparation will contain twenty doses.]

Cascara Sagrada.

Cascara Sagrada was so named by the Spanish, and means sacred bark. It is official under the name of Rhamnus Purshiana, and is the dried bark of a small tree growing on the Pacific Coast. The official preparations are:

Extractum Rhamni Purshianæ. Dose, about .20 gram (3 grains).

Fluidextractum Rhamni Purshianæ. Dose, 1 c.c. (15 minims).

Fluidextractum Rhamni Purshianæ Aromaticum. Dose, 1 c.c. (15 minims).

The National Formulary furnishes a preparation of Fluidextractum Rhamni Purshianæ Alkalinum, which is a fluidextract of cascara sagrada which is not bitter. Dose, 1 c.c. (15 minims).

All these preparations taste bitter except the last, and the real dose of any one of them is *enough*, the amount depending on its frequency and the results. Many preparations on the market are almost worthless as laxatives, as the bark must be long kept and the preparation carefully made. The liquid preparations are always the most active, and act as slight stimulants to the mucous membrane of the stomach, hence act rather as bitter tonics. The extract is often dried and furnished in tablets which are rendered tasteless by coating. If these tablets are properly made, and contain a good preparation of cascara, they are efficient. If a cascara preparation or a cascara tablet produces rectal irritation, there is probably some other ingredient than cascara in it to render it active. As pure cascara is not astringent and not irritant to the bowels, and can cause no irritation or congestion in the pelvis, it is not contraindicated in hemorrhoids or in pregnancy.

It cures constipation perhaps as much by causing a daily movement of the bowels and thus creating a proper intestinal habit as by any curative properties that it may possess. The repeated taking of cascara does not create a tolerance, and generally the dose may be gradually diminished. Hence, in most instances this drug is the best laxative to use in chronic constipation. Whether it is best to give a small dose three times a day or a larger dose once a day, depends on the result of a careful study of the individual patient. After the amount necessary has been determined, week by week this dose may be diminished until finally, by the aid of proper diet, exercise, etc., the constipation becomes cured. No alkaloid has been separated from cascara sagrada, but an active glucosid under the name of cascarin is prepared. Whether this represents all the desirable activities of the crude drug has not been determined.

Myocarditis.

Dr. W. W. Kerr, San Francisco, in the *California State Journal of Medicine*, January, 1908, well treats this subject. He enumerates the causes of myocardial degeneration as follows:

1. Secondary to valvular lesions.
2. Due to infections.
3. Due to errors in diet and food metabolism.
4. Due to disturbances of the excretions or of the internal secretions.
5. Due to cachexia following malignant growths.
6. Due to general senile decay.

He presents the etiologic causes to demonstrate that myocardial weakness should not be treated by routine methods. While digitalis, for instance, is very valuable in certain conditions, it is harmful in others. Absolute rest for a time is often necessary, and baths are valuable, and sooner or later regulated exercise is advisable. However, the difference "between exercise and exertion" should be distinctly explained to the patient. Exercise to the point of dyspnea or cardiac tire should never be allowed.

1. Myocardial debility from the first cause is doubtless the result of passive congestion of the cardiac muscle from obstructed circulation in the coronary veins. This condition is also brought about by emphysema or prolonged asthma, and is the reason why the muscle of both sides of the heart becomes degenerated, although perhaps from the valvular lesion but one side of the heart is overworked. The treatment for such a condition consists in rest, baths, finally graded exercise, and digitalis from first to last. Digitalis slows the heart, and thus prolongs the muscle rest, allowing it to recuperate. Secondly, by increasing the contraction of the heart it not only raises the blood pressure in the aorta, thus increasing pressure in the coronary arteries, but also by completely emptying the right auricle, allows the coronary veins to thoroughly empty into that cavity. Also the firmer contraction of the cardiac muscle eliminates the products of its own metabolism and the nutrition of the heart muscle improves.

2. Kerr would subdivide the myocardial changes due to infections into two classes: Those "in which the changes are the result of the influence of the toxin directly on the cardiac muscle, and those in which the infection affects the coronary arteries and induces secondary changes in the muscle fibers." Under the first heading he includes such infections as diphtheria, rheumatism, smallpox, typhoid, erysipelas and pneumonia, and he wisely states that no remedy is so efficacious as tincture of the chlorid of iron in preventing the development of cardiac weakness during the course of these infections. Typhoid and syphilis he thinks are the two infections which most frequently induce changes in the coronary vessels that may terminate in a myocarditis, and he finds that the best treatment for such patients is the prolonged use of moderate doses of iodid of potash. Digitalis ordinarily should not be given in the cardiac weakness due to infections, at least not during the acute stages. In fact, it is a good working rule never to give digitalis during acute feverish processes.

3. Disorders of digestion from overeating or from intestinal fermentation, or from mal action of the liver are now well recognized as causes of myocardial changes. The toxins thus circulating in the blood seem to have a deleterious action on the cardiac muscle, hence when such toxins are considered the cause of cardiac debility, the food taken, and the manner in which it is digested, and the way in which the products of metabolism are excreted should be the object of careful study. Such study should include careful repeated analyses of the twenty-four hours' urine to determine what products are well excreted and what are retained in the body, and the diet arranged accordingly. No one diet can be laid down as the best for this condition, but the diet should be made to suit each individual patient. Kerr advises three meals a day, and each meal to be of equal amount as far as quantity and nutritive value is concerned. He does not believe in one light meal and one or two heavy ones. Of course, alcohol should be interdicted. A glass of hot water the last thing at night and whatever is necessary for the proper evacuation of the bowels in the morning is good treatment. Kerr obtains benefit in this kind of cardiac trouble from small doses of mercury, and believes that the alterative effect of ¼ of a grain of the protoiodid

three times a day, for ten days or a month, is beneficial. If there is edema or dropsy he gives digitalis. If there is gout he gives colchicum.

4. Bright's disease is the most prominent example of a disturbed excretion causing myocardial degeneration. This condition has been thoroughly discussed and the treatment described in THE JOURNAL for Feb. 8, 1908, page 465.

Increased thyroid secretion in Graves' thyroid disease or exophthalmic goiter (a misnomer, as Graves' disease is often present without exophthalmos), always causes myocardial weakness. How much is due to the excessive rapidity with which the heart is driven in this disease, or how much is due to the action of toxins in the blood, can not be determined. But little can be done for the heart in this condition until the thyroid disease is surgically or medicinally improved. Cardiac tonics are of but little value in aiding the heart, although strophanthus may be of some benefit.

In Addison's disease of the suprarenal glands cardiac debility soon develops, and the treatment of the heart is, of course, useless unless the disease of the adrenal glands becomes arrested.

5. The asthenic condition of the heart due to malignant growths is part of the general anemia and debility that is caused by the disease. There is a toxemia, and as long as the toxins can not be removed we can only temporarily aid the heart with cardiac tonics, as digitalis, and cardiac stimulants, as strychnia, and perhaps temporarily inhibit the profound anemia by administering iron.

6. Senile myocardial changes are often the result of an endarteritis of the coronary arteries. This condition is likely to be associated with mal metabolism of the food, and is often associated with imperfect excretion. The diet should be carefully regulated to fit the needs of the individual, and the urine studied to note the ability to excrete nitrogen and salts. An old man generally requires but little food, and on a diminished and carefully regulated diet he will circulate less toxins, and his heart muscle will not be thus debilitated, and the arteriosclerosis may be made to progress slowly or not to progress at all. The medicinal aids to inhibit the progress of a general endarteritis are often vasodilators such as small doses of iodid of potash or nitroglycerin in small doses, and Kerr finds arsenic of value. If the heart is decidedly weak, small doses of digitalis may be given in conjunction with nitroglycerin, thus preventing the contraction of the arterioles caused by the digitalis. Strychnin is also often of value in this myocardial debility.

The best preparations of digitalis are the tincture and the infusion. The unofficial active principle, digitalinum, does not always seem to represent the whole activity of the drug. If digitalis is to be given hypodermatically, digitalin is the best preparation to use, in dose of 1/100 to 1/50 of a grain (0.00065 to 0.0013 gm.), but when digitalis can be administered by the mouth, preparations of the crude drug act best. The dose of digitalis is always *enough*, i. e., enough to obtain its physiologic action. It is well to begin medication with digitalis, unless there is some special urgency, with small doses, and gradually increase the amount until the full physiologic action is reached. In this way the heart is not suddenly stimulated to act beyond its strength. Overaction of digitalis is shown by the heart being too much slowed, or by its action becoming irregular or rapid; by nausea and vomiting; by a full, tight feeling in the head; and by a diminution in the output of urine. If any one of these symptoms develop, digitalis should ordinarily be stopped.

℞.	c.c.		
Tincturæ digitalis	25	or	flʒi

Sig.: Ten drops, in water, three times a day, after meals.

This dose is small and should be increased sufficiently to obtain physiologic effect.

Or:

℞.	c.c.		
Infusi digitalis	200	or	flʒvi

Sig.: A teaspoonful, in water, three times a day, after meals.

This dose may be increased to two teaspoonfuls or more, if needed to obtain physiologic effect.

When an iodid is deemed advisable, the potassium or the sodium salt may be used, and either may be given in a saturated solution or in a solution of which a dose would be a teaspoonful.

There is no syrup or tasteful menstruum that will well disguise the taste of an iodid. It is much better to give these preparations in water and allow the patient to take them either in milk or effervescing water, or in any solution that he may prepare to suit his taste, or he may follow the drug with any taster that he desires.

℞.	gm. or c.c.		
Sodii iodidi	20	or	ʒv
Aquæ q. s. ....ad saturandum			q. s. ad sat.

M. et Sig.: Five drops, in water, three times a day, after meals.

[Each drop represents about .065 gram or 1 grain of the drug.]

Or:

℞.	gm. or c.c.		
Potassii iodidi	6	or	gr. lxxv
Aquæ	100		flʒiii

M. et Sig.: A teaspoonful, in water, three times a day, after meals.

If it is deemed advisable to give mercury, it may well be given as a protoiodid, in the form of tablets, as:

℞.

Tabletas hydrargyri iodidi flavi, āā, gr. ¼ No. 50.

Sig.: One tablet three times a day, after meals.

Strophanthus is best given in the form of the official tincture, with a beginning dose of five drops, and arsenic in the form of Fowler's solution, in small dose, as two drops, three times a day, after meals.

If nitroglycerin is deemed advisable, unless there is need for its quick action, as in angina pectoris or in cardiac dyspnea when relief of the peripheral circulation is immediately necessary, the dose should be small, and is best given directly after a meal, unless a more frequent dosage is needed. It should be understood that much lowering of the blood pressure in conditions of arteriosclerosis is not tolerated by patients who have become accustomed to high blood pressure. On the other hand, small doses, as even 1/400 of a grain three or four times in twenty-four hours, more if needed, will often relieve a laboring heart, cardiac pain and dyspnea. If there is cardiac weakness, even if arteriosclerosis is present, small doses of digitalis combined with nitroglycerin medication, as pointed out by Kerr, gives the most successful treatment.

Cure of Mucomembranous Enteritis by a Fright.—The *Gazette Médicale de Nantes* contains in a recent number a communication from Vince relating that he had been treating for two or three months a patient with mucomembranous enteritis without appreciable benefit. The patient was a nervous, arthritic woman of 30, but vigorous and fond of outdoor sports. During the course of the enteritis she lost several pounds and was frequently so weak that she could not leave her bed. A fire broke out in her room one night, causing great alarm, and two days later all symptoms of the intestinal trouble had vanished and they have not returned during the six months since, although the patient abandoned all therapeutic and dietetic measures.

Pharmacology

THE BROADER AIMS OF THE COUNCIL ON PHARMACY AND CHEMISTRY.

TORALD SOLLMANN, M.D.

Member of the Council, Professor of Pharmacology and Materia Medica at the Medical Department of Western Reserve University.

CLEVELAND, OHIO.

(*Continued from page 1135.*)

III. THERAPEUTIC OBSERVATION AND "POTTERING."

Every science and, indeed, every art, is based on exact observation and sound reasoning. The most brilliant reasoning must lead to false conclusions if it starts from false premises. The first essential to progress is, therefore, sound observation and sound experimentation. The recognition of this fact has wrought the remarkable advance in most of the medical sciences, and its neglect is mainly responsible for the relative decadence of therapeutics. Look at the vast bulk of the therapeutic literature of the day and one can not fail to be struck with the preponderance of the vague impressions and *a priori* conception over definite facts—and the worst of it is that there seems to be no serious effort to get out of this rut. The only way to discover therapeutic facts, as any other facts, is to *see* and to *try*—it is the only way at present for the individual physician to learn the art of therapeutics; and it is an absolute essential to the advancement of the science of therapeutics.

I may be answered that every physician is trying therapeutic experiments every day. Is this true? It is true that the treatment of every patient is, in a sense, an experiment; but is it not in very many cases "pottering" rather than serious experimentation? There is too often very little attempt to put the question clearly and to judge the result critically; to think out the experiment in advance; to consider the complicating conditions and to reduce them to the simplest terms; to observe accurately and to record effectively the observations; to utilize them as the basis of deduction and further experimentation; to exclude or discount sources of error; to control superficial impressions by multiplying experiments under various conditions. These are the essentials of successful experimentation, and their neglect will invariably lead to error. I repeat that true therapeutic experience can be acquired only in this way by the individual and by the medical profession as a whole.

It may be objected that we have no moral right to experiment on patients; but what else do we ever do in therapeutics, consciously or unconsciously? Is the interest of the individual patient not served much better if we conduct the experiment of his treatment thoughtfully, rather than in a haphazard fashion? Fothergill's work on "Digitalis" and on the "Antagonism of Medicines" illustrates the feasibility and value of this method of therapeutic experimentation. I would not advocate the restriction of treatment to one measure merely to simplify conditions, if the interest of the patient requires several measures—only let us be sure that the patient really does require several measures. Too often complex treatment is merely a cloak of ignorance, an expression of the absence of any definite purpose. In reading Sidney Ringer's "Therapeutics" I was much struck by the scarcity of complex treatment in the hands of this acute therapeutist, and I gained the impression that to this he owed a good part of his real knowledge of the science and art.

It may be objected also that only the favored few, who control a large practice or hospital, could hope to acquire any valuable knowledge by these means. It should be remembered, however, that a few careful experiments outweigh any number of slovenly "trials." Furthermore, the largest and best conducted clinic in the world would not suffice to gather any valuable data, if it should attempt to try out every invention and every fancy mixture, new and old, which is to be found on the market. To make any advance, we must confine ourselves to a relatively small number of relatively simple remedies, to the most promising; and rigorously exclude those which are unpromising, and especially those which are plainly unscientific. Many of the older survivals in the Pharmacopeia, and some of the newly admitted products come under this heading of "unpromising;" but by far the most numerous examples are to be found among the proprietary products—the specialties —since the manufacturer is too often much more interested in the commercial value of his product, than in its scientific value. It is in this connection that the practicing physician will find the greatest use for the past work of the Council, for this had for its sole purpose the casting out of those products which are intrinsically unpromising and unscientific, or fraudulent; those whose use would mean a waste of time, money and opportunity.

The methods employed by the Council in this selection will form the subject of the next paper.

(*To be continued.*)

Wheeler's Vitalizer.

To the Editor:—I have been much interested in the work that you are doing in exposing the danger lurking in the many well-advertised "nerve tonics" and "headache cures." I want to thank you for your exposure of Harper's "Brain Food." I needed such information. About nine months ago I learned that two women of my acquaintance were taking this preparation and that they had been inducing others to take it. I soon noticed that these women, whose daily duties were exacting, began to show purple lips and presented symptoms of general depression, and I warned them that they were probably taking a dangerous mixture containing acetanilid, and they heeded my warning.

I wish to call attention to "Dr. Wheeler's Nerve Vitalizer" which is sold to the public. The label states that the adult dose is from "one to four teaspoonfuls, or even more." It is recommended for "all nervous diseases . . . sleeplessness . . . sick or nervous headache . . . epilepsy, fits, spasms, St. Vitus' dance, nervous prostration and other severe and chronic cases."

I know two extremely delicate, educated, middle-aged women who have been taking this mixture pretty freely. They are in a pitiable condition of neurasthenia, suffering from gloomy forebodings in regard to the hopelessness of their health, and yet they claim that the medicine has surely saved their lives when all else had failed. I want to know what, if any, are the harmful ingredients of this nostrum. Can the Council on Pharmacy and Chemistry of the American Medical Association help me out, and in so doing help others?

M. R. Morden, Adrian, Mich.

Comment:—Wheeler's Nerve Vitalizer has been analyzed in the laboratory of the American Medical Association, and the chemists' report follows:

> Wheeler's Nerve Vitalizer was packed in a carton bearing the name of the preparation, its manufacturers, "The J. W. Brant Co., Ltd., Albion, Mich.," and an exhaustive list of the diseases for which the product is intended, beside the general statement that it is a cure for "all nervous diseases." The "Vitalizer" is a brown, syrupy liquid having a peculiar salty taste partially masked by licorice. Qualitative tests showed the presence of sodium, potassium and bromin. Quantitative determinations indicated the presence of 12.61 gm. of potassium bromid and 6.30 gm. of sodium bromid in each 100 c.c. of the "Vitalizer." This is equivalent to 9.73 grains of potassium bromid and 4.86 grains of sodium bromid to the fluid dram; a quantity of bromids equivalent to 15.35 grains of potassium bromid.

It would seem from the above report that the label, "Nerve Vitalizer," is a misnomer and constitutes a misbranding very similar to, if not legally identical with, that for which Harper was convicted of violating the Food and Drugs Act. It is certainly not a matter of indifference that delicate women should drug themselves with large doses of depressing agents like the bromids in the supposition that they are toning up an exhausted nervous system with a vitalizer.

The danger of the recommended dose equivalent to over sixty grains of potassium bromid, to be taken indiscriminately by the laity, is evident. Equally vicious is the suggestion that in certain conditions the drug should be used four times daily "for at least one year;" should such advice be followed bromism will inevitably result. The question arises in this connection whether the law ought not to take cognizance of substances as potent for harm as are the bromids, as well as of those drugs which are now included in the list.

Antiperiodic Tincture (Warburg's).

To the Editor:—1. Will you state in The Journal the reason for putting in the National Formulary Warburg's Tincture, which contains 0.25 gm. opium in 1,000 c.c.?

2. Does the original formula of Dr. Warburg contain opium or any derivative of opium?

3. Which is the proper name for the National Formulary preparation, Antiperiodic Tincture or Warburg's Tincture?

4. Also: When a physician prescribes Warburg's Tincture, is there any law, national or otherwise, by which the pharmacist would be justified in dispensing the National Formulary preparation if no mention is made of it?

It seems to me that to the physician this would be confusing, as his patient may or may not get the National Formulary preparation which contains opium when he prescribes Warburg's Tincture, as many physicians are not aware of the fact that such a preparation is listed in the National Formulary, and many who are would not know that it contains opium unless they were to make a comparison of the formula with that of the United States Dispensatory.

C. A. Hofer, Philadelphia.

Answer.—1. The Antiperiodic Tincture is used enough to justify its inclusion in official lists.

2. Yes. The formula for Warburg's Tincture in the second edition of the National Formulary was criticized because "two important ingredients"—namely, prepared chalk and "confectio damocratus"—were omitted from the formula. The formula was discussed in pharmaceutical journals, especially by William M. Martindale of London, author of the "Extra Pharmacopeia," and as the result of this, in the present (third) edition of the National Formulary, the prepared chalk is reinstated in the formula in order that through its presence the acridity of the tincture may be modified. Since it was impracticable to include in the formula the obsolete "confectio damocratus," a small amount of opium was introduced, since opium was the real active ingredient of the confection. The amount of quinin was reduced from 10 grains to the fluidounce to 9 grains. Aside from the addition of opium, which amounts to 0.25 gram per liter, or about ⅛ grain per fluidounce, the preparation remains substantially as before. The formula as now official probably corresponds to the original Warburg's Tincture more nearly than other formulas published from time to time.

3. We suggest that physicians who desire to prescribe this preparation use the Latin title of the National Formulary and append to it the letters "N. F."—thus, "Tinctura Antiperiodica, N. F." (Physician's Manual, page 158). If a different formula is desired, the physician should prescribe it by writing it out in full.

4. The National Formulary has now received official recognition through the Food and Drugs Act, and it is the duty of pharmacists to dispense a preparation made in accordance with the National Formulary, whether its official Latin title "Tinctura Antiperiodica" or the synonym "Antiperiodic Tincture" or "Warburg's Tincture" is used in the prescription.

Testimonials.

Testimonials are one of the most valued assets of the stock-in-trade of the "patent" and proprietary medicine manufacturer. Without them the successful exploitation of any nostrum would be well-nigh impossible. In the testimonial the manufacturer is assumed to sink his own personality and give to the public the evidence of a disinterested third party. The value of evidence, so we are told, "rests on our faith in human testimony as sanctioned by experience." The majority of us come in daily contact with people who are, at least in a general way, truthful. Such experience tends to develop a faith in the statements found in testimonials that, while highly profitable to the exploiters of nostrums, is not warranted by facts.

The "patent-medicine" testimonial, as has been shown by Samuel Hopkins Adams in the "Great American Fraud" articles, is scientifically valueless. The individual giving it, in many cases, becomes the recipient of certain favors, financial or otherwise, of the company seeking it. The testimonial once obtained is worked to the limit—in some cases past the limit. Not long ago *Collier's Weekly* reproduced two items from the same issue of a certain newspaper: One was a "patent-medicine" advertisement consisting of a testimonial from a woman stating how she had been restored to health by using the nostrum advertised; the other was an obituary notice of the same woman!

Leaving the "patent medicine" and looking into the testimonials of the "ethical proprietaries," we find an analogous state of affairs. There is this one difference, however: In addition to the testimonial that appears as such, with no attempt at dissimulation or pretense, we have the "scientific" (?) article form of testimonial. Such articles, appearing in the reading pages of medical periodicals, assume to be scientific dissertations on various matters of interest to the medical profession. Were they written with this object, even though discussions of certain proprietary articles formed the bases of the articles, but little objection could be raised to them. Investigation proves, however, that instead of being impartially critical they are fulsomely laudatory and instead of coming from men of standing in the profession they emanate from individuals whose chief work seems to be furnishing such "copy" for various proprietary houses. So long as the therapeutic claims of a large proportion of proprietary preparations are based on no more reliable foundation than that furnished in this way, so long is the intelligent physician compelled to assume an attitude of healthy skepticism toward all such claims.

Correspondence

Some Medical Superstitions Among the Southern Negroes.

Memphis, Tenn., March 23, 1908.

To the Editor:—A negro girl recently presented herself at the out-clinic of the Memphis Hospital Medical College. On examination I found her to be suffering from a syphilitic iritis together with syphilitic ulcer of the throat and enlarged glands. The therapeutic remedy to which she had resorted for relief of the sore throat and enlarged glands was a live frog, which she wore against the skin of the affected parts. On being asked what her object was in applying the frog she promptly replied: "It takes de pisin out of de systim." She was firmly convinced that the application had given her marked relief.

A few years ago an old "'fo' de wah" colored woman brought her grandchild, a little colored girl 5 years of age, to the clinic for examination. The child was suffering from measles. On asking the old "Auntie" (would there were more of them in these days) what she had done for the child, she drew from the pocket of her white apron a one-ounce morphin bottle filled with bedbugs! Suiting the action to the word, she said: "I done been gibbin' her bedbug tea to drive de 'ruption out."

Not long since a colored girl came to the clinic, stating that she had "de lukers" (leucorrhea). When asked if she had done anything for the condition she described in a dramatic manner how, two weeks previously, she had introduced a full-grown magnolia blossom well up into the vagina. This means of relief was suggested to her by a colored "granny." I had considerable difficulty in removing the blossom with dressing forceps.

Frank A. Jones, M.D.

Passive Hyperemia in Seasickness.

Elmira, N. Y., March 13, 1908.

To the Editor:—In a recent trip across the Atlantic I obtained excellent results in three cases of seasickness with Bier's hyperemia. Having seen Bier demonstrate its value in cases of vertigo and migraine due to anemia and believing, as many others do, that seasickness is due to some disturbance of the circulation of the blood in the brain, I decided to try this treatment.

I prepared myself with one-half meter (20 inches) of two centimeters (¾ inch) wide ordinary black elastic braid, to which I sewed one hook and several eyes.

Soon after leaving port we ran into a heavy sea; I began to suffer, so I went to my stateroom and applied the band loosely around my neck under my collar. I returned to my deck chair and in about twenty minutes, much to my surprise, I felt more comfortable; in one hour I was entirely relieved of pain, and one hour later I enjoyed a good dinner.

On the following day I tried this treatment on two of my fellow-passengers, and after adjusting it properly, i. e., with very slight pressure and no feeling of discomfort, I was able to relieve them of their suffering. During the remainder of the trip it was in use by one of us most of the time.

The band is simple, inexpensive, causes no discomfort, can not be seen, and does not interfere with other treatment. It produced good results in these cases and added greatly to the pleasure of the voyage. Charles Haase, M.D.

Removal of Cerebral Tumors Without Anesthesia.

Cincinnati, Ohio, March 15, 1908.

To the Editor:—In the article on brain tumor by Drs. Thomas and Cushing in The Journal, March 14, 1908, Dr. Cushing states his belief that the removal of a cerebral growth without an anesthesia was an experience, so far as they knew, unique, and that the principle may possibly prove to be applicable to other cases. In a paper read before the American Medical Association and published in The Journal, Oct. 11, 1902, I recorded a case in which the second operation was done without anesthesia; the dura was opened by a large horseshoe-shaped incision and the brain examined and palpated. A tumor—a tuberculoma—was located beneath the cortex. This part of the second operation was entirely painless. Only when it was necessary to enlarge the opening in the bone with rongeur forceps was chloroform administered. In the article quoted I distinctly refer to having followed the same procedure of the two-stage operation with the second without general anesthesia. In regard to the tuberculoma referred to, the patient had a recurrence, for which a second operation was performed five years after the first operation.

Joseph Ransohoff.

Miscellany

Harmfulness of Boric Acid in Cream.

An English milk dealer was convicted recently for selling cream containing boric acid. The case was appealed and the *Lancet*, 1908, i, 2, gives a summary of the trial:

A large number of witnesses were called on both sides. The cream in question was sold in a pot on which was a label to the effect that it contained a small percentage of boron preservative to retard sourness. The amount of boric acid found in it by Mr. C. E. Cassal, the public analyst, was 21.91 grains to the pound. Mr. Cassal stated in evidence that if a preservative was present in a sufficient amount to exert a substantial antiseptic action on food it must of necessity injuriously interfere with the process of digestion. The cream contained 52 per cent. of fat.

Mr. Reginald Harrison, F.R.C.S., gave his experience with boric acid in connection with urinary fever. He has found that by its use operations on the urethra and bladder can be performed without fever resulting, but he was forced to abandon its use because the patients were made ill otherwise by the remedy. Flatulence, nausea, and often disturbance of the heart's action result and occasionally eruptions on the body and other symptoms occur. As boric acid is chiefly excreted by the kidneys, he has not the slightest doubt that boric acid in the proportion contained in this cream, and even in smaller quantities, would tend to intensify any disease of the kidney even in an incipient stage. The long continued administration of small doses appears to produce the same result as the use of large doses extended over a shorter period. He does not agree with the conclusions of Liebreich and Tunnicliffe. Experiments extended over a comparatively short time are not to be compared with what occurs in every-day life when people go on for months and months consuming quantities of boric acid in their food.

Dr. W. D. Halliburton, professor of physiology in King's College, London, stated that the consumption of boric acid in any quantity is injurious; it brings about digestive disturbances but, of course, different people are differently affected. Its addition to milk causes the lime salts to be thrown out and in this way if cream be added to milk, as is now very generally done, in order to make cow's milk approximate more nearly to human milk, the presence of the acid destroys the value of the lime, making it absolutely insoluble. In this way persons consuming the mixture do not get their fair proportion of the lime which goes toward making bone, and rickets may result. He agreed with Mr. Harrison as to the effect on the kidneys and also as to the fallacy of conclusions drawn from short experiments such as those of Tunnicliffe. Questioned as to the results obtained by Chittenden, he pointed out that the experiments were made on dogs, which have a very resistant alimentary canal.

Dr. Ralph Vincent, one of the physicians to the Infants' Hospital, said that if milk and cream are kept at a temperature of 40 F., there is no necessity for using any preservative. The addition of boric acid to the foods of infants is likely to have more serious effects from the fact that as the feeding takes place at short intervals the kidneys and digestive organs are continuously under the influence of the drug. The first effect produced in digestion in the stomach of the infant is the precipitation of the curd; boric acid interferes with this, and the child eventually suffers from sickness, diarrhea alternating with constipation, which leads to a condition of marasmus in which the child can no longer digest anything. Cream has largely taken the place of cod-liver oil and it is essential that it should be pure.

Dr. H. R. Kenwood, professor of hygiene and public health in University College, London, considered the addition of boric acid to food as a positive danger. He made some experiments on himself in 1903 and again in 1905, and on each occasion suffered from a train of symptoms now generally recognized as "borism." He attached high value to the experiments of Dr. Wiley, considering them by far the best which had ever been carried out with reference to boric acid. From his experience as a medical officer of health he was of opinion that in average homes a label on a jar affords very poor protection. Medical men who recommended cream for their patients might not be aware that they were taking a boricised article.

The court in giving judgment held that the conviction must be affirmed and the appeal dismissed with costs.

Book Notices

Bier's Hyperemic Treatment. By Willy Meyer, M.D., Professor of Surgery at the New York Post-Graduate Medical School and Hospital and Prof. Victor Schmieden, Assistant to Professor Bier, University of Berlin, Germany. Cloth. Pp. 209, with illustrations. Price, $3.00. Philadelphia: W. B. Saunders Co., 1908.

The need of a practical treatise on treatment by hyperemia has been such as amply to justify putting such a book before the American public. That the authors are well fitted to prepare such a work is evident from the facts that Dr. Meyer has been a leader in introducing the method into the country, having used it since its first appearance fifteen years ago, and that Dr. Schmieden is an assistant of Professor Bier and hence thoroughly conversant with the latest improvements in technic.

Bier's method rests on a theoretical basis which regards inflammation as a beneficial process and the circulation of the blood as an agent employed by Nature in the cure of disease. In order to avoid misconception from the use of the terms congestion and obstruction in connection with the treatment, it is necessary to state clearly the fundamental principle, that the object of the method is to increase the amount of blood in the part but never to produce stasis. The circulation must be continuous. It follows, from the view of Bier, that all attempts to subdue inflammation, such as the application of ice, are harmful. The natural process must be favored, not hindered.

The means of producing hyperemia are divided into three classes: passive congestion by obstructive means (*Stauungs-Hyperämie*), passive congestion by suction, and active hyperemia induced by heat, principally by hot air.

The authors think that no term in English conveys all of the meaning of *"Stauungs-Hyperämie,"* but they use the term "obstructive hyperemia." Since the book went to press Ewart has stated that *"Stauungs-Hyperämie"* was a translation into German of the prior English term "dammed circulation" (The Journal, March 21, page 996). The various devices for obstruction, suction and the application of hot air are described and fully illustrated. The applications of the method to general surgery are then treated at length, an attempt being made to state well-ascertained facts without any bibliographic references. In order to indicate those affections in which the results achieved do not justify a positive recommendation of the method the paragraphs relating to these diseases have been printed in smaller type. The applications of the method in medicine and in the specialties receive somewhat less extended treatment.

The book appears to be thoroughly suited to its purpose as a practical manual for the use of this therapeutic method. There appears to be no tendency to regard the method as a panacea, but the experience of European as well as American surgeons seems to indicate the desirability of its wider extension, an end which will be doubtless greatly assisted by the manual before us.

Queries and Minor Notes

Anonymous Communications will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

CONGESTIVE CHILL.

Holly Springs, Miss., March 25, 1908.

To the Editor:—A good deal of confusion seems to exist among certain physicians as to the proper use of the term congestive chill. I have always associated congestive chills with pernicious forms of malarial septicemia. Sometimes chills initiating diseases of other than malarial origin are diagnosticated as congestive chills. I know that the surface of the body is cold and pale in chills, and that this indicates internal congestion. But I know that the old physicians of the south regard a congestive chill in the true sense of the word as a condition of extreme peril. Will you please concisely define the term congestive chill and state the time of the year this condition is most frequently seen? Norman G. Gholson.

Answer.—The obvious meaning of the term congestive chill, is a chill resulting in congestion of the internal organs. Although this condition is present in practically all chills, the term is applied to extreme cases of which malaria furnishes the most frequent examples. The term can not, however, be confined exclusively to the chills occurring in malaria, although in the south especially, custom has given it the significance of a chill occurring in pernicious malaria. The term is loosely applied to any malarial chill of unusual severity, especially when accompanied by such symptoms as coma, delirium, suppression of urine, and jaundice of rapid development.

FAILURE OF SPEECH DEVELOPMENT.

Evansville, Ind., March 29, 1908.

To the Editor:—I have a patient, a little boy of five, who can not be made to talk, although he hears and understands perfectly. Can you recommend any work covering such a defect? William H. Field.

Answer.—We know of no book which deals directly with the question of failure of the development of speech. Much on the subject of such defects has not yet found a permanent place in medical literature. A few articles have been published at different times, but we can refer only to the following by Dr. G. Hudson-Makuen, Philadelphia:

Development of the Faculty of Speech, *International Medical Magazine*, July, 1903.

Retarded Development of Speech in Young Children, *Pennsylvania Medical Journal*, June, 1905.

Technic of Speech Production, *Philadelphia Medical Journal*, Feb. 2, 1901.

Speech Training as a Factor in the Development of the Feeble Mind, *American Medicine*, Dec. 2, 1905.

The Physiology of Language and Its Relation to the Treatment of Stammering, *New York Medical Journal*, Dec. 29, 1906.

HYPEREMIA THERAPY.

Austin, Texas, March 31, 1908.

To the Editor:—One of our local physicians lately visited Germany and reported the general topic of the day to be the Bier treatment by local congestion. There is a splendid article in Bryant and Buck's Surgery, just being published; but that article deals mostly on the treatment of chronic tubercular joint diseases. It appears that the Bier method is now being used very successfully in acute troubles. Please refer me to the articles in The Journal on the subject. W. J. Mathews.

Answer.—The Journal commented on this method March 10, 1906, p. 726. Two good articles are by Willy Meyer: Bier's Treatment in Chronic and Acute Surgical Infectious Diseases, Aug. 17, 1907, p. 560; and by B. M. Bernheim: Passive Hyperemia, March 14, 1908, p. 840. The last article includes a bibliography which may be valuable. See also for the technic an abstract of an article by H. Rubritius in The Journal, June 2, 1906, p. 1804. On page 1208 of this issue, we review a book which has just been issued on this subject.

DOSE OF ACONITE.

Yonkers, N. Y., March 24, 1908.

To the Editor:—In the "Physicians' Manual of the U. S. Pharmacopeia and National Formulary" the dose of Tinctura Aconiti is given on pages 8 and 158 as "0.2 Cc. or 3 minims," while in the other books it is given as 10 minims. Please state which is right? G. P.

Answer.—Both are correct. The dose of tincture of aconite given by the U. S. Pharmacopeia as 10 minims is a full dose, and should be given at intervals of some hours. In practice it is usually better to give it in smaller doses at intervals of from 15 minutes to an hour until the desired action on the circulation is obtained. For this purpose the dose should be 2 to 3 minims as is given in the "Physicians' Manual."

FACIO-HYPOGLOSSAL ANASTOMOSIS FOR FACIAL PALSY.

Ft. Worth, Texas, March 26, 1908.

To the Editor:—Some time ago you published an article on the treatment of paralysis of the facial nerve by the transplantation of the hypoglossus. I am extremely anxious to obtain the article and also any other pertaining to the subject. E. D. Capps.

Answer.—The article referred to was published in The Journal, March 24, 1906, p. 856, under the title "Results of the Facio-Hypoglossal Anastomosis for Facial Palsy," by A. S. Taylor and L. P. Clark. This article contains a full bibliography.

Association News

THE SCIENTIFIC EXHIBIT.

Announcement of Plans for the Scientific Exhibit at Chicago Session in June.

The patronage of the Scientific Exhibit at the Chicago session of the American Medical Association will come largely from the cities of the Mississippi and Ohio valleys. There will, of course, be a few devoted to the great cause who will send exhibits from distant points. The magnificent contributions made by the laboratories and museums of the east at the Boston and Atlantic City sessions will be difficult to equal. We have faith, however, in the energy and progressiveness of the men in the middle west to hold up the high standard set by the east. Our hope that the Chicago session will have a successful exhibit is still further supported by the fact that a number of persons from remote parts of the country have announced their intention to participate.

It is desired at this time to call especial attention to some new features in the exhibit which should appeal particularly to sanitarians and research workers.

A gold medal will be awarded for the best tuberculosis exhibit. Competing exhibits will be graded, however, on compactness consistent with elucidation of the whole tuberculosis problem.

The exhibit idea for instructing the public is perhaps the most practical and widely useful method thus far employed. It must have impressed every practical mind that tuberculosis exhibits thus far offered to the public have been large, cumbersome and expensive to maintain. The aim of the committee is to secure a model small exhibit, which at the same time is comprehensive. Such should be easily portable and adapted to installation in public libraries, railway stations and similar public places. Public health departments would find in such a compact exhibit a most valuable means of disseminating knowledge concerning this great sanitary question. A number have already signified their intention to participate in this contest, and it is not too much to hope that a satisfactory working model will be secured for the guidance of sanitarians.

Another gold medal will be offered for the best research exhibit. The committee on awards, however, may not grant the medal if, in their judgment, no exhibit presents sufficient merit.

All correspondence relating to this subject as well as demonstrations (lantern, gross or microscopic) should be directed to Dr. E. R. LeCount, Rush Medical College, Chicago.

Another phase of the exhibit which it is hoped to make prominent, is the systematic demonstration of gross specimens by a corps of competent assistants under the direction of Dr. LeCount.

The visitors will be taken systematically in small groups around the collection, the demonstrator calling attention to salient points of specimens. The plan is greatly preferable to putting trust in labels. It insures the teaching of a practical lesson to the observer.

Of interest, certainly, to exhibitors will be the announcement that very handsome certificates of honor will be granted to a few of those presenting exhibits of superior character. The committee on awards for medals and certificates will consist of three members of the Association of national standing whose judgment and fairness will not be questioned.

Correspondence concerning the tuberculosis exhibits should be addressed to the director, Dr. Frank B. Wynn, 311 Newton-Claypool Building, Indianapolis.

Frank B. Wynn, Director,
W. M. Late Coplin,
E. R. LeCount,
Committee on Scientific Exhibit.

NEW MEMBERS.

List of new members of the American Medical Association for the month of March, 1908.

ALABAMA.

Fabien, J. J., Greeley.
Gilder, G. S., Carbon Hill.
Harper, W. W., Selma.
Russell, W. P., Hayneville.
Lacey, C. N., Demopoles.
Semmes, R. O., Camden.
Smith, M. M., Tuskegee.

ARIZONA.

Carpenter, H. L., Goldroad.
Miller, E. S., Flagstaff.
Nicholson, Percival, Mayer.
Noon, A. H., Nogales.
Russell, A. S., Tucson.
Zimmerman, I. M., Tucson.

ARKANSAS.

Brown, J. W., Swarts.
Buchanan, A. S., Prescott.
Johns, P. W., Hot Springs.
Leming, I. K., Waldron.
North, Arthur, Palatka.

CALIFORNIA.

Anton, F. L., Los Angeles.
Belknap, Florence A., Palo Alto.
Beyer, Herman, Oceano.
Bransford, S. G., Suisun.
Clark, W. D., San Francisco.
Dennis, Mary E. D., Los Angeles.
Hindlay, G. D., Santa Barbara.
Isnardi, Mario, San Francisco.
Johnson, L. R., Stockton.
Kleeman, G. E., Oakland.
Lobse, J. L., Oakland.
Musgrave, R. W., Hanford.
Maulhardt, A. A., Oxnard.
Molony, W. R., Los Angeles.
Martin, E. E., Millville.
Orbison, T. J., Pasadena.
Schafer, A. F., Bakersfield.
Sewall, E. C., San Francisco.
Simpson, Wm., San Jose.
Smith, Rea, Los Angeles.
Taylor, Mary C., Stockton.
Trachman, H. J., Santa Rosa.
Worley H. F., Oakland.

COLORADO.

Bixler, C. W., Erie.
Brown, H. C., Denver.
Coffman, Frank R., Denver.
Cummings, B. F., Lake City.
Gill, A. E., Gulch.
Schermerhorn, Fred, Montrose.
Turner, W. E., Brush.
Vinyard, G. S., Woodland Park.
White, W. J., Longmont.

CONNECTICUT.

Bean, W. B., So. Norwalk.
Carlin, C. H., Torrington.
Robinson, M. W., Noroton Hts.
Treadway, W. B., Stamford.

DELAWARE.

Springer, H. L., Wilmington.

DISTRICT OF COLUMBIA.

Christmas, W. W., Washington.
Cook, H. C., Washington.
Griffith, C. I., Washington.
Korshet, Morris, Washington.
Littlepage, W. H., Washington.
Moore, Mead, Washington.

FLORIDA.

Izlar, A. L., Ocala.
Lindner, E. G., Anthony.

GEORGIA.

Bowdoin, J. P., Adairsville.
Bowen, J. H., Canon.
Calhoun, F. P., Atlanta.
Parker, W. H., Mize.
Walker, O. B., Bowman.

IDAHO.

Callard, C. B., Placerville.
Clark, B. O., Emmett.
Glase, R. L., Boise.

ILLINOIS.

Abt, J. L., Chicago.
Adams, E. M., Girdley.
Adkins, A. E., Brookport.
Allen, Oscar, Dunlap.
Anderson, C. H., Menard.
Andrew, H. B., New Salem.
Axelson, J. M., Chicago.
Baer, J. L., Chicago.
Betz, H. E., Chicago.
Bischoff, H. A., Chicago.
Bloch, Leon, Chicago.
Blood, R. P., Chicago.
Bradburn, B. P., Lincoln.
Brill, J. A., Chicago.
Butterfield, Willis, Belvidere.
Buckley, Sara C., Chicago.
Campbell, J. T., Chicago.
Cantrall, J. W., Rochester.
Carr, C. T., Somonauk.
Carriere, V. A., Litchfield.
Chase, E. D., Chicago.
Clark, J. B., Chicago.
Colin, G. A., Chicago.
Collins, J. A., St. Jacob.
Corbus, B. C., Chicago.
Crandall, J. B., Sterling.
David, V. C., Chicago.
Davis, C. S., Champaign.
Dawes, L. P., Chicago.
Dreyer, J. W., Aurora.
Dunn, H. B., Ladd.
Dyas, F. G., Chicago.
Ebersole, J. R., Monmouth.
Eggert, F. C., Chicago.
Eldridge, F. P., Greenview.
Eustace, A. B., Chicago.
Ewing, John, Tuscola.
Ferguson, O. W., Mattoon.
Ferris, C. L., Carthage.
Fischer, C. E. M., Chicago.
Fitch, A. F., Chicago.
Fowler, L. L., Menard.
Franken, J. G., Chandlerville.
Gay, R. J., Chicago.
Germer, J. W., Chicago.
Grabow, P. E., Chicago.
Graves, Robert, Chicago.
Graves, R. E., Chicago.
Hagans, Grace F., Chicago.
Halliburton, Westley, Alton.
Hamilton, J. M., Chicago.
Hartwell, D. D., Marion.
Heineck, A. P., Chicago.
Herbst, R. H., Chicago.
Hershfield, A. S., Chicago.
Holliday, O. M., Melrose Park.
Hollister, Mary C., Chicago.
Holmes, A. G. H., Chicago.
Honnold, F. C., Chicago.
Hunt, A. S., Jerseyville.
Hunter, C. W., Oneida.
Hunter, E. W., Chicago.
Irons, E. E., Chicago.
Jackson, Siegfried Chicago.
Jeffries, B. Grant, Chicago.
Kerrick, C. L., Chrisman.
Kleinpell, H. H., Chicago.
Kretschmer, H. L., Chicago.
Lakemeyer, A. W., Chicago.
Lark, E. T., New Hanover.
Littlejohn, David, Chicago.
Lucas, D. E., Chicago.
Lyon, H. N., Wheaton.
Magee, W. G., Chicago Heights.
Martin, C. V., Chicago.
Matthew, J. B., Bluemound.
McEntire, E. J., Erie.
McGrory, J. J., Chicago.
McInnes, R. W., Belvidere.
McIntosh, J. J., Allendale.
McKenna, C. H., Chicago.
Mize, H. E., Danville.
Morgan, D. A., Nilwood.
Morton, F. R., Chicago.
Newcomb, C. F., Champaign.
Nowlin, J. H., Chicago.
Oakes, R. A., Chicago.
O'Brien, E. J., Chicago.
Oldenborg, H. A., Chicago.
Oliver, Paul, Chicago.
Osgood, L. J., Chicago.
Papot, Grace E., Chicago.
Peck, D. B., Chicago.
Pokorney, F. J., Chicago.
Powers, H. W., Chicago.
Pratt, Irene R., Chicago.
Quales, N. T., Chicago.
Quinn, W. A., Chicago.
Rafferty, H. N., Robinson.
Renaud, J. T. U., Chicago.
Renberg, F. H., Chicago.
Reynolds, E. R., Chicago.
Rice, J. H., Quincy.
Rice, W. E., Tuscola.
Robinson, S. T., Edwardsville.
Roth, J. H., Chicago.
Roth, L. R., Chicago.
Royal, Andy, Wrights.
Rutherford, C. W., Newman.
Schaefer, H. L., West Salem.
Schiller, Heliodor, Chicago.
Shore, J. P., Sailor Springs.
Schroeder, S. P., Nashville.
Schroeder, W. E., Chicago.
Sherlaw, Jos., Chicago.
Shurtz, S. W., Champaign.
Smale, W. M. B., Chicago.
Stewart, Andrew, Chicago.
Stillians, A. W., Chicago.
Thompson, Gertrude F., Chicago.
Thompson, J. R., Bridgeton.
Troutt, E. C., Huey.
Vadakin, J. H., Bethany.
Vaughan, R. T., Chicago.
Warne, F. C., Chicago.
Washburn, J. M., Chicago.
Weirick, W. H., Washington.
Wheeler, A. M., Chicago.
Wheeler, R. M., Chicago.
White, W. S., Chicago.
Whitsitt, W. H., Danforth.
Wiman, L. H., La Moille.
Windett, R. A., Aurora.
Wood, F. W., Chicago.
Zimmermann, A. G., Chicago.

INDIANA.

Bosenbury, C. S., South Bend.
Button, C. E., Crown Point (T. Butte, Mont.).
Cox, C. R., Lynn.
Gilpin, J. H., Ft. Wayne.
Knight, J. C., Jonesboro.
Knowlton, Millard, Terre Haute.
Lairy, M. M., Lafayette.

IOWA.

Baker, C. W., Stanwood.
Barton, E. G., Ottumwa.
Bobo, L. K., Oxford Junction.
Gardner, J. R., Lisbon.
Griffin, C. C., Jr., Vinton.
Harrington, C. M., Knoxville.
Hill, J. C., Newton.
Johnston, E. N., Fredericksburg.
Luse, R. J., Des Moines.
Stookey, C. G., Mechanicsville.

KANSAS

Randles, Herbert, White City.
Sharpe, O. D., Neodesha.

KENTUCKY.

Barrett, W. Lee, Aetnaville.
Bruce, W. E., Vanceburg.
Carpenter, J. D., Louisville.
Clayton, J. M., West Louisville.
Gilkey, J. A., No. Middletown.
Hiestand, C. V., Merrimac.
Langolf, F. A., Louisville.
McDonald, M. A., Whitesville.
Richmond, H. C. T., Louisville.
Stedman, S. M., Versailles.
Stout, C. E., Martin.
Yontsler, D. E., Owensboro.

LOUISIANA.

Bacon, E. F., New Orleans.
Thibodaux, P. T., Donaldsonville.

MAINE.

Cumiston, C. H., Brunswick.
Hutchins, G. H., McFalls.

MARYLAND.

Flinder, Harris, Baltimore.
Macht, D. I., Baltimore.
Wilson, L. R., Baltimore.

MASSACHUSETTS.

Andrews, F. F., Revere.
Bigelow, Alice H., Boston.
Carroll, J. P., Woburn.
Damon, A. L., No. Wilbrabam.
Drohan, J. H., Brockton.
Faunce, C. B., Jr., Boston.
Fish, E. C., Melrose.
Ladd, Maynard, Boston.
Lahey, F. H., Boston.
Lane, E. B., Boston.
Lee, R. I., Boston.
Livingston, Clarence B., Lowell.
McNamara, J. J., Brockton.
Murphy, D. D., Amesbury.
O'Leary, J. A., Wakefield.
Russell, S. J., Springfield.
Shaw, A. E., Lowell.
Wheeler, A. A., Leominster.

MICHIGAN.

Brooks, W. D., Leslie.
Campbell, A. McK., Grand Rapids.
Davey, B. M., Lansing.
Fischer, P. M., Remus.
Georg, C., Ann Arbor.
Griffith, W. A., Coldwater.
Haviland, J. J., Lennon.
Holden, Hiram, Trenton.
Houston, James, Swartz Creek.
Pequeguot, C. F., Detroit.

MINNESOTA.

Hamel, C. E., Duluth.
Houey, C. L., Duluth.
Liedloff, A. G., Mankato.
Schmidt, K. H., Minneapolis.

MISSISSIPPI.

Beadles, A. O., Stonewall.
Lewis, T. B., Washington.
Williamson, J. F., Pleasant Grove.

MISSOURI.

Beedle, G. A., Kansas City.
Buhman, Rudolph, St. Louis.
Chamberlain, G. W. E., Rockport.
Churchill, E. R., Nevada.
Cunuingham, O. J., Kansas City.
Dieckman, W. C., Dexter.
Frielingsdorf, E. H., St. Louis.
Fulkerson, W. D., Trenton.
Fulton, C. M., Kansas City.
Gordan, J. B., Bunker.
McBratney, E. W., St. Louis.
Savage, H. G., Warsaw.
Wagers, A. J., St. Louis.
Wood, D. L., Kansas City.
Wood, N. P., Independence.

NEBRASKA.

Lowery, J. H., Leigh.
McDowell, M. B., Hay Springs.
Potter, G. B., Shelby.
Sims, L. B., Friend.
Stejskal, F. J., Crete.
Tyler, E. M., Auburn.

NEW HAMPSHIRE.

Dearborn, L. G., Sr., Derry.

NEW MEXICO.

Doepp, F. F., Carlsbad.

NEW YORK.

Broome, J. R., New York City.
Clawson, C. D., Montour Falls.
Douglass, A. C., Ilion.
Eisenberg, I. C., New York City.
Erway, C. H., Elmira.
Felton, C. A., Syracuse.
Ford, F. R., Utica.
Gak, H. E., Syracuse.
Getty, S. E., Yonkers.
Heath, C. J., Syracuse.
Horowitz, Philip, New York.
Howland, John, New York.
Jones, Florence L., Brooklyn.
Kauffman, L., Buffalo.
O'Brien, J. J., Schenectady.
Odell, H. L., Syracuse.
O'Neill, R. P., New York City.
Rupp, F. J., Syracuse.
Scripture, E. W., New York.
Smith, Cassar, Olean.
Tilney, Frederick Brooklyn.
Waldron, H. A., Newburgh.

NORTH CAROLINA.

Hays, B. K., Oxford.
McFadyen, P. R., Randelman.

NORTH DAKOTA.

Abplanalp, I. S., Ray.
Engstad, J. E., Grand Forks.
Mathews, G. A., Napoleon.

OHIO.

Allen, S. D., Oakharbor.
Andrews, W. B., Kent.
Austin, G. M., Wilmington.
Ballou, J. G., Graytown.
Bamburger, Herman, Toledo.
Bodman, L. H., Toledo.
Boggs, S. E., Good Hope.
Brandon, E. F., Edon.
Burdsall, H. L., Hamilton.
Caldwell, J. S., Cincinnati.
Campbell, G. M., Navarre.
Coy, M. C., Evansport.
Crawford, C. C., Cleveland.
De Haven, A. D., Xenia.
Drury, A. G., Cincinnati.
Farnsworth, G. B., Cleveland.
Fisher, J. F., Sabina.
Frame, C. A., Cambridge.
Fritz, J. H., West Alexander.
Gorrell, A. H., Zanesville.
Guntrum, W. E., Greenville.
Hall, W. A., Chillicothe.
Hathway, R. L., E. Liverpool.
Heath, J. R., Grover Hill.
Hilty, N. S., Pandora.
Huddle, G. P., Stoutsville.
Hunt, C. T., Miamisburg.
Hutchings, Stanley R., Springfield.
Keller, J. G., Toledo.
King, P. F., Alliance.
Kirkpatrick, J. F., London.
Lehman, P. M., Ney.
Lieuellen, J. O., Maineville.
Manning, Mary P., Hamilton.
McLaughlin, T. H., Toledo.
Meek, A. W., Hollandburg.
Miller, H. T., Springfield.
Moore, C. A., Cambridge.
Mortland, D. G., Edgerton.
Mulholland, P. I., Toledo.
Nihart, W. K., Edgerton.
O'Ferrall, R. M., Piqua.
Palmer, I. N., Newark.
Pav, A. F., Cleveland.
Rabberman, W. H., Forest.
Replogle, M. V., Bryan.
Robiusou, Rush, Columbus.
Ruhl, L. A., Covington.
Schuetzler, J. U., Bryan.
Sheibley, A. F., Ottawa.
Stukey, F. P., Lancaster.
Steuer, J. C., Cleveland.
Tussing, L. I., Lima.
Walker, C. A., Louisville.
Wallenstein, Millard, Cincinnati.
Watterson, B. E., Continental.
Whitaker, H. O., New Burlington.
Whitford, Frank, Sedalia.
Williams, Georgetta S., Hamilton.
Witham, J. E., Kings Mills.
Wolfstein, D. I., Cincinnati.
Yoder, H. M., Smithville.

OKLAHOMA.

Grosshart, Ross, Tulsa.
Lloyd, H. C., Hobart.
Ritter, J. M., Mondamin.
Roberts, D. D., Nashville.
Rone, J. B., Oklahoma City.
Sanborn, G. H., Shawnee.

PENNSYLVANIA.

Cadwalader, W. B., Philadelphia.
Diez, M. Luise, Philadelphia.
Hooker, R. S., Philadelphia.
McGhee, S. J., Millhall.
Miller, E. B., Altoona.
Purnell, H. G., Ansonville.
Reed, W. L., Homer City.
Rice, A. C., McSherrystown.
Rochelle, Mary J., Philadelphia.
Saxer, G. P., Fleetville.
Schwarz, L. L., Pittsburg.
Spicher, C. C., Lovejoy.
Wagner, L. F., Reading.
Whetstone, W. B., Philadelphia.
White, S. G., Pittsburg.
Wyant, Florence B., Sharon.

RHODE ISLAND.

Hussey, F. V., Providence.
Logan, E. J., Providence.

SOUTH CAROLINA.

Bailey, C. W., Georgetown.
Johnston, J. G., Chester.
Sanders, R. L., Anderson.
Timmermau, W. P., Batesburg.

TENNESSEE.

Akins, E. M., McCays.
Cate, P. W., Charleston.
Haase, Marcus, Memphis.
Prather, P. W., Woodland Mills.

TEXAS.

Aldridge, H. W., Rockett.
Beall, K. H., Fort Worth.
Bernard, J. W., Carney.
Binney, Charles, Thurber.
Blackwell, T. H., Dickens.
Bolin, G. W., Loveing.
Bowen, R. E., Devers.
Bush, I. J., El Paso.
Burke, Albert, San Antonio.
Carpenter, J. D., Frisco.
Colgin, M. W., Waco.
Connally, H. F., Eddy.
Dawe, W. T., Gonzales.
Dudley, J. B., Marysville.
Dudley, R. L., Marysville.
Easton, E. S., Eagle Pass.
Faulk, Lem, Sulphur Springs.
Fisher, T. B., Dallas.
Forrester, W. H., Klondike.
Hill, J. A., Groveton.
Holt, O. C., Lockhart.
Howard, G. R., Palestine.
Johnson, J. M., Giddings.
Mays, C. E., San Angelo.
McCuiston, S. A. Pattonville.
McFarlin, J. E., Sandia.
McGlasson, I. L., Axtell.
Meredith, Duane, Dundee.
Mooney, James, Wellington.
Neal, J. F., Lytle.
Nifong, H. D., Britton.
Post, G. A., Simms.
Powell, C. N., Deweyville.
Rogers, I. S., Frisco.
Roth, H. G., Mobetie.
Sharpe, E. L., Pleasanton.
Stone, D. S., Junction.
Stuckey, J. H., Caro.
Swonger, J. B., Odelia.
Thomas, V. D., Manor.
Vaughan, W. B., Honey Grove.
Westmoreland, J. P., Weldon.
Wilkins, J. S., Wellington.
Youngblood, R. C., Cestohowa.

UTAH.

Richards, G. G., Salt Lake City.

VERMONT.

Buxton, G. D., Proctorsville.
Dewey, J. E., Montpelier.
Latour, G. E., Burlington.
Swift, H. H., Pittsford.
Turner, W. D., Worcester.

VIRGINIA.

Barrow, Bernard, Barrow's Store.
Nelson, H. T., Jr., Charlottesville.
Page, R. L., Batesville.
Peery, E. W., Rural Retreat.
Tucker, Beverly R., Richmond.
White, R. J., Keller.

WASHINGTON.

Harnett, A. E., Three Lakes.
Hoxsey, G. W., Leavenworth.
Livingstone, David, Centralia.
Macdonald, J. F., Hoquiam.
Maloney, R. L., Anacortes.
McGillivray, D. E., Port Angeles.
O'Neill, F. W., Spokane.
Paschall, B. S., Seattle.
Pickrell, W. B., Spokane.
Summers, J. W., Walla Walla.
Whitney, H. J., Davenport.
Wiesel, P. E., Garfield.

WEST VIRGINIA.

Biddle, J. S., Mason.
Brewm, J. A., Fayette.
Drinkwater, W. G., Gormania.
Gibbons, P. A., Morgantown.
Goff, T. N., Kenova.
Lemaster, A. J., Bedington.
Mayer, D., Charleston.
Morrison, L. C., Hurricane.
Neale, W. P., Point Pleasant.
Peery, T. E., Bluefield.
Pendleton, P. B., Longacre.
Phillips, F. M., Harper's Ferry.
Powell, R. H., Grafton.
Skaggs, H. C., Kay Moor.
Smith, Isaac, Peel Tree.
Steele, H. G., Keystone.
Wilkinson, C. E., Brandonville.

WISCONSIN.

Andrae, R. W., Norwalk.
Becker, B. A., Silver Lake.
Bernhard, A., Milwaukee.
Farr, J. F., Eau Claire.
Fletcher, W. T., Salem.
Germano, G. A., Kenosha.
Gilbert, H. A., Madison.
Golley, F, B., Milwaukee.
Haveu, W. S., Racine.
Jones, Susan, Racine.
Wetzler, S. H., Milwaukee.
Worden, J. E., Minocqua.
Zimmerman, Amelia, Kenosha.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending April 4, 1908:

Clayton, J. B., and Dean, E. A., asst.-surgeons, will report in person to Major William C. Borden, surgeon, president examining board at Manila, P. I., at such time as may be required by the board for examination for promotion to the rank of major.

Kieffer, C. F., surgeon, retired from active service on account of disability, to take effect June 24, 1908, and granted leave of absence to include that date.

Heizmann, C. L., asst.-surgeon-general, retired from active service, upon his own application, after forty years' service.

Harris, J. R., asst.-surgeon, relieved from further treatment at General Hospital, Presidio of San Francisco, and ordered to return to station, Fort Worden, Washington.

Craig, E. J., dental surgeon, left Fort Mackenzie, Wyo., for duty at Fort Robinson, Neb.

McAlister, J. A., Jr., dental surgeon, relieved from duty at Fort Sheridan, Ill., and ordered to Philippine service; granted leave of absence for one month.

Millikin, J. D., dental surgeon, left Fort Wayne, Mich., and arrived at Fort Sheridan, Ill., for duty.

Drake, P. G., contract surgeon, relieved from duty at Fort Hancock, N. J., and ordered to Fort Ethan Allen, Vt., for duty.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending April 4, 1908:

Koltes, F. X., asst.-surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the Navy Yard, Mare Island, Cal.

Leach, P., surgeon, ordered home to wait orders, when discharged from treatment at the Army and Navy General Hospital, Hot Springs, Ark.

Baker, M. C., asst.-surgeon, detached from duty on the Midway Islands and ordered to the Navy Yard, Mare Island, Cal.

Public Health and Marine-Hospital Service.

List of changes of stations and duties of commissioned officers of the Public Health and Marine-Hospital Service for the fourteen days ended April 1, 1908:

Carmichael, D. A., surgeon, granted leave of absence for ten days, from March 25, 1908, on account of sickness.

Kalloch, P. C., surgeon, directed to proceed to Bradford, Me., for special temporary duty, on completion of which to rejoin his station at Portland.

Anderson, J. F., passed asst.-surgeon, directed to proceed to Asheville, N. C., for special temporary duty, on completion of which to rejoin his station in the Hygienic Laboratory.

Amesse, J. W., passed asst.-surgeon, relieved from temporary duty in the Hygienic Laboratory and directed to rejoin his station at Havana, Cuba.

Warren, B. S., passed asst.-surgeon, detailed to represent the service at the annual meeting of the Oklahoma State Medical Association at Sulphur, Oklahoma, May 14-16, 1908.

Wightman, W. M., asst.-surgeon, granted leave of absence for seven days, from March 1, 1908.

de Valin, Hugh, asst.-surgeon, relieved from duty at New Orleans quarantine station and directed to proceed to Savannah quarantine station and assume charge at that port.

Bryan, W. M., asst.-surgeon, temporarily relieved from duty at New Orleans and directed to proceed to New Orleans quarantine station, reporting to the medical officer in command for duty.

Tarbell, B. C., acting asst.-surgeon, granted leave of absence for thirty days, from April 1, 1908, and excused without pay for a further period of two weeks from expiration of leave.

Fister, S. B., acting asst.-surgeon, granted leave of absence for fifteen days, from April 6, 1908.

Gustetter, A. L., acting asst.-surgeon, granted leave of absence for four days, from March 3, 1908, on account of sickness.

Jackson, J. M., Jr., acting asst.-surgeon, granted leave of absence for seven days, from April 14, 1908.

Keatley, H. W., acting asst.-surgeon, granted leave of absence for one day, March 19, 1908, under Paragraph 210, Service Regulations.

Simonson, G. T., acting asst.-surgeon, granted leave of absence for two days, from March 31, 1908.

BOARD CONVENED.

A board of medical officers was convened to meet at Boston, April 9, 1908, for the purpose of making physical examination of an officer of the revenue cutter service. Detail for the board: Surgeon R. M. Woodward, chairman; Asst.-Surgeon T. W. Salmon, recorder.

RESIGNATION.

Resignation of Asst.-Surgeon R. B. Scofield accepted, by direction of the President, to take effect April 17, 1908.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended April 3, 1908:

SMALLPOX—UNITED STATES.

California: Los Angeles, March 7-14, 4 cases; San Francisco, 5 cases.

Illinois: Chicago, March 14-21, 2 cases; Jacksonville, 1 case; Rock Island, 1 case; Springfield, March 12-19, 16 cases.

Indiana: Elkhart, March 14-21, 5 cases; Indianapolis, March 15-22, 3 cases; La Fayette, March 16-23, 1 case; Muncie, March 14-21, 7 cases: South Bend, 1 case.

Iowa: Ottumwa, March 14-21, 1 case.

Kansas: Kansas City, March 14-21, 7 cases.

Kentucky: Covington, March 14-21, 2 cases.

Louisiana: New Orleans, March 14-21, 8 cases, 2 deaths.

Michigan: Detroit, Feb. 14-21, 1 case; Port Huron, 2 cases; Saginaw, March 7-14, 4 cases.

Montana: Butte, March 10-17, 2 cases.

Nebraska: Nebraska City, March 14-21, 8 cases.

New Jersey: Newark, March 14-21, 1 case.

Ohio: Cincinnati, March 13-20, 19 cases; Cleveland, 1 case; Dayton, March 14-21, 1 case.

Tennessee: Nashville, March 14-21, 2 cases.

Texas: San Antonio, March 14-21, 20 cases.

Washington: Spokane, March 7-14, 9 cases; Tacoma, 1 case; Whatcom County, Feb. 15-March 17, 32 cases.

Wisconsin: La Crosse, March 14-21, 6 cases; Manitowoc, 1 case; Racine, 3 cases.

SMALLPOX—FOREIGN.

Brazil: Bahia, Feb. 1-29, 115 cases.

Canada: Halifax, March 15-22, 2 cases; Winnipeg, March 14-21, 2 cases.

China: Hongkong, Feb. 1-8, 46 cases, 29 deaths.

Ecuador: Guayaquil, Feb. 15-29, 11 deaths.

Great Britain: Edinburgh, Feb. 22-March 7, 6 cases. Feb. 29-March 7, 1 case; Leith, Feb. 22-March 7, 6 cases.

India: Bombay, Feb. 8-25, 28 deaths; Calcutta, Jan. 18-Feb. 8, 46 deaths.

Italy: General, March 5-12, 25 cases.

Japan: Kobe, Feb. 22-29, 140 cases, 65 deaths; Osaka, Feb. 15-26, 237 cases, 62 deaths; Yokohama, Feb. 22-29, 53 cases, 22 deaths.

Malta: Feb. 22-29, 3 cases.

Mexico: Manzanillo, March 7-14, 2 cases, 2 deaths; Monterey, March 8-15, 2 deaths.

Peru: Lima, Feb. 15-22., present.

Russia: Moscow, Feb. 22 29, 40 cases, 8 deaths; Odessa, Feb. 22-March 8, 6 cases, 2 deaths; Riga, Feb. 29-March 7, 2 cases: St. Petersburg, Feb. 15-29, 33 cases, 11 deaths; Warsaw, Dec. 14-Jan. 11, 68 deaths.

Spain: Valencia, March 1-8, 10 cases, 2 deaths.

YELLOW FEVER.

Ecuador: Guayaquil, Feb. 15-29, 14 deaths.

CHOLERA.

India: Calcutta, Jan. 18-Feb. 8, 151 deaths; Madras, Feb. 15-21, 15 deaths; Rangoon, Feb. 8-15, 4 deaths.

PLAGUE.

Brazil: Bahia, Feb. 1-29, 5 cases, 1 death.

Chile: Antofagasta, Feb. 23, 14 cases, 1 death; Arica, Feb. 19-26, 6 cases, 1 death; Iquique, Feb. 25, present; Valparaiso, Dec. 14-28, 2 cases, 1 death.

Ecuador: Guayaquil, Feb. 15-29, 4 cases, 9 deaths.

India: Bombay, Feb. 18-25, 125 deaths; Calcutta, 40 deaths; Rangoon, Feb. 8-15, 17 deaths.

Peru: Callao, Feb. 22-29 1 case, 1 death; Catacaos, 12 cases; Chepen, 9 cases, 4 deaths; Eten, 15 cases, 10 deaths; Lima, 9 cases, 4 deaths; Mansefu, 7 cases, 4 deaths; Mollendo, 3 cases, 2 deaths; Paita, 1 case, 2 deaths; Santa Eulalia, 6 cases, 6 deaths; Trujillo, 32 cases, 16 deaths.

Medical Education and State Boards of Registration

COMING EXAMINATIONS.

DISTRICT OF COLUMBIA Board of Medical Supervisors, Washington, April 14-17. Secretary, Dr. George C. Ober, 210 B. St. S.-E., Washington.

WEST VIRGINIA State Board of Health, Parkersburg, April 14-16. Secretary, Dr. H. A. Barbee, Point Pleasant.

ARKANSAS Regular Board of Medical Examiners, Little Rock, April 14. Secretary, Dr. F. T. Murphy, Brinkley.

ILLINOIS State Board of Health, Northwestern University Building, Chicago, April 15-17. Secretary, Dr. J. A. Egan, Springfield.

MISSOURI State Board of Health, St. Louis and Kansas City, May 4-6. Secretary, Dr. J. A. B. Adcock, Warrensburg.

LOUISIANA Homeopathic Board of Medical Examiners, New Orleans, May 5. Secretary, Dr. Gayle Aiken, 1102 St. Charles Ave., New Orleans.

TENNESSEE State Board of Medical Examiners, Memphis, Nashville and Knoxville, May 5. Secretary, Dr. T. J. Happel, Trenton.

MISSISSIPPI State Board of Health, State Capitol, Jackson, May 12. Secretary, Dr. J. F. Hunter, Jackson.

ILLINOIS State Board of Health, City Hall, East St. Louis, May 12-14. Secretary, Dr. J. A. Egan, Springfield.

NORTH CAROLINA State Board of Medical Examiners, Winston-Salem, May 19. Secretary, Dr. G. T. Sikes, Grissom.

MASSACHUSETTS State Board of Registration in Medicine, State House, Boston, May 12-14. Secretary, Dr. Edwin B. Harvey, Room 159, State House, Boston.

NEW YORK State Board of Medical Examiners, Albany, May 19-22. Chief of Examinations Division, Charles F. Wheelock, Albany.

INDIANA Board of Medical Registration and Examination, Indianapolis, May 26-28. Secretary, Dr. W. T. Gott, 120 State House, Indianapolis.

NEBRASKA State Board of Health, State Capitol, Lincoln, May 27-29. Secretary, Dr. E. J. C. Sward, Oakland.

Indiana Medical Colleges Inspected.

The Indiana Board of Medical Registration and Examination announces that it has completed its annual inspection of Indiana medical colleges and that the following are in good standing:

Indiana Medical College, School of Medicine of Purdue University.

State College of Physicians and Surgeons, Indiana University School of Medicine.

Physio-Medical College of Indiana.

The board states that it has withdrawn recognition from the Eclectic Medical College of Indiana, and that any work done in that institution after the graduation of the 1908 class will not be recognized by the board.

Maine March Report.

Dr. William J. Maybury, secretary of the Maine Board of Registration in Medicine, reports the written examination held at Augusta, March 17-18, 1908. The number of subjects examined in was 10; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 12, all of whom passed. The following colleges were represented

PASSED.

College.	Year. Grad.	Per Cent.
College of P. and S., Baltimore	(1907)	85.7
College of P. and S., Boston	(1907)	77.5
Tufts Coll. Med. School	(1905) 80.4; (1907)	79, 89.5
Jefferson Med. Coll.	(1907)	86.8
Laval University, Quebec (1894) 76.2; (1899) 85.2; (1905) 80.2; (1906) 83.3; (1907) 78.1.		
McGill University, Quebec	(1904)	91.9

Connecticut March Report.

Dr. Charles A. Tuttle, secretary of the Connecticut State Medical Examining Board, reports the written examination held at New Haven, March 10-11, 1908. The number of subjects examined in was 10; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 14, of whom 10 passed and 4 failed. The following colleges were represented

PASSED.

College.	Year. Grad.	Per Cent.
University of Maryland	(1897) 79.2; (1900) 82.2; (1907)	78.8
Baltimore Med. Coll.	(1906)	75.9
Yale University	(1905) 86.9; (1907)	84.5
Harvard Med. School	(1906)	81.6
College of P. and S., New York	(1887) 80.6; (1905)	86.4
University of Naples, Italy	(1907)	75.3

FAILED.

Baltimore University	(1900)	72.0
Maryland Medical College	(1907)	63.2
Dartmouth Medical School	(1871)	52.2
University of Naples	(1870)	63.9

Connecticut Homeopathic March Report.

Dr. E. C. M. Hall, secretary of the Connecticut Homeopathic Medical Board, reports the written examination held at New Haven, March 10-11, 1908. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 2, both of whom passed. The following colleges were represented:

PASSED.

College.	Year. Grad.	Per Cent.
Boston University	(1887)	90.
Hahnemann Med. Coll., Philadelphia	(1907)	96.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

NEW LAW FOR GERMANY.

Supplementary Medical Practice Act Proposed.

The German medical journals contain the text of a bill now before the Reichstag which provides for the regulation of the practice of medicine by irregulars. This bill, which has caused considerable editorial comment, provides for the regulation of a large class of irregular practitioners who are patronized by the public, but who are not qualified as physicians. The editorials admit that the bill is not perfect, but urge the medical profession to work for its enactment, as it is a step in the right direction and a gain over present conditions, especially so far as public health is concerned.

The bill provides that every person who makes a practice of treating disease or morbid conditions of any kind, and who is not a legally qualified physician, must register his name and address with the police, record removals from time to time and keep a set of books open to the inspection of the police at all times. Persons known to have been convicted of crime or those whose methods are liable to injure the health of man or animals are not to be allowed to register or practice. Persons registering under this law are not to be allowed to treat venereal diseases. Public advertisement of remedies for such diseases as well as advertisement of aphrodisiac remedies for "loss of vigor," measures to prevent conception or to interrupt pregnancy, is entirely prohibited. The exploitation of any remedy liable to injure the health or to defraud the purchaser can be prohibited by a committee of the bundesrath. Advertisement of remedies, the composition of which or the essential factors in the manufacture of which are secret, is also forbidden. Practitioners registering under this law are forbidden to use any treatment not based on personal examination. This will preclude the use of "absent treatment." They are not allowed to use any narcotics except local anesthetics, neither are they permitted to use hypnosis or "mystic processes" in their treatment.

A commission formed by the Imperial Health Office is to be established by the bundesrath for the purpose of passing on remedies or substances claimed to be serviceable for the treatment of diseases of man or animals. This commission is to consist of a judge and of experts from the professions of medicine, veterinary science and pharmacy. Appointment is for five years. Making claims by advertisements or otherwise of properties possessed by remedies not borne out by the findings of the commission is punishable by imprisonment, fine, or both. The same penalty is to be applied to those making knowingly untrue statements with reference to the person of the manufacturer or originator, or to the person or persons responsible for the publication of the advertisement. Fine and imprisonment are also imposed on proof of the following: Soliciting for absent treatment by public announcement or advertisements; publicly announcing remedies for the prevention or cure of venereal diseases; publicly announcing or recommending remedies for the treatment of disease of animals or man in which the constituents or essential character of the cure, or the process of preparation is kept secret or is obscured.

The *Münchener medizinische Wochenschrift* says editorially: "The bill does not in any sense fulfil the wishes of those physicians who seek the abolition of quackery. It contains, however, a number of practical measures for the restriction of quackery so that the removal of the worst outgrowths of this injury to the public health may be hoped for. Registration and the necessity of keeping books open to the inspection of the police will be a decided hindrance to the business of the quack. The other provisions of the bill contain much that is good. It should be the business of the physician to recognize in the bill what it positively offers rather than to complain about what is lacking, since a vigorous opposition is to be expected from those interested in the defeat of the bill."

The measure outlined above is of importance, since it introduces a new principle in medical legislation, namely, the regulation of irregulars, quacks and fakers by the local police rather than by the state. These people are granted the right to practice under police surveillance. All efforts made in this country so far have been for the prevention of the practice of medicine by anyone except those legally qualified to do so. When a sect or cult became so powerful that it could not be prevented from practicing, the difficulty has been met by admitting representatives of the sect and according them the legal standing of physicians, regardless of their scientific standing. Recent legislation along osteopathic lines in a number of states is an example. The proposed German law attempts to meet the difficulty by allowing the followers of those fads and cults which a portion of the public wish to patronize to carry on their business, but under police surveillance and without at the same time lowering the standing and personnel of the recognized medical profession. This plan is worthy of careful study. The progress of the bill and the practical results of the law, if adopted, will be watched with interest.

Antituberculosis Meeting in County Society.

An antituberculosis meeting to which the general public was invited was held under the auspices of the Warren County Medical Society, at Bowling Green, Ky., March 25. The meeting was held at 1 o'clock in the afternoon in order to permit of the largest possible attendance. Over a thousand people were present. Beside addresses on tuberculosis from a medical standpoint, papers were read on the economics of the tuberculosis problem, by the county attorney of Warren County; on the public schools and the tuberculosis question, by the county superintendent of schools; on the legal control of tuberculosis, by the state's attorney, and on the solution of the tuberculosis problem, by a member of the faculty of the Western Kentucky State Normal School. Great interest was shown in the meeting and it is anticipated that beneficial results will follow. This is the ideal way of enlightening the public on medical matters.

Dr. McCormack in Louisiana.

Dr. McCormack has just concluded a two weeks' tour in Louisiana, extending from March 17 to March 30. In both interest aroused and immediate results achieved this trip has probably been the most successful of any yet undertaken by him, if we may judge from the newspapers of the different towns visited.

The *Monroe News* says:

> Those who heard Dr. McCormack's message last night will be very sure not to forget it. His words, simply and discreetly spoken, were full of meaning, incontrovertible, indisputable. He came with no hope of gain, for nothing was asked of anyone but a hearing, with no flourish of oratory, no play of words or fine periods, but he brought us something better—help and hope. He planted the banner of advancement and enlightenment in our midst and went his way, carrying his message throughout this state. The people of this state, which has suffered, perhaps more than any in the union from preventable diseases and death, are going to "sit up and take notice" after

> Dr. McCormack is through, and a happier, better day for us lies in the future.

The *Lake Charles Daily American:*

> A large audience was assembled to hear his address which was one of the most interesting and instructive ever heard in this city.

The *Lake Charles Daily Press:*

> It was a familiar talk more than a formal lecture and was thus more appreciated.

The following comment is made editorially by the last mentioned paper:

> The lecture last night gave the people something to think about. It is just such plain, practical, common-sense lectures that do the people much good.

The *New Orleans Picayune:*

> A notable lecture was delivered last night to a crowded house.

The *Times-Democrat:*

> Rarely if ever has an audience in this city followed a lecture more absorbingly, expressed more ready understanding, sympathy and appreciation than the gathering that heard Dr. McCormack's address. His plea for better sanitation for the physician and the enlightenment of all regarding health and the prevention of disease was made to thinking people. That he was in accord with his audience last night was evidenced by the reception of his remarks.

The Alexandria *Town Talk:*

> His gospel of health is preached by his own personality, strong, straight and strenuous. The chief charm of his address lies in his absolute frankness and sincerity. He marshals his figures from the ground of actual experience and draws from them the most absolute and overwhelming conclusions. His presence in any community as a teacher on the great subject of public health is an uplift of the highest order and the *Town Talk* voices the sentiments of the entire community when it places on record its thanks for this splendid address.

Particularly noteworthy has been the support and endorsement given this work by the prominent members of other professions in Louisiana.

At the New Orleans meeting the Rt.-Rev. Archbishop James H. Blenk was present and spoke at the close of Dr. McCormack's address, thanking him in the name of the city of New Orleans for the good which his lecture would do.

Regarding the meeting at Natchitoches, the president of the State Normal School, Prof. B. C. Caldwell, writes:

> Dr. McCormack's address at our school will do more good than anyone now living can estimate. It was masterly and entertaining as well. Although he spoke for an hour, the 500 students listened with rapt attention to every word and were able to follow intelligently everything that was said. I wish such a lecture could be delivered in every gathering of teachers in Louisiana. It would raise the standard of morality and the scale of honor, and would help to make us all a happier and healthier and nobler people.

At Natchitoches Judge Porter, of the Court of Appeals, was present and participated in the meeting, and said afterward:

> This is something which no intelligent man or woman can afford to miss. It is full of most valuable information and practical suggestions and has afforded me more pleasure than any lecture which I can recall.

Equally prominent men were present in other cities and endorsed the speaker and his work.

It is especially significant that the suggestions of Dr. McCormack regarding "patent medicine" advertising and the exploitation of frauds in the daily papers was at once taken up by the *New Orleans Morning World*, which began an active crusade against immoral and deceptive advertisements, quoting from Dr. McCormack's address as a justification for such an exposure and printing in this connection a lengthy editorial on quacks and quackery and the help given them by papers who share their profits. In this connection the editorial says:

> One thing is certain, the public ought to stop this. We, as a people, are long-suffering and kind, but there is a limit. When the breeders of the infinite diseases that result from ignorance and cupidity and imposition pose as moralists, it is about time for the people to sit up and take notice. The *World* believes that it is far more important to health to have the money agents of quackery suppressed than it is to suppress either racing or liquor.

Dr. McCormack will devote the month of April to work in Mississippi.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES.

DR. JOHN H. BLACKBURN, DIRECTOR.
Bowling Green, Kentucky.

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Seventh Month.

Third Weekly Meeting.

DISEASES DUE TO PREGNANCY.

Toxemia.

Sources of poison: Infections from air passages, intestines, endometrium, urinary tract.

Symptoms: Malaise, dizziness, headache, nausea, vomiting, edema.

Effect of injection of urine and blood serum.

Emesis.

Degrees of vomiting, frequency.

Varieties: Toxic, reflex and neurotic.

Causes: 1. Increased sensitiveness of nerve centers, with splanchnic congestion. 2. Peripheral irritation: Uterus; malpositions, inflammations, tumors. Gastrointestinal tract. Hysteria.

Treatment: Preventive.

Mild cases: Prophylaxis, diet, medicinal.

Hyperemesis: Diet, rest, careful nursing. Rectal saline solution, nutritive enemata. Hypodermoclysis. Gastric lavage. Medicinal treatment. Induction of abortion.

Eclampsia.

Frequency.

Contributing causes: Primiparity, twin pregnancy, hydramnios, constipation, heredity, epidemic influence.

Immediate causes: Metabolic and fermentative poisons. Placental and fetal poisons. Injury to liver and kidney from placental emboli. Significance of albumin and diminished urea.

Clinical history. Pre-eclamptic period, onset, convulsions.

Treatment: Threatened eclampsia.

Convulsions: Antepartum, intrapartum, postpartum. Saline solution, sweating, purgation, bleeding. Physiologic action and use of (a) morphin, (b) veratrum viride, (c) chloroform.

Medical Diseases Complicating Pregnancy.

Heart disease: Frequency. Effect of pregnancy, effect on pregnancy, effect of labor, of puerperium. Prognosis. Treatment: (a) pregnancy, (b) labor.

Hemophilia. Varices.

Pulmonary tuberculosis: Effect on pregnancy. Effect of pregnancy. Management. Question of marriage.

Dental caries. Gastrointestinal disorders.

Nephritis: Dangers of pregnancy.

Neuralgias and neuritis.

Acute infections: Smallpox, typhoid, measles, scarlet fever, influenza, erysipelas.

Gonorrhea: Acute and chronic, effect on child, on puerperium. Symptoms. Treatment.

Syphilis: Infection (a) before conception, (b) at time of conception, (c) after conception, (d) paternal infection. Treatment in each case.

Surgical and Gynecologic Affections Complicating Pregnancy.

Hernia and appendicitis. Traumatisms. Surgical infections.

Uterine retrodisplacements. Prolapse. Antefixation. Cancer of cervix. Fibromyomata of uterus. Ovarian tumors.

Marriages

Edward L. Sutton, M.D., to Miss Katherine Louise Mussler, both of Pittsburg, Pa., April 9.

W. S. Van Fossen, M.D., Columbus, Ohio, to Miss Katherine Hobson of Fremont, Ind., April 2.

Edgar B. Friedenwald, M.D., to Miss Bettie Freundlich, both of Charleston, W. Va., March 23.

Noble P. Howard, M.D., Greenfield, Ind., to Miss Verona Maud Donnelle of Indianapolis, Ind., March 25.

Truman William Brophy, M.D., Chicago, to Mrs. Esther Strawbridge of Moorestown, N. J., March 31.

Deaths

Elisha Ingraham Baily, M.D. Jefferson Medical College, Philadelphia, 1844; who entered the Army as first lieutenant and assistant surgeon in 1847; was promoted to captain five years later; to major in 1861, and breveted lieutenant-colonel, March 13, 1865, for faithful and meritorious services during the Civil War; advanced to lieutenant-colonel in 1876; to colonel in 1883; retired by operation of law in 1888, and advanced to the grade of brigadier general on the retired list in 1904; died at the Army General Hospital, San Francisco, March 23, from arteriosclerosis, aged 83.

Edward Gilead Morse, M.D. Medical School of Harvard University, Boston, 1870; a member of the American Medical Association; for 18 years treasurer of the Norfolk District Medical Society; treasurer of the Massachusetts Medical Beneficiary Society; councilor of the Massachusetts Medical Society; librarian of the Roxbury Social Medical Improvement Society; one of the best-known practitioners of Roxbury district, Boston; died suddenly March 24, from heart disease, while making a professional call, aged 59.

Charles Jordan Orr, M.D. Washington University, Medical Department, St. Louis, 1891; a member of the Missouri State Medical Association; president of the St. Louis City Hospital Alumni Association; a member of the staff of the Missouri Baptist Sanitarium, and formerly treasurer of the St. Louis Medical Society of Missouri; for several years in charge of the St. Louis Medical College Dispensary; died at his home in St. Louis, March 28, from tuberculosis, after an illness of two months, aged 41.

Albert Brown Robinson, M.D. University of Buffalo (N. Y.) Medical Department, 1857; a member of the Massachusetts State and Suffolk District medical societies; assistant surgeon of the Tenth Massachusetts Volunteer Infantry and surgeon of the Forty-second Massachusetts Volunteer Infantry during the Civil War; some-time dispensary physician of Roxbury, and professor of surgery in the New England Female Medical College; died at his home in Roxbury, Boston, March 29, aged 72.

Abriam P. McConnell, M.D. Medical College of Ohio, Medical Department University of Cincinnati, 1850; formerly coroner and physician of Mason County, Mich.; and city physician of Ludington; surgeon of the Twenty-second Michigan Volunteer Infantry in the Civil War; a member of the local board of pension examiners, and acting assistant surgeon in the United States Marine-Hospital Service; died at his home in Ludington, March 25, from senile debility, aged 81.

Clarence A. Force, M.D. Starling Medical College, Columbus, Ohio, 1885; a member of the American Medical Association; and for a quarter of a century a prominent physician of Attica, Ohio; for several terms a member of the city council, and for many years a member of the board of education; died in Mount Carmel Hospital, Columbus, March 24, from cancer of the intestine, eight days after an operation, aged 49.

Bryant Sloat Fassett, M.D. College of Physicians and Surgeons in the City of New York, 1903; of Elmira, N. Y.; a member of the medical societies of the State and County of New York, and Elmira Academy of Medicine; formerly surgeon to Roosevelt Hospital, out-door department, and Vanderbilt Clinic; died from acute nephritis, in Roosevelt Hospital, March 24, after an illness of twelve days, aged 29.

Thomas Devereaux Haigh, M.D. New York University Medical College, New York City, 1851; a member of the American Medical Association; once president of the Medical Society of the State of North Carolina and of the Cumberland County Medical Society; and for a long time dean of the medical profession of Fayetteville, N. C.; died at his home in that city, March 23, from heart disease, aged 78.

William J. Ford, M.D. New York University Medical College, New York City, 1884; a member of the Connecticut State and Litchfield County medical societies; in 1903 a member of the Connecticut legislature; at one time postmaster of Washington; town clerk and town treasurer for 20 years; died at his home in Washington, March 27, from pleurisy, after an illness of five days, aged 57.

Augustus Cæsar Kinney, M.D. Bellevue Hospital Medical College, New York City, 1870; of Astoria, Ore.; a member of the Oregon State Medical Association and Clatsop County Medical Society; one of the pioneers in the vaccination treatment of tuberculosis; died in Fabiola Hospital, Oakland, Cal., March 24, from cancer, two weeks after a surgical operation, aged 62.

Orla Irwin Corson, M.D. Starling Medical College, Columbus, Ohio, 1897; formerly coroner of Muskingum County, Ohio; for a time surgeon in the service of the Baltimore & Ohio Railroad; died suddenly at his home in Mount Sterling, Ohio, March 20, from organic heart disease, aged 37.

William Pinkney Bridgham, M.D. Medical School of Maine, Medical Department of Bowdoin College, Brunswick, 1844; for more than half a century an esteemed practitioner of Oxford County, Maine; died at his home in Buckfield, March 21, after an illness of about two months, aged 91.

Herbert Orrin Pease, M.D. New York University Medical College, New York City, 1882; at one time physician of Hampden County, Massachusetts; died at his home in Springfield, March 23, from a carbuncle, complicating diabetes, after an illness of two weeks, aged 52.

Oscar J. Thibodeaux, M.D. Medical Department of the Tulane University of Louisiana, New Orleans, 1887; mayor of Napoleonville, La., and assistant coroner of Assumption Parish; died at his home in Napoleonville, La., March 22, after a prolonged illness, aged 44.

Robert H. Van Dyke, M.D. University of Maryland School of Medicine, Baltimore, 1886; of Dover, Del.; a member of the Kent County (Del.) bar; died in the German Hospital, Philadelphia, March 8, from appendicitis, after an illness of three weeks, aged 46.

John Bryant, M.D. Medical School of Harvard University, Boston, 1878; who never engaged seriously in the practice of his profession, but was noted as an athlete and yachtsman; died at a private hospital in Boston, March 21, after an operation, aged 56.

Henry D. Clapp, M.D. University of Buffalo (N. Y.) Medical Department, 1895; interne in the City Hospital, Rochester, after graduation; died at his home in Geneva, N. Y., March 19, from pulmonary edema, after an illness of three years, aged 34.

J. Truman Lambert, M.D. St. Louis College of Physicians and Surgeons, 1884; for many years local surgeon of the Illinois Central Railroad at Farley, Iowa; died at his home in that place, March 24, after an illness of nearly two years, aged 59.

James Colby Sherman Gleason, M.D. University of Iowa College of Medicine, Iowa City, 1883; a practitioner of Corona, Cal., for 20 years, and president of the Independent Publishing Company; died at his home, March 27, from uremia, aged 63.

Charles Henry Frost, M.D. Rush Medical College, Chicago, 1881; a member of the American Medical Association, and a prominent practitioner of central Wisconsin, died suddenly at his home in Plainfield, March 26, from heart disease, aged 53.

John Breathed Snodgrass, M.D. Jefferson Medical College, Philadelphia, 1870; a Confederate veteran; died at his home in Martinsburg, W. Va., March 28, from heart disease, after a brief illness, aged 65.

Benjamin Bissell Waring, M.D. University Medical College of Kansas City, Mo., 1887; a member of the Iowa State and Ringgold County medical societies; died at his home in Maloy, March 3, aged 47.

Levi Metler Jones, M.D. Medical College of Ohio, Medical Department University of Cincinnati, 1866; died at his home in West Liberty, Ohio, February 22, after an invalidism of nearly 30 years, aged 74.

Cecil M. Armistead, M.D. University of California, Medical Department, San Francisco, 1896; a member of the American Medical Association; died at his home in San Francisco, February 6, aged 37.

Charles Louis Tilton, M.D. Western Reserve University Medical College, Cleveland, 1886; was found dead in his room in North Baltimore, Ohio, March 26, from heart disease, aged 42.

Hazen L. Avery, M.D. Rush Medical College, Chicago, 1904; of Los Angeles, Cal.; died at the Clara Barton Hospital in that city, March 22, from hemorrhage of the stomach, after an operation, aged 32.

George Strohecker Goodhart, M.D. Pennsylvania Medical College, Gettysburg, 1849; said to have been the oldest practitioner of Reading, Pa.; died at his home, March 26, aged 88.

Hamilton L. Sullivan, M.D. Louisville (Ky.) Medical College, 1888; died at his home in Winston-Salem, N. C., March 24, from septicemia, after an illness of two weeks, aged 52.

George F. Butman, M.D. Medical School of Harvard University, Boston, 1865; died at his home in Somerville, Mass., March 22, after a long illness, aged 70.

Alfred S. Gates, M.D. New Orleans School of Medicine, 1869; a Confederate veteran; died at his home in Franklin, La., March 19, after a long illness, aged 65.

Nathaniel G. Carter, M.D. Louisville (Ky.) Medical College, 1872; died at his home in Meridian, Miss., March 25, after an illness of two weeks, aged 57.

Otto F. Prochaska, M.D. College of Physicians and Surgeons, Chicago, 1890; died at his home in Cleveland, Ohio, March 29, after a prolonged illness, aged 39.

William E. Franklin, M.D. Washington University, Medical Department, St. Louis, 1860; died at his home in La Grange, Tenn., March 22, aged 75.

A. R. Sherrill (License, Arkansas), 1903; a Confederate veteran; died at his home at Sherrill, Ark., March 14, from senile debility, aged 82.

Deaths Abroad.

B. E. van den Corput, M.D., one of the leading physicians and scientists of Belgium, formerly professor of materia medica in the university at Brussels, died there February 22, aged 86. He was editor of the *Jour. de Méd. de Bruxelles*, which introduced in 1865 the innovation of publishing international health bulletins, and he founded in 1868 his *Ephémerides médicales*. He was sent by the government several times on scientific missions to other countries and was honorary member of many scientific societies at home and abroad. His works touch on numerous phases of chemistry, pharmacology, medicine and public health.

Conolly Norman, F.R.C.P. Ireland; one of the editors of the *Journal of Mental Science*; a pioneer in the humane treatment of the insane; fell dead from heart disease recently near his home in Dublin, aged 54.

Society Proceedings

COMING MEETINGS.

American Medical Association, Chicago, June 2-5.

Mississippi State Medical Association, Natchez, April 14.
Tennessee State Medical Association, Knoxville, April 14.
Florida Medical Association, Ocala, April 15.
Medical Association of Georgia, Fitzgerald, April 15.
South Carolina Medical Association, Anderson, April 16.
American Assn. of Pathologists and Bacteriologists, Ann Arbor, Mich., April 17 and 18.
Arizona Medical Association, Tucson, April 20.
Medical Association of State of Alabama, Montgomery, April 21.
Medical Society of State of California, Coronado, April 21-23.
Louisiana State Medical Society, Alexandria, April 28-30.
Med. and Chir. Faculty of Maryland, Baltimore, April 28-30.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES.

Eighteenth Annual Meeting, held at Cleveland, Ohio, March 16-17, 1908.

The President, Dr. Henry B. Ward, Lincoln, Neb., in the Chair.

Officers Elected.

The following officers were elected for the ensuing year: President, Eli H. Long, University of Buffalo; vice-presidents, E. P. Lyon, St. Louis University, and Charles F. Bevan, College of Physicians and Surgeons, Baltimore; secretary-treasurer, F. C. Zapffe (re-elected), 1764 Lexington Street, Chicago; judicial council, William J. Means (chairman), Starling-Ohio Medical College; A. A. D'Ancona, University of California; B. D. Myers, University of Indiana; Henry B. Ward, University of Nebraska; C. M. Jackson, University of Missouri; Randolph Winslow, University of Maryland; Egbert LeFevre, University and Bellevue Hospital Medical College.

New York City was chosen as the next place of meeting, March 15-16, 1909.

President's Address.

Dr. Ward reviewed the work that is being done by the various organizations interested in the elevation of medical education and by the state examining boards, outlining the scope and sphere of action of each body, and urging cooperation.

Raising of Standards.

Dr. W. L. Bryan, president of the Indiana State University, emphasized the desirability of higher education in all fields as a means for elevating the masses and making better physicians and better men in all trades and professions.

The State University and the Medical School.

Dr. George H. Hoxie, University of Kansas, stated that the state university is the logical outcome of the belief in popular education; on it devolves the duty of leadership and preparing its people for more advanced work. The medical school is a result of this, as are schools of law and of engineering, etc. The university must put in force the highest possible standard and put men in charge of the administration of these standards who will and can enforce them. The teaching force was discussed, and Dr. Hoxie recommended that only prepared men be put in charge of the teaching, men who devote their time to this work and are paid for doing so. The conduct of the clinical department separately from the scientific department of the medical school was considered the best plan of instruction, rather than to duplicate the first two years of the course, or demand for admission to the medical school credit in all of the scientific subjects taught in the medical course.

Academic Seniors in Absentia in Professional Schools.

Dr. A. R. Baker thinks that notwithstanding the increased entrance requirements to medical schools, there are not so many graduates in medicine to-day with baccalaureate degrees as there were fifteen or more years ago, although there has been a great increase in the number of literary college graduates. The reason for this is that too much time is required, the student entering on his life-work too late. Dr. Baker said that if he were to prepare a curriculum for students intending to enter professional schools, he would cut down the entrance requirements of the academic schools at least two years, and, if necessary, re-establish the old preparatory schools so that students can take a short cut to enter college earlier in life. He would then require three years' residence in the academic school, and at the completion of one or two years in the professional school confer the bachelor's degree on the deserving, making it a reward of merit. The time requirement, he said, should be such that it is possible for the student to enter the medical college at 20 or 21.

Equipment of a Medical College.

Dr. F. C. Zapffe outlined what should be considered a minimum equipment in all the departments of a medical school, including the clinical and the out-patient departments.

On motion, a committee was appointed to consider this paper, and this committee recommended that the association adopt the equipment laid down, as a tentative working standard, which was done.

Resolutions.

A number of resolutions were passed:

Equipment.—The committee appointed to consider the paper by Dr. Zapffe recommended the adoption of the summary of college equipment presented as a tentative working basis for further development of a standard equipment; and urged the consideration also of college buildings and their adaptability to efficient teaching, and what qualifications should be possessed by the various laboratory instructors.

Licensure Examinations.—The association recommended that the state licensing boards permit medical students to take examinations in the work of the first two years of the course immediately on the completion of such work, that the examining boards adopt some practical tests to show a mastery of the art of medicine as well as its theory.

Entrance Requirements.—The association, recognizing the growing need and sentiment for extended entrance requirements, earnestly advises and recommends that the present minimum standard be increased as soon as practicable, and calls the attention of the state boards to the fact that its standard of entrance requirements is now higher than that of many states, and respectfully urges that such state boards meet this standard.

Committees.

The following committees were appointed

Committee on Medical Education.—This committee is charged with the duty of conferring with organizations having particular interest in matters concerning medical education, and to consider entrance requirements. Chairman, W. J. Means.

Committee on Medical Examining Boards.—This committee is charged with all matters pertaining to the uniformity of standards, to licensing examinations, to medical college equipment, and to such other items as intimately concern both the association and the state examining boards. Chairman, F. C. Zapffe.

Committee on Medical Curriculum.—This committee is entrusted with the formulation of the course of study in the medical college or such part as it may choose to consider from time to time. It is actively engaged in the preparation of a syllabus indicating the minimum for the work of a standard medical college. Chairman, F. C. Waite.

Committee on Medical Research.—This committee is to stimulate investigation in medical colleges and associated institutions, and to combat tendencies or proposed limitations which will be inimical to the advance of medical science. Chairman, Egbert LeFevre.

Committee on Medical Teaching.—This committee will consider the pedagogic elements in medical education, with especial reference to the training of medical teachers, methods of instruction employed and allied topics. Chairman, Henry B. Ward.

Committee on Equipment.—This committee will consider college equipment, including buildings. Chairman, F. C. Zapffe.

Medicolegal

Extent of Waiver of Privilege by Bringing of Action for Malpractice.

The Kansas City Court of Appeals had in the case of Hartley vs. Calbreath, a question akin to that decided by the Supreme Court of Missouri in Smart vs. Kansas City, reported in the Medicolegal Department of The Journal, Feb. 29, 1908, page 723, only that was an action for personal injuries, while Hartley vs. Calbreath was one for alleged malpractice.

It appeared that the plaintiff in Hartley vs. Calbreath was thrown from a horse and dislocated his shoulder. The defendant was called and engaged to attend him. The evidence tended to show that he reduced or "set" the shoulder, and pronounced it "all right;" that he put the plaintiff's arm in a bandage or "sling" suspended from around his neck, but he did not secure the arm to the body so as to prevent the upper portion from being free to move. He returned next day, when the plaintiff complained of severe pain. He then took off the bandage, or, as otherwise expressed, took it out of the sling and left it free. The plaintiff continued to suffer great pain, and, his shoulder not appearing to be doing well, he was at the defendant's office, and there, in the presence of another physician, the shoulder was examined, and not being thought to be in proper place, another effort was made. Afterward yet another effort was made by the use of "pulleys." But after all, according to the evidence in the plaintiff's behalf, the shoulder was not properly reduced or "put in place," whereby he lost much of the use of that arm and suffered great pain. The plaintiff's theory was that the defendant either failed in the first place to reduce the dislocation, or, if he did reduce it, that he left it so improperly bandaged and cared for as that his arm had too much freedom of movement, and the shoulder would not remain in place, and that he was negligent and unskilful in not sooner discovering that the shoulder was not properly reduced, and using immediate means to put it in proper condition.

The defendant offered another physician as a witness. On the plaintiff's objection he was not permitted to testify, on the ground that whatever he knew about the case was privileged under the statute. It appeared that several months after the defendant's treatment of the plaintiff the latter called on the witness as a physician and was examined by him. The Court of Appeals declares that there can be no doubt of the correctness of the court's ruling. It is true that in cases of this nature, the physician being a party, the necessity of the matter makes him competent to testify in his own behalf concerning communications between himself and his patient, notwithstanding the statute. Cramer vs. Hurt, 154 Mo. 112. Otherwise the physician might be without means of protecting himself. And so a consulting physician has been held competent to testify concerning those things which transpired at the consultation. This was put on the ground that the plaintiff himself had removed the privilege of secrecy. Lane vs. Boicourt, 128 Ind. 420. Some of the language used in the opinion in that case is perhaps broader than would be justified by the views entertained in Missouri; but, restricted as the court has stated, the court believes it a proper statement of the law as held by the courts of Missouri.

But the witness offered in this case brought up altogether different considerations. He was in no way connected with the defendant's attendance on the plaintiff. He examined the plaintiff in his professional capacity, with a view to seeing what could be done for him. The defendant did not answer this position by saying that the secrecy of the whole matter had been removed by the plaintiff bringing the present action and himself testifying, and by his having made it necessary for the defendant to testify, and therefore the privilege did not longer exist; for the secrecy and privilege of the communications to the witness in question had not been removed. It has been directly held by the Supreme Court of Missouri that a waiver as to one physician is not a waiver as to others who may have attended on the person making the waiver. The statute, says the court, "does not exclude the evidence by reason of its inherent character, but only when given by the persons within its purview." Mellor vs. Railway Company, 105 Mo. 455; Barker vs. Cunard Ship Co., 91 Hun, 495, affirmed in 157 N. Y. 693. This court held in Arnold vs. Maryville, 110 Mo. App. 254, that the statute in privileging all necessary information and communications received by the physician from the patient did not apply to a physician who was called on, not with a view of giving the patient attention and relief, but for the purpose of qualifying himself as a witness. But in this case the trial court and counsel first ascertained from the witness offered that nothing was said between him and the plaintiff about a suit, or his being a witness, but that he was consulted with a view to relieve the plaintiff of his distress.

Referring to the fact that Wigmore on Evidence (volume 4, section 2389) seems to consider an exposure of the mere ailment by bringing the action sufficient to entirely remove the bar of secrecy, the court says that it regards his view as being too much restricted. The object of the statute is not fully met in all cases by merely keeping secret the fact that a patient had a certain ailment. The primary object of the statute is the relief of the patient, and to that end it has made the way clear for him to permit a complete examination and to give full and free communication of everything connected with his ailment which may be necessary to enable the physician to prescribe for him. And those things are as securely included in the purview of the statute as the ailment itself. And an exposure of the ailment does not necessarily release secrecy as to them.

Suppose a physician, on being called to attend a patient for an ailment about which itself there is no desire for secrecy, finds it necessary to examine his body and so informs him. He has on his body a scar or other defect, wholly disconnected from the ailment on account of which the physician was called, which would be material evidence against him in the trial of some cause, civil or criminal, to which he was a party. If the physician is at liberty, or may be compelled, to testify to what he observed, or what was told him in relation thereto, the patient might refuse to be examined, and thus deprive the physician of necessary information, and thereby, possibly, lose his life. Again, it is well known that for the same ailment different persons, on account of being or not being, or of having been or not having been, afflicted with other complaints, must be treated in different ways, or with different medicines. In these instances, and numberless others, the statute gives the patient free conduct and free tongue with his physician to the end that the latter may have full information for his relief and restoration. So it seems to be perfectly manifest that it is not alone the mere fact of a particular ailment which the statute intends that the physician shall not give in evidence, but its purpose is to protect all else which may have been communicated to him to enable him to prescribe intelligently. The plaintiff by bringing the action waives the statute no further than the action discloses, viz., the ailment and its treatment by the physician or physicians therein named. He does not waive the privilege as to other physicians. If the privilege is waived as to other physicians called, as was the witness under discussion, disconnectedly from the defendant, it must be by some act of the plaintiff in himself disclosing what took place with such physician by calling it out in evidence. In this case the defendant and the consulting physician with him were permitted to testify. But when it came to the defendant's offer of the third physician, who afterward examined the plaintiff, there was no waiver as to him, and hence the court approves the trial court's ruling excluding him. A judgment for the plaintiff is affirmed.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Boston Medical and Surgical Journal.

March 26.

1 *Dental Caries as a Factor in the Etiology of Other Diseases. L. W. Baker, Boston.
2 *The People's Disease: How to Prevent It. W. R. Woodbury, Boston.
3 Idiopathic Dilatation of the Colon, with Report of a Case in a Man of Fifty-Six. E. H. Stone, Cleveland.
4 Cooled Targets in *X*-Light Tubes. W. Rollins, Boston.

1. **Dental Caries.**—Baker urges the control of dental diseases as an important factor in preventive medicine. He describes carious cavities as culture tubes, containing stock cultures for the development of millions of disease-producing germs, which continually drain further into both the alimentary and respiratory tracts. The constant swallowing of poisonous material is the cause of many grave and far-reaching diseases, such as gastric catarrh, appendicitis and anemia. He cites such authorities as Sir Frederick Treves, Dr. William Hunter and Professor Osler, as to the lack of oral asepsis poisoning the fount of life from its very source. The prevention of dental caries would effect a great financial saving and be a step in preventive medicine. The physician, the surgeon and the dentist must collaborate in the education of the public, which is the most important step in every branch of preventive medicine. Dentists for hospital staffs, dental instruction to nurses, and dental as well as other inspection of public schools, are measures urged by this author.

2. **The "People's Disease."**—By this apt name Woodbury refers to dental caries, which is undoubtedly the most widely distributed disease in the world. As also in the preceding article, Osler's saying is quoted: "If I were asked to say whether more physical deterioration is produced by alcohol or by defective teeth, I should unhesitatingly say, defective teeth." The author discusses the condition of the mouth from babyhood on. He suggests the union of the Boston dental organizations, with a view to aiding in popular education as regards oral hygiene by the following methods: 1. Putting into wider circulation the leaflet on the "Care and Use of the Teeth." 2. Furnishing literature on dental hygiene, and information and assistance in promoting the cause. 3. Providing popular exhibitions—charts, photographs, instructions, literature—for settlements, schools and institutions. 4. Giving practical talks on the care of the teeth, and popular and timely articles to the newspapers—country and city. 5. Cooperating with the organizations working to check and control tuberculosis. 6. Providing lists of registered skilled dentists who will work for nominal fees for deserving and worthy persons. 7. Discouraging the sale and use of dental preparations injurious to the teeth.

Medical Record, New York.

March 28.

5 *Grave Chorea and Its Relation to Septicemia. B. Sachs, New York.
6 *Theoretic Considerations Relative to Immunization by Means of the Tubercle Bacillus and Its Products. W. J. Stone, Toledo, Ohio, and E. C. L. Miller, Detroit, Mich.
7 *How Much Gynecology and Abdominal Surgery Should the General Practitioner of Medicine Know? W. A. N. Dorland, Philadelphia.
8 Diagnosis and Treatment of the Commoner Diseases of the Skin. E. L. Cocks, New York.
9 *Rational Method of Treatment in Chronic Endometritis. J. M. Rector, Jersey City.
10 *Examples of Chronic Productive Inflammations in Early Life. R. Floyd, New York.

5. **Septicemic Chorea.**—Sachs says that, like epilepsy, chorea has become a generic term. He discusses septicemic or infectious chorea and summarizes the literature. Pathologic and bacterial studies as well as clinical symptoms point to the existence of a special infectious type of chorea. Prodromal restlessness and twitchings are followed by extravagant universal choreic movements; jactitations are so severe that the patient has to be restrained. Speech becomes difficult, and later, impossible, due to extreme choreic movements of the muscles engaged in the mechanism of speech and to the accompanying mental change, apathetic or delirious. After one or two weeks, stupor, coma, and later death, supervene. He describes two cases of this type, with blood examinations, showing in the first case staphylococcus invasion; in the second, some organism as yet undetermined. Sachs believes that acute grave delirium, with its marked motor disturbance, some of the virulent forms of meningitis, and possibly some of the postpuerperal forms of encephalitis, will be found to be allied pathologically at least to toxic chorea. He classifies the forms of chorea, omitting the post hemiplegic form, into chorea minor without evidence of infection, due to exhaustion of the nerve elements; the chorea of endocarditis, rheumatism and fever; chorea gravidarum; senile chorea, and the septicemic chorea now dealt with. Treatment so far has been unavailing. Salicylates, sedatives, hypnotics and the usual hydriatic treatment have been employed.

6. **Tubercle Bacillus Immunization.**—Stone and Miller describe the various preparations of the tubercle bacillus that have been used with a view to producing immunization. They describe a method of combining the bacillus emulsion of Koch with the bouillon filtrate of Denys. They are of the opinion that the opsonins are but one of the factors necessary to the production of immunity, and that, theoretically at least, the antibacterial elements (constituents of the cell body) are more necessary in the early stages of the disease than the antitoxin elements (the immediate products of the germ).

7. **What the General Practitioner Should Know.**—Dorland forcefully urges the cultivation to the utmost, of the diagnostic ability of each and every medical man in the country, in preference to the acquisition of an extensive knowledge of surgical and laboratory technic, valuable as that is in its proper place. He protests against immature surgery, and states what should be known by the general practitioner in reference to internal hemorrhage, ectopic pregnancy, appendicitis, uterine curettage, especially after labor, posterior displacements, and cancer of the uterus.

9. **Chronic Endometritis.**—Rector lays down the first principles in treatment of diseased mucous surfaces as follows: (a) Frequent cleansing of the surface with a non-astringent, non-irritating solution, for the purpose of removing the adhering secretion; (b) opening the mouths of the glands, thus re-

lieving any retained secretions and preventing germ propagation; (c) stimulating glandular activity directly, or indirectly through the secretory nerves; (d) replacing the normal equipoise between vascular supply, innervation and mutual relationship. He endeavors to effect this by electrical measures. With the patient in the dorsal position and the positive electrode on the abdomen, the negative electrode sound is introduced through a speculum into the uterus, and a constant current of from five to fifteen milliamperes is turned on for from five to ten minutes. The irrigator, also an electrode, then replaces the sound, and the cleansing solution is allowed to flow while the current is still passing. The dilatation will remain long enough to permit of additional applications to the cavity of the uterus or the cervix. The current should not be turned on until the electrode is in position, and should be raised slowly to the required strength and reduced slowly for removal. He describes the current and the apparatus used.

10. **Chronic Productive Inflammation.**—Floyd reports three cases in children of the chronic productive inflammation frequently found in middle life and old age, and commonly attributed to senile changes or replacement fibrosis. He considers their occurrence in the young, and also in relation to syphilis, gout or alcohol an argument in favor of their inflammatory origin.

New York Medical Journal.

March 28.

11 The Accessory Sinuses of the Nose from an Operative Standpoint. H. Smith, New York.
12 *Radiographic Topography of the Frontal Sinus and Other Pneumatic Sinuses of the Face. S. Tousey, New York.
13 *Relation of Mental Attitude to Bodily Function. W. L. Conklin, Dansville, N. Y.
14 *Bacterial Vaccines of Staphylococci Strains. A Technic for Their Preparation. H. Shoemaker, Philadelphia.
15 *Influence of Animal Therapy on the Opsonic Index in Tuberculosis. G. B. Sweeney, Pittsburg, Pa.
16 Newer Methods of Examining the Bladder. F. Bierhoff, New York.
17 *Occipitoposterior Positions. L. W. Michaelis, New York.
18 Blood Conservatism of Neurotic Individuals. J. G. Drennan, St. Thomas, Ont., Can.

12. **Cranial Sinus Skiagraphy.**—In examining the frontal sinus, antrum and ethmoidal and sphenoidal cells, Tousey takes first a lateral view of the face, and secondly an anteroposterior picture with the tube behind the head and the plate in front. He describes a method of taking the pictures from an empty skull in which the different air spaces are filled with lead shot, for comparison with pictures showing the condition of these air spaces in living patients. Anteroposterior pictures of the head seldom show as well in print as in the original print or negative, which is best examined by transmitted light in a negative examining box.

13. **Mental Attitude and Bodily Functions.**—Conklin considers that physicians give too little attention to psychotherapy, by which he does not mean hypnotism, the field of which he considers to be limited, but rather the fact that just as bodily attitude does not mean the position of the head or an arm, but of the body as a whole, so mental attitude refers, not to the will or the emotions, but to the mind in its entirety. What is the trend of a man's thought? Can he use his intellect and as a rule reach conclusions which are definite and reasonable? Are his emotions and imagination under control and is his volition strong? Has he an object in life and some sense of personal responsibility or is he aimlessly drifting? These are questions which have a distinct bearing on the bodily function and health of any individual. To this end it would seem that psychology and psychotherapy should be given a place in the curriculum of our medical colleges.

14. **Vaccines of Staphylococci.**—Shoemaker, while at work on the immunization of furunculosis, acne and sycosis has made the following observations: (a) Opsonin in the serum is modified by heat. (b) Bacteria are incited to phagocytosis by serum from which the opsonin has been removed by heat. (c) Bacteria unite with a substance in heated serum which prepares them for phagocytosis. (d) Bacteria remove a substance from the serum collected at the foci of infection which reduces the opsonizing power of this serum for this species and no other below that of the patient's blood serum. He describes a special technic recommended for the purpose of producing the highest possible phase and concludes that a thermolabile and a thermostabile substance are found in the bodies of the staphylococcic strains of bacteria, which substances, in the organic bacterial bodies, are of the nature of an amboceptor and a complement. The activity of the thermolabile moiety of the bacterial body varies inversely, as the degree of heat and its time of application.

15. **Animal Therapy and Opsonic Index in Tuberculosis.**—Sweeney says that while Wright, Metchnikoff, Ehrlich, Neufeld and other scientists differ in their opinions as to the sources whence the defensive properties of the blood are derived, on this point they all agree that the phagocytic activity follows any manifestly stimulating influence, however exerted, on the blood. They also agree that the ability to withstand or overcome infectious processes is proportionate to the degree of this activity. He describes five cases and is strongly disposed to attribute the benefits observed in these cases as much to the invigorating influence of the lymph on the phagocytes as to its specific antitoxic action on the tubercle bacilli. While it is true that this view has not been particularly popular of late, he is fully convinced that a defensive attitude on the part of the human organism toward infectious agents can be established and maintained only through influences exerted on the living, active cell. He cites a portion of a personal letter from Metchnikoff, showing that he has not seen any occasion to modify his views as expressed in his essay on "The Hygiene of the Tissues."

17. **Occipital Posterior Positions.**—Michaelis finds 30 per cent. of occipitoposterior presentations in his last 100 cases. In addition to the commonly received causative factors, or in their absence, he finds incomplete flexion of the head to be the underlying causative element. Usually the diagnosis is easy, but occasionally the usual factors are unascertainable, so that we must look at the general behavior of the case. The man who makes a diagnosis of posterior presentation from early rupture of the membranes and slow dilatation will rarely go astray. Michaelis discusses the difficulties and dangers of this presentation, and in regard to treatment, says that our efforts are at first directed to rectifying the malposition, converting it, if possible, by both postural and manual methods into an occipitoanterior position, which is frequently attained by having the patient lie on that side of the body toward which the occiput is directed. As she does this the fundus falls forward to the side and slightly upward, and the child's body consequently tends to be flexed on the head, and at the same time its back is thrown anteriorly, carrying the occiput with it, while the head, raised slightly out of the pelvis, can, and frequently does, impinge on the anterior plane during subsequent uterine contractions, and rotation is thus promptly and satisfactorily effected. Or the patient may kneel on the floor with a pillow under her knees, which is placed a little distance from the bed on which she rests her head and arms, while at the same time she advances the side toward which the occiput points somewhat more than the opposite one. This position acts exactly as does the lateral one, except that as the angle at which she leans away from the perpendicular is increased, the fundus is thrown further forward, augmenting the tendency to anterior rotation. The drawback to this kneeling posture is its discomfort; yet even though it is very uncomfortable for the woman in pain to kneel at her bedside, it is decidedly preferable to the condition which it tends to obviate. The lateral posture is frequently a source of discomfort to the patients, and he therefore lets them alternate one with the other. The success of this treatment is marked, and the desired result is attained in a large number of cases. In those in which it has failed he attempts manual rectification, provided the os is sufficiently dilated to permit the necessary manipulation, i. e., at least to the size of a quarter of a dollar. The first step is the attempt to flex the head and then to keep it flexed during several successive pains. If this does not cause anterior rotation, the next step is the effort to rotate the head manually. Two fingers are introduced, and, after the head is flexed, pressure in an anterior direction is made by

them on the occiput with the object of bringing it to the front of the pelvis, while at the same time the other hand is used to assist rotation through the abdominal wall by pressing the trunk of the child upward and forward. "This is most often successful when the head is just at or above the brim; when it is firmly wedged in the pelvis it is hardly necessary to say that this procedure is futile, except in very exceptional instances, until the ischial spines are passed. At this point in the pelvis, however, rotation is more readily effected with the forceps than with the hand. The use of podalic version is indicated, in Michaelis' opinion, when the head is absolutely free above the brim, and in the presence either of early maternal exhaustion or of essential uterine atony, both exceptional occurrences. In other cases, the use of forceps is indicated. In cases of operative or instrumental interference, means for resuscitation of the child should be at hand.

Journal of Experimental Medicine, New York.

March.

19 Changes Occurring in the Physiologic Degeneration of Actinosphærium Eichorni. W. T. Howard, Cleveland, Ohio.
20 *Ocular Tuberculin Reaction in Cattle. E. F. McCampbell and D. S. White, Columbus, Ohio.
21 *Mechanical Factors in the Production of Lymphocytosis. F. P. Rous, Ann Arbor, Mich.
22 Relation of the Coagulation Time of Blood to Thrombosis in Phlebitis. H. Brooks and B. S. Crowell, New York.
23 Calcification of the Arterial System in a Cat with Transplanted Kidneys. A. Carrel, New York.

20. **Ocular Reaction in Cattle.**—McCampbell and White find that in tuberculous animals the ocular tuberculin reaction is associated with fibrinous conjunctivitis coming on in from six to eight hours. The reaction is more pronounced in animals not recently tested with tuberculin. The ocular test may possibly be of value for diagnosis in animals which will not react a second time when tested with tuberculin by the ordinary method. The indications are that the ocular tuberculin test may prove valuable in the diagnosis of tuberculous cattle, but further experiments are necessary.

21. **Production of Lymphocytosis.**—Rous finds that the lymph of the thoracic duct furnishes to the blood a larger proportion than is supposed of circulating lymphocytes. The quantity of lymphocytes supplied through the thoracic duct of the healthy dog remains practically constant from hour to hour, if the physiologic conditions are not notably changed. Transient change in the physiologic conditions may alter the output of cells, but with the disappearance of this change the output tends to resume its previous rate. These facts indicate that the tissues producing lymphocytes are "set" at a rate of activity definite in the individual. Rous finds that struggle produces a prompt increase in the output of lymphocytes through the thoracic duct. Indeed, the lymphocyte output may be tripled or quadrupled during a long-continued struggle. The increased lymph flow caused by a lymphagogue, such as glucose, brings with it increased output of lymphocytes through the thoracic duct. A comparison of the effects of struggle with those of glucose demonstrates that in the former some factor besides increase in lymph flow *per se* (Ehrlich) works to cause the large output of lymphocytes. The nature of this factor has not yet been determined. The variations caused by muscular exertion and by increased lymph flow in the number of lymphocytes coursing through the thoracic duct are so pronounced as to suggest that the total number of lymphocytes in circulation must be considerably influenced by them. Clinical findings by other observers indicate that this is true; and the clinical findings themselves become much simpler of interpretation.

Annals of Surgery, Philadelphia.

March.

24 *Tracheobronchoscopy. C. Jackson, Pittsburg, Pa.
25 *Trichinous Infection of a Carcinoma of the Lip. E. A. Babler, St. Louis.
26 *Ludwig's Angina. T. T. Thomas, Philadelphia.
27 *Technic of Cancer of the Breast Operation. R. H. M. Dawbarn, New York.
28 Rupture of the Lung Without Costal Injury. R. G. Le Conte, Philadelphia.
29 *Acute Dilatation of the Stomach and Arteriomesenteric Ileus. (To be continued.) W. B. Laffer, Cleveland, Ohio.
30 Unilateral Renal Hematuria Due to Cystic Pyelitis. I. S. Haynes, New York.

24. **Tracheobronchoscopy.**—Jackson's article is the same as that published in the *Journal of Laryngology*, December, 1907, but includes two additional cases.

25. **Trichinous Carcinoma.**—Babler reports a case of epithelioma of the lower lip, the whole lip being entirely swollen to a degree not accountable for by the growth. The entire lip was excised, with the submental glands; primary union ensued. Pathologic examination of the growth showed two bodies circular in shape having the appearance of encapsulated trichinæ lying embedded in muscular tissue. Apparently the presence of trichina in carcinoma has been reported only twice before, once in the lip and once in the breast.

26. **Ludwig's Angina.**—Thomas concludes his article on Ludwig's angina, the first part of which was noticed in The Journal, March 21, 1908, page 993. He considers the condition a rapidly spreading cellulitis, beginning as a petty lymph adenitis in the region of the submaxillary gland and extending to the floor of the mouth and pharynx. Some neighboring surface lesion is the primary focus. The streptococcus, alone or with other organisms, is usually the infecting organism. Death usually results from invasion of the larynx. The infection travels from the gland through the opening in the muscular buccopharyngeal wall. The alarming symptoms of Ludwig's angina are due to the invasion of the floor of the mouth, rapidly spreading to the larynx. The most dangerous cases are those in which the phlegmonous process begins on the pharynx or larynx. The pathologic changes do not differ materially from those of any severe pyogenic infection under similar anatomic conditions. The frequency and constancy of its course make it worthy of a place as a morbid entity, for which no name is so brief and comprehensive as that of Ludwig's angina. Modern surgical treatment has reduced considerably the number of cases in which irregular septic temperature, profuse sweats, delirium, and a progressively profound typhoid state occur. Incisions in the floor of the mouth may be advisable in a few cases for the relief of excessive swelling, but they have rarely given satisfactory results. The median suprahyoid incision, while the safest of the external incisions, does not expose the primary seat of infection, and should not be selected, except to evacuate an evident purulent collection in the submental region. The submaxillary incision, i. e., over the submaxillary triangle and parallel with the lower border of the jaw, will, probably, locate an existing pus collection in the greater number of cases. If frank suppuration is not found before, the mylohyoid muscles should be divided and the sublingual tissues exposed. Local anesthesia is recommended.

27. **Cancer of the Breast.**—Dawbarn emphasizes certain points in the technic of operation for cancer of the breast. He endorses the suggestion of Syme, that where there is any doubt as to the diagnosis it is desirable to cut with a single stroke into the midst of the supposed neoplasm. Should it prove to be a thick-walled abscess containing pus, the possibility of unnecessarily mutilating a woman will be averted. If pus is not found, the wound should be tamponed immediately, with gauze soaked in an antiseptic solution or boiling water and wrung out, thus sealing all lymphatic mouths and taking up any lymph that may have gathered between incision and packing. He also endorses Gerster's recommendation, to reverse the usual order of procedure and invariably attack the armpit first and the breast last. This will avoid a considerable amount of sqeezing or massaging of the breast. It will, as Gross formerly pointed out, disclose from the condition of the axilla whether or not there is any use in performing the rest of the operation, and it moreover renders possible a notable degree of prophylactic hemostasis. He describes a method of muscle anastomosis by the detachment from its origin of an inch or so of the anterior fibers of the deltoid, the muscle being split in a direction parallel to its long axis for a short, but sufficient, distance to permit of the detached portion being sutured to a stump of corresponding size of the adjacent pectoralis major. This, of course, is contraindicated if the cancer extends to the vicinity of the muscles involved. Finally, he recommends the use of a triangular splint, but in an entirely different position from that ordinarily employed. It is

so placed that the patient's palm rests on the back of her neck, the front of the forearm lies in contact with her cheek, while the elbow looks directly forward, and is from nine to twelve inches anterior to her chest wall, this measured distance being, of course, taken with thorax uncovered and not as in actual splinting, with the triangle resting on the thick dressings bandaged in place. He recommends numerous relaxing incisions into, but never through, the true skin. Considering the great sacrifice of skin demanded by prudence in these operations, skin grafting can scarcely be avoided without these incisions plus sub-dissection to the opposite edge of the sternum.

29. **Acute Dilatation of the Stomach.**—Laffer reports four cases and discusses extensively the literature of the subject. He believes that the clinical, pathologic and experimental data are strongly in favor of acute dilatation of the stomach, as being primarily an innervation disturbance affecting either the centers in the brain or cord or the nerve paths connecting the stomach with these centers.

Interstate Medical Journal, St. Louis.

February.

31 *Technical Method of Performing Certain Cranial Operations. H. Cushing, Baltimore.
32 *Scientific Relation Between Humans and Non-Humans. J. Oldfield, London, England.
33 *Diagnostic Points Between Hysteria and Organic Nervous Disease. M. W. Hoge, St. Louis.
34 History of the House: The Struggle for Fresh Air and Light. G. M. Gould, Philadelphia.

31. **Cranial Operations.**—Cushing describes the operations in which a portion of the skull is but temporarily displaced, usually for the primary object of intracranial exploration, and those in which it is intentionally and permanently removed, usually for purposes of cerebral decompression. Under the heading: "Steps of an Osteoplastic Resection," he describes the general preparation, position on table, preparation of operative field, control of hemorrhage from scalp by a special tourniquet, the operative flap and the intracranial procedure. Under this last he says that experience has taught much in regard to two things: 1, The principle of cerebral dislocation permissible in the presence of a large cranial and dural opening and of great importance in explorations; and 2, the danger of decompression directly over a vascular growth. Operations with removal of bone he discusses as: 1. Subtemporal operations; (a) ganglion operation; (b) subtemporal decompression for symptoms of increased intracranial tension; (c) temporal exploration in traumatic cases. 2. Suboccipital operations. He concludes that, for the present, the need of both particular technical training and wide neurologic experience must cause this work to remain largely in the hands of those who devote themselves exclusively to it; though, as in the case of all surgical specialties, the time will come when matters of operative therapy having been put on a sound basis for certain conditions and shown to be futile in others, the general surgeon will come to include them among his numerous daily operations. In the meantime, he says, there is much to be learned in regard to the cerebrospinal fluid circulation before the treatment of cerebrospinal infections or of acquired and chronic hydrocephalus can be dealt with; much to be learned in regard to intracranial pressure, before we can finally determine the best method of decompression for inaccessible tumors, for the edema of uremia, the swelling associated with cerebral softening, with encephalitis, with the so-called meningitis serosa, etc.; much to be learned in regard to cerebral hemorrhages, before we can finally come to remove apoplectic clots as safely as we can those from the meningeal spaces; and much to be learned in regard to many other diverse problems which come before the operating neurologist.

32. **Humans and Non-Humans.**—Oldfield states the five principal arguments on which scientific bodies and individual scientists base the justification of experimental research on animals, and endeavors, certainly with unusual temperateness, to confute them.

33. **Hysteria and Organic Disease.**—Hoge reports a case illustrating the great difficulty that sometimes occurs in establishing a diagnosis between functional and organic nervous disease, owing to the fact that not infrequently cases of undoubted organic disease present some symptoms of hysterical, or at least psychic, origin. Two ophthalmoscopic examinations showed optic atrophy, tending to confirm the diagnosis of organic lesion of the nervous system, previously arrived at.

Albany Medical Annals.

February.

35 Personal Experiences of a Patient in a Hospital for the Insane.
36 *Recent Progress in the Treatment of Epilepsy. W. P. Spratling, Sonyea, N. Y.
37 Address to the Albany Guild for the Care of the Sick. J. M. Mosher, Albany.
38 *Treatment Following Abdominal Section. G. Chandler, Kingston, N. Y.
39 Questions of Broad Consideration Outside of Technic that Concern the Organized Medical Profession. F. C. Curtis, Albany.

36. **Epilepsy.**—Spratling discusses briefly the recent history of epilepsy and considers its commonness, the absence of a definite pathology, the changes postmortem described by pathologists in the brains of confirmed epileptics, being probably the result, not the cause, of the epileptic seizure. He describes the pathologic work at the Craig Colony and states that he considers the legal right to make an autopsy on the brain and spinal cord of every patient who dies there, having been supported at the public expense, together with a study of living matter, secretions, the psychic life, its power and changes, the organic life and its capacity to resist, as the two most promising steps in the study of epilepsy in recent years. He discusses the passing of bromism and cautions against exceeding from fifteen to twenty grains a day, that amount being gradually arrived at. Five grains three times a day on scientific principles are of greater value than twenty grains three times a day without heed to eliminative precautions. Recalling the recoveries from tuberculosis to-day, he concludes that within twenty-five years epilepsy will be cured as frequently as insanity is cured now, namely, in from 25 to 30 per cent. of all cases.

38. **After-Treatment of Abdominal Section.**—Chandler's paper is really a plea for getting patients out of bed earlier than is the usual custom after abdominal section. No matter what the lesion or how weak the patients, he has them recover from ether in the sitting posture by means of a bed rest. He keeps them in this posture for about twelve hours and then allows them to lie down and turn in any position that is comfortable. They sit up again with a bed rest practically all the next twenty-four hours. On the third day, if strong, but anyway on the fourth day, he has them in a chair. On the fourth or fifth day they walk around. From that time on they walk or sit up with their clothes on during the day, leaving the hospital usually from the tenth to the fourteenth day, well and strong. He discusses the question of bandages, internal treatment and the bowels, and concludes with a few remarks on acute general peritonitis.

Buffalo Medical Journal.

February.

40 *Opium Treatment of Peritonitis. C. G. Stockton, Buffalo.
41 *Position of Surgery in Treatment of Septic Peritonitis. J. W. Bovée, Washington, D. C.

40. **Opium Treatment of Peritonitis.**—Stockton believes that the opium treatment is most useful in the milder cases before the inflammation has become general in the abdominal cavity. These views are based on clinical observations and physiologic experiments. Alonzo Clark taught that the largest safe doses of opium should be administered with long intervals, yet never allowing the patient to emerge from its complete sedative effects. Stockton is convinced of the truthfulness of the claims put forward by Clark if his principles are adhered to, but the moderate use of opium results only in covering up symptoms, not in curing the patient. Opium controls abdominal shock, favors the intra-abdominal circulation by overcoming the spasm of the abdominal parietes and the spastic state of the vessel. He also believes that the proper treatment of oncoming septic peritonitis is immediate operation, but that when the operation is delayed and the inflammation is becoming general it is safer to use the full opium treatment until such

time as the suppuration is localized and drainage effected without molesting the greater part of the abdominal cavity.

41. **Septic Peritonitis.**—Bovée points out the indefinite character of the term septic peritonitis, of which there are many varieties. In cases in which the invading organism is a streptococcus and the area involved large he doubts the advisability of opening the abdomen, as death is almost sure to result. Stimulation and injections of antistreptococcic serum are the main elements in treatment. Even when the area is small surgical treatment is questionable. The presence of the colon bacillus, the gonococcus, the staphylococcus, or even the gas bacillus, with the streptococcus would cause him to regard it as a surgical condition. In perforations of hollow viscera he would limit non-surgical treatment to those cases that have passed beyond consciousness and in which the absorbents have been permanently suspended and death is imminent. All other classes or phases of peritonitis of a septic character should be treated surgically. Local anesthesia, he asserts, has a strong indication in this work. Manipulation of the abdominal contents is to be avoided as much as possible. Washing out the peritoneal cavity with salt solution is, in Bovée's judgment, harmful, or at least of doubtful value. Drainage is a perplexing question. When the disease is localized and can be satisfactorily dealt with at the time of operation drainage may be dispensed with to advantage. In other conditions he feels it safer to drain. He opposes the use of opium, relying on the cold water coil or ice and the use of salt solution by hypodermoclysis, or even intravenously. We may yet change entirely to Murphy's plan of relieving tension and trusting to Nature for rest.

Archives of Pediatrics, New York.

February.

42 Pneumohydrothorax in a Boy Two Years Old—Recovery. F. Huber, New York.
43 *Blood Pressure in Children. W. L. Stowell, New York.
44 *Hysteria in Children. G. E. Price, Philadelphia.
45 *Rest Treatment in Chorea. J. Ruhräh, Baltimore.
46 Case of So-called Cyclic Vomiting with Hepatic Insufficiency. E. W. Saunders, St. Louis.
47 Report on Milk Supply of New York City, with Recommendations. L. E. Holt, A. Jacobi, J. D. Bryant, T. M. Prudden and R. G. Freeman, New York.
48 *Digital Methods of Extubation. J. R. Clemens, St. Louis.
49 Fatal Case of Hemophilia Neonatorum. H. F. L. Ziegel, New York.
50 Automatic Bottle Warmer. R. G. Freeman, New York.
51 Two Babies with Infantile Scurvy Observed in One Week. M. Ostheimer, Philadelphia.
52 Case of Vincent's Angina. J. E. Hunt, Kansas City, Mo.
53 Case of Multiple Sarcomata in a Young Child. De R. Howland, Bridgeport, Conn.

43. **Blood Pressure in Children.**—Stowell's investigations lead him to the following conclusions: Blood pressure in the young is low in proportion to extreme youth. Its rise and fall are quickly influenced by emotions, as in adults. Diseases of the nervous system give high pressure. Acute diseases with high temperature may give either high or low pressure. Sclerosis of arteries is almost unknown in childhood, so that the use of a sphygmomanometer for its detection is needless. Blood pressure readings are of interest physiologically, but have little clinical value in childhood.

44. **Hysteria in Children.**—Price, from an investigation of the literature, concludes that girls are more frequently, boys more severely, affected with hysteria. Predisposing etiologic factors are heredity, faulty environment and education, any condition lowering the vitality or causing continuous irritation of the nerve centers. The symptoms are essentially the same as in the adult, but slightly modified. Suggestion in one form or another he regards as of paramount importance in the removal of symptoms, but we must never lose sight of the probability of an underlying neuropathy. Hypnotism he mentions only to condemn, holding that the experiments of Charcot, Babinski, Dercum and others have shown it to be only artificially induced hysteria. He presents four cases of the following less common forms: 1, Hysterical tremor; 2, hysterical joint; 3, psychic type; 4, hysterical dyspnea (Dercum's service at Jefferson Hospital).

45. **Chorea.**—Ruhräh aims at two objects in treatment of chorea: 1. Rest of mind and body. 2. Increase in weight. He puts the child to bed, no matter what the severity of the disease, and keeps it there until the movements have ceased entirely and the patient has gained weight. Warm baths, tubs or sponging, are used daily if the skin is rough and dry. With poor nutrition, massage is given once a day. Milk diet, three to eight ounces every two or three hours, is given, and continued until the child asks for other food or the digestive organs seem fitted for it; it is increased according to indications. The bowels must be kept open. In anemia Blaud's pills or a solution of iron and manganese peptonate may be given.

48. **Extubation.**—Clemens describes Renault's and Marfan's methods of removing the tube by digital expression, instead of by instrumental extubation. The expression method should aim to remove the tube by a force acting from below upward in the direction of the long axis of the trachea. As a result of experiments, Clemens is convinced of the great value of Marfan's method and considers Renault's method inferior, because in it the position of the operator is constrained, the child being less under control, while the pulp of the index finger used in Marfan's method is more sensitive than that of the thumb. Marfan's method, he declares, should be taught to all hospital internes and nurses.

Iowa Medical Journal, Des Moines.

February.

54 Placenta Prævia. L. A. Rodgers, Oskaloosa.
55 *Retrodisplacement of the Pregnant Uterus with Special Reference to Its Treatment. A. C. Page, Des Moines.
56 Placental Stage of Labor. C. A. Boice, Washington.
57 Organization and History of Iowa State Medical Society. G. F. Jenkins, Keokuk, Iowa.
58 Trypsin Treatment of a Case of Recurrent Carcinoma. F. S. Clarke, Le Mars.
59 A New Preparation of Veratrum in Eclampsia. A. M. Huston, Joliet, Ill.
60 Medical and Surgical Progress. G. Cullen, Des Moines.

55. **Retrodisplacement of Pregnant Uterus.**—Page's views may be summarized as follows: 1. In patients presenting themselves early, manual replacement of the displaced uterus and retention of it in position by pessary until the uterus has attained a size that will prevent recurrence of deformity is the indicated treatment. This emphasizes the desirability of early examination in all pregnancies. 2. Proper attention should be given to bowels and bladder. 3. When it has been impossible to replace the uterus early, wait till the third month of pregnancy, with the hope of spontaneous reposition. If this has not taken place at that time, anesthetize the patient and replace it, if possible. 4. When reposition at this stage can not be accomplished, even under anesthesia, if surroundings are proper and no sepsis is present, open the abdomen, free the uterus, bring it forward, and fix it there by one of the operations devised for shortening the round ligaments. This must be done with the minimum amount of manipulation of the uterus necessary to accomplish the purpose. 5. When proper surroundings can not be obtained for laparotomy, or when a septic condition is present, dilate and empty the uterus. 6. In the extreme cases of incarceration and sloughing vaginal hysterectomy may be necessary.

West Virginia Medical Journal, Wheeling.

February.

61 *Diagnostic Significance of Abdominal Pain. J. Schwinn, Wheeling.
62 Emergency Cases in Surgery. H. D. Hatfield, Eckman.
63 President's Address, Ohio County Medical Society. L. D. Wilson, Wheeling.
64 Influenza. D. H. Cummings, Clarksburg.
65 Corneal Ulcerations. C. M. Hawes, Huntington.
66 Surgery, 1860-1900. W. H. Sharp, Parkersburg.
67 Removal of Steel from the Interior of the Eye with the Giant Magnet. J. L. Dickey, Wheeling.

61. **Abdominal Pain.**—Schwinn discusses abdominal pain, and particularly that in the ovarian region. He suggests the following method of examination, which works well in his hands: Pick up the skin over the ovarian region and squeeze it lightly; if the patient feels the same kind of pain usually complained of, it is probably hysterical, especially if produced by the slightest touch of the skin. Then examine the sensibility of conjunctiva, cornea and pharynx; this is likely to be diminished or abolished in hysteria. A cursory examination of the visual field may now be added, as a procedure taking up but little time and embarrassing the patient but slightly;

if the patient is hysterical. the visual field is apt to be contracted. Search for painful spots along the spinal column, and the testing of the more common reflexes may now follow, and if from this preliminary examination we have reason to suspect that the patient is hysterical, we proceed to the examination of the pelvic organs. In case of hysterical pain a tender ovary will invariably be found at this examination, no matter whether there is really anything wrong with it or not, simply because the ovary is squeezed together with the overlying hyperesthetic skin, between the fingers in the vagina and those over the abdomen. He has sometimes been able to move the ovary out of the range of the tender skin, when it was found that an ovary most painful a moment before, proved to be absolutely painless. In this way it is, as a rule, not very difficult to come to the right conclusion as to the advisability of an operation and the probable outcome of it so far as pain is concerned. A young married woman consults him frequently about a severe pain in the ovarian region. She has been advised repeatedly by a number of physicians to have the right ovary removed as the only chance of getting rid of the pain. He has examined her carefully a number of times and believes the ovary to be in no way responsible for this pain, which is undoubtedly of purely hysterical nature. A few applications of galvanism to the painful area always relieve the pain for weeks or even months, and in this way he has managed to save the ovary for the past three years, for, in his opinion, it is just as criminal to remove a normal ovary as it is to produce an abortion.

Military Surgeon, Carlisle, Pa.

February.

68 The Correspondence School as a Means of Instruction for Medical Officers of State Forces. H. I. Jones, Indiana National Guard.
69 *Military Sanitary Service. C. Amezcua, Mexican Army.
70 Training of Medical Officers of the State Forces from a Regular Army Standpoint. F. P. Reynolds, U. S. Army.
71 Sanitation—Requirements for Navy Ashore and Afloat. M. H. Simons, U. S. Navy.
72 *Ipecacuanha in Dysentery. A. A. Woodhull, U. S. Army, retired.
73 Observations Made During a Visit to Japan by the United States Army Board for the Study of Tropical Diseases as They Exist in the Philippines. P. M. Ashburn and C. F. Craig, U. S. Army.
74 Investment of Medical Officers with Executive Sanitary Powers. E. L. Munson, U. S. Army.

69. **Military Sanitary Service.**—Amezcua urges that the powerful influence on the prosperity of the army of hygiene as applied to the soldier and the conditions in which he lives, imperatively demands autonomy for the army medical corps, in order to avoid the loss of time inherent in red tape, and to enable that corps to fulfil its duties conscientiously.

72. **Ipecacuanha in Dysentery.**—Woodhull urges medical officers, in whatever climate or however the dysenteric patient may have been reduced, to administer faithfully and nonemetically large doses of ipecacuanha. He knows of no instance in which such treatment has failed.

Journal of the Kansas Medical Society, Columbus.

February.

75 Tabes Dorsalis. H. P. Mahan, Parsons.
76 *Surgical Treatment of Tuberculosis. R. M. Markham, Scammon.
77 Conservative Treatment of Diseases of Women, Especially Retrodeviations. F. A. Harper, Pittsburg.
78 Postoperative Treatment of Laparotomies. R. A. Stewart and H. H. Heylmun, Hutchinson.
79 Rational and Conservative Treatment of Uterine Flexions. F. A. Carmichael, Goodland.

76. **Surgical Tuberculosis.**—Markham considers that, unless the general condition of the patient furnishes a contraindication, it may be stated as a rule that in all recent cases of primary synovial tuberculosis treatment should be commenced with intra-articular and parenchymatous injections of iodoform, and, if necessary, rest and immobilization of the limb; and this treatment, he believes, should be continued for some time before an operation is decided on. If no improvement follows, or if in spite of treatment the symptoms become aggravated, the joint should be opened, and the condition then revealed will point out whether an arthrectomy or a partial or complete resection should be done. Age furnishes no contraindication to the operation, although the immediate and remote results are much better in children than in adults. It is now the prevailing idea that only diseased tissue should be removed and as little of the healthy bone structure sacrificed as is compatible with a thorough operation.

Ophthalmic Record, Chicago.

February.

80 Probable Metastatic Hypernephroma of the Chorioid with Microscopic Findings. C. P. Small, Chicago.
81 *Defect of Abduction Associated with Retraction of the Globe in Adduction. J. Green, Jr., St. Louis.

81. **Congenital Defective Eye Abduction.**—Green refers to a previously described congenital anomaly of the ocular muscles, of which the most conspicuous signs are: 1, partial or complete abduction; 2, some limitation of adduction; 3, retraction of the globe into the orbital cavity—a condition first described as a definite symptom-complex by Duane (*Archives of Ophthalmology*, March, 1905). Green reports a case of his own. He considers the restriction of adduction susceptible of two explanations: 1. With an inelastic externus the normally inserted internus is thereby prevented from exercising its full function, or: 2, the internus is inserted too far back on the globe to exert any notable inward rotation, this function being assumed somewhat inefficiently by the conjoined action of the superior and inferior recti. Beyond correcting the refractive error little can be done in the way of treatment. In the few cases in which operation has been tried the results have hardly justified the procedure.

Chicago Medical Recorder.

February.

82 *Rational Treatment of Displacement of the Uterus. W. M. Thompson, Chicago.
83 *Statistical Data of Work on the Spinal Fluid. S. R. Klein, Chicago.
84 Cesarean Section Performed Under Relative Indications. J. C. Hoag, Chicago.
85 *Value and Limitations of Blood Examinations. R. W. Webster, Chicago.
86 Pneumonia Symptoms and Diagnosis. C. A. Bushwell, Chicago.

82. **Displacement of the Uterus.**—Thompson summarizes his article as follows: Uncomplicated cases of retrodisplacement should have the benefit of treatment—manual replacement with tampons or pessaries—before resorting to operation. Following pregnancy, all patients should be examined one week after delivery for retrodisplacement, and if necessary should receive treatment. Complicated cases (adnexal disease, relaxed vaginal wall, etc.), are often cured by the removal of the complications. The general trend of operators, when the case is not beyond the expectation of pregnancy is away from fixations, toward suspension through shortening the round ligament; whether outside or inside the abdomen is not decided.

83. This article appeared in the *Iowa Medical Journal*, November, 1907, and was abstracted in The Journal, Dec. 21, 1907, page 2122.

85. **Blood Examinations.**—Webster concludes that blood examinations have a certain value in diagnosis and prognosis in respect of both negative and positive findings. In blood diseases they are usually pathognomonic and diagnosis is at least uncertain without them. He thinks that they may be omitted in many cases in which they can add nothing to the diagnostic features, e. g., cirrhosis of the liver, nephritis, diabetes, cardiac insufficiency or eruptive fevers. In surgery, while the leucocyte count is often valuable, blood examination can rarely decide the question of operation, though frequent examinations may prepare the surgeon to meet an emergency otherwise likely to prove fatal. As too much reliance is often placed, both by specialist and practitioner, on routine blood examinations, Webster cautions against relying solely on the blood examination to settle a diagnosis, except in blood diseases and in cases in which the examination has been of a bacteriologic nature.

American Journal of Public Hygiene, Boston.

February.

87 Impression Preparations and the Van Gieson Stain for Negri Bodies. L. Frothingham, Boston.
88 Diagnosis of Rabies. A. W. Williams, New York.
89 Determination of Intestinal Bacteria in Milk. D. D. Jackson, Brooklyn, N. Y.

90 Relative Value of Dextrose Broth, Phenol Broth and Lactose Bile as Enrichment Media for the Isolation of *B. Coli.* S. C. Prescott and C. E. A. Winslow, Boston.

91 Preservatives in Food and the Effect Thereof on the Public Health. H. W. Wiley, Washington, D. C.

92 Ocular Tuberculin Test: A New Diagnostic Method in Tuberculosis. E. R. Baldwin, Saranac Lake, N. Y.

93 Prevalence of Venereal Disease. L. T. Wilson, Boston.

94 What Should Be the Attitude of Boards of Health Toward Venereal Diseases. A. Post, Boston.

Lancet-Clinic, Cincinnati.

March 21.

95 Retrodeviations of the Uterus. C. L. Bonifield, Cincinnati.

96 Prostatectomy. G. F. Lydston, Chicago.

97 The Kidney Surgically Considered. M. A. Austin, Anderson, Ind.

Medical Fortnightly, St. Louis.

March 10.

98 Sketch of the History of the Antituberculosis Crusade. L. M. Warfield, St. Louis.

99 What Does Disease Mean? H. Gasser, Platteville, Wis.

100 Case of Dermatitis Herpetiformis (Duhring's Disease). P. Kanoky, Kansas City, Mo.

101 Aneurism of Arch of Aorta. L. H. Behrens, St. Louis.

102 Severe Type of Neurasthenia Relieved by Partial Section of the External Rectus. M. Wiener, St. Louis.

Atlanta Journal-Record of Medicine.

March.

103 Diagnosis and Treatment of Penetrating Wounds of the Abdomen. F. W. McRea, Atlanta.

104 *Adhesive Plaster for Cure of Certain External Diseases and Lesions. M. B. Hutchins, Atlanta.

105 Diagnosis of Incipient Pathologic Changes in the Kidney by Means of Renal Epithelium. A. T. Gaillard, Atlanta.

106 Malarial Hemoglobinuria. E. F. Jones, Midville, Ga.

104. A similar article by this author appeared in the *New York Medical Journal*, Oct. 5, 1907, and was abstracted in The Journal, Oct, 19, 1907, page 1398.

Providence Medical Journal.

March.

107 Operative Treatment of Breast Tumors. R. B. Greenough, Boston.

108 Gastralgia. J. V. Shoemaker, Philadelphia.

109 Aural Nystagmus and Vertigo. J. F. Hawkins, Providence.

Long Island Medical Journal.

February.

110 Obstetric Experiences in General Practice. J. H. Barry, Long Island City.

111 Investigation of Tetanus on Long Island. C. F. Barber, Brooklyn, N. Y.

112 Literature and Statistics of Tetanus and Trismus on Long Island. W. Browning, Brooklyn, N. Y.

113 The Cystoscope as an Aid to Diagnosis in Diseases of the Bladder and Kidneys. P. M. Pilcher, Brooklyn, N. Y.

114 Three Cases of Foreign Bodies in the Intestine. T. B. Spence, Brooklyn, N. Y.

115 Subcutaneous Section of the Corrugator Supercilii and of Fibers of the Orbicularis Palpebrarum. C. C. Miller, Chicago.

Annals of Otology, Rhinology and Laryngology, St. Louis.

December, 1907.

116 *Tuberculosis of the Mouth. R. Levy, Denver, Colo.

117 New Methods of Examination of the Semicircular Canals and Their Practical Significance. R. Barney, Vienna.

118 Circumscribed Purulent Inflammation of the Labyrinth. H. Neumann, Vienna.

119 Construction of the Ethmoid Labyrinth. G. E. Shambaugh, Chicago.

120 Is There an Ideal Operation for the Correction of Deviations of the Nasal Septum? J. S. Gibb, Philadelphia.

121 Pathology of the Faucial Tonsil. J. A. Babbitt, Philadelphia.

122 Atrophic Rhinitis. J. Sendziak, Warsaw, Poland.

123 Eleven Cases of Cerebral Complication Due to Acute and Chronic Suppuration of the Middle Ear, with Complete Analysis of Five. C. F. Welty, San Francisco.

124 Technic of the Complete Mastoid Operation—Improved, Shortened and Simplified—Through the Digastric Route. W. S. Bryant, New York.

125 Case of Mastoiditis and Epidural Abscess; Operation and Rapid Recovery. Id.

126 Case of Suppuration and Necrosis of the Labyrinth—Operation—Recovery. G. L. Tobey, Jr., Boston.

127 Therapeutic Value of Fibrolysin in Otitis Media. E. Urbantschitsch, Vienna.

116. This article was published in the *Denver Medical Times*, December, 1907, and in the *Laryngoscope* for December, 1907, and was abstracted in The Journal, Feb. 15, 1908, page 563.

Journal of the Outdoor Life, Saranac Lake, N. Y.

January.

128 Friendly Visitors of the Sitter-Out.

129 How to Manage a Cough without Drugs. A. J. Richer, Ste. Agathe Des Monts.

130 Evil of "Patent Medicines" in the Treatment of Tuberculosis. A. P. Francine, Philadelphia, Pa.

131 Value of the Sanatorium. D. R. Lyman, Wallingford, Conn.

132 "The Last West."

133 Various Ways in Which Tuberculosis May Be Acquired. J. Walsh, Philadelphia.

February.

134 How Pennsylvania Is Setting the Pace for the Nation in Tuberculosis Work. S. G. Dixon.

135 Outdoor Living for the Non-tuberculous. N. Bridge, Los Angeles.

136 Rest and Exercise.

137 Report to the International Conference on the International Congress on Tuberculosis. L. F. Flick, Philadelphia.

138 Suggestions for the Health-Seeker.

139 How Consumptives Are Prepared for Useful Life at White Haven Sanatorium.

Journal of Mental Pathology, New York.

VIII, No. 3.

140 Development of Modern Care and Treatment of the Insane, as Illustrated by the State Hospital System of New York. C. F. MacDonald, New York.

141 New Method of Preserving the Central Nervous System for Morphologic Study. A. Giannelli, Rome, Italy.

142 Peripheral Amyotrophy Due to Traumatism. Clinical and Anatomopathologic Study. R. Bonfigli, Rome.

143 Case of Korsakoff's Psychosis Due to an Unusual Cause. S. Soukhanoff, Moscow.

144 Methods of Resuscitating Electrocuted Animals. Different Effects of Various Electric Currents According to the Method Used. Importance of Excluding from the Circuit the Central Nervous System During Resuscitation. L. G. Robinovitch, Paris.

145 General and Cerebral Blood Pressure During an Attack of Electric Epilepsy. L. G. Robinovitch, Paris.

146 Electric Anesthesia. Its Use in Laboratory Work. Id.

147 Methods of Resuscitating Animals in a Condition of Respiratory and Cardiac Syncope Caused by Chloroform. Various Electric Currents Used. Importance of Excluding from the Circuit the Central Nervous System. Id.

Journal of Ophthalmology and Oto-Laryngology, Chicago.

February.

148 Conjunctival Tuberculin Reaction in Diagnosis of Eye Diseases. W. O. Nance and G. W. Swift, Chicago.

149 The Pupil of the Eye in Health and Disease. G. G. Lewis, Syracuse, N. Y.

150 A Study of Refraction Based on 4,000 Cases. J. F. Byington, Battle Creek, Mich.

151 Treatment of Maxillary Antrum Disease of Dental Origin. J. J. Kyle, Indianapolis, Ind.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London.

March 14.

1 Surgery of the Spinal Cord and Its Membranes. D. J. Armour.

2 *Clinical Symptoms of the Cases of Epidemic Cerebrospinal Meningitis in Belvidere Fever Hospital, Glasgow, During the Recent Epidemic, with Short History of the Disease in Scotland. W. Dow.

3 *Case of Persistent Ingestion of Needles and Their Removal from Different Parts of the Body, Especially from the Organs of the Abdominal Cavity by Laparotomy Several Times Repeated. A. Nicoll.

4 Five Cases of Appendicostomy. J. L. Stretton.

5 Medical Treatment of Congenital Hypertrophic Stenosis of the Pylorus. G. Carpenter.

6 *Treatment of Delayed Chloroform Poisoning. A. P. Beddard.

7 Case of Cystic Disease of the Maxillary Antrum. R. Lake.

8 *Lymphangioplasty. W. S. Handley.

9 Portal Obstruction Without External Evidences of Portal Caval Anastomosis: Its Prognostic Significance. G. H. C. Lumsden.

10 Compound Depressed Fracture of the Vault of the Skull; Operation and Recovery. H. R. Beale.

2. **Cerebrospinal Meningitis.**—Dow gives an exhaustive enumeration of the clinical symptoms of the fifty-five cases of epidemic cerebrospinal meningitis in the Glasgow epidemic, from May, 1906, to January, 1907. Onset has been sudden, with headache always, and vomiting usually. Vertigo and sore throat have been noted. The physiognomy has been characteristic; cheeks flushed, dusky or cyanotic; herpes at the angles of the mouth; the facies generally resembling a typical pneumonia. Kernig's sign was present in the majority of cases. Case occasionally occurred with death in from twenty-four to forty-eight hours, in which neither rigidity of the head or neck nor Kernig's sign developed. The skin symptoms included "goose skin," which was common in the chronic stage, and *tâche cérébrale*, which was common through the course of the disease. The true rash was seldom present but the existing rash did not conform to any of the types usually associated with acute exanthemata. It consisted of small hemorrhages

in the superficial part of the corium, bright purple, of irregular form, from one-eighth to one-quarter of an inch in diameter, and lasting from three to four days. In seven cases a mottling, resembling that of typhus, appeared. Herpes was present in 18.1 per cent. in the first phase, and in 21.09 in the second phase, of the epidemic. The nervous symptoms included pain throughout the acute period of illness, most frequently in the occiput, common and persistent in the head and along the spine; mentally, apathy or indifference, with every grade of disturbance between this and coma; delirium, varying between muttering and maniacal, was not infrequent. Hyperesthesia of skin was common and intense. Contraction of certain muscles was present in nearly all cases. The plantar reflex was exaggerated in acute cases before the onset of coma. There was rapidly progressing emaciation, but there were no trophic lesions of skin. Chronic hydrocephalus was fairly common from the twentieth day onward. Convulsions accompanied the onset in children under one year, but in no case in adults. Of the organs of special sense, the eye and ear were most frequently affected, nystagmus was common in acute cases, and occasionally in the chronic stage. A curious condition, consisting of spasmodic retraction of the upper eyelids accompanied with rhythmical contraction and dilatation of the pupil from ten to fifteen times a minute, and an irregular form of nystagmus consisting of irregular twitchings of the eyeballs in all directions and not from side to side of the middle line, was also observed. Both the middle ear and the central auditory system were frequently affected; purulent discharge, from which, however, Weichselbaum's diplococcus could not be isolated, was moderately common. Out of thirty patients who recovered, five were completely deaf, and in no case has improvement taken place since dismissal. Taste and smell were not affected. At the onset in acute cases the temperature ranged from 102 to 104 F., continuing at this level without remission, and rising or falling before death. From the eighth to the fourteenth day in chronic cases the temperature was of a remarkably remittent type, oscillating three or four degrees. Pulse rate varied greatly, usually it was much accelerated, but often it was slow. Marked variation in frequency at different hours of the day and on consecutive days was frequently observed in the same individual; it was little influenced by alterations in temperature. True Cheyne-Stokes' breathing was rare, but various modifications were not infrequent. Vomiting was the most prominent disorder, the appetite was good, as a rule, considerable nutriment being taken with relish. The tongue was usually fairly clean; in protracted cases it was dry and brown; sometimes, peeling irregularly. Bowels were usually constipated, with loss of rectal control in all acute cases and frequently in children. As a rule there was no sugar in the urine; albumin was occasionally found, blood never. There was no instance of nephritis. Incontinence of urine was common in children throughout the disease, but in adults only during unconsciousness. Arthritic pains were present in very few cases, usually at wrists, knees and ankles. Purulent arthritis in which the diplococcus of Weichselbaum was isolated in pure culture was seen in two cases.

3. **Ingestion of Needles.**—Nicoll reports the extraordinary case of a married woman, 23 years of age, on whom he performed laparotomy four times and four minor operations between Oct. 26, 1906, and Nov. 20, 1907, for the removal of forty-two needles and two pins. A fifth laparotomy was performed on December 14, which unfortunately proved fatal. At the autopsy one whole needle and part of another were found in the liver, and another in the left renal vein. Nicoll discusses the source of the needles, the majority of which were certainly swallowed, and the motive, of which hysteria was undoubtedly the keynote; the patient seemed to consider her position as a celebrity an enviable one. She had no areas of anesthesia or demonstrable paresthesia, so that the needles must have caused distinct sensation, and Nicoll suggests that this may indicate a perverted sexual appetite. The motive otherwise appears obscure. Nicoll admirably describes the patient's personality as follows: "She was quite an entertaining person. The stories she had to tell of the various members of the medical profession with whom she came in contact, and her unconcealed mirth at their vain attempts to diagnose her case correctly, showed a sense of humor which, while certainly perverted, was remarkably acute. When not ill or in pain she was cheerful and happy. She took a childish pride in the extent and magnitude of the various operations to which she was subjected. But with all her perversity there was an undercurrent of shrewdness that was positively baffling. Naïve, irresponsible, roguish, sullen, and morose by turns, grateful always, she had won the personal interest and sympathy of her medical attendant by her unswerving loyalty." He concludes with a résumé of more or less similar instances from the literature recorded by sixteen authors. Three incidental points may be mentioned: First, the fact that a thorough examination of the whole length of the intestine during operation displayed at no point any scar to show a possible previous perforation by any of the needles found in the abdominal cavity. Second, the protective character of the great omentum, as shown by the way in which this structure enveloped a needle found in the act of passage through the stomach, and apparently took charge of the needles in the abdominal cavity, rendering them harmless. Third, he notes that at the postmortem examination at the end of 1907, the "silk sutures placed in the stomach wall some twelve months previous to death were almost entirely absorbed, their situation being marked only by a few disorganized silken threads."

6. **Delayed Chloroform Poisoning.**—Beddard, basing his opinion on Rosenfeld's views of the effect of chloroform poisoning on cell metabolism, suggests that it would seem worth while to try feeding such patients with dextrose, either by the mouth or, failing this, by enemata or continuous rectal infusion of a solution of from 10 to 20 per cent., or even by infusing intravenously a 6 per cent. solution. Since these cases are rare, and since there is at present no means of knowing which patients will show a great susceptibility to chloroform, it is not likely that it will be possible to decide in man whether feeding with dextrose before the anesthesia is of any value, but it might be advisable to try it in rickety and ill-nourished children. Further, it might be possible, by inquiry, to find out whether an abnormal susceptibility to chloroform is associated with an absence before the operation of such food as will keep up the store of glycogen in the body, and whether conditions which reduce this store increase the susceptibility.

8. **Lymphangioplasty.**—Handley discusses the causation and nature of the brawny arm found in about one case out of six of cancer of the breast. He considers an adequate pathology provided for, by the view that the permeative spread of a cancer is accompanied by an almost coextensive destruction on the lymph vascular system. He believes he has found a way of providing an artificial lymphatic system of the limb, which, though clumsy, is nevertheless efficient. It consists in providing permanent conduits to lead the lymph from the obstructive area into areas of normal lymphatic circulation. Examination of a piece of silk ligature that had been imbedded in the peritoneal tissues for ten years, showed the main substance of the thread intact, while the absence of cellular elements indicated that the leucocytes could not penetrate and set up organization. His plan, therefore, which he has carried out successfully in two cases, one of which he describes, was to introduce into the subcutaneous tissue of the swollen arm a number of buried silk threads running longitudinally upward from the wrist, to terminate in the loose and healthy areolar tissue in or beyond the axilla, and spaced out at convenient intervals around the limb, resembling the drainage of a marshy field by buried pipes. The success, although its ultimate result awaits the verdict of time, has exceeded Handley's hopes. He proposes to describe the method, state its results, and discuss its application to other forms of lymphatic edema later. He believes that it will largely replace amputation and arterial ligature in elephantiasis, and that it will relieve the subjects of chronic white leg. He expresses his indebtedness to the Cancer Research Committee of the Middlesex Hospital for its assistance in the investigations.

British Medical Journal, London.

March 14.

11 *Treatment of Pneumonia. S. West.
12 Diagnosis of Organic from Functional Affections of the Nervous System. J. S. R. Russell.
13 Commoner Symptoms of Cerebellar Abscess. W. Trotter.
14 *Colony and Bromid Treatment of Epilepsy. A. J. McCallum.
15 *Case of Hysterical Somnambulism Showing Abnormal Acuity of Vision in the Somnambulistic State. J. W. Russell.
16 Case of Merycism. H. F. L. Taylor.
17 Excessive Patellar Reflex of Nervous Origin. P. C. Smith.
18 Middle Meningeal Hemorrhage. Trephining. Recovery. W. Tyson.
19 Conveyance of Disease by Domestic Pets. A. E. Porter.
20 Employment of the Artificial Membrane in Marked Temporary Deafness During the Subacute Stage Following Acute Tympanic Suppuration. W. Hill.

11. **Pneumonia.**—West thinks that we must not assume that there is only one kind of pneumococcus, and consequently one kind of pneumonia, for the serum that is obtained from one strain of pneumococcus does not seem to have any effect on that from another strain. As to the infectiveness of the disease, he thinks it very slight indeed, if it exists at all, for pneumonia patients in general wards rarely, if ever, convey the disease to their neighbors. The three points in all germ diseases are to kill the germ and prevent its spread, to neutralize its poisons, and to care for the patient. We have no means of killing the pneumonia germ within the body. He sees no hope in antitoxins, for the only serum that seems likely to be effective is one grown from the patient's own bacilli, and by the time that could be obtained the patient will be either dead or convalescent. In the care of the patient the most important thing is a devoted physician, who will stick by him, prepared to do the right thing in the nick of time, e. g., administer a little strychnin just when wanted. The treatment must be largely symptomatic. He deprecates the present tendency to decry symptomatic treatment, for if one can not treat the disease one may as well treat the patient, and, if the patient can be saved it does not matter whether the disease has been treated or not. For "stitch" in the side, he says that three or four leeches over the painful spot will stop the pain and that it will not return. Temperature need not be dealt with unless it is over 103 F., but if it runs up to say 105, it must be reduced, and he considers cold sponging much more convenient than the cold bath—sponging the various parts of the body in succession. A cold air bath may be given by means of a tent frame with, if necessary, bags of ice suspended within the tent frame. Antipyretics should never be used. Their action is not permanent and is always accompanied by depressing results. Attention to the heart is most important. With dilatation of the right heart and cyanosis venesection is required. It is not done often enough, he asserts, but it is to be used only for mechanical relief, and, therefore, many ounces must be removed; obviously, if the patient's strength can not bear that loss, it is worse than useless to bleed him. Of drugs, digitalis is efficient but apt to be dangerous; strophanthus is less efficient. He sees most benefit from caffein citrate with nux vomica. Oxygen inhalation is useful. Cough should not be dealt with; if considerable it is for the purpose of unloading the bronchial tubes and should not be thwarted; if slight it does not matter. Sleeplessness must be combated. He discards chloral and the chemical soporifics, and when sleep becomes an urgent indication, gives morphin, 1/3 grain (0.02 gm.), and repeats this dose if necessary; but opium and its alkaloid are to be used with the utmost caution. Hyoscyamin he particularly cautions against in pneumonia. An ordinary case requires no alcohol or other stimulant. A little alcohol is sometimes useful in delirium. He particularly insists on the necessity for constant observation of the chest during convalescence, and cites the case of a convalescent who was sitting up eating his dinner and suddenly fell back dead. Autopsy demonstrated double empyema with the pericardium full of pus, which had been entirely unsuspected, but would have been discovered had there been continued attention to examination of the chest.

14. **Bromid in Epilepsy.**—McCallum reviews three and a half years' experience at the Starnthwaite Epileptic Colony, and considers epilepsy a reflex act in its origin and a cerebral vice in its fuller development and perpetuation. This view, he says, harmonizes many divergent facts—cures after correction of refractive errors or removal of adenoids, or from relief of constipation, the removal of the condition in a case of undescended testicle (Osler), the treatment of ovarian irritations, etc. When the cause can not be removed it is imperative to render it inoperative, and this can be done by bromid. Bromid treatment is necessary and curative in peripheral, traumatic, emotional and toxic cases. The amount required to stop the sensory stimulation varies exceedingly; 80 grains (5.0 gms.) a day is the average, but 60 grains (4.0 gms.) have been sufficient to arrest epilepsy of an intensity shown by the occurrence of 267 grand mal seizures in a year. Among the boys in the colony 130 grains (8.45 gms.) is the highest dose given so far; 20 grains (1.3 gms.) are given night and morning, increasing by 10 grains (0.65 gm.) a day as often as the attacks recur. Epileptic boys stand bromids much better than adults. He has detected no toxic action on the heart, and believes the toxic action of potassium salts on the heart to be a myth. Bromid rash may be ignored. It rarely occurs with a pure salt and usually disappears without any treatment save a soothing antiseptic ointment, if the bromid is continued.

15. **Hysterical Somnambulism.**—Russell reports the case of a woman aged 29, a teacher, whose father killed himself in her presence during her childhood, and who suffered from somnambulism. She had several attacks of somnambulism under observation in the Birmingham General Hospital. During these attacks she was able to read, to write and to crochet, in a light so dim that none of her attendants could see to do anything. On waking, however, she appeared quite unable to do the same things in the same light. It is worthy of note that she remembered on waking the events that occupied her mind in her somnambulistic state.

Medical Press and Circular, London.

March 4.

21 *Indigestion in Children. G. F. Still.
22 *Enlargement of the Spleen. W. B. Warrington.
23 Hemangiectatic Hypertrophies of the Foot and Lower Extremity, Congenital or Acquired. F. P. Weber.

21. **Indigestion in Children.**—Still summarizes the signs of indigestion in children, which condition demands special attention not only because it is frequently mistaken for other conditions, but because it is of such vast importance during the age of active construction. Especially to be noted are a peculiar, heavy smelling, foul breath, a shortness of breath amounting to air hunger, and dryness of hair with loss of gloss. Lichen urticatus is almost proof positive of disturbance of the digestive system. He particularly emphasizes that a child should not have to start for school ten minutes after beginning a meal, and that it should not be compelled to go to a meal straight from sleep without having time fully to rouse itself. The idiosyncrasies of children are as important as those of adults and demand as careful study. Some children are poisoned by eggs, in whatever form; others by oatmeal porridge. The dyspepsia of childhood is generally carbohydrate dyspepsia. Brown bread in some children causes mucus in the stools, which will cease on discontinuance of the bread. Toast, if given, should be toasted through to brittleness, not given soft inside, in which state it is no better, if not worse, than bread, in those cases in which bread disagrees. Excessive use of bread and butter and excessive milk drinking must be guarded against. "By all means let a child have as much milk as it can easily digest, but be careful not to pass this limit." Potatoes for some children are very indigestible. If given they should be mashed thoroughly with a masher, not merely with a fork.

22. **Splenomegaly.**—Warrington describes a case summarized as follows: Sailor, aged 36 years. History of increasing asthenia not exceeding two months. Admitted with profound anemia and cachexia. Great enlargement of the spleen, slight enlargement of lymphatic glands. No leucocytosis; constant pyrexia; violent diarrhea and delirium preceded death. Diagnosis, acute Hodgkin's disease. He discusses Hodgkin's disease and relates another case. Certain facts, he says, seem clear: In ordinary Hodgkin's disease the glandular enlargements

have a specific or recognizable structure. Tuberculosis, if present, is merely an added lesion. In the acute case the same characteristic structure was present. Many observations show that in acute conditions the blood may rapidly alter, a great increase of lymphocytes occurring, so that the disease may clinically be indistinguishable from lymphatic leukemia; but that further observation is required on the structure of the glands in such cases. A second case of splenomegaly is summarized as follows: Great enlargement of the spleen in a pregnant woman, the subject of syphilis; anemia; two hemiplegic seizures. Postmortem disclosed recent cerebral hemorrhage, exuberant mitral vegetations, tuberculosis of one kidney, cystic degeneration of the other. The placenta showed evidence of syphilitic disease. He remarks that in his cases the pathologic findings show that no less than three causes of toxemia were present, viz., syphilis, tubercle, and recent virulent endocarditis, and these may have been sufficient to account for both the anemia and the enlarged spleen.

Clinical Journal, London.

March 11.

24 *Chronic Intestinal Obstruction. H. L. Barnard.
25 New Growth of Mediastinum and Brain Presenting Some Unusual Features. A. J. Hall.

24. **Chronic Intestinal Obstruction.**—Barnard discusses the symptomatology and causation of chronic intestinal obstruction on the basis of 669 cases collected from the records of the London Hospital. As to the surgical treatment of chronic constipation, he refers to the accumulation of inspissated mucus and epithelial débris, which may occur as a troublesome complication after the operative exclusion of the colon from the alimentary canal, and states that he has found a large high enema of soap and water, introduced slowly once a month, efficient in overcoming this. Should this fail, he would perform the simple operation of appendicostomy and irrigate the colon from above at regular intervals, rather than undertake so extensive an operation as excision of the colon.

Journal of Tropical Medicine and Hygiene, London.

March 2.

26 *Identity of Beriberi and Epidemic Dropsy. F. Pearse.
27 Some Ticks of Central Africa. A. Y. Massey.
28 Schistocerca Peregrina and the Spread of Glossina Palpalis Wellmanii. C. Wellman.

26. **Identity of Beriberi and Epidemic Dropsy.**—Pearse summarizes the symptoms present in an outbreak of a so-called epidemic dropsy, first described in 1877, which has recently reappeared in Calcutta, and compares them with those of an outbreak of undoubted beriberi in the Alipore Reformatory. In the absence of any bacteriologic evidence, positive or negative, for either disease, that is the only comparison that can as yet be made. From this comparison he concludes that the two diseases are essentially the same, and that the cause of the disease is to be found in some as yet undiscovered specific microbe.

Indian Medical Gazette, Calcutta.

February.

29 *Etiology of Blackwater Fever. C. P. Lukis.
30 *Hemoglobinuria and Quinin Sulphate. D. McCay.
31 Psychology, Medicine, and So-Called Christian Science. F. W. Sumner.
32 Epidemic of Dengue Consisting of Both Three-Day and Seven-Day Fever Type Among the Fifteenth Lancers at Sialkot, 1907. H. Fooks.
33 New Method of Carrying Wounded Off the Field. J. S. O'Neill.
34 Fifty Cases of Beriberi in the Reformatory School, Alipur. F. J. Daley.

29. **Blackwater Fever.**—Lukis considers that the hitherto undiscovered factor in the causation of blackwater fever is not the malarial parasite, but the Leishman-Donovan body. His reasons are: 1. The distribution of blackwater fever does not correspond to that of malaria, but does correspond to kala azar or cachexial fever. 2. Blackwater fever closely resembles in its symptomatology the Texas fever, or hemoglobinuria of cattle, a disease due to a pyrosoma closely resembling the Leishman-Donovan body, though differing in certain important particulars. 3. In kala azar the blood is in an abnormally labile condition, indicated by mucous hemorrhages and petechial blotching. Quinin is distinctly harmful. 4. The findings of Christophers and Stevens, that in a series of cases of blackwater fever malarial parasites were found in only 12.5 per cent., while large mononuclear leucocytes were increased in 93 per cent., Lukis regards as evidence, not of the malarial nature of the disease, but rather that it is of the nature of cachexial fever or kala azar. He holds that blackwater fever occurs only in patients who are victims of kala azar. He lays down the following rules: 1. Whenever microscopic examination is possible, quinin should not be administered until after the demonstration of malarial parasites in the blood. This rule is strictly observed in the Medical College Hospital. 2. If no microscopic examination be possible, then quinin should be administered with great caution, and its use should be definitely abandoned if two or three moderate doses, given in solution, do not produce an appreciable effect on the temperature. 3. In view of Captain McCay's observations, the hydrochlorate or acid hydrochlorate of quinin should always be used in preference to the sulphate.

30. **Hemoglobinuria and Quinin Sulphate.**—McCay reports the series of physiologic investigations into the relation between quinin sulphate and blackwater fever which led him to the conclusions given in an advance note in the *Indian Medical Gazette*, December, 1907, and abstracted in The Journal, Jan. 25, 1908, page 319.

Annales de Dermatologie et de Syphiligraphie, Paris.

February, IX, No. 2, pp. 65-128.

35 *Frequency of Albuminuria Accompanying Scabies. (Albuminurie chez les galeux.) J. Nicolas and A. Jambon.
36 *Comparison of Influence of Father and Mother in Respect to Inherited Syphilis. (Influence comparée des générateurs dans l'hérédo-syphilis.) Carle.
37 Culture Media for Dermatophyte Fungoid Organisms. (Technique de fabrication des géloses sucrées dites: milieux d'épreuve. Pour les champignons dermatophytes.) R. Sabouraud.

35. **Albuminuria in Scabies.**—Nicolas and Jambon describe sixteen cases in which patients with scabies presented albuminuria evidently due to the action of the parasites in the skin, either directly from toxemia or by reflex action from the cutaneous irritation modifying the circulation through the kidneys or the functioning of their epithelium. In the majority of cases the albuminuria accompanied the scabies and vanished with it, but in others there was actual nephritis which persisted and ran a separate course afterward. They examined 85 other patients and found no trace of albuminuria. In 5 out of the 14 cases of simple albuminuria the scabies had induced the formation of pustules. In 2 other cases serious nephritis was observed as also in several cases on record. In 2 cases reported by Scheube the nephritis terminated fatally about seven months afterward.

36. **Comparison of the Influence of Father and Mother in Respect to Transmission of Syphilis to the Offspring.**—Carle believes that syphilis in the mother is far more dangerous for the offspring than syphilis in the father, and relates three instances in which young men marrying 13, 18 and 9 months after the primary sore, in the midst of the second stage, did not contaminate the wife and have procreated healthy offspring. He consequently insists on greater strictness in regard to the interval before permitting marriage in the case of women than of men.

Archives Générales de Médecine, Paris.

February, LXXXVIII, No. 2, pp. 65-144.

38 *Heart Disease and Pregnancy. (Révision de la loi de Péter.) L. Pouliot.
39 Special Variety of Inguinal Adenitis in Algiers. (Adénites climatériques à bacilles fluorescents.) Pigeon and Tanton.
40 Location of the Nipples in Men and Importance of the Left Nipple Line in Determining the Transverse Diameter of the Heart. (Situation des mamelons chez l'homme.) N. Tchlgaeff.

38. **Heart Disease and Pregnancy.**—Pouliot believes that pregnancy need not be forbidden to all women with heart disease. Mitral stenosis seems to afford the greatest predisposition to acute edema of the lungs, especially when the thorax is contracted, or there is some lesion in the lung interfering with the circulation through it or a chronic kidney affection.

He would forbid marriage to every woman with heart disease showing even the slightest tendency to albuminuria, also to those with pronounced mitral or aortic stenosis, myocarditis, or abnormal fusion of the heart. A large number of women with heart affections are not included in these categories and they can pass safely through a pregnancy as he illustrates by a number of examples. One patient had mitral insufficiency, well compensated even during previous pregnancies, without distressing dyspnea at any time, the myocardium, arterial pressure and work of the heart being approximately normal. She passed through a normal pregnancy and was able to nurse her infant without mishap. He has also found that a large proportion of the women passing through an apparently normal childbirth in the hospital, with nothing to call special attention to the heart, are yet affected with some form of heart disease. Asystole is the dangerous condition, and even a slight attack at any period, especially during the absence of pregnancy, and disturbances in the circulation, such as persisting edema of the legs, should forbid pregnancy to such a patient, as also habitual excessively low or high arterial pressure. In treatment of asystole it must not be forgotten that digitalis is unable to act when there is much hydremia which is especially frequent in pregnant women. Consequently, the first indication is for extensive venesection, and haste is necessary, as cardiac insufficiency in pregnant women rushes with exceptional rapidity through its various stages, and urgent measures are required. Venesection is indispensable, he asserts, in case of acute pulmonary edema. These measures must be supplemented by the logical removal of the cause by hastening labor or interrupting the pregnancy. During the last two months of pregnancy he advises premature delivery, at need, if there is nothing to suggest impending edema of the lungs. But the slightest sign of the latter prohibits premature delivery, as labor is liable to be the determining cause of acute pulmonary edema. He has observed cases of tardy asystole, the exhausted heart giving out between the third day and third week after delivery. He calls this condition "gravido-cardiac cachexia;" it is generally observed only in elderly multiparæ or in women enfeebled by some organic taint. The mortality of asystole during pregnancy amounted to 46 per cent. in his experience with 555 cases.

Presse Médicale, Paris.

March 7, XVI, No. 20, pp. 153-160.

41 The Liver in Kidney Affections. (Le foie dans les affections du rein.) L. Bernard and L. Laederich.

March 11, No. 21, pp. 161-168.

42 Preceding Condition of Victims of Industrial Accidents. (Etat antérieur chez les victimes des accidents du travail.) V. Balthazard.

March 14, No. 22, pp. 169-176.

43 Laryngostomy. Sargnon and Barlatier.
44 Tardy Ocular Lesions After Diagnostic Instillation of Tuberculin. P. Van Durme and E. Stocké.

Obstétrique, Paris.

XII, No. 6, pp. 481-580.

45 Organized Protection of Infants and Protection of Women During Confinement. (Consultations de nourrissons. Mutualités maternelles.) R. Marois and F. Poussineau.

Revue de Chirurgie, Paris.

March, XXVIII, No. 3, pp. 281-408.

46 *Experimental Research on Injections of Gas into the Veins. P. Delbet and Mocquot.
47 *Esophagoscopy in Treatment of Severe Cicatricial Stenosis. (Cure des rétrécissements cicatriciels à forme grave par l'esophagoscopie.) Guisez.
48 *Pancreatectomy and Especially Ablation of Head of Pancreas. L. Sauvé. Commenced in No. 2.

46. **Injection of Gas Into the Veins.**—The experimental research reported demonstrates that the rapidity with which the gas or air is injected into the vein is an important factor in the toleration; and also that oxygen can be injected in large quantities if done slowly and at a distance from the heart. Dogs tolerate 10 c.c. of oxygen by the minute and the kilo, injected into the saphenous vein, which in proportion for a man of average weight would be 600 c.c. a minute. Physiologists tell us that 33 c.c. a minute are sufficient to maintain the vital functions, an amount which is less than 2 c.c. a minute by the kilo. If the air passages are unobstructed, intravenous injection of oxygen might thus be safely done in the clinic, as in case of asphyxia from carbon monoxid. The injection can do little or no good unless the heart is still beating, consequently nothing can be hoped from it in chloroform syncope, but the outlook is promising in asphyxia from poisonous gases. The scanty experience to date seems to indicate that the oxygen drives out and takes the place of the carbon monoxid anchored on the blood corpuscles. No experiments were made with ozone, but a solution of hydrogen dioxid caused great changes in the red corpuscles and the animal was ill for three days, although no disturbances were manifest from the presence of the gas in the circulatory system.

47. **Value of Esophagoscopy in Treatment of Cicatricial Stenosis.**—Guisez reports twenty cases in which direct visual inspection by the esophagoscope allowed the application of appropriate measures with the cure of the condition. He gives illustrations of the knife, esophagoscope and other instruments and lamps used, with views of the findings. The shape and seat of the stricture are very important for the prognosis. Short strictures, more like a valve, are most amenable to esophagotomy under the control of the esophagoscope. The multiplicity of the strictures is no bar to successful intervention, as each can be treated in its turn. Lengthwise strictures with longitudinal infiltration or protrusions can not be treated with the knife, as a rule; when the upper part can be corrected to normal conditions it is impossible to inspect the region below, and there is great danger of perforation from the blind use of the knife. Even when the edge of the stricture has been successfully slit, in such cases the stenosis generally recurs, notwithstanding repeated dilatation. The lower the stricture the better the results in his cases. Strictures in the vicinity of the cardia are easier to operate on, easier to catheterize and to keep open, possibly because they are necessarily shorter than strictures at a higher point. The technic is somewhat similar to that of urethrotomy. Dilatation later should never be done without esophagoscopy in case of a pocket above the stricture allowing a false route. The esophagoscope itself helps to direct the bougie into the right road. For lack of this precaution he met with a serious mishap in one of his earliest cases, the patient succumbing five days after the operation during dilatation without visual inspection. Children with cicatricial stenosis, he says, are unable to obtain sufficient nourishment through a gastric fistula for their proper development and the majority soon perish. He declares that with esophagoscopy it is possible to save most of them and to cure in many cases hitherto considered incurable. One child gained 24 pounds in a few months after the operation. The stricture was systematically dilated every week or two in this case for a year, and later at two months' intervals. His cases are given in detail.

48. **Pancreatectomy.**—In this monograph on surgical treatment of affections of the pancreas Sauvé pleads for restriction of the operation to ablation of the head of the pancreas as the rule. Recently acquired knowledge shows that the pancreas is vitally indispensable on account of its internal secretion; its external secretion can be substituted, but not the internal. Even a very small fragment of the pancreas left behind is able to take care of this internal secretion. Duodenopancreatectomy answers all the requirements, even for cancer of the head of the pancreas, and has been successfully performed in the clinic by Codivilla, Tuffier, Manclaire, Moynihan and others.

Semaine Médicale, Paris.

March 11, XXVIII, No. 11, pp. 121-132.

49 Reproduction and Development of the Glossina palpalis. E. Roubaud.
50 Discovery of Stegomyia fasciata at Marseilles.
51 The Painful Points in Appendicitis. (Les points douloureux appendiculaires.) F. Lejars.
52 Ambulant Treatment After Laparotomies. A. Goubarov.

Archiv für Verdauungs-Krankheiten, Berlin.

February, XIV, No. 1, pp. 1-106.

53 *Intestinal Splashing Sound and Dulness in Incomplete Intestinal Occlusion. (Intestinales Plätschergeräusch und tiefe Dämpfung bei unvollständigem Darmverschluss.) A. Mathieu.

54 Technic for Isolation of Pure Gastric Juice from Stomach Content. (Neue Methode der Isolierung des reinen Magensaftes aus dem Mageninhalt.) Z. Inouye and N. Muguruma.
55 Improved Fermentation Tubes for Examination of Feces. (Neues Gärungsröhrchen zur Bestimmung der Stuhlgärung nach Schmidt-Strasburger, nebst Beiträgen zur Stuhluntersuchung.) E. Müuzer.
56 Conclusions from Comparison of Action of Various Saline Waters on Secretion of Gastric Juice. (Vergleich der Wirkungen verschiedener Kochsalzwässer auf die Magensaftabsonderung mit Hilfe der Pawlowschen Methoden.) M. Rheinboldt.
57 *Syphilitic Febrile Liver Affections. (Ueber luetisches Leberfieber.) A. Stauder.
58 *Functions and Position of Stomach in Chlorosis. (Funktionen und Lage des Magens bei Chlorose.) G. Liwschitz.

53. **Splashing Sound in Intestines and Deep Dulness with Incomplete Ileus.**—Mathieu discusses the circumscribed splashing sound and dependent dulness, changing its position as the patient turns from side to side, in cases of incomplete occlusion of the small intestine. When the splashing sound was heard near the umbilicus and yet the stomach tube showed the stomach empty, the condition was diagnosed as stenosis of the middle part of the small intestine, and the laparotomy confirmed this assumption. In such cases there was no dulness toward the side, as in the case of free accumulation of fluid in the peritoneal cavity. He cites a number of cases, including some personally observed, the evidence showing that acute or chronic incomplete occlusion of the intestines with retention of fluids in the intestine above the stenosis may be revealed by a splashing sound or by displacement of the dulness as the patient turns on his side. When the stenosis becomes complete these signs vanish as also when conditions are restored. When the stenosis is in the middle third of the small intestine, it simulates dilatation of the stomach or hourglass stomach, and radioscopy may prove useful for differentiation of the true condition, although the location of the splashing sound below the umbilicus and the tone of the sound suggest an intestinal rather than a stomach affection. Even when there is vomiting it is not the vomiting of gastric retention. In one case, the signs and symptoms suggested hourglass stomach, except that examination of the region four days before had shown normal conditions—the sudden onset of the trouble confirmed the presumptive diagnosis of stenosis of the upper part of the small intestine. When the stenosis is in the vicinity of the ileocecal valve or farther along, the signs are unmistakable, as he describes in detail. Delbet noticed that the upper margin of the area is inclined to form a zigzag line by the distribution of the fluid in the loops of the intestine. Mathieu adds that the conditions in which the area of dulness develops and its coincidence with the splashing sound help to differentiate the accumulation of fluid in incomplete ileus from ascites, although both may occur together in some cases. The gastric splashing sound can be distinguished from the intestinal by the waves that can be induced in the fluid and the presence of fluid that can be pumped out of the stomach. When there is accumulation of fluid in both stomach and upper small intestine, in consequence of incomplete stenosis of the latter, a copious reflux of bile may aid in differentiation.

57. **Syphilitic Febrile Affection of the Liver.**—Stauder reviews the various cases of syphilitic "liver fever" that have been reported in the last few years and describes a typical case from his own experience. The palpation findings were unmistakable; the liver was much enlarged, and tender with several tumors, none hard. The other organs were apparently normal, but the temperature ranged between 100 F. mornings and 101 evenings, even when the patient remained in bed for a week. The general health and appetite were strikingly good. The patient denied syphilitic infection, but the disease was diagnosed by exclusion and the fever vanished the second day after mercurial treatment had been commenced. The liver subsided nearly to normal size and appearance in the course of two or three weeks, while the patient gained rapidly in strength and weight.

58. **Stomach Functioning in Chlorosis.**—Liwschitz tabulates the findings in 39 chlorotic patients in respect to secretion and position of the stomach. Normal conditions in regard to gastric secretion were found in 44.7 per cent. and deficient secretion in 47.4 per cent., only 7.9 per cent. presenting hyperchlorhydria. The motor power of the stomach was found generally reduced; the interval before expulsion of the stomach content was longer the severer the chlorosis. Ptosis of the stomach was observed only in 19.1 per cent. of 47 cases of chlorosis.

Beiträge zur Geb. und Gynaekologie, Leipsic.

XII, No. 2, pp. 155-338. Last indexed Dec. 21, 1907, p. 2044.

59 Negative Results from Aronson's Antistreptococcus Serum in Puerperal Fever. A. Mayer.
60 *The Operative Era in Obstetrics. (Die operative Aera der Geburtshilfe.) A. Hegar.
61 *Reimplantation of Ovaries in Human Beings. Paukow.
62 Torsion of Pedunculated Growths. (Zur Torsion gestielter Gebilde.) S. Stiassny.
63 *Attempts to Improve Primary Course and Ultimate Results of Pubiotomy. (Hebosteotomie.) P. Kroemer.
64 Rhabdomyomata of Body of Uterus. H. Hunziker.
65 Extensive Grape-Sarcoma of the Mucosa of Vagina and Uterus in Child of 2. (Traubige Schleimhautsarkome der weiblichen Genitalien im Kindesalter.) E. Gräfenberg.
66 Bone Formation in the Fallopian Tubes. (Knochenbildung in den Tuben.) L. Michaud.
67 *Scopolamin-Morphin Anesthesia in 100 Obstetric Cases. (Morphium Skopolaminnarkose in der Geburtschilfe.) Gminder.

60. **The Operative Era in Obstetrics.**—Hegar remarks that we can not say that the management of childbirth in a contracted pelvis has reached a very high degree of perfection when the obstetrician must choose whether to bore into the skull of the child, cut open the mother's abdomen or saw the bones of the pelvis. And yet, he says, with our present methods of obstetrics we do not seem able to progress beyond these inhuman and crude procedures. The older obstetricians made it a principle to regard the mother as of more consequence than the child, in the management of contracted pelvis, but the promoters of the present operative era do not hesitate to perform extensive cutting operations on the mother and expose her to appreciable danger in order to save the child. They allow perforation only when the birth canal is infected so that Cesarean section or pubiotomy is contraindicated. He discusses the German law which requires a life for a life in case of deliberate taking of life, and remarks that a physician who would be deterred from an indicated perforation by fear of criminal proceedings would destroy two human lives instead of one. No physician, to his knowledge, has ever been summoned before the courts on account of perforation of a living child, notwithstanding the numerous cases in which it has been done. The promoters of the operative era are now agitating to have the law explicitly modified as regards physicians, to render perforation legitimate in certain circumstances. But Hegar warns that the discussion of the question would not be restricted to medical and legal circles alone, but would certainly be taken up by part of the laity, and, the public once instructed in regard to the matter, denunciations and blackmail might follow. In respect to the management of delivery with pelvis of less than 8 cm. in the true diameter, when spontaneous delivery seems impossible, the circumstances of the given case must determine whether perforation or an operation on the mother should be done; but the main point, he insists, is to do quickly whatever it is decided to do. Hesitation and delay have certainly done harm in many instances. If labor has been under way for some time and infection is probable or certain, perforation can be depended on to give better results than Cesarean section. (Freund, in commenting in the *Deutsche med. Wchnschr.* on Hegar's communication, calls attention to his own research on the relations between the strength of the round ligaments and the uterine muscles. He found that when the round ligaments are stout and strong the uterine musculature is liable to be the same, and labor contractions will probably be powerful and effectual. By this means the outcome of labor can be better foreseen. The round ligaments can generally be palpated readily in pregnant women, especially the left one. They are seldom the same size.)

61. **Reimplantation of Ovaries.**—Pankow reports from Krönig's gynecologic clinic 7 cases of autoplastic transplantation of the ovaries. The details and results are shown in tabulated form, all demonstrating the practicability and excellent results of the reimplantation. The results observed further confirm the importance of the internal secretion of the

ovaries. The ovaries were removed on account of excessive hemorrhage, osteomalacia or dysmenorrhea, and the organs were reimplanted in a pocket made for them in the peritoneum between the bladder and uterus. This location was selected to allow control by palpation of the ovaries later. In future, however, he intends to implant the ovary at a point whence the ovum could find its way to the tube, if the patient has not yet reached the menopause. Menstruation reappeared in all except one of his patients after an interval of from three to six months, even in one case in which the ovary was reimplanted in the thigh. One patient had severe symptoms of the artificial menopause and atrophy of the genitals, and menstruation never returned. The menstruation seemed to be of the same type as before the operation, unless the intervals were a little longer and the menstrual hemorrhage less in amount. In the case in which the ovary had been reimplanted in the thigh, menstruation gradually subsided and stopped entirely after about eighteen months.

63. **Technic for Pubiotomy.**—Kroemer reports 13 cases of delivery by pubiotomy. There was morbidity in 53 per cent., but after the routine use of a retention catheter, the morbidity dropped to 25 per cent. He urges that the ligamentary apparatus must be divided also, as without this the pelvis is not able to gape. In 5 cases there were extensive lacerations of the vaginal walls, but all healed by primary intention. He ascribes this favorable result to his exact suture without drainage. Protection of the bladder or proper attention to any possible injury of the bladder determines the primary course of the operation. There was no disturbance later in the gait in any of the patients. In one case the child's skull showed an artificially produced, large dent, after pubiotomy, version and forceps.

67. **Scopolamin-Morphin Anesthesia in Obstetric Cases.**—Gminder relates the details of 100 obstetric cases in which the scopolamin-morphin technic was applied at Menge's clinic at Erlangen. He summarizes this experience in the statements that this method is certainly dangerous for the mother and dangerous for the child. He was unable to find any mode of administration which could be designated as free from danger for both mother and child. He concludes with an earnest warning to practitioners in general never to attempt this scopolamin-morphin anesthesia at delivery in a private house. He regards the measure as presumably responsible for the death of one of the children, for serious asphyxia of 11 others and slight asphyxia in 12. The serious after-hemorrhage in 5 cases he also ascribes to the measure, and the disturbances in the course of the labor in 27 others. In 4 cases complications on the part of the mothers were observed. He administered the anesthetic as a rule until the labor was rendered painless, varying the dosage in seven groups from 1/640 to 1/200 grain scopolamin, with and without morphin. Twenty patients were treated strictly according to Gauss' technic, but labor was unmistakably retarded in six of the women.

Beiträge zur Klinik der Tuberkulose, Würzburg.

IX, No. 2, pp. 199-260. Last indexed March 7, p. 806.

68 *Congenital Tuberculosis and Its Importance in Practice. C. Kraemer.
69 Specificity of Cutaneous Reaction to Tuberculin According to von Pirquet. Schläpfer.
70 Psychologic Analysis in Medicine and in Intoxication Psychoses in Infectious Diseases, Especially Pulmonary Tuberculosis. F. Köhler.
71 *Curative Action of Pneumothorax of Natural Origin on the Course of Pulmonary Tuberculosis on the Same Side. F. Steinbach.
72 Usefulness and Mode of Administering Creosote as Medicinal Adjuvant in Sanatorium Treatment of Pulmonary Tuberculosis. S. Daus.

68. **Congenital Tuberculosis.**—Kraemer comments on the way in which the primary tuberculous infection is being referred farther back, to early childhood, and argues that we should go a step farther and refer the primary infection to the ovum or fetus. He declares that the present conception of "a predisposition to tuberculosis" is merely the external manifestation of existing, congenital tuberculosis. When the infection is extensive the infants die young, but when the infection is merely with a few and possibly attenuated tubercle bacilli the tuberculosis may remain latent for years. Among the arguments he cites are some families in which the father and all the children succumbed to tuberculosis, while the mothers were not affected. He has found authentic evidences of tuberculosis in the ancestry of 70 per cent. of all his tuberculous patients. Another argument is the exceptionally favorable conditions for the colonization and persistence of the tubercle bacilli offered by the seminal vesicles and the Fallopian tubes. Harbitz and others have demonstrated the existence of "latent" tubercle bacilli. In 5 instances in his experience twins were tuberculous. This conception of congenital tuberculosis, he adds, is extremely important in practice. The family physician has it in his power to prevent the unexpected breaking out of tuberculosis in a family. The examples of entire families dying out from tuberculosis are sad indeed, doubly so, he says, because it might have been so easily prevented. The marriage of the tuberculous should be advised against until the parties are cured, and the physician has the right to exact this as the veto is only temporary. Tuberculin is useful both for the detection and treatment of still latent, closed tuberculosis. It fits into congenital tuberculosis, he adds, like the key in the lock, revealing the condition and then curing it. The reason why so little has been accomplished, notwithstanding the enormous efforts expended in the campaign against the white plague, is because the stream is still flowing from this hidden source of infection which he calls congenital tuberculosis. He concludes by appealing for more exhaustive study of the conditions of inheritance of tuberculosis, which he says is far more important than inherited syphilis.

71. **Curative Action of Naturally Developed Pneumothorax on Tuberculous Lung Affections.**—Steinbach reports three cases in which pneumothorax developed naturally in the course of a pulmonary tuberculous process. The pneumothorax evidently modified conditions in a way that promoted spontaneous healing. Improvement was observed almost at once after its development. The pleural effusion became purulent in one case, the patient succumbing to the results. The cases cited show that the method of artificially inducing pneumothorax in treatment of pulmonary lesions has a logical and promising basis.

Berliner klinische Wochenschrift.

February 10, XLV, No. 6, pp. 293-340.

73 Late, Postconceptional Transmission of Syphilis to Fetus. (Fall von später postkonzeptioneller Uebertragung der Syphilis.) E. Lesser.
74 Cutaneous, Conjunctival and Subcutaneous Injections of Tuberculin. M. Wolff.
75 Infection from Absorption of Tubercle Bacilli from Alimentary Tract. (Resorptionsinfektion vom Magendarmkanal aus.) E. Oberwarth and L. Rabinowitsch.
76 Serum Diagnosis of Syphilis. L. Michaelis and F. Lesser.
77 Recurrence of Papillomata in the Bladder. (Rezidive der Harnblasenpapillome.) L. Casper.
78 Ligation of the Veins at the Right Time and in the Right Way the Most Effectual Means for Treatment of Puerperal Septic Thrombophlebitis. H. von Bardeleben.

Centralblatt für die Grenzgebiete der Med. und Chir., Jena.

February 1, X, No. 2, pp. 49-80.

79 *Infantile Scorbutus. (Barlowsche Krankheit.) W. Kaupe. Commenced in No. I.

February 22, No. 3, pp. 81-128.

80 Treatment of Pulmonary Tuberculosis by Artificially Induced Pneumothorax. (Behandlung der Lungentuberkulose durch künstlich erzeugten Pneumothorax.) V. Bunzl. Review of the Literature.

79. **Infantile Scorbutus.**—Kaupe passes in review 286 articles that have appeared on the subject of scorbutus since 1900. Roentgen examination in dubious cases shows characteristic changes in the youngest zone of the diaphyses. The hemorrhagic tendency may be manifested in the urine—some of Kaupe's own patients showed a distinct red line outlining the wet spots on the diapers. Few affections have been so frequently incorrectly diagnosed, as he shows by citations from the literature, in which the scorbutus was taken for periostitis, osteomyelitis, nephritis, spondylitis, rheumatism, teething disturbances, inherited syphilis, tuberculosis of the knee or hip and infantile paralysis. In one case, a physician wasted two months with electricity, casts and massage in a typical case of infantile scorbutus which he had diagnosed as spinal

paraplegia or dislocation of the hip. Five days after proper treatment had been instituted the child was well. Raw milk is the main reliance in treatment. One child thrived on asses' milk only, and had green stools when given to a wet nurse. The hematoma generally subsides spontaneously.

Medizinische Klinik, Berlin.

March 8, IV, No. 10, pp. 321-352.

81 Management of Childbirth with Flat Pelvis. (Leitung der Geburt beim platten Becken.) A. Martin.
82 Exclusion and Free Transplantation of Small Intestine at Any Desired Point. (Ausschaltung und freie Transplantation von Dünndarm an den Ort der Wahl.) P. Esau.
83 Is It Possible to Avoid Fatalities in General Anesthesia? (Sind Todesfälle in der Narkose vermeidbar?) Strauch.
84 Miner's Anemia. (Wurmkrankheit de Bergleute.) E. Brandenburg.
85 Theoretical Principles and Their Application in Practice in Regard to Learning to Understand Speech from the Movements of the Lips. (Erlernung des Ablesens der Sprache vom Gesichte der Sprechenden.) F. Kobrak.
86 History of Mercurial Innunctions. (Quecksilberschmierkur bei Syphilis.) P. Richter.

Münchener medizinische Wochenschrift.

March 3, LV, No. 9, pp. 433-488.

87 Opsonins as a Means of Differentiating and Identifying Pathogenic Species of Bacteria. H. Schottmüller and H. Much.
88 Hemolytic Substance in Hookworm Disease. (Hämolytische Wirkung von Anchylostoma duodenale.) L. Preti.
89 Relation of Cobra Venom to Red Corpuscles. (Beziehungen des Kobragiftes zu den roten Blutzellen.) H. Sachs.
90 *Curative Influence of Venesection and Local Blood-letting in Neuroses and Gynecologic Affections. (Anwendung der Aderlässe und örtlichen Blutenziehungen bei Neurosen und bei gynäkologischen Erkrankungen.) A. Theilhaber.
91 *Blood Serum Diagnosis of Cancer in Digestive Tract. (Blutserologische Untersuchungen beim Karzinom des Magens und Darms.) R. Rosenbaum.
92 The Sphygmotonograph for Graphic Registration of Blood Pressure. (Zur graphischen Registrierung des Blutdruckes beim Menschen.) A. Jaquet.
93 Improved Technic as Basis for Dosage of Roentgen Rays. (Optimale Betriebsverhältnisse als Grundlage für die Dosierung der Röntgenstrahlen.) A. G. Hessmann.
94 Tank of Salt Solution Ready to Use. M. Brenner.
95 Discussion of Legislative Restriction of Sexual Anomalies. W. Weygandt.
96 Inhalations of Decoction of Quillaja Bark in Affections of the Upper Air Passages. (Saponininhalationen bei Erkrankungen der oberen Luftwege.) G. Zickgraf.
97 *Fatality from Spinal Anesthesia. (Zur Kenntnis der Todesfälle nach Lumbalanästhesie mit Stovain.) R. Birnbaum.
98 *Tuberculosis of Liver Cured by Operation. (Fall von gross knotiger Lebertuberkulose.) V. Bunzl.
99 Pathology of Laryngocele. O. Scheven.
100 Importance of Radiologic Examination of Colon. B. Wiesner.
101 Vaginal Cesarean Section for Placenta Prævia. Rühl.

90. **Benefits of Gynecologic Operations Due to Loss of Blood; Therapeutic Deductions Therefrom.**—Theilhaber presents an array of arguments and data which demonstrate to his satisfaction the great benefit liable to be derived from venesection or scarification in numerous neuroses and gynecologic affections. It has been his experience that women were benefited by gynecologic operations at first, but that this benefit was transient, and was probably the result of the loss of blood during the operation with the following regeneration of the blood. On these assumptions he has treated 83 gynecologic patients during the last six months by venesection or scarifications, withdrawing a total of 200 or 300 c.c. of blood in all from each. He first experimented on himself and found that he slept more profoundly and felt better generally after 120 and 200 c.c. of blood had been withdrawn by venesection in the course of two weeks. The effect was like the stimulation of a trip to the mountains or the seashore. His rule is to withdraw about 1 or 1.5 per cent. of the body weight, and he reports the results of careful research into the composition of the blood and other conditions afterward. When the affection is connected with menstruation, he does the venesection a few days before the period, but for neuroses he prefers the time after menstruation. His oldest patient was 66. True anemia is of course a contraindication, but when pale lips and cheeks are merely the result of defective circulation the venesection is often of surprising benefit. Dyes maintains that venesection has an actual curative action in true chlorosis. Theilhaber obtained the best results from venesection or scarifications in cases of nervous metrorrhagia, or uterine hemorrhage from atony or metritis or excessive sexual excitement, also in cases of preclimacteric hemorrhage. It is his impression that patients with high blood pressure respond more favorably to the venesection than those with low pressure, although excellent results were attained in many cases of the latter group. Venesection seemed to exert a more powerful action in the neuroses, and scarifications in uterine disturbances. These measures are particularly useful in neuroses in persons with an inherited gouty or rheumatic taint and for neuralgia in the abdomen or sacral region, nervous headache, sleeplessness and the "hot flashes," etc., of the menopause. In conclusion, he reviews the history of venesection since the days of its commendation by Hippocrates. It shows that it has been advocated and used in waves followed by waves of disregard and neglect as in the period from which it is now emerging.

91. **Serum Diagnosis of Cancer of Digestive Tract.**—Rosenbaum has been applying Kelling's method of diagnosing carcinoma in the stomach or intestines by the hemolytic serum test. He examined the serum of 70 patients, including 26 with certain cancer. The results obtained are so favorable that he urges wider application of the measure, simplifying the technic if possible. See The Journal, Jan. 19, 1907, page 269.

97. **Mechanism of Death After Stovain Spinal Anesthesia.**—Birnbaum reports that vaginal hysterectomy under spinal anesthesia was done on a woman of 53, on account of total prolapse of the myomatous uterus. She was apparently free from arteriosclerosis; the walls of the radial, temporal and femoral arteries were soft and elastic. The evening of the same day the patient seemed agitated and signs of a severe brain affection appeared, which proved fatal on the ninth day. The brain showed advanced and widespread arteriosclerosis, although there had been no appreciable previous manifestations of its existence before the operation. The action of the anesthetic—stovain—in the spinal canal plus its toxic action on the vasomotors are sufficient to explain the fatality, he thinks, even without reference to the direct toxic action of the drug on the brain.

98. **Cure of Tuberculous Affection of Liver.**—Bunzl's patient was a young man free from any signs of syphilis, but with intense pains in the much enlarged and nodular liver. An operation showed that extirpation was not practicable and the liver was merely drained and sutured. Great improvement followed, but the pains recurred in the course of two years. This time it was found possible to enucleate a tumor as large as a man's fist, after which the abdomen was sutured; the patient has since been clinically free from all disturbances. The hemorrhage at the last operation was arrested by tamponing with gauze impregnated with a solution of adrenalin, 30 drops of adrenalin in 10 c.c. of physiologic salt solution. He states that the prompt arrest of the threatening hemorrhage by this means was remarkable.

Therapie der Gegenwart, Berlin.

February, XLIX, No. 2, pp. 49-96.

102 *Aids for Early Diagnosis of Acute Appendicitis. E. Sonnenburg.
103 Nature of Gout. (Die Gicht, ihr Wesen und Behandlung.) Falkenstein.
104 *The Question of Giving Castor Oil in Acute Appendicitis. (Rizinusdarreichung im akuten Perityphlitis-Anfälle.) W. Körte. Id. F. Karewski.
105 How Does Castor Oil Act in Acute Appendicitis? (Wie wirkt Rizinusöl bei der akuten Perityphlitis?) J. Rotter.
106 Treatment of Coryza and Chronic Catarrh of Nose and Throat. (Therapie des Schnupfens und der chronischen Nasen- und Rachenkatarrhe.) Salzwedel.
107 Connection Between Leukemia and Gout. Becker.
108 Treatment of Gastric Ulcer. (Ulcus ventriculi.) H. Elsner.
109 Organic Astringents and Their Chemical Relations with the Phenols. W. Osborne.
110 Cholögen Treatment of Biliary Lithiasis. (Chologenbehandlung der Gallensteinkrankheit.) A. Hecht.
111 New Irrigator for the Rectum. (Mastdarmspüler.) H. Citron.
112 Potato Dishes for Diabetics and the Obese. (Kartoffelküche für Zuckerkranke and Fettleibige.) W. Sternberg.
113 Treatment of Epilepsy by General Practitioner. G. Flatau.

102 and 104. **Early Diagnosis of Severe Acute Appendicitis.**—Sonnenburg gives castor oil as a "surgical measure" in cases suggesting acute appendicitis. The patients must present an average pulse of 92, temperature of 37.5 C. (99.5 F.) and leucocytosis of 15,000. If the affection does not take an immediate turn for the better after the purge has taken effect, he operates at once. In 51 cases seen in the first two days, 49 of

the patients were apparently cured by the purge, and 2 others were promptly operated on. In 60 other cases seen later than the second day the symptoms subsided under the castor oil in all but 2.

Körte disapproves of the castor oil, and Karewski reports 3 severe cases of perforation peritonitis resulting from the castor oil treatment in the hands of physicians who had failed to regard Sonnenburg's strict rules as to the pulse, temperature and leucocytosis as indications for its administration.

Zentralblatt für Chirurgie, Leipsic.

March 7, XXXV, No. 10, pp. 289-320.

114 Origin of Median Fistulas in the Neck. (Entstehung der mittleren Halsfisteln.) R. Weglowski.
115 Ventral Decubitus to Reduce Danger of Pneumothorax in Operations in the Thoracic Cavity. (Bauchlage zur Verminderung der Pneumothoraxgefahren bei Operationen in der Brusthöhle.) C. A. Eisberg.
116 *Suction Hyperemia to Reduce Painfulness in Anal Affections. (Saugbehandlung als schmerzstillendes Mittel bei den Aftererkrankungen.) K. Ogata.

March 14, No. 11, pp. 321-352.

117 Incision in Operations for Appendicitis. (Bauchschnitt bei Appendicitisoperationen.) A. V. Moschcowitz.
118 Sensitiveness of the Abdominal Organs. E. Haim.
119 Hysteric Pseudoappendicitis. A. von Rothe.

116. **Suction Hyperemia in Treatment of Painful Anal Affections.**—Ogata has made extensive application of the Bier vacuum glasses in numerous cases of mastitis, boils, carbuncles, abscesses and felons, and with invariably favorable therapeutic results. He has also applied the method in 25 cases of extremely painful fissure of the anus, 17 of hemorrhoids and 6 of tuberculous ulcerations in or around the anus. In the cases of fissure the relief from the pain was marked. Defecation ceased to be painful after only one or two applications of the suction apparatus. In most cases the application is followed by complete cure in the course of a week or two without the necessity for other intervention, as he shows by some concrete examples from his practice. The first application of the suction glass to hemorrhoids causes the nodules to swell and feel as if they had burst, but the relief from the pain is soon apparent; the nodules gradually subside completely, and the tendency to hemorrhage becomes spontaneously arrested in two or three days. He found the effect equally good in tuberculous anal ulcerations. The pain was relieved and the ulceration was favorably modified.

Zentralblatt für Gynäkologie, Leipsic.

March 7, XXXII, No. 10, pp. 313-360.

120 Indications and Technic of Cesarean Section in the Cervix. (Cervikaler Kaiserschnitt.) J. Pfannenstiel.
121 Extraperitoneal Cesarean Section. (Extraperitonealer Uterusschnitt.) H. Sellheim.
122 Ripening of the Follicles and Ovulation During Pregnancy. (Follikelreifung und Ovulation in der Schwangerschaft.) L. Seitz.
123 Cesarean Section in a Case of Placenta Prævia and Contracted Pelvis. (Kaiserschnitt wegen Placenta prævia und Beckenenge.) G. C. Nijhoff.
124 Vaginal Cesarean Section in a Case of Eclampsia. (Vaginaler Kaiserschnitt bei Eklampsie.) F. Weisswange.

March 14, No. 11, pp. 361-392.

125 Cicatricial Constriction of Cervical Canal as Indication for Cesarean Section. (Seltene Indikation zum Kaiserschnitt.) Z. Endelman.
126 Incarceration of Laminaria Tent in Uterus. (Einklemmung eines Laminariastiftes im Uterus.) R. Schaeffer.
127 *Protection of Perineum During Delivery. (Dammschutz bei Geburten.) C. Rindfleisch (Gera).

127. **Protection of Perineum During Delivery.**—Rindfleisch applies to the perineum pads of cotton dipped in cold water, taking them from a dish standing at the bedside, renewing the pads every five or ten minutes. They are about 10 cm. long, 7 cm. wide, and contain about 10 gm. of sterile cotton wrapped in sterile gauze. The temperature of the water is about 68 F. These cooling pads are applied to the perineum as soon as the head becomes visible. Just before it begins to emerge he applies outside the pad a flat plate that fits against it and serves to protect the perineum, a bent handle allowing pressure on the plate at the right angle. He reports favorable results from this technic in 28 cases, the women finding the cooling pads very grateful, while the perineum was softened and saved from laceration by the technic. He gives an illustration of the handled plate he uses.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

Dictionnaire Technologique, dans les Langues Française, Allemande et Anglaise. Renfermant les termes techniques usités dans les arts et métiers et dans l'Industrie en général. Rédigé par M. Alexandre Tolhausen, traducteur près la Chancellerie des Brevets d'Invention à Londres. Revu par M. Louis Tolhausen, ancien consul général de France, officier de la Légion D'Honneur. Français-Allemand-Anglais. Cinquième édition, avec un nouveau grand Supplément de 1901, enrichi de nombreux termes d'électricité, de télégraphie, de téléphonie et autres. Three volumes. Cloth. Price, $2.75 each. Vol. I, pp. 1018. Vol. II, pp. 1040. Vol. III, pp. 1037. New York: The Macmillan Co.

Manual of Surgery. By Alexis Thomson, F.R.C.S. Ed., Surgeon to the Deaconess Hospital, Edinburgh, and Alexander Miles, F.R.C.S. Ed., Surgeon to Leith Hospital. Vol. 1, General Surgery. Second Edition, Revised and Enlarged. Pp. 808, with 313 illustrations. Cloth. Price, $2.50. Vol. II, Regional Surgery. Second edition, revised and enlarged. Pp. 816, with 313 illustrations. Cloth. Price, $2.50. Philadelphia: J. B. Lippincott Co.

Bradycardia and Tachycardia. Part II of Clinical Treatises on the Symptomatology and Diagnosis of Disorders of Respiration and Circulation. By Prof. Edmund von Neusser, M.D., Professor of the Second Medical Clinic, Vienna. Authorized English Translation by Andrew MacFarlane, M.D., Professor of Medical Jurisprudence and Physical Diagnosis, Albany Medical College. Cloth. Pp. 150. Price, $1.25. New York: E. B. Treat & Co., 1908.

Bier's Hyperemic Treatment. By Willy Meyer, M.D., Professor of Surgery at the New York Post-Graduate Medical School and Hospital, and Prof. Victor Schmieden, Assistant to Professor Bier, University of Berlin, Germany. Cloth. Pp. 209, with illustrations. Price, $3.00. Philadelphia: W. B. Saunders Co., 1908.

Les Pseudo-Bacilles Acido-Resistants. Critique des Méthodes de coloration du bacille tuberculeux. Révision du groupe des bacilles dits Acido-résistants. Par Le Dr. André Philibert. Travail du Laboratorie de Bactériologie de la Faculté de Médecine de Paris. Paper. Pp. 144. Paris: G. Steinheil, Editeur, 1908.

Arterial Hypertonus, Sclerosis and Blood Pressure. By William Russell, M.D., F.R.C.P., Edin., Physician to and Lecturer on Clinical Medicine in the Royal Infirmary, Edinburgh. Cloth. Pp. 194, with illustrations. Price, $2.50. Philadelphia: J. B. Lippincott Co., 1908.

The Blues. By Albert Abrams, A.M., M.D., (Heidelberg), F.R.M.S., Consulting Physician to the Denver National Hospital for Consumptives. Third Edition, Revised and Enlarged. Cloth. Price, $1.50. Pp. 287, with illustrations. New York: E. B. Treat & Co., 1908.

The Functional Inertia of Living Matter. By David Fraser Harris, M.B., C.M., M.D., B.Sc. (Lond.), F.R.S.E., Lecturer on Physiology and Normal Histology in the University of St. Andrews. Cloth. Pp. 136. Price, $2.00. Philadelphia: P. Blakiston's Son & Co., 1908.

Life Insurance and General Practice. By E. M. Brockbank, M.D. (Vict.), F.R.C.P., Lecturer in Materia Medica and Therapeutics, Victoria University of Manchester. Cloth. Pp. 288. Price, $2.50. New York: Oxford University Press, 1908.

School Reports and School Efficiency. By David S. Snedden, Ph.D., and William H. Allen, Ph.D., for the New York Committee on Physical Welfare of School Children. Cloth. Pp. 183. Price, $1.50. New York: The MacMillan Co., 1908.

Seventh Annual Report of the New York State Hospital for the Care of Crippled and Deformed Children, W. Haverstraw, for the Year Ending Sept. 30, 1907. Paper. Pp. 46. Albany: J. B. Lyon Co., 1907.

The History of the Study of Medicine in the British Isles. By Norman Moore, M.D. Cantab., Fellow of the Royal College of Physicians. Cloth. Pp. 202, with illustrations. Oxford: The Clarendon Press, 1908.

Monthly Bulletin of the International Bureau of the American Republics. Vol. 25, Nos. 4 and 5, and Vol. 26, No. 2. Pp. 1031, 1339 and 496. Paper. Washington: Government Printing Office, 1907.

Lecons sur les Troubles Fonctionnels du Coeur (Insuffisance Cardiaque—Asystolie), par Pierre Merklen, Médecin de l'hôpital Laennec. Paper. Pp. 428. Paris: Masson et Cie, Editeurs, 1908.

Twenty-first Annual Report of the Board of Managers of the St. Lawrence State Hospital, Ogdensburg, N. Y., for the year ending Sept. 30, 1907. Paper. Pp. 230. Albany: J. B. Lyon Co., 1908.

Die Schuppenflechte (Psoriasis Vulgaris) und ihre Behandlung. By Dr. S. Jessner, Königsberg i. Pr. Zweite Auflage. Paper. Pp. 185. Würzburg: A. Stubers Verlag (C. Kabitzsch, 1908).

Fifty-ninth Annual Report of the Board of Trustees and Superintendent of the Central Indiana State Hospital for the Insane, Indianapolis. Paper. Pp. 56. Indianapolis: W. B. Burford, 1908.

Rotunda Midwifery for Nurses and Midwives. By G. T. Wrench, M.D., Late Assistant Master Rotunda Hospital. Cloth. Pp. 324. Price, $2.00. New York: Oxford University Press, 1908.

An Abridgement of Practical Medicine and Allied Sciences. By J. Caudor McLaughlin, M.D. Flexible Leather. Pp. 524. Published by the Author, Kansas City, Mo.

Second Annual Report of the Chicago Tuberculosis Institute, Including the First Report of the Edward Sanatorium, Naperville, Ill. Paper. Pp. 45.

Thirteenth Report of the Board of Health of the Town of Mountclair, N. J., from Jan. 1, 1907, to Dec. 31, 1907. Paper. Pp. 59. Newark: E. Wiener.

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Original Articles

MALUNION OF BONES.*

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NEW YORK.

The widespread indifference still shown in the practical use of the Roentgen ray is a fact greatly to be deplored, and proof of this statement is furnished by my own experience. I had an opportunity to observe 217 cases of malunion of bones since the early Roentgen era, and, strange to say, most of the cases were not treated by the poor village doctor, but by surgeons of good repute, some of them leading men. That these men would have well known how to treat these fractures in a blameless manner had they recognized their nature, can not be doubted; but they failed to make use of the Roentgen ray before it was too late. Most of these gentlemen are addicted to the principles of Epimetheus instead of following the wise brother Prometheus. They imagine that by virtue of their especially well-developed palpatory talent they could feel configurations which in reality did not exist, and those that existed they did not feel.

I can not go into the psychologic reasons of this lack of respect for one of the greatest medical discoveries of all times, although it would be a tempting task. but I shall confine myself to demonstrating (1) how malunion should and could have been prevented in some of my cases, and (2) how it is best corrected.

I trust that I will not be misunderstood if I undertake to criticise the present state of affairs, but I feel that it is my duty to warn.

I may, therefore, suggest the following axioms:

1. No bone injury should be treated unless at least one reliable Roentgen ray picture is taken.

2. The Roentgen method, in combination with the usual methods of examination, determines the character of a suspected bone injury.

3. If there be no bone injury the usual treatment consists in massage, followed by temporary immobilization; a movable splint (plaster-of-Paris) being recommended for the latter purpose.

4. If there is a fissure or fracture, followed by no displacement, manipulation of the injured area must be avoided, and immobilization in the most comfortable position applied. A plaster-of-Paris dressing answers the purpose best as it adapts itself to the contours of the body in any shape desired, and it offers no obstacle to the control of the Roentgen rays.

After two or three weeks the dressing is removed and massage begun. This is best done by allowing the use of a temporary plaster-of-Paris splint, which the patient himself can take off and reapply after massage is administered.

5. If a displacement is present, the fracture must be looked on as a most important injury. Reduction must then be tried at once. This may be done under the control of the screen, on a translucent table, a plaster-of-Paris dressing being applied after reposition is perfect. This is a simple, short and cheap method, but the impressions on the fluoroscope are by no means so reliable as those made on a plate, and the latter can be studied at leisure. If the facilities allow, a plate should therefore be made before efforts at reduction under the guidance of the fluoroscope are tried.

Another method consists in taking two skiagraphs, in different positions, generally in the lateral as well as in the dorsal position. Under the guidance of these plates the reposition is tried, while the two fragments are firmly held between thumb and fingers of the surgeon, whose instinct will generally lead him correctly since the plate shows him toward which direction he must push the displaced fragment, and how far. When he believes he has succeeded, a plaster-of-Paris dressing, padded with cotton at its extremities only, is applied and a Roentgen picture taken through it in order to ascertain whether or not reposition is perfect. If it does not seem to be, the dressing must be removed and another attempt at reposition made. If the process of reduction, as frequently happens in displaced fractures, meets with difficulties, anesthesia should be employed. The surgeon will nearly always be able to judge by the plate, whether such difficulties would be anticipated, in which case he will anesthetize the patient before resorting to any unpromising efforts at reduction.

6. No surgeon can assert positively, before having tried, whether he will be able to reduce a fractured fragment or not. He should, therefore, be careful in his promises to the patient. While, in the great majority of cases, it is possible to reduce the worst fractures at an early stage, there are conditions in which, on account of entangling of the fragments or extensive splinter formation. or similar complications, reposition, even under anesthesia, can not be accomplished. Then the fragments must be exposed by the scalpel and trimmed until they can eventually be brought into apposition. Sometimes there is then so little tendency to further displacement that simply applying a plaster-of-Paris dressing ensures perfect immobilization. In those cases in which one fragment presents a cavity, as it happens in old fractures of the neck of the humerus, the other fragment may be inserted into that natural excavation in the medullary canal. This is much easier when one fragment is thinner than the other. If not, the fragment may be adjusted properly by removing some of the cortex with a chisel. Good results are also gained by applying catgut sutures through the periosteum, provided there is enough of it.

The safest of all sutures is the aluminum bronze wire suture. Silver wire invariably breaks when it is twisted forcibly; and the wire must be twisted because the bone fragments must be held together so tightly that they will not slip by each other. By virtue of its extreme flexibility and softness, the bronze wire stands any amount of force required. The reason so many cases in which the adjusting steps were made by a master, proved to be failures in the end, can only be found in the timid manipulations of the surgeon while suturing, because he was afraid to go further in twisting the silver wire, knowing that it would break. Thus the fragments became loose gradually, and became united in a displaced position, causing such severe disturbance by irritation and friction through displacement. that, in spite of the most thorough aseptic precautions, suppuration occurred.

The technical principles of suturing bone fragments should be the same as those in general plastic surgery, viz., thorough asepsis, accessible exposure, avoidance of force, and of tension of the tissues, exact hemostasis and accurate apposition of the wound margins.

In suturing the intestine we first of all try to place the suture extra-abdominally. No one would attempt to apply an intestinal suture in the depth of the abdomen. The same principle must be adhered to in bone surgery. The periosteum must be just as carefully treated as the peritoneum. It is incised longitudinally and gently pushed aside by a thin broad elevator. Old adhesions are thoroughly freed with the knife; blunt force must always be avoided. The badly united ends are then separated with mallet and chisel. Then the fragments are bent. The posterior surface is more and more denuded of periosteum, until the whole limb can be folded, as it were. Loose bone splinters are removed; the bone ends are trimmed and a hole is bored in the center of each fragment, about an inch above the end. Then, after approximation can be accomplished without force, the wire is pulled through the holes without being knotted. The fragments are then pressed down into place and the wire is twisted with a strong handled steel twister. The wire must be very tightly attached to the bone. If the wire is applied properly the fragments can not be moved, except by great force. The periosteum is minutely united with catgut around the twisted wire. The same is done with the fascia and the skin. The twisted wire itself is surrounded with two silk-sutures at the skin, which answer the purpose of fortification and of relaxation. After from four to six weeks, depending on the size of the bones, the wire is taken out.

The wound is covered with bismuth subgallate gauze, over which a piece of absorbent moss board is placed. The limb is then immobilized by a large plaster-of-Paris dressing. A fenestra may be left in the dressing to control the wound. If union by first intention takes place, as it should, there is no reaction.

It is unwise to cut off the wire just above the bone and leave it *in situ*. In the course of time it often causes irritation, which makes its extraction a very difficult and tedious task. As a rule, degenerative processes of the bone tissues form around it.

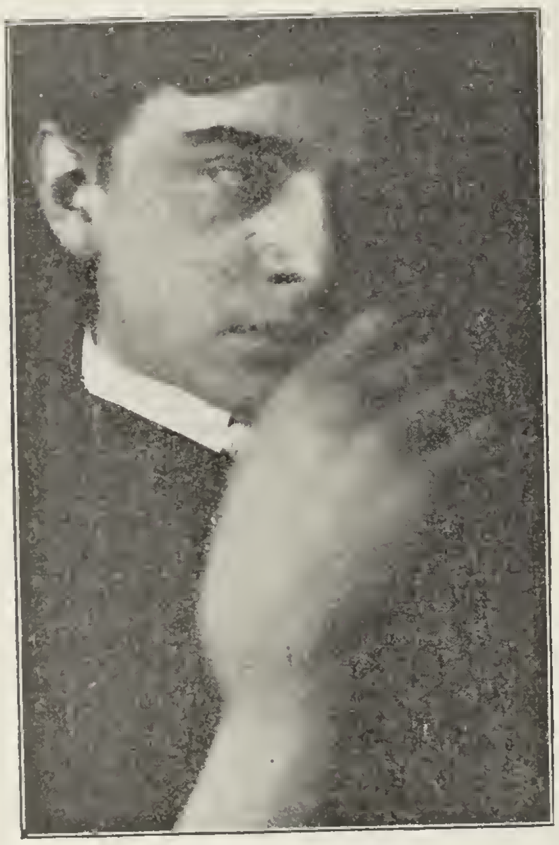

Fig. 1.—Case 1. Photograph taken immediately after the injury, showing deformity.

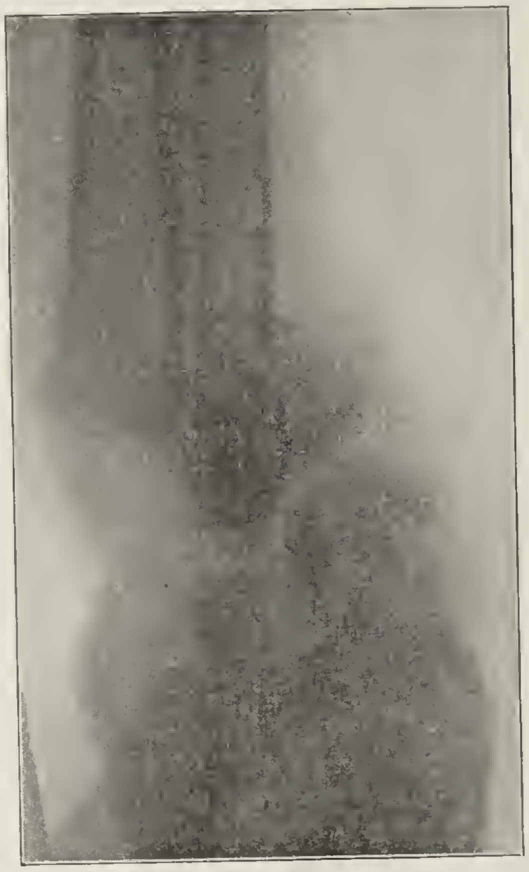

Fig. 2.—Case 1. Skiagraph showing excessive displacement of lower end of radius immediately after the injury.

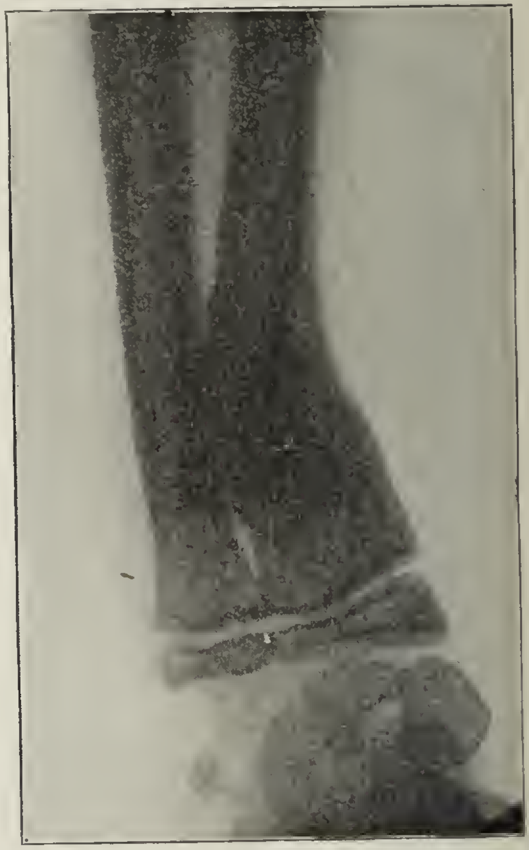

Fig. 3.—Case 2. Skiagraph showing immense displacement of lower end of radius.

The holes are bored with a drill, which I modified from a carpenter's drill. Its advantages are that it does its work without requiring any pressure. For holding the fragments I employ a modified wrench instead of a bone-holding forceps.[1] In simple linear osteotomy, required especially in badly united fractures of the lower end of the radius, my abdominal spoon serves as a protector against the underlying tissues, while the chisel is used for separation.[2] In regard to other details, I may refer to my previous publications on the subject.[3]

To illustrate my views I will report a few cases from my practice:

Case 1.—Boy, aged 16, while taking exercise at college, fell on his outstretched hand. Five minutes later he presented himself at the Postgraduate Hospital and a skiagraph (Fig. 2) was made almost immediately showing excessive displacement of the lower end of the radius. An effort at reduction made under ether proved to be unsuccessful. The patient was advised to have the lower fragment reduced by inserting a chisel between the two fragments so as to shift them into the normal position. This was done and after four weeks recovery was perfect.

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[1] Med. Rec., Jan. 4, 1908.
[2] Med. Rec., Nov. 5, 1905.
[3] N. Y. Med. Jour., Dec. 27, 1902.

CASES 2 and 3.—These showed the same conditions, except the nature of the fracture was not recognized. Figure 3 shows an immense upward displacement of the lower fragment, five months after the injury. At this late period reposition after separation with the chisel naturally promised very much less chance for complete restoration than if it had been done immediately, because the soft tissues had been exposed to undue pressure for that length of time and had partially atrophied. The skiagraph of Case 3, representing a fracture of the radius associated with fracture of the lower end of the ulna, shows excessive upward and lateral displacement. Although nineteen days had elapsed since the injury, reposition by chisel without separating the fragments proved to be successful.

CASE 4.—Boy, aged 10, sustained a fracture of the second, third, fourth and fifth metacarpal bones, and was treated in a hospital of a large city. The displacement of the second and third metacarpals was enormous.

Treatment.—The hand was considerably enlarged and nearly useless. Reduction was accomplished by means of the chisel. Although the soft tissues had to be interfered with considerably on account of the many adhesions, the result was good. After the second and third metacarpals were wired, the fourth and fifth could be held *in situ* by a few catgut sutures.

CASE 5.—Man, aged 22, was run over by an automobile, eight months ago. He was brought to a hospital in an ambulance. The diagnosis of fracture of tibia and fibula was made, reduction was tried under ether anesthesia and a plaster-of-Paris dressing was applied by a surgeon of national reputation. No Roentgen examination was attempted because the case appeared to be extremely simple. After six weeks the patient made an effort to get up, but could not do so on account of intense pain. On closer examination it was found that the patient's leg was over an inch short. A Roentgen-ray examination was then made, eight weeks after the accident, and another effort at reduction was made under ether anesthesia.

Roentgen Examination.—Nine weeks after the injury I examined the patient at St. Mark's Hospital. I found the left leg swollen from the malleoli up to the knee. The patient was unable to stand on his foot and was unable to walk. The Roentgen examination disclosed an overlapping of the fibular fragments in the middle of the leg. The fragments were laterally united by a long triangular bridge of callus. The upper fragment leaned against the internal tibial surface. The tibia itself showed axial diversion and protrusion of a sharp fragment. Anteroposteriorly there was overlapping of the transversally fractured fragments of the fibula, while the excessive lateral displacement of the obliquely fractured tibia was markedly represented. There was only slight callus formation which explained the abnormal mobility of the fragments (Fig. 4).

Treatment.—On the day after admission the fractured area was exposed, the fragments freed and wired with bronze in the manner described above. The skiagraph showed perfect union of the fragments, the wires still being *in situ* four weeks later. Many adhesions had to be severed in order to liberate the bone ends. The sutures were removed six weeks after the operation. The result is perfect and there is no shortening.

Remarks.—As it is still customary, attention was given to the tibia exclusively during the efforts at reduction, while the fibula was ignored. Although the tibial fragments had yielded at the time of manipulation, they always fell back into the wrong position under the influence of the malposition of the fibular fragments which remained overlapped.

A skiagraph made at the time of the accident would have directed attention to the fibula. In other words, if the transversally severed fragments of the fibula could be brought into apposition, the tibia had, *eo ipso*, to remain in its normal position. And in the event of failure, the surgeon, on the strength of his Roentgen plate, would have persuaded the patient to submit to exposure of the fragments and wiring. When the patient had left the hospital, six weeks later, he would have been well instead of having had to spend four months more in bed.

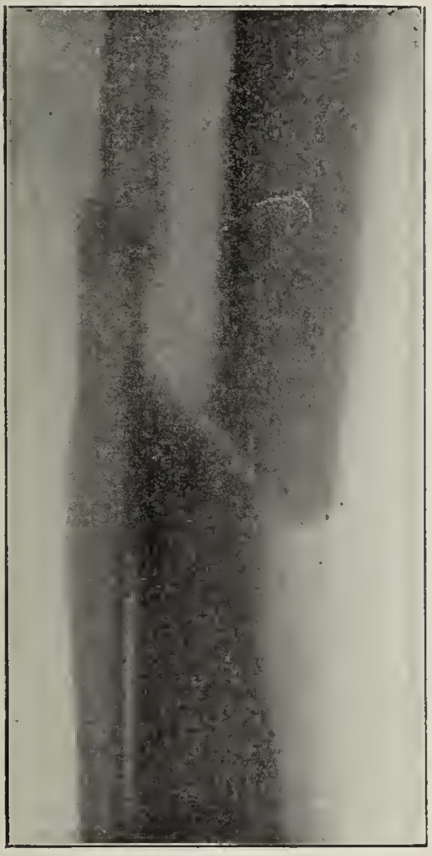
Fig. 4.—Case 5. Abnormal mobility of fragments due to slight callus formation.

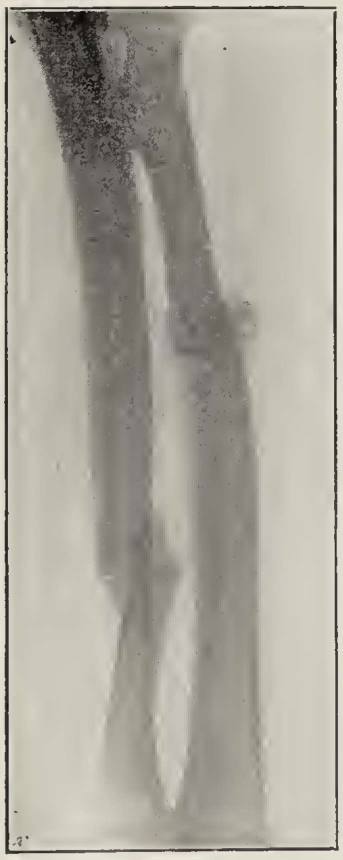
Fig. 5.—Case 9. Non-united fracture of radius and ulna, with overlapping of fragments six weeks after injury.

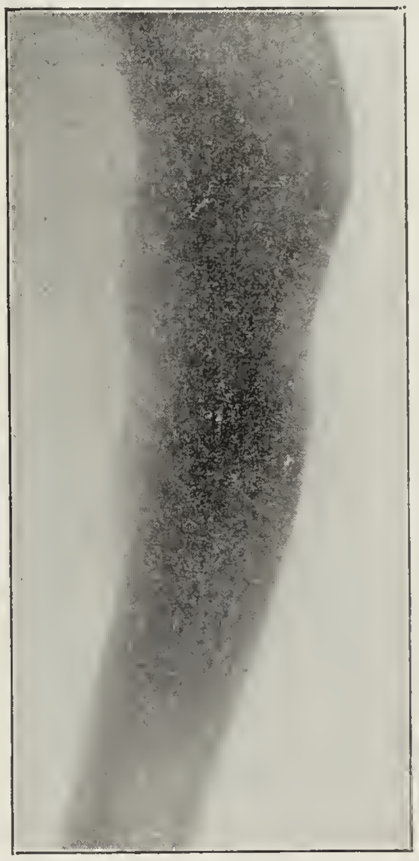
Fig. 6.—Case 12. Aluminum tube in medullary canal supposed to hold fragments together.

CASE 6.—The skiagraph in this man, aged 26, shows the same characteristics as that in Case 5, with the difference that the accident happened three years ago and that the soft tissues became so much atrophied that a chisel operation at this late stage would be a risky affair.

CASE 7.—Man, aged 40, fell in an automobile from a precipice and was treated for dislocation of the right shoulder and fracture of the left elbow.

Examination.—When I examined the patient I found him unable to use his arms and hands at all, as both were closely pressed to the front of the body. The right shoulder showed a deep impression which suggested a subglenoid dislocation. The skiagraph showed the head of the humerus as a very small fragment in the glenoid cavity, the diaphysis of the humerus being driven inwardly toward the sternal end of the clavicle at its posterior surface.

Treatment.—The diaphysis was freed with much difficulty and reduced. The head showed a considerable excavation in its center, which was utilized as a recipient for the diaphyseal end. Thus wiring could be dispensed with. No reaction following, the left elbow was corrected five days afterward. The skiagraph represented backward dislocation of the elbow and fracture of the internal epicondyle. There were also indications of much proliferating bone tissue. Reduction of the backward dislocation could not be accomplished before liberating a number of ligamentous fragments. No wiring was necessary after reposition was accomplished. Another skiagraph showed the condition of the joints five weeks after operation. The patient can use both of his arms now, the result being nearly perfect.

Remarks.—In this case no Roentgen examination was made until three months after the accident. If it had been done the treatment would, of course, have been entirely different.

Case 8.—The skiagraph showed malunion of fracture of humerus five weeks after the injury, which was supposed to have been a dislocation. The head is turned outward, a portion of the articular surfaces being united with the diaphyseal fragment by callus formation. Division was performed by chisel. The result is good.

Case 9 was one of non-united fracture of radius and ulna, the fragments overlapping six weeks after injury (Fig. 5). Recovery ensued after the fragments had been severed by chisel and wired.

Case 10.—The skiagraph showed overlapping fragments of the femur of a child of 2 years. Shortening amounted to two inches. Four weeks after the injury the fragments could still be severed by blunt force, the directions of the forcible motions being indicated by the skiagraph.

Case 11.—A boy, aged 10, sustained a fracture of the lower end of the femur. The lower fragment, including the patella, was displaced backward and became united to the posterior surface of the femur. The shortening four months after the accident amounted to three inches. The patient is now looking forward to an operation.

Case 12.—Boy, aged 12, sustained a fracture at the upper third of the femur, followed by displacement one-half year ago. It was corrected at the time, the fragments being brought into exact apposition. An effort was made to hold the fragments together by an aluminum tube, which was inserted into the medullary canals of the two fragments (Fig. 6), but the upper half of the tube became loose, the fragments were displaced and greatly irritated so that inflammatory processes followed. For a year a fistula was discharging seropus at the inner margin of the thigh. The nature of the deformity, as well as that of the fistula, was not disclosed until I resorted to the Roentgen method, which showed the overlapping of the bones and the displaced aluminum tube.

MALIGNANT DEGENERATION OF WARTS AND MOLES.[*]

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ST. LOUIS.

The frequency with which warts and moles suddenly increase in size and show other evidence of malignant change does not seem to be appreciated by either the medical profession or the laity. My attention has recently been attracted to this important subject by a series of very impressive cases observed at the St. Louis Skin and Cancer Hospital.

As early as 1860, Collins called attention to the peculiar changes occasionally observed in warts and moles; they suddenly increase in size, soften and appear to ulcerate. Virchow and Billroth were, perhaps, the first to describe cases in which a wart showed sarcomatous change; they designated the pathologic condition plexiform sarcoma, and expressed the opinion that warts and moles not infrequently undergo sarcomatous degeneration. In 1892, Unna contended that many, if not most, of these warts and moles are epitheliomata rather than sarcomata, thus concurring with McCarthy, who, in 1880, reported a very interesting case which macroscopically and microscopically corresponded with the sarcomatous growths described by Billroth and Virchow. McCarthy felt confident that the cord-like masses of cells were not of connective tissue origin, but were some form of rapidly growing epithelial structure. Keen has found that growths which arise from warts proper are generally epithelial carcinomata. Several of Keen's cases of malignant disease originating in moles were undoubtedly sarcomata.

In 1903 Eve reviewed the records of the London Hospital for the past twenty years and found that twenty-six of the thirty-three cases of melanosarcoma situated in the skin probably originated in pigmented moles. Eve was convinced that the tendency to the formation of secondary growths in the liver does not appear to be so great in the melanosarcoma of the skin as in the case of primary melanosis of the eye, and that the excretion of melanin in the urine is not so frequent. Wilson and Kalteyer reported a case of melanosarcoma originating in a mole on the forehead, and collected fifty of these cases, in 69 per cent. of which the growth had its origin in a mole or nevus, thereby pointing out the importance of removing warts, moles and nevi as soon as possible lest they become malignant.

It is true that a wart or a mole may never become malignant, but the literature, as well as the cases studied by me at the St. Louis Skin and Cancer Hospital, will convince the most skeptical that an apparently harmless wart or mole may suddenly begin to grow, and oftentimes quite rapidly, destroying the life of the unfortunate individual.

In some of our cases the more or less constant irritation to which the mole or wart was subjected seemed to be the exciting factor. In one instance the patient attributed the malignant change to the bite of a woodtick. Several of our cases of malignant disease had their origin in a mole which had frequently been accidentally cut by a barber. Most of our cases originated in warts. wart.

It must be admitted that the general practitioner is not always to blame for the delay of excising these apparently harmless blemishes. I have recently observed several cases in which the patient refused to have the growth removed. In our report will be found an instance in which a patient with a mole on his left temple refused operation. He is now eking out a most pitiful existence; the left eye and practically the entire left half of his face have been destroyed by the disease.

The plates submittted with this report emphasize the fact that warts and moles should be removed as soon as possible. I fully concur with Keen, who has contended that the moment warts and moles begin to increase in size they are almost invariably already malignant growths and should be treated as such. Just here I would like to protest against the practice of cauterizing warts on the face; they should be excised.

Cases 1, 2, 6, 8, 9, 11, 12, 16, 17 and 18 occurred in the service of Dr. Lutz, Case 7 in that of Dr. N. B. Carson, and Cases 3, 4, 5, 10, 13, 14 and 15 in the service of Dr. H. G. Mudd. It is a pleasure to acknowledge my indebtedness to Drs. Lutz, Carson and Mudd for the courtesies extended. I am also greatly indebted to Dr.

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[*] From the St. Louis Skin and Cancer Hospital.

Guthrie McConnell for the pathologic reports, and to Dr. Mook and Dr. Wells for the excellent photographs.

REPORT OF CASES.

CASE 1.—*History.*—Mr. W. E. W., aged 63, was admitted Nov. 19, 1907. Fifteen years ago he noticed a small seed-wart growing on the back of his left hand, but, since it did not cause him any discomfort or did not grow, he gave it only passing consideration for nine or ten years, when seven or eight small, brownish, warty-like growths appeared on the back of his right hand and a scaly, roughened area on the right side of his nose. At this time the wart on the left hand began to grow quite rapidly and he trimmed it frequently. Three years ago the growth on his left hand was the size of a walnut and divided into two equal portions; he was advised to have it removed, but refused. Six months ago it became painful and discharged an offensive, yellowish green fluid. Arsenic was applied and reduced the size of the growth very much, but within a very few weeks the growth had attained its former size. Arsenic was again applied with a similar result. Recently the growth on his left hand has been growing very rapidly and a hard, flat, ulcerated growth has appeared on his left cheek. His left arm is practically useless; he can not flex or extend it very freely.

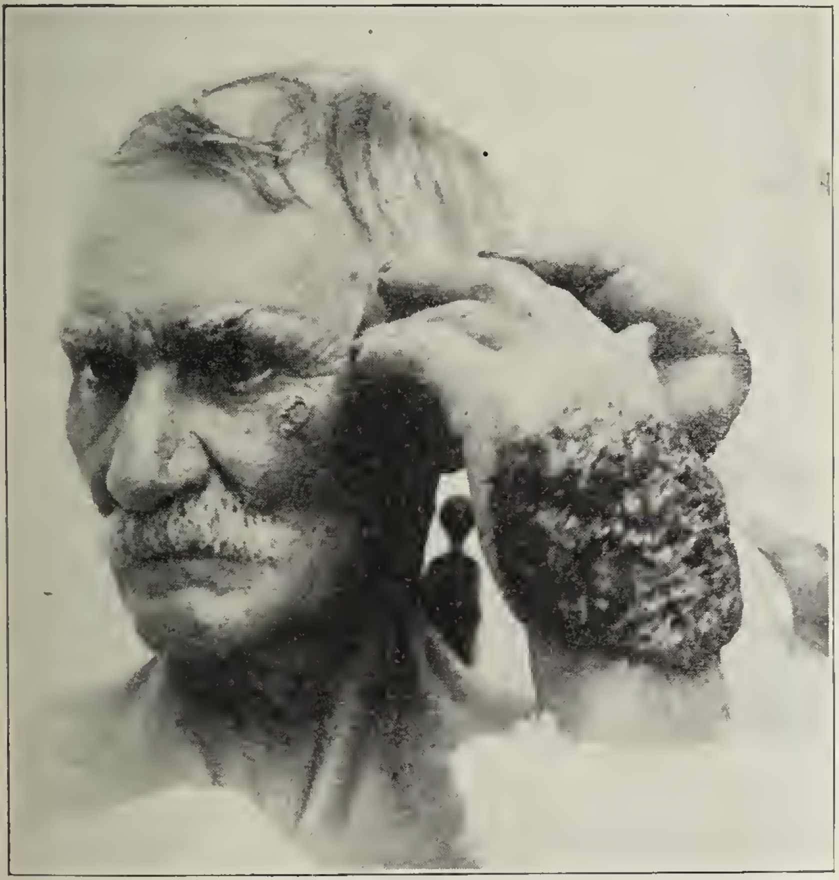

Fig. 1.—Epitheliomatous degeneration of a wart on the hand.

Examination.—On the dorsal surface of the left hand was a large, cauliflower-like growth covered with a yellowish, greenish, offensive discharge; the lower third of the forearm was swollen; the flexor muscles were markedly contracted, limiting very materially the movements of the forearm; epitrochlear gland not enlarged. On the dorsal surface of the right hand were eight brownish, firm nodules (Fig. 1). On the left malar eminence was a firm, flattended mass, about one inch in length and one-half inch in width, presenting the appearance of an epithelioma (Fig. 1). On the right side of the nose was a scaly-like indurated area as large as a silver dime.

Operation.—The left forearm was removed by disarticulation at the elbow. The rubber tissue drain was removed on the third day. Union was complete on the fourteenth day. The growth on the left malar eminence was also excised. Union was primary, but about three weeks later a small nodule was noted in the upper, outer margin of the line of incision. *X*-ray exposures have been given each week since the latter finding.

Microscopic Examination.—The specimen from the hand contained many distinct nests of cells of various sizes. The nests were separated by connective tissue which in places was very markedly increased. The nuclei of the cells varied greatly in size, shape and staining qualities, the large round faintly staining nuclei predominating. Many epithelial pearls were present, with a large amount of keratin formation. In places, near the periphery of the specimen, there was considerable edema. The specimen from the cheek showed numerous nests of cells, the nests being smaller in size than those of the specimen from the hand. The connective tissue was greatly increased, with considerable congestion throughout the specimen. Lymphocytic infiltration was quite marked. Pathologic diagnosis: epithelioma of hand and cheek.

CASE 2.—*History.*—Mr. J. K., aged 72, was admitted Dec. 17, 1907. Ever since he can remember he has had a mole on the left side of face near the external canthus of eye; six years ago the barber accidentally cut it, but it healed within a short time. A few months thereafter a small scab appeared on the mole and he picked it off with his finger nail; another scab appeared and was removed; after which time the mole became an ulcerating growth; all attempts to heal it were futile. He consulted many prominent surgeons, but was refused an operation. Pastes, salves, powders, *x*-ray, and other applications were not of any benefit; the disease continued unabated. During the past six months the destructive process made very rapid progress; patient lost seventy pounds and the pain became of an agonizing character. Morphin, in very large doses, is necessary to secure relief.

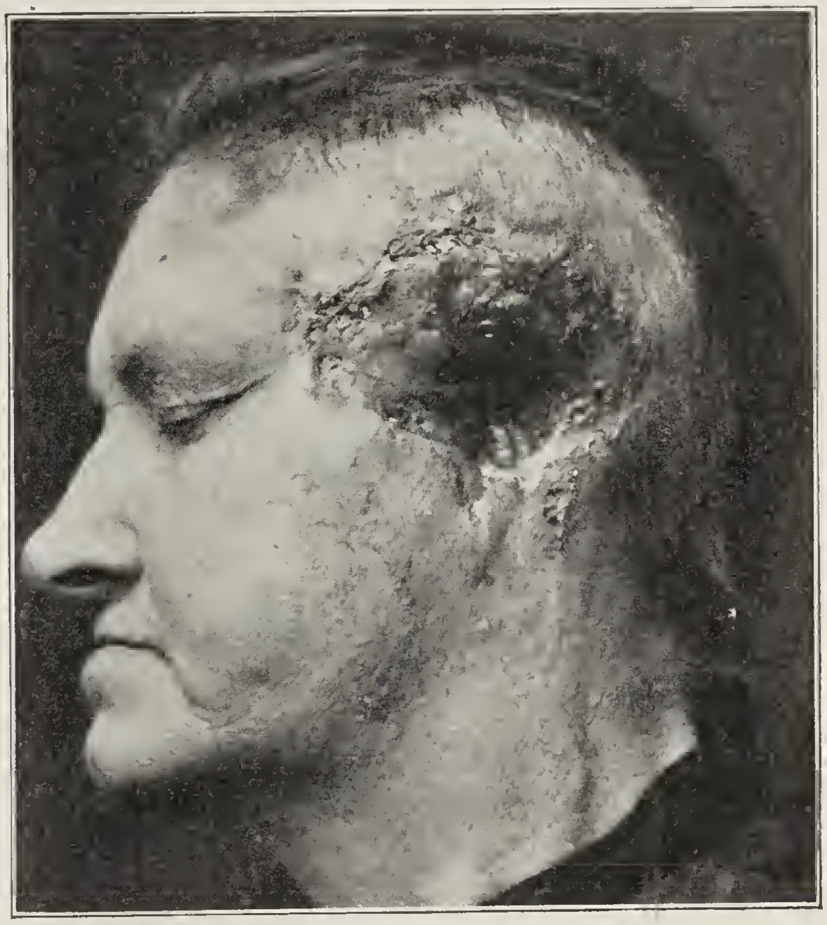

Fig. 2.—Malignant degeneration of mole on temple.

Examination.—The left eye and greater portion of left side of face had been destroyed.

Treatment.—Palliative.

Pathologic Diagnosis.—Rodent ulcer.

CASE 3.—*History.*—Mrs. J. E., aged 54, was admitted Jan. 22, 1906. When thirty years old she noticed a small mole growing on her left temple near the hair margin. She frequently irritated the mole while combing her hair; sometimes the comb scratched off the top so that the mole would bleed. About four years ago the mole began to grow and develop into a malignant ulcer. The destructive process extended gradually to the left ear, which latter it eventually destroyed. A portion of the scalp and left temporal muscles have been destroyed. At present she can not hear very well with left ear; pain is quite severe. At times the pain extends to the orbit and to the parietal region. There is a constant ringing noise in left ear.

Examination.—A large, granular, ulcerated area about four inches in diameter, the center of which was the middle ear, occupied the left temporal region; the left external ear was destroyed (Fig. 2), also the entire petrous portion of the temporal bone; the dura was in view.

Operation.—Parts curetted and cauterized. Temporary benefit; involvement of brain; death.

Microscopic Examination.—A section, including a portion of the skin of the ear, as well as the ulcerating surface, was examined. The squamous epithelium of the skin showed little change till the immediate neighborhood of the ulcer was reached. The epithelium sent numerous broad projections into the deeper tissues. There was, however, no attempt toward breaking through and infiltrating. The surface epithelium beyond this point became rapidly thinner and disappeared. The portion at the ulcerated end was composed of irregular nests of cells containing long oval vesicular nuclei that stained deeply. No intercellular fibers were present. The cells composing the tumor resembled those of the germinating layer and did not take on any of the changes seen in squamous epithelioma. There was also considerable connective tissue hyperplasia at the edge of the ulcer. Round-cell infiltration quite marked.

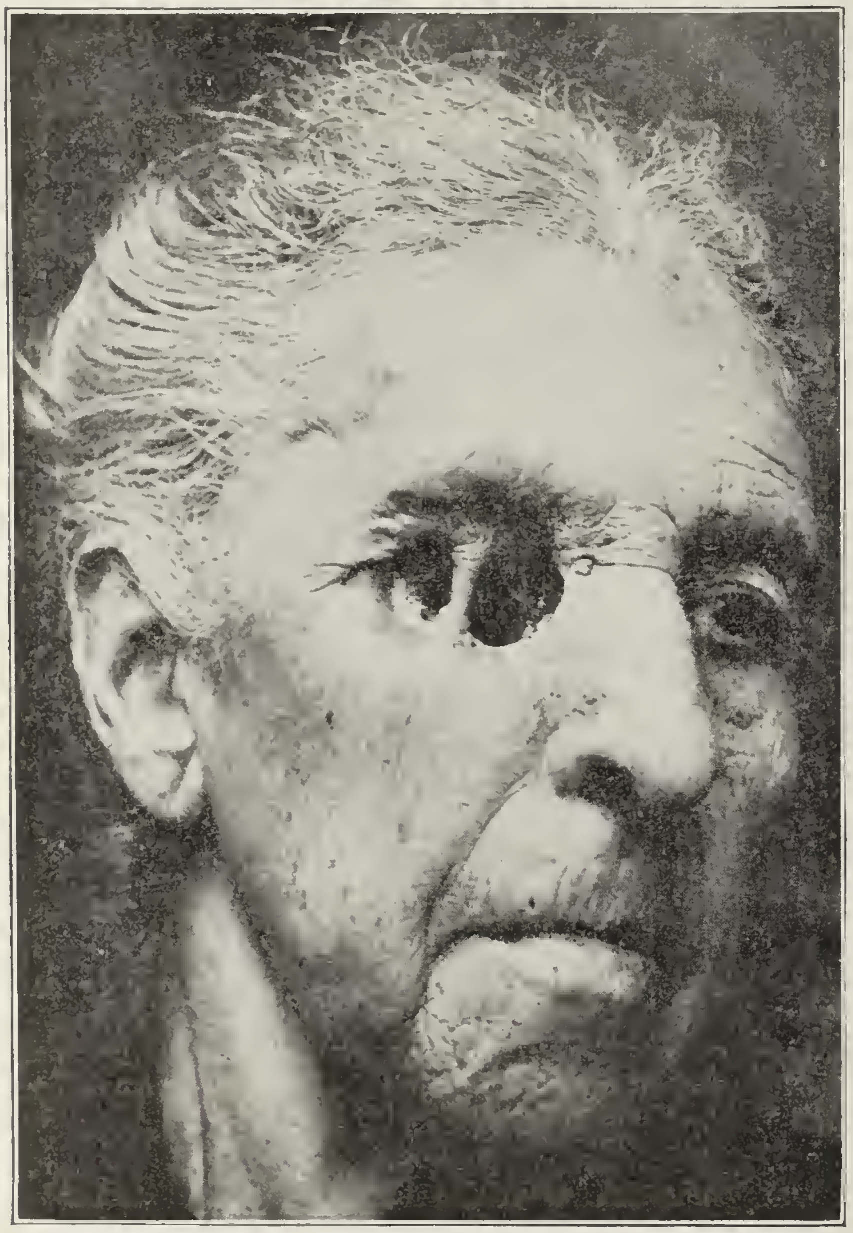

Fig. 3.—Malignant degeneration of wart on lower eyelid.

Pathologic Diagnosis.—Carcinoma (rodent ulcer).

Case 4.—*History.*—Mrs. S. O'M., aged 74, was admitted Feb. 25, 1905. At fifty years of age she noticed a small wart on her right lower eyelid. Five years ago the wart began to grow and soon became red and ulcerated and in two years the destructive process involved the entire right half of the lower lid and attacked the eye. One year later she had the lid and eye removed, but within a short time the condition was as bad as before operation. Pain has become a very prominent and distressing symptom. Pastes, salves and powders have been applied without benefit.

Examination.—The right orbital cavity was occupied by a cauliflower-like growth from which exuded an offensive, purulent discharge. Patient was emaciated, pale and weak.

Operation.—The orbital cavity was thoroughly cleaned out. Within a very short time evidences of recurrence were noted (Fig. 3). The disease extended to the brain; patient died a short time ago.

Pathologic Diagnosis.—Epithelioma of orbit and brain.

Case 5.—*History.*—Mr. P. G., aged 70, was admitted Aug. 25, 1905. Six years ago he noticed a small wart-like nodule on the left side of his nose. Six months ago it began to grow, extending to cheek. It became lobulated and resembled a bunch of grapes. At present it is growing at a rapid rate.

Examination.—On left side of nose and cheek was a red, lobulated growth about as large as half of a walnut, presenting the appearance of an epithelioma.

Operation.—Growth was excised. Union was primary. Patient has not been seen since May, 1906. No recurrence at that time.

Pathologic Diagnosis.—Epithelioma of nose and cheek.

Case 6.—*History.*—Mr. J. L. T., aged 73, was admitted July 11, 1906. He had a small mole on the left side of his nose ever since he can remember. In 1889 a barber accidentally cut off the top of the mole; the wound healed, but about a year ago a scab appeared and he picked it off. Within a short time another scab appeared and he removed it; this process was repeated at frequent intervals until nine months ago, when the mole became a destructive ulcer which has grown rapidly during the past two months.

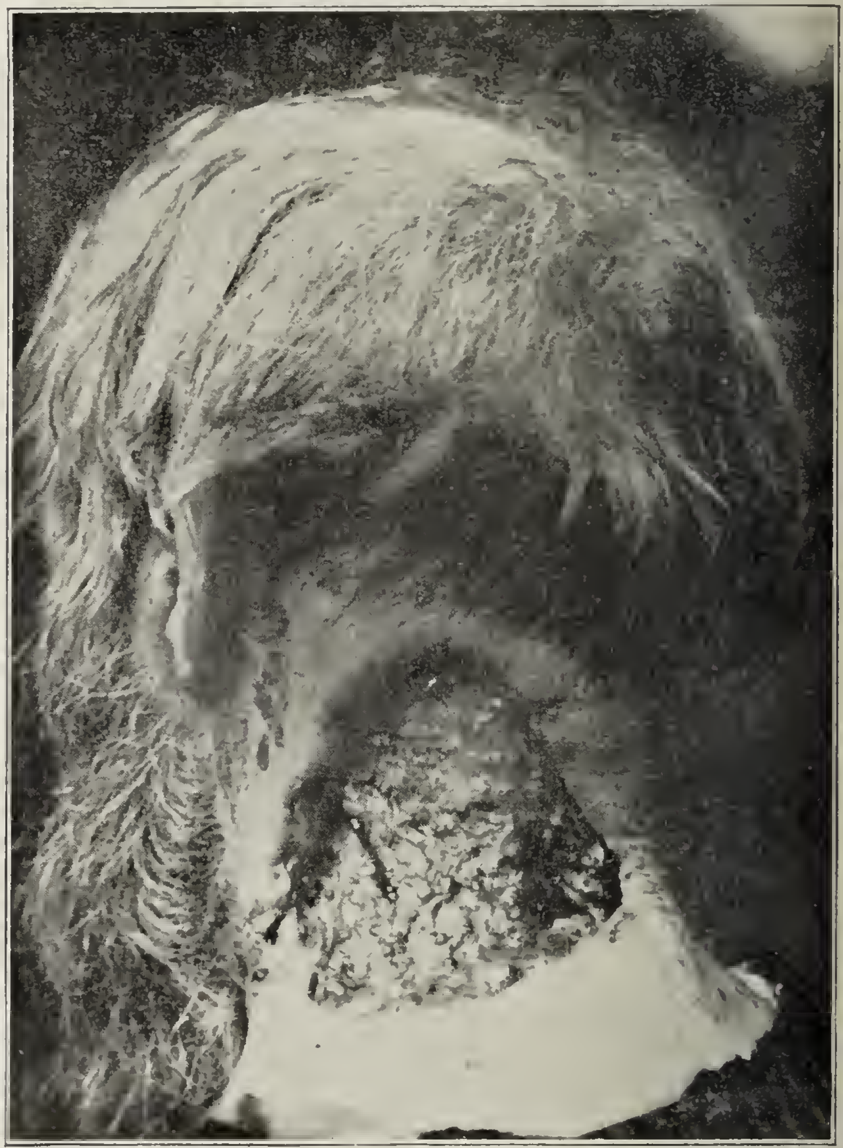

Fig. 4.—Epitheliomatous degeneration of a mole on the neck.

Examination.—On the left side of the neck near the angle of the jaw was an indurated ulcer, one and one-half inches in length and one-half of an inch in width, presenting the usual appearance of a rodent ulcer. No palpable glandular involvement. Growth was excised. Primary union.

Microscopic examination showed rodent ulcer.

Case 7.—*History.*—Mr. J. P. C., aged 56, was admitted June 26, 1906. For many years he has had a small mole on the right side of his face, but it did not cause him any inconvenience until in 1889, at which time a barber cut it while shaving him. The wound healed within a short time, but a few months later a barber cut it again, after which it did not heal satisfactorily. A few years ago he noticed that the mole was ulcerated and increasing in size. Pain has not been severe in character.

Examination.—On the right side of the face, over the molar eminence, was situated an irregular, depressed ulcer, worm-eaten in appearance, about as large as a silver half-dollar. It presented the appearance of a rodent ulcer. No palpable glandular enlargement.

Operation.—Growth excised. Primary union. Recovery.

Microscopic Examination.—The neoplastic cells were distributed throughout the specimen in two different arrangements. In places there were quite large, irregular nests of cells containing oval or round nuclei that stained fairly deeply. The peripheral layer of cells was arranged in a distinctly columnar fashion. There was no restricting membrane, the cells lying in direct contact with the adjacent tissue. In other places the cells had a more or less regular arrangement into narrow strands surrounding distinct acini. In many of these openings were found blood cells and granular matter. Some of the acini contained a somewhat granular mass which stained slighcly with eosin. Round-cell infiltration was quite marked. Some muscle fibers showed hyaline change. Numerous mitotic figures.

CASE 8.—*History.*—Mr. McC., aged 74, was admitted Jan. 15, 1907. Ever since he can remember he has had a small mole or birthmark on the left side of his neck, just below the tip of the mastoid process of the temporal bone. Sixteen years ago a woodtick bit him on the mole. He was unable (he thinks) to remove all of the tick, and is under the impression that his present condition is the result of this. Two or three months after he was bitten he noticed that the mole was very tender to touch, and that it was increasing in size. Various preparations were applied; a small ulcer appeared on the mole, which showed a tendency to increase in size and refused to heal kindly. He finally succeeded, however, in healing the ulcer. A few years later he accidentally contused the left side of his neck against the limb of a peach tree; the parts became very sore and ulcerated. The tissues immediately surrounding the mole became indurated and of increased size. He consulted various "quacks" and spent all of his money, but the ulcer continued to get larger and larger. As time went on the growth caused more or less constant and severe pain; pain was especially severe at night. Recently the growth has been increasing more rapidly and has destroyed a large portion of the left side of tne neck, posterior to the sternomastoid muscle. He has lost considerable weight.

Examination.—A large, granulated, depressed ulcer with irregular, firm margins occupied the left posterior side of the neck (Fig. 4). The muscle was exposed in the central portion of the ulcer; portions of the muscle showed characteristic malignant change. Portions of the margins of the ulcer were undermined. Cervical (left) glands palpably enlarged. The sternomastoid muscle (left) very firm and infiltrated at its upper portion. General condition of patient quite good.

Treatment.—I gave trypsin injections for a considerable time, but with only temporary benefit; the severe pain became lessened to such an extent that the patient could sleep the entire night. Within a short time, however, the pain returned, but was never as severe as previously. The trypsin treatment did not change the condition of the growth, except that it became clean. Owing to illness in patient's family, he was called home about three months after admittance to hospital. Not traced.

Microscopic Examination.—One-half of the specimen consisted of a mass of quite dense connective tissue covered by a layer of surface epithelium. The other half was made up of a more open connective tissue framework, scattered throughout which were numerous small, irregular nests of cells. These nests were not limited by any membrane and were separated from each other by greater or less amounts of adult connective tissue. There was a very general widespread round-cell infiltration.

Pathologic Diagnosis.—Squamous epithelioma.

CASE 9.—*History.*—Mr. G. T. W., aged 54, was admitted Oct. 1, 1906. About two or three years ago he noticed a small warty growth on his lower lip. In October, 1905, it began to grow rapidly, and the physician whom he consulted diagnosed it cancer. Acids, pastes and plasters were applied without benefit. The disease continued unabated. He lost weight; appetite poor; pain more or less constant and quite severe.

Examination.—A large cauliflower-like growth occupied practically the entire lower lip and a part of the chin and inferior maxilla in median line. The mouth was apparently free from involvement. The growth was very firm, except in the ulcerated portions. Patient presented a somewhat cachectic appearance.

Operation.—The lower lip in its entirety and the submental and submaxillary glands were removed, and the diseased bone was thoroughly curetted. Superficial tissues of face were approximated and a new lip was formed. Patient developed a pneumonia and died a few days after the operation.

Microscopic Examination.—The superficial epithelium was very much thickened and the papillæ were large. Lying deeper within the tissues were irregular nests of cells containing large round bubble-like nuclei. The cells in the periphery of these nests showed quite a well-marked columnar arrangement. In the center of many of the nests the cells had become considerably flattened and had undergone keratin formation with loss of the nuclei. Round-cell infiltration was very well marked beneath the epidermis and between the cell nests. Very few mitotic figures were found. The submaxillary gland showed slight inflammatory changes.

CASE 10.—*History.*—Mr. L. W., aged 58, was admitted Aug. 23, 1906. About seventeen years ago he noticed a small warty-like growth on right half of his lower lip. For years after its appearance it began to grow at a rapid rate and he had it excised. Three years later it returned and in 1901 he had it cauterized. The growth disappeared and did not return until three years later; it then appeared in the form of a small, hard ulcer, which latter soon became of a rapidly destructive character. He tried various so-called "cures," but the disease continued unabated. No loss of weight; appetite good.

Examination.—The entire right half of lower lip had been destroyed. A hard crate-like, ulcerating mass presented itself in this area; the lower teeth, normally covered by the right half of the lower lip, were exposed. The submental glands, as well as the submaxillary glands, were not palpably enlarged. Floor of mouth was apparently free from involvement.

Operation.—Radical excision. Patient recovered. Union was primary. No recurrence up to present time.

Microscopic Examination.—The greater part of the specimen was composed of irregular masses of cells containing rather small round or oval vesicular nuclei. These masses had no limiting membrane and ramified through the tissue in the form of a coarse network with more or less connective tissue in between. In a number of places the tumor cells had a distinct adenomatous arrangement. Narrow strands of about two cells in thickness formed a network enclosing spaces that appeared to be filled with a secretion. There were several areas in which the central portion of the cell masses had undergone a marked degeneration.

CASE 11.—*History.*—Mrs. M. C., aged 56, was admitted Oct. 21, 1907. Many years ago she noticed that she had a mole on the right side of her nose, but, since it did not cause her any inconvenience, she did not pay any attention to it until five or six years ago, at which time it began to increase in size. Pastes, salves and other "frauds" were applied without benefit. The growth rapidly increased in size. Pain was not severe or constant.

Examination—On the right side of the nose, at about the center, was a brownish, nodular growth, one inch in length and one-half inch in width; it felt tense and firm and was in the skin.

Operation.—Excision under local anesthesia. Primary union. Subsequent Roentgen ray treatment.

Microscopic Examination.—The superficial epithelium was considerably thickened and showed a very great keratin degeneration. There was some parakeratosis.

CASE 12.—*History.*—Mr. W. F. R., aged 53, was admitted March 6, 1907. Five years ago he noticed a small, white, wart-like growth on his lower lip near its center. He pulled it out, but within a few weeks it returned. The process was frequently repeated. The substance removed was always of the same consistency, spongy-like and closely resembled a wart. Five or six months after its first appearance he consulted a so-called "cancer doctor," who attempted to treat it with his pastes, etc., but without success. The application employed seemed to accelerate the development of the growth. One year ago the growth involved the entire right half of the lip; he consulted a surgeon who excised the lower lip. Within six months the growth returned (?) and rapidly attained the size of a small closed fist. Another surgeon found the inferior maxilla also involved. Three weeks ago the growth on lip and a portion of the inferior maxilla were removed. At present there are evidences of recurrence. Loss of sixty pounds in weight during the past year.

Examination.—Mouth deformed, due to previous operation. There was constant flow of saliva from mouth, at right angle of the very narrowly contracted mouth was a small nodular growth about as large as a pigeon's egg. Glands not palpably enlarged. Floor of mouth not involved. Patient could scarcely open his mouth.

Treatment.—He had been subjected to Roentgen rays, but without benefit. Injections of trypsin were tried, but so many abscesses followed its use that they were discontinued. The lower lip was freed from the inferior maxilla and the growth was excised under chloroform anesthesia. Patient has not been heard from since he left the hospital. Probable recurrence.

Case 13.—*History.*—Mr. J. T., aged 75, was admitted Sept. 4, 1907. About three years ago he noticed a small wart on the left side of his nose, but, since it did not seem to grow and did not cause him any pain, he let it alone; within a very short time it became an ulcer and grew rapidly. Painful at times.

Examination.—On the left side of nose was a hard movable mass about as large as half of a walnut. The edges of the mass were of firmer consistency than its central portion. The growth presented the appearances of an epithelioma.

Treatment.—Excision under local anesthesia. Primary union.

Microscopic Examination.—The specimen was composed of many small cell nests separated from each other by a slight amount of connective tissue. In many places the nests appeared to have fused, thus forming masses with scalloped edges, resembling rosettes. In the nests the peripheral cells were arranged in a quite regular columnar manner, the central cells being massed together irregularly. Many of the cells were undergoing division. Some round-cell infiltration in the connective tissue.

Case 14.—*History.*—Mr. L. B. L., aged 78, was admitted May 12, 1906. Eight years ago he noticed a small wart-like growth on his lower right eyelid, but it did not cause him any discomfort or did not seem to increase in size until four years later, at which time a small scab appeared. He pulled this off and the wart bled freely. Within a short time the wart began to ulcerate and discharge a greenish, offensive pus, and the parts became swollen and more or less painful. The destructive process extended until the entire lower lid was destroyed; the upper lid was so swollen and edematous that he could not see out of his right eye. No loss of flesh.

Examination.—The right lower lid was practically destroyed. The tissues adjacent to the base of the lower lid were indurated and infiltrated by a growth presenting the appearance of an epithelioma. The upper lid was edematous and obstructed sight of right eye. Eyesight not destroyed. Lympn glands not enlarged.

Operation.—The lower lid and tissues at base of lid were excised. Within a very short time the eye showed evidences of being affected by the malignant process. The right orbital cavity was cleared out. Shortly thereafter the patient died.

Microscopic Examination of Eyelid and Contents of Orbit.—The first specimen was completely surrounded by squamous epithelium which on one side was quite thin and had almost no papillæ. The epithelium increased gradually and extensions dipped deep down into the corium, forming anastomosing strands. The cells varied in size, and many contained numerous minute granules almost black in color. In a few places the cells were flattened and arranged concentrically, but had not undergone a keratin transformation. No mitoses. The second specimen showed large masses of adult connective tissue separating and surrounding irregular nests of cells. These cells had quite large spindle-shaped nuclei, vesicular in character. There was no limiting membrane, the cells lying free within the tissues. Numerous mitotic figures present. Round-cell infiltration quite well marked. Vessels congested; some interstitial hemorrhage present.

Pathologic Diagnosis.—Rodent ulcer.

Case 15.—*History.*—Mr. C. W. N., aged 59, was admitted June 8, 1906. Was never ill until two years ago, when he noticed a small wart growing on penis near urethral opening. A few months later he consulted a physician, who burned off the wart. Contrary to expectations, the wound would not heal. Six months ago he was operated on, a portion of the penis being removed. He has become steadily worse and has lost considerable weight.

Examination.—Patient anemic and looked badly. The entire penis had been destroyed and was replaced by a large, foul sloughing ulcer. The testicles were swollen and the scrotum was edematous and ulcerated in places. The inguinal glands were swollen, tender and sloughing. The condition was pitiful and exemplified the distressing result of the physicians' failure to do a radical operation instead of a partial one.

Treatment.—Patient's condition did not warrant operation.

Pathologic Diagnosis.—Epithelioma of penis.

Case 16.—*History.*—Mrs. R., aged 70, was admitted Dec. 10, 1907. Sixteen years ago she noticed a small, white, seed-wart on her upper (right) eyelid. It seemed to remain unchanged in size for twelve years, when it began to grow and shift its site from the outer third to near the inner canthus of the eye. Caustics, pastes, salves, etc., had been applied without benefit. Pain was not a prominent symptom. The growth increased very rapidly in size, a small nodule appearing near the margin of the lid.

Examination.—About half an inch above the inner canthus of right eye was a nodular, slightly ulcerating mass as large as a five-cent piece. The growth presented the usual characteristics of a rodent ulcer. On the border of the lid, near the inner canthus, was a small, hard whitish nodule about as large as a pin-head.

Operation.—Excision. Wound healed by granulation. Exposure to Roentgen rays twice a week. Recovery.

Microscopic Examination.—Specimen showed numerous nests of cells varying in size and shape. These nests were distinctly separated by connective tissue. The nuclei of the cells varied greatly in shape and staining qualities; the oval, deeply staining ones predominating. There was a very large amount of round cell infiltration and of congestion. No attempt at pearl formation.

Case 17.—*History.*—Mr. J. J. D., aged 59, was admitted April 28, 1906. About two years ago he accidentally noticed that he had a small wart-like growth on the back of his left hand; it did not cause him any pain or discomfort until about six months later, when it began to grow. Various acids, pastes and other drugs were applied without success. Five months ago the growth became ulcerated and began to grow rapidly. Two weeks before admission he had a physician remove the growth, but when the sutures were removed, a week after operation, the physician found that the parts had not healed; the wound was gaping.

Examination.—On the dorsum of the left hand, between the base of thumb and index finger, was an irregular, exuberant ulcer, the size of a silver quarter. Axillary and epitrochlear glands not palpably enlarged.

Treatment.—X-ray exposures were given twice a week for some months. The parts healed and the patient discontinued his visits to the clinic.

Case 18.—*History.*—Mr. G. S., aged 62, was admitted Oct. 14, 1907. Had a wart on his lower lip for twenty-five years, but it did not grow until two months ago. Lower lip had become swollen and the growth was the size of a filbert.

Examination showed patient well nourished and in apparent good health, except for the growth on and swollen condition of his lower lip. Near the center of the free margin of the lip was a scaly growth presenting the characteristics of an epithelioma. The swollen condition of the lip did not appear to be due to the epitheliomatous growth only. The submental and the submaxillary glands were not palpably enlarged.

Having been so frequently impressed with the fact that a wart may suddenly show malignant changes, and appreciating the importance of early excision, the patient was admitted to have the growth removed. One day later, the entire lower lip was excised and the submental glands removed. The silkworm gut sutures were removed on the fifth day. Union was primary.

Pathologic Report.—The epithelium suddenly changed from the normal to an irregular layer of great thickness. Long finger-like projections of cells extended deep into underlying tissues. Throughout the greater part of the growth, the cell nests penetrated down into the muscular tissue and brought about an atrophy of the muscle fibers. Along the advancing periphery of the new growth there was a very marked infiltration of lymphocytes and plasma cells. The cells found in the nests were large and polygonal, and contained a large round or oval vesicular nucleus. Many of them showed varying degrees of keratin formation, and typical epithelial pearls were very numerous. The cells on the surface of the growth showed marked keratin formation and parakeratosis. On the mucous side of the specimen was found a small salivary gland. On the skin side were seen numerous hair follicles, sebaceous and sweat glands. Lying deeper within the muscular tissues were two bodies, circular in shape, with a surrounding rim of homogenous substance that stained with eosin. This ring enclosed a space in which were found several round and oval bodies that contained cells and nuclei enclosed within a definite membrane. In between these bodies was a small amount of granular pink-staining material. External to the capsule was a slight amount of round-cell infiltration. These masses lay embedded in the muscular tissue, and the adjacent muscle fibers had been flattened in varying degrees. The appearance was that of an encapsulated trichina. These bodies lay quite close to quite a large artery.

CONCLUSIONS.

1. The laity should be impressed with the danger of permitting warts and moles to grow, and should be urged to have them excised at once.

2. The early excision of apparently harmless warts and moles will save days of suffering; in many instances, the life of the individual will be saved thereby.

3. The moment that warts and moles begin to grow they are almost invariably already malignant growths and should be treated as such.

4826 Delmar Boulevard.

STATIC ELECTRICITY.

ITS PHYSICAL PROPERTIES, MODALITIES, PHYSIOLOGIC EFFECTS AND THERAPEUTIC INDICATIONS.

WILLIAM BENHAM SNOW, M.D.
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To standardize the therapeutics of static electricity properly a consideration of the type of apparatus and modalities employed is a question of first importance. There are three types of static machine at present in the market—the Holtz, Toepler-Holtz and the Wimshurst—which produce currents of practically the same quality but varying materially, other things being equal, in the potential as measured by spark-gap and shrdlu odhmc discharge when high resistance is placed in the circuit.

My experience and familiarity with static machines leads me to the conclusion that the Holtz machine, having from eight to sixteen revolving plates and being provided with an exciter, is the best type of machine for medical purposes. My reasons for this conclusion are: 1, During the administration of the Morton wave current, the modality of most importance in static therapeutics, this type of machine will produce, other things being equal, the longer spark-gap and discharge with the greatest degree of regularity; 2, this type of machine is more easily kept in repair; 3, when having the suitable number of revolving plates, sufficient current is evolved when running at a low rate of speed (300 to 400 per minute) without producing alternating oscillatory currents as is sure to occur with high speed machines.

For the evolution of currents of high frequency, in connection with the static resonator, a high-speed apparatus having a smaller number of revolving plates, in which a unidirectional current is not desired, the same objection does not obtain. The idea of inducing a general purpose current by employing a smaller number of revolving plates at high speed is not practical or scientific, for the quality of the current, as to proportion of potential and amperage, is not under control as it is when derived from a number of revolving plates sufficient to produce the current at a lower rate of speed. With high-speed machines the spark-length is deficient and the current is oscillatory or alternating in character.

At the present time the static machines of the Holtz type having sixteen revolving plates 30 to 36 inches in diameter and constructed with a high degree of insulation to prevent escape of the current to and through the case, and provided with a means of controlling amperage of the current without reducing the potential as measured by the length of the spark gap when administering the wave current, is the type of static machine most cordially to be commended. For most purposes, and for most patients when the employment of the *x*-ray and high-frequency currents are not taken into consideration, a static machine having eight revolving plates of the above type will meet most indications.

CLASSIFICATION OF STATIC MODALITIES.

Numerous static modalities are employed therapeutically, of which the following may be considered in order of excellence: 1, The static wave current; 2, the static spark; 3, the direct vacuum tube current administered in the same manner as the static wave current; 4, the static brush discharge; 5, the static induced current; 6, static insulation; 7, the static spray. In this classification we are not considering the high-frequency currents — auto-condensation, auto-conduction and the high-frequency effleuve — also produced by the static machine of a quality similar to the high-frequency currents derived from other sources.

The properties of the static current, which render it unique, are: 1, intensity of diffusion; 2, constant or unidirectional; 3, high potential, relative to small amperage; 4, ease of control of current as to periodicity or frequency, by regulation of speed and spark-gap, regulation of amperage and voltage by the same means, and the additional regulation of ground connection by placing in the circuit a variable resistance; 5, it is the only apparatus with which the current can be satisfactorily administered from one side of the machine with the other side grounded and the patient insulated, thereby producing unique physical and physiological effects not derived from other apparatus.

DIFFUSION OF THE STATIC CURRENT.

The remarkable degree of diffusion of the static current is evidenced by the passage of the current through materials which are non-conductors of other currents, as its passage through the length of a long platform with the discharge of a spark several inches in length, or the passage of the current through wooden electrodes—a quality which makes necessary the employment of the best insulation in the construction of the apparatus. The contrast as compared with currents from other sources of energy or transformers is very striking. This quality of the static current is probably due to the mechanical character of its evolution, thrown out as it is by the rapidly-revolving plates and the fact that the two polarities are evolved when the speed is not too great, absolutely distinct under these conditions. In other words, there are no inverse currents as from a Rhumkorff coil.

CONSTANCY OF THE STATIC CURRENT.

The current from a static machine is constant—uniformly flowing in one direction from either one or both poles, if not run at too rapid rate of speed or altered by a short spark discharge or other oscillatory influence brought in the electro-static field. This quality is noted during the administration of a static charge or insulation when the current passes smoothly over the patient and escapes from the loose hair and other points which stand out from the surface of the patient, or his clothes. The oscillatory character and mechanical feature is derived from a short spark-gap in circuit, either with the wave current or static induced current, or during the administration of the disruptive or convective discharges.

The relation of amperage and potential from the static machine is most striking. An eight-plate machine, as shown by Prof. Samuel Sheldon, when in rapid motion, produces a current of one-fourth of a milliampere—one four-thousandths of an ampere—while the potential measured by the spark-gap is hundreds of thousands, approximately fifty thousand for each inch of spark length. A proportion of such marked contrast is not derived from any other source of electric energy. The current is harmless for therapeutic purposes, and it possesses a great capacity to awaken to activity by its remarkable energy of potential and diffusion.

CONTROL OF THE STATIC CURRENT.

The control or regulation of the current strength, potential and rate of interruption by means of the spark-gap and speed rate, is an invaluable feature in connection with the therapeutic administration of the current. With the unidirectional current from a properly constructed and insulated Holtz machine provided with a rheostat or mechanical speed controller, having a large number of steps, it is possible to regulate the spark discharge at the spark-gap to a uniform high or low rate of periodicity, and likewise to control the amperage and frequency in connection with the high-frequency apparatus. The amperage of the high-frequency current induced by a static machine and resonator may be greatly increased by placing in one side of the circuit a multiple spark interrupter, a prerequisite for the administration of the necessary current strength for auto-condensation applications from the Holtz machine.

The intensity of the wave current administered will depend largely on the character of the grounding which may be varied in the larger machines to regulate both amperage and intensity, by placing a resistance rheostat, such as the water rheostat I recently devised, between the negative pole of the machine and the earth.

The one pole administrations of the static machines, or the wave current and disruptive and convective discharges applied to the patient when insulated, are of the greatest value in therapeutics and are not capable of production with anything like the same quality from any other apparatus. It is to this type of administration with the important characteristics—diffusion and unipolar qualities—that the distinctive therapeutic value of the static current is chiefly due. Owing to this feature of the current it becomes practically a one-pole current—a current of one polarity—producing the characteristic effects derived from the passage of the positive or negative electrons throughout the body. By this form of administration the current is physically compelled to pass to and fro throughout the organism or locally with energy through any affected viscus or diseased tissues. It is owing to this characteristic that the administration of the wave current produces two important effects on the economy: 1, Local tissue contraction; 2, a constitutional effect due to the passage of the material electrons throughout the body, diffused in such a manner as to involve in their passage every part in its path to the surrounding surfaces.

The local administration induces a succession of diffused tissue contractions beneath the metal electrodes with intervals of relaxation synchronous with the spark discharge. This, when applied to congested tissues, softens the indurated structures by forcing the products of inflammation and stasis out into the circulatory channels, both vascular and lymphatic, thereby permitting the re-establishment of circulation in the involved tissues, and coincidently throwing into activity every part of the involved mass, restoring metabolism.

THE PHYSIOLOGIC EFFECTS OF UNIPOLAR CURRENTS.

The physiologic effects of these one-pole currents are readily appreciated when their action is understood. This has been demonstrated by those who have had experience in the treatment of inflammatory conditions, particularly as directed to the relief of local stasis with the prompt re-establishment of the normal functions. From these mechanical effects we must accord to the static current a pre-eminence in the treatment of non-infected inflammation. The indications conserved in the treatment of non-infected conditions are: 1, The relief of local stasis; 2, the re-establishment of circulation; 3, the institution of normal metabolism.

The general or constitutional effects arising from the passage of the currents to and fro through the tissues of the body render them particularly efficacious in therapeutics. The effect on arterial tension of the static wave current is generally to lower abnormally high tension, and also by re-establishing activity in the conditions of lower tension arising from lowered vitality to raise the tension by restoring tone and function. In other words, the disposition in the one class of conditions is to overcome contractions or tension in the muscular system generally, which are abnormal, and to increase nutrition in all conditions by re-establishing functional activities.

By the dual action of this current, the electric on the general and constitutional conditions, and the local mechanical, directed to the relief of inflammatory processes, infiltrations and congestions, these modalities or methods serve a most valuable purpose. When it is realized that this influence is exerted by a current of such small amperage, the effects being produced by the great potential of the current of electrons, resulting in the re-establishment of normal function without risk to cell structures, its great value becomes apparent.

These effects are not only demonstrated clinically but physically, rendering certain their indication and value in therapeutics. There are other qualities of the current as administered from the vacuum tube which deserve attention, viz., the antiseptic and actinic actions. Whenever an electric discharge takes place there is a chemical decomposition at the surface of the electrode with the production of ozone and nitrous acid. Ozone possesses the power to attack or combine with organic substances, rendering them sterile by oxidation. Nitrous acid also possesses a marked affinity for water, and nitric acid is produced in minute particles, capable of affecting local processes to an extent varying relative to the amperage of the discharge. These antiseptic qualities are constantly greater from the larger ampere sources, but are also considerable from the static machine.

The actinic action of the current as derived from the effects of the higher light frequencies, represented by the violet tints accompanying the passage of the electrons in vacuum tubes, is the same as the effects of the corresponding light frequencies. The extent and value of these radiations and emanations possess a well recognized value, if not an exact established therapeutic status. Administered from the static machine with the vacuum tube connected direct from the machine, a method which I first described, they possess qualities combining the contractile effects of the other static modalities with these antiseptic powers. These qualities have been clinically shown to possess peculiar merit in the treatment of lesions of the mucous surfaces and of the skin, as well as being a convenient method of treating superficial inflammatory processes as sprains of small joints and enlarged lymphatic glands.

The therapeutic value of the static modalities, as based on the physical and physiologic effects, give them a very wide range of indication. Success or failure from their administration, however, depends on the technic employed. Three elements, too often neglected in the management of patients with these modalities, are: 1, The regulation of the applications as to the frequency of treatment; 2, the regulation in the matter of dosage; 3, the length of time devoted to the administration. After careful comparative tests, it has been definitely demonstrated that in the treatment of most inflammatory conditions, as well as when administered for the tonic effects of the current, the length of time devoted to the administrations of the wave current should not be less than fifteen minutes and not more than thirty minutes, the usual twenty-minute administration best meeting the requirements in most cases. The frequency of the treatment must be regulated by the conditions under observation so that the improvement is progressive. Experience has taught that in most cases these administrations should be given almost daily, and in some cases of acute inflammatory conditions, as sprains and sciatica, twice daily, until the patient is so improved that a relapse will not occur during a longer interval, when the treatment may be administered once daily or every other day until the patient is cured. The dosage in every case should be suited to the conditions.

RULES OF DOSAGE.

Four rules of dosage are well established: 1, The spark-gap when administering the wave current must not be made so long as to produce too severe pain throughout the inflammatory area, and the gap should be gradually lengthened as it becomes possible; 2, the spark-gap should not be so long as to produce spastic or too severe muscular contractions; 3, the static sparks should be regulated in their length according to the depth of the lesion or size of the part under treatment, from one-half inch to the fingers, to four inches over the knees and thighs; 4, the convective discharges should not be administered to the extent of local irritation.

A broad conception of the indications for the employment of the static modalities would indicate their use in all non-infected inflammatory conditions, internal and external, and for the energetic re-establishment of local and general metabolism. The following special indications are conserved by them:

1. The static spark and static wave current and, to a less degree, the brush discharge and direct vacuum tube current are the means *par excellence* for the treatment of all non-infectious joint inflammations.

2. In the treatment of uncomplicated neuritis in regions accessible (the only exceptions being within the pelvis, chest wall and bones of the skull) the static wave current, static spark, brush discharge and direct vacuum tube current, alone or in combination, are uniformly effective in skilled hands and the choice of methods.

3. In the treatment of spinal cord affections of a non-infectious inflammatory character, including tabes, anterior poliomyelitis, myelitis, syringomyelia and the dystrophies, the static wave current to the spine and periphery with addition of sparks in adults must be applied with great energy over the site of the lesion of the cord and without fear.

4. In the treatment of genital and pelvic conditions, non-septic in character, in accordance with the principles above given, the static wave current and direct vacuum tube current are effective in the following conditions: Uterine congestions and dysmenorrhea, subinvolution, cervical ulceration, salpingitis, ovaritis (which is usually secondary), urethral caruncles, vaginismus, hemorrhoids (not indurated), anal fissure, rectal ulcers, prostatitis (not removing hyperplasia), vesiculitis (specific and non-specific), congestions in the spermatic cord and canal between the internal and external rings, epididymitis, orchitis, chronic gleet, and impotency in many cases; in all of these cases named they are most effective, safe and cordially to be recommended.

5. In the following glandular congestions either the wave current or direct vacuum tube current are the choice of modalities. In enlarged and congested liver, spleen, simple adenitis, in mastitis, and tonsillitis before suppuration has advanced, over the pancreas in diabetes, the kidneys in Bright's disease, the adrenals in Addison's, and the thyroids early in simple and exophthalmic goiter, over the stomach and duodenum and ileum when secretions are abnormal or deficient, over a dilated stomach, and constipated bowels. In the above conditions the static modalities are very effective, more so than other agents in most cases because by inducing active energetic intrinsic contraction they remove congestion and infiltration and restore tone and metabolism.

6. Conditions of spasm or muscular contraction are relieved by the static modalities, particularly by the sparks and wave current, either through the secondary effect of relieving congestion, as in joint disease, or as in dysmenorrhea or vaginismus, or by direct antispasmodic influence in other conditions, as high arterial tension, and acute spasm as muscular cramp.

7. On general and local metabolism, when not complicated by organic disease, the static modalities, particularly the wave current, are remarkably efficacious and indicated as part of the régime in all cases because all of the functions are demonstrated to be quickened. Weight is increased, the hemoglobin percentage is increased, an approach to normal in blood count is induced, due undoubtedly to a quickening of cell activity throughout the economy owing to the stimulating influence of the rapidly moving electrons.

If those who have not awakened to the truth of these statements will on investigation put the unused static machine in service they will find it one of the most resourceful means at command, and those who have not one will find an installation a profitable investment for themselves and their patients.

THE ETIOLOGY AND TREATMENT OF HYPERTROPHY OF THE PROSTATE.

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It would seem that if hypertrophy of the prostate is due to atheroma, as is generally supposed, it would occur in more than 25 to 30 per cent. of all males past middle life, and I, therefore, believe that it is due entirely, or nearly so, to congestion or inflammation. Atheroma is frequent without hypertrophy, and *vice versa.*

Acute and subacute inflammations everywhere give rise to hyperplasia, and especially is this true in the prostate, which is abundantly supplied with blood vessels and highly cellular connective tissue. In the liver, kidney, spleen or any other glands of the body, hypertrophy or interstitial hyperplasia is always preceded by congestion or inflammation. These conclusions are the result of clinical observation and not of laboratory research. The general laws of pathology justify them.

The arteriosclerosis theory of Guyon has practically no adherents; nearly all authorities admit that congestion and inflammation will produce hyperplasia, and that this plays an important part in many cases of hypertrophy, the only difference of opinion being as to the manner in which hyperplasia produces hypertrophy.

As a basis for these conclusions, from a clinical standpoint, is the frequency with which hypertrophy occurs in comparatively young people. I have seen it in a boy 8 years old and in a number of men between 30 and 40, one of whom had complete retention for twelve years until operated on at 37. The claim may be made that the enlargement in the young is only a prostatitis. That is true, but when this inflammation has persisted until it produces obstruction it is as truly a hypertrophy as is adenoma of the prostate.

Inflammation is an effort on the part of Nature to repair an injury. The first stage in the process is congestion, which causes exudation of fluids into the tissues and also an infiltration of small round cells. When this infiltration has become a chronic process the new tissue becomes organized, and this is the beginning of the hypertrophy. That it is a true hypertrophy is not at all probable, as it occurs at a period of life when the functional activity of the gland is on the decline, while in other glandular organs it begins at a much earlier period.

Hypertrophy is an excessive growth or development of an organ. True, the action of a muscle tends to increase the circulation, and if long continued there follows hypertrophy or increase of substance, a physiologic process. Increased circulation, plus infection, will cause exudation of small round cells and hyperplasia—a pathologic condition. As this pathologic process continues the elements of the gland, whether glandular or fibrous or both, become increased. The glandular elements are increased first, the fibrous elements secondarily. Naturally, one expects the glands immediately surrounding the urethra to become involved first, and pathologists have shown that the central glands are first involved.

No reason can be given why the glandular form should be so much more frequent than the interstitial other than the continued irritation produced by the retained secretion of the acini, from complete or partial occlusion of the excretory ducts by the small round-celled infiltration.

After the occlusion of the glands the interstitial hyperplasia may cease, but the retained secretion will keep up the irritation of the acini, causing a multiplication not only of the cells but also of the acini. This is a plausible explanation of the occurrence of the adenomatous form in from 80 to 85 per cent. of the cases of hypertrophy. Furthermore, the fibrous and fibromyomatous form is most frequent in the young.

In the case of the boy of 8 the infection followed catheterization during an attack of typhoid, and it has continued to the present time. The boy now has a large fibrous gland, the enlargement being principally in the median lobe and practically free from inflammation. The bladder wall is not only thrown into rugæ, but two diverticula are developing on the posterior wall. There are 360 c.c. of residual urine.

Two other patients under my care at present have prostatic hypertrophy. One, a man, aged 34, has no residual urine, but he has a contracted bladder and urinates frequently. The other, a man, aged 37, has 450 c.c. of residual urine and an infected bladder, with the usual rugæ accompanying hypertrophy. Another patient had complete retention for four years previous to operation at the age of 41, and yet another, aged 59, had had complete retention for fourteen years.

Most of these patients gave a definite history of acute infection in young manhood, and all gave a definite history of chronic prostatitis. Of course, acute specific infection is not a pre-requisite to a chronic prostatitis, but it is the most common cause. There was no sclerosis, nor was there a history of injury to any nerve trunk.

These cases show that hypertrophy is not confined to the aged or atheromatous period of life, and also show that the condition is frequently found in patients in the prime of life. It must be admitted, however, that hypertrophy manifests itself most frequently in the aged, but the explanation for this is twofold: First, each year lengthens the time for infection and continued inflammation with its increasing obstruction; and, second, it occurs at that period of life when lack of tone and senile degeneration make themselves manifest. There is yet no record of any celibate undergoing operation for hypertrophy, a strong point in favor of infection as a cause.

TREATMENT.

If this theory be true, pathologic hypertrophy is a preventable condition in many cases, and the treatment is prophylactic, palliative and operative. The prophy-is prophylactic. palliative and operative. Prophylaxis consists in the application of heat, massage, dilatation and various medicinal remedies. The palliative treatment consists of catheterization, intravesical irrigation, vesical sedatives and urinary antiseptics.

The operative treatment is palliative and radical. Palliative measures, such as cystotomy, are only resorted to in extreme cases in which prostatectomy is not advisable. Prostatotomy, or the Bottini operation, is indicated in a limited number of cases—those in which the median lobe is small—and even these patients will do better with perineal section. The removal of the gland is advisable in all cases in which hypertrophy is sufficient to demand it unless the patient is *in extremis.*

I am in favor of the perineal operation. First, because it is in accord with the best laws of surgery in that it affords perfect drainage from the most dependent point; second, the ejaculatory ducts, seminal vesicles, prostatic urethra, bladder wall and the vesical sphincter are all left intact, continuous irrigation of the bladder may be kept up for twenty-four hours without soiling the linen, the patient can control his urine the second day after the operation, and is out of bed the third or fourth day, avoiding all the unpleasantness of having to lie in bed bathed in his own urine for two or three weeks, as is the case in the suprapubic operation. In the suprapubic operation not only are the prostatic urethra and ejaculatory ducts destroyed, but a large area of bladder wall is torn, thus opening up the blood vessels and lymphatics for infection, with very poor drainage. The argument has been advanced that the saving of the ejaculatory ducts is of little consequence, since the operation is seldom necessary except in men whose sexuality is unimportant on account of their age. In my opinion, however, the preservation of these ducts is of the utmost importance, and especially would this be true in the boy of 8, the young married man of 25, 34, 41, or even the man of 60 or 65. If for no other reason than to save these ducts, the perineal is the operation to be preferred. A number of cases could be cited in which the sexual powers were not interfered with, but, on the contrary, have been completely restored to normal.

BLOOD DEPLETION TO 296,000 IN PERNICIOUS ANEMIA WITH RECOVERY.

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Reports of recovery in pernicious anemia, when the blood depletion reaches 300,000 or lower, are rare. In Quincke's classical case it reached 143,000 and the patient was said to have recovered, at least for a time. Very few cases, however, are reported in the literature approaching this figurative count. The word "recovery" is used tentatively in the case herewith reported, in the sense that two years have elapsed since this patient first came under observation with a return, as we understand generally the meaning of the term, to perfect health and ability to perform arduous manual labor for the past year. During this time the blood counts and hemoglobin percentages have reached normal limits.

As the blood counts approached the normal, normoblasts and megaloblasts could not be found in the smears (entirely absent for the past year), and the marked poikilocytosis present in the early specimens disappeared. Two years is, perhaps, too short an interval to speak of recovery in a disease so characterized by a tendency to relapse as primary progressive anemia, and still, to all intents and purposes, the patient is in perfect health

J. B. T., male, aged 27, farmer, was admitted to St. Vincent's Hospital as a patient of Dr. W. W. Coldham, with whom it was my privilege to see him, Jan. 4, 1906.

History.—The patient had never been out of the state, and had never been ill until March, 1905. Purpuric history, scurvy, lead intoxication and lues were excluded. Hemorrhoids not present. In March, 1905, the illness began with weakness, palpitation and dyspnea, loss of appetite and extreme pallor. The ankles and subpalpebral folds became swollen later. He partially recovered during the summer following (1905) and was able to resume his work for a short period.

The illness which brought him to the hospital began about one month before admission (early in December, 1905) with malaise, constantly increasing weakness, constant vomiting after taking food, and dyspnea. There had never been a history of urinary retention or loss of weight.

Examination.—When admitted, the patient was in a drowsy, semi-comatose condition, and unable to answer questions intelligently. The pallor was marked, and of a decided yellow tint. There had been no loss of weight. The panniculus was well preserved. More or less general edema was present, involving, especially, the extremities and face. The eyes were nearly closed. The liver was slightly enlarged, and the spleen was just palpable. Superficial lymph nodes not increased in size. Urine: Examination showed nucleo-albumin present in slight amounts, serum-albumin in considerable quantity, and a slight amount of albumose; otherwise negative. The urine was voided involuntarily during the first few days.

Blood: Jan. 4, 1906. Hemoglobin, minus 10 per cent. (Dare). An average of three counts from ear and finger give 296,000 red cells per c.mm. Poikilocytosis was marked (shadow forms, microcytes, macrocytes, and lance shaped forms were abundant). Few normoblasts and megaloblasts were present. White cells, 4,800; normal differential counts.

Treatment.—The treatment in the beginning consisted of sodium arsenite, gr. 1-10, hypodermically, every four hours, because of the patient's gastric disturbance and his inability to swallow during the first few days in the hospital. Strychnia and brandy were administered hypodermically for the impending collapse, and 500 c.c. normal saline solution were injected subcutaneously, every four hours, for two weeks. Nourishment per rectum. The sodium arsenite was continued during his stay.

Subsequent Blood Examinations.—Jan. 7, 1906. Hemoglobin, 10 per cent. (Dare); red blood cells, 582,400; color index, 0.8; marked poikilocytosis, with abundance of normoblasts; fewer megaloblasts; few myelocytes. The increase in the number of normoblasts and degenerate forms of leucocytes after three days of arsenic medication was very suggestive.

January 10. Hemoglobin, 15 per cent. (Dare); red blood cells, 972,000; color index, 0.7; marked poikilocytosis, but fewer normoblasts and degenerated leucocytes than before.

January 19. Hemoglobin, 20 per cent. (Dare); red blood cells, 1,286,300; color index, 0.7; leucocytes, 3,860; normal differential counts; poikilocytosis still marked; normoblasts diminishing; no megaloblasts found.

The improvement was rapid from this time on and the patient left the hospital five weeks after admission, Feb. 8, 1906.

Subsequent History.—The patient was able to resume work as a farmer in May, 1906. On Nov. 28, 1906, the hemoglobin was 81 per cent (Dare); red blood cells, 2,768,000; color index, 1.4; one normoblast was found in one slide, and a few atypically shaped red cells, but no microcytes or macrocytes.

The blood examination made on Oct. 19, 1907 (one year later) showed hemoglobin, 92 per cent. (Dare); red blood cells, 3,792,000; color index, 1.2; leucocytes, 3,733; differential counts within normal limits. No normoblasts were found; no poikilocytosis.

On Dec. 28, 1907 (two years from beginning of attack), the hemoglobin was 94 per cent. (Dare); red blood cells, 4,438,000; color index, 1.0; leucocytes, 4,320; normoblasts and megaloblasts absent. No poikilocytosis.

Subsequent Treatment.—The first three months after returning home he took small doses of Fowler's solution and dilute hydrochloric acid. Medicine has not been necessary for a year and a half. December, 1907, he weighed 181 pounds.

This case emphasizes the following points:

1. The immediate prognosis in certain cases of pernicious anemia, with blood depletion below 400,000, although serious, is not hopeless.

2. The prognosis depends on the degree of red cell regeneration in the bone marrow, the age of the individual and the potency of the hemolytic poison being important factors.

3. Arsenic exerts a rapid specific influence on the degree of red cell regeneration in certain cases of per-

nicious anemia, but whether through direct stimulation to bone marrow activity or through neutralization of the hemolytic poison, or both, is a point that remains to be settled.

236 Michigan Street.

A CASE OF TRANSIENT HEART BLOCK DUE TO INTESTINAL TOXEMIA.

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Patient.—R. E., Jr., aged 17, a robust school boy, was seen by me with the symptoms described below, on April 2, 1907

History.—He is the third child of healthy parents who have been patients of mine for five years or more. There was no family history of importance except that his father is subject to attacks of intestinal fermentation with marked indicanuria and slight albuminuria without morphologic elements, and that his paternal uncles are of neurotic temperament. The patient himself is also subject to attacks of intestinal disturbance and suffers from constipation at times. In April, 1904, I treated him for diarrhea, at which time his physical examination was negative except for some pallor of the face and a systolic murmur at the base of the heart, which I attributed to anemia. His blood examination was negative except that the red cells were a trifle pale. His urine was negative. During the summer of 1906, while away on a vacation, he was confined to bed for more than a week with severe diarrhea. He is a good athlete and played quarterback that fall on the football team of a large preparatory school in New England. He also took part in the running and other athletic contests. Several times that year he was knocked senseless on the football field and once did not remember anything that occurred during the second half of the game after having received a blow on the head, although he continued to play. He came to see me on Nov. 5, 1906, looking pale and worn, and complaining of insomnia, which was worse for a night or two just preceding a football game. Physical examination was negative, except that his heart beat too forcibly, while both the first and second sounds were louder than usual and his pulse showed increased tension. His afternoon urine contained a "decided trace" of serum albumin, while the morning specimen showed only a "faint trace" or none at all. His blood count was normal. After a quiet two weeks, at home he slept much better and the albumin disappeared. He was then allowed to return to school but was advised to avoid violent exercise, especially athletic contests, for some months. He disobeyed instructions, as I next heard of him as captain of the hockey team. On March 26, 1907, he came to New York City with some school friends, ate a very heavy dinner, drank several glasses of beer, and smoked excessively. Nausea, vomiting and headache resulted, which continued during the night and the following forenoon. All the succeeding week he suffered from indigestion and constipation. On Sunday, April 1, he felt exceedingly ill and decided to make an effort to get home as he thought he was going to have typhoid. He left school early Monday morning, vomited frequently during the six-hour journey, and could not retain anything on his stomach.

Examination.—When seen by me in the afternoon, he was ashy pale and seemed very ill. He was still nauseated and suffered from vertigo, which recurred several times in the next twenty-four hours. His temperature was 97.8 F., and his tongue was thickly coated. I was greatly surprised on feeling his pulse to find it beating at the rate of 28 to the minute, but it was quite regular and of remarkably good tension. The frequency of the radial pulse was uninfluenced by posture or slight exertion. The apex was high, just under and just within the left nipple, and dulness did not extend beyond the midsternal line toward the right. There was a faint systolic murmur over the apex which was not transmitted, and another, also systolic, over the pulmonary space. The examination of the lungs was negative and the spleen and liver were not enlarged. The abdomen was rather distended and slightly tender, particularly in the epigastrium. Thinking that perhaps some of the pulsations of the ventricle did not reach the wrist, I listened very carefully, and it seemed to me that I could occasionally make out an almost inaudible sound between the slow and pronounced pulsations at the apex. These pulsations could not be counted with even an approximation to accuracy on account of their feebleness. A very distinct venous pulse, however, could be both seen and felt in the jugular vein, which beat at the rate of 96 to 98 to the minute. So far as I could determine by inspection and palpation, this venous pulse did not seem to bear a simple relation to the pulse at the apex. To determine with certainty whether the block was complete or partial, tracings should have been made of the apical, jugular and radial pulsations. Blood examination showed hemoglobin, 80 per cent.; red cells, 5,120,000; white, 2,000. He voided ten ounces of urine Monday evening, which was all he had passed in twenty-four hours. It was clear, dark red; sp. gr., 1.033; decided trace of albumin present; urea, 2 per cent.; no bile; no sugar; large amount of indican. Microscopic examination showed a few hyaline casts and some renal epithelia.

Treatment.—He was purged with calomel, put on an alkaline diuretic and a limited quantity of peptonized milk. The following day his urine increased in quantity and indican fell off, while his pulse was slightly accelerated. It increased to 40 the third day, to 50 the morning of the fourth day, and that afternoon rose to 72, with the loss of an occasional beat; the venous pulse had by this time disappeared.

The clinical characteristics of Adams-Stokes disease are: 1. Bradycardia of shorter or longer duration. 2. Venous pulse in the neck. 3. Cerebral disturbance which may vary from weakness or slight vertigo to severe epileptoid convulsions or Cheyne-Stokes respiration. Heart block is said to be complete when the pulsations of the auricle and ventricle, as shown by tracings, bear no definite relation one to another. It is said to be partial when there is a definite relation between the two, so that every second or third or other small fraction of the pulsations originating in the auricle do reach the ventricle. Then these curves show a fixed relation to each other.

The condition is due primarily to interference with the bundle of His, a muscular bundle which passes forward from the coronary sinus through the interauricular septum to the central fibrous body of the heart, on which it forms a plexus. One of the bundles from this plexus breaks through the fibrous body into the interventricular septum and is distributed subendocardially to the right and left sides of the latter.[1] This is said to be the only muscular communication between the auricles and the ventricles.

His[2] succeeded in sectioning this bundle which he had previously demonstrated and bringing about complete disassociation of the auricular and ventricular rhythm. Gaskell[3] was the first to demonstrate the fact that in tortoises constriction of the circular layer of muscle at the auricular ventricular junction inhibits the normal rhythm of the heart, so that the auricles and ventricles beat independently. The work of A. F. Stanley Kent[4] on the structure and function of the mammalian heart should be read in this connection.

A case similar to mine is recounted by Babcock,[5] which occurred in a young officer of the army with a good family and personal history. This man presented indicanuria and other digestive disturbances at the time of his attacks. A study of a case which occurred in the service of Dr. Osler at Hopkins, by Joseph Erlanger,[6] is most instructive. This patient recovered under iodids.

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[1] Ewart: Progressive Medicine, September, 1906, p. 74.

[2] Arb. a. d. Klin. zu Leipzig, 1893, p. 23; Centrbl. f. Phys., 1895, ix, 469; Deutsch. Arch. f. klin. Med., 1899, lxvi, 316.

[3] Jour. Physiol., 1883, iv, 43.

[4] Jour. Physiol., 1893, xiv, p. 233.

[5] Diseases of the Heart and Arterial System, D. Appleton & Co., 1903, New York and London.

Ashton, Norris and Lavenson[7] give a full account of this affection and report a case with autopsy. Here almost complete division of the bundle of His was caused by gummatous infiltration.

Another recent case with autopsy showing fatty degeneration of this bundle is reported by Butler,[8] of Brooklyn. Stengel[9] carefully reports a case which microscopically presented marked atheromatous changes in the region of the bundle of His.

The bibliography of this affection is already very extensive; much of it is referred to in the articles mentioned, from which I have quoted freely.

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HOW THE MALARIAL PARASITE PERPETUATES ITS EXISTENCE.

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Observing that malarial fever may occur during any month of the year, in any climate, and in regions where there are no mosquitoes, one is often asked the question: "In the beginning of the year, where does the malarial parasite come from?"

Before the days of the discovery of the fact that the *Anopheles* acts as the carrier of the malarial parasite, the above question was impossible of solution, and, indeed, some time after that discovery had been made known to the world through the researches of Ronald Ross and others, some observers were slow in being convinced in regard to the true etiology of this disease. Having considered the fact that malarial fever became more prevalent during months of the year when the weather was warmest, and when vegetable and organic matter was most subject to decay, the opinion became current that the cause of malarial fever was generated or reproduced itself in the soil, or air, or else in stagnant water, where such decay was going on the most rapidly.

Subsequent investigations made by Ronald Ross, Koch, Grassi, Marchiafava, Bignami and others abroad, and by Thayer and others, including myself,[1] in America, and still later by the investigations in regard to the etiology of yellow fever, have demonstrated how opinions firmly grounded when based alone on the process of observation and not confirmed by experiment may lead one into serious error.

Slowly, the facts regarding the etiology of malarial fever gained a foot-hold and at last have been incorporated in the medical text-books of the present day.

Though many of the discovered truths had become firmly established as to the method of conveyance of malarial fever from man to man, there were many who could not give up the old belief that malarial fever might be contracted through the medium of the inspired air, or drinking water, and even after these opinions had almost been dispelled, there still remained a lingering fear that these discoveries might be fallacious, since it was pointed out that malarial fever might occur during the winter months, and in regions where there were no mosquitoes. The statement had been reiterated that there were two hosts only which harbored the malarial parasite, the *definitive* host (man), and the *intermediate* host (mosquito), and as it could be demonstrated that malarial fever might occur in regions where there were no mosquitoes, the *presumed* axiom "no mosquitoes, no malarial fever" was challenged and frequently denied.

Since experience had taught that malarial fever was more common in the fall, and gradually disappeared as winter approached, to reappear in the spring, it seemed as though there was a gap somewhere in the formulated theory as to the life cycle of the malarial parasite. The next questions to determine were, how does the malarial parasite perpetuate itself, and what becomes of it during the winter months?

In order to answer these questions more fully it becomes necessary to compare the life cycle of the malarial parasite with that of some of the other disease producing micro-organisms. Comparing the malarial parasite (an animal organism) with micrococci (vegetable organisms) we are struck with the complex life of the former. In the reproductive process of the micrococci, for instance, there is a cleavage along certain lines, and one micrococcus splits into two micro-organisms, producing diplococci. Sometimes the cleavage occurs in three directions and sarcinæ are produced. If the cleavage is always in the same direction, long chains of organisms, streptococci, are produced, and if into groups, staphylococci are found. The bacilli divide transversely and arrange themselves into threads, and, as in case of the tetanus and anthrax bacilli, contain spores.

The life cycle of the malarial parasite is quite complex. Being of a higher order, and of an *animal* nature, it requires for its growth and development a certain amount of heat and darkness, and a certain amount of albumin or living protoplasm. While many of the vegetable organisms, such as the tetanus and plague bacilli, may grow in the soil and sometimes in the water (typhoid bacillus) the malarial parasite would undoubtedly perish if it did not obtain for its nourishment living protoplasm.

It is probable that the cause of yellow fever is an animal organism, partaking somewhat of the nature of the malarial parasite, and found in its permanent host, the blood of man.

Perhaps, by a process of *natural selection,* it is necessary that the malarial parasite should be withdrawn from the human blood, and be changed in the body of the mosquito from the full grown or flagellated parasite to the spindle-shaped spore, to be in this form transmitted back to man, for the reason that it could not seemingly otherwise escape from its permanent host (man) and be again introduced in a *living* form into some other living body.

Shortly after the discovery of the malarial parasite by Laveran, investigators began a closer study into the nature of the different forms of this organism, and most of them came to the conclusion that the estivo-autumnal parasite was the one most responsible for the pernicious types of malarial fever, and the one which to the greatest degree resisted the action of quinin. While it appears true that the estivo-autumnal parasite may give rise to very pernicious forms of fever, one must

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6. Jour. Exper. Med., Nov. 20, 1905, and Jan. 25, 1906.
7. Amer. Jour. Med. Sci., January, 1907, p. 28.
8. Amer. Jour. Med. Sci., May, 1907, p. 715.
9. Amer. Jour. Med. Sci., December, 1905, p. 1083.
1. Trans. College of Physicians of Philadelphia, Third Series, vol. xxii, 1900; also Journal A. M. A., March 2, 1901.

not lose sight of the fact that the tertian type may also be very resistant to the action of quinin, often appearing to survive the administration of over 100 grains and go on hibernating and sporulating in the patient's blood throughout the winter months.

SOME CASES OF MALARIAL FEVER WHICH HAVE OCCURRED DURING THE WINTER MONTHS.

Case 1.—Dec. 29, 1905. *History.*—Q. H., white, aged 6 years, never seriously ill until two years ago, when he had several attacks of tonsillitis.

Present Illness.—Began Oct. 1, 1905, with a "dumb" chill, followed by fever. The second chill occurred two days later. For this attack he took quinin and had no more chills for twenty-one days. He began taking quinin Dec. 29, 1905, at 3:30 a. m., and had taken about 9 grains previous to the time the blood was obtained at 9:30 a. m. December 29. It was believed by the father that the tonsillitis was the cause of the fever.

Examination.—The spleen was enlarged (though in my experience it is about as frequently not enlarged in recurrent cases), and was palpable two or three inches below the ribs. The boy had a blanched appearance; hemoglobin, 60 per cent. The blood was stained by the Wright method and showed one crescentic estivo-autumnal parasite, containing black pigment granules, arranged in the shape of a wreath near the center of the parasite. In another specimen of blood obtained at the same time and stained by the Woldert modification of the Nocht-Romanowski method, I found two small merozoites with blue protoplasm and one dot of red nuclear chromatin clinging just within the edge of a red cell. In two crenated red cells I found one merozoite in each which had an irregular protoplasmic body and one dot of red chromatin. Two other red cells were found containing small forms of merozoites exhibiting one dotlet of nuclear chromatin.

Case 2.—Jan. 12, 1906. *History.*—The patient, a boy, 13 years of age, in August, 1905, began to have "dumb" chills. During October, 1905, he had three chills, recurring about every seven days. For this attack he began to take tonics. He afterward had three "dumb" chills during November, which paroxysms occurred every seventh day. In December he had about four shaking chills. The last chill occurred Jan. 11, 1906. About January 1 and 10 he had shaking chills.

Examination.—The blood was obtained on Jan. 12, 1906, at 7 a. m., and was stained by the Wright and also by the modified Nocht-Romanowski method, and showed attached to the red corpuscles the ring form of parasites, with only one dot of red nuclear chromatin. In other microscopic fields I found large and small ring forms, each of which contained only one granule of nuclear chromatin.

Case 3.—Jan. 23, 1907. *History.*—The patient, a physician, aged 25 years, had never been seriously ill previous to July 14, 1906, when he went fishing on the Neches river in Texas, and at noon on July 17, while still in camp, he began to suffer from severe abdominal cramps, soon followed by nausea and vomiting. Later he developed a severe form of urticaria, which bothered him severely for several hours, passing away entirely after three or four days. On the morning of July 17 he had a high fever, which seemed to decline about 11 a. m. July 18 he had another attack of abdominal colic followed by fever. July 20 he began taking quinin (15 to 20 grains daily), continuing it for about ten days. The quinin was then discontinued and at the end of three or four days the fever returned, and he again took quinin for three or four days. The fever continued for about three weeks.

Present Illness.—Began at 11 a. m. Jan. 18, 1907, with sudden cramping in region of stomach accompanied by severe vomiting, and within half an hour he began to suffer with urticaria lasting a day or two. There was no fever on January 19. At noon January 20 he again suffered from an attack of cramp colic followed by a shaking chill and fever. On January 22, at 2 p. m., he had another shaking chill, followed by high fever. On this day at 6 p. m., he began taking quinin, and up to January 23, at 2:30 p. m., had taken 25 grains. The blood, stained by the modified Nocht-Romanowski method, showed tertian rosette forms of parasites containing three or four segments of red nuclear chromatin. Half-grown and smaller forms were also present. The stippling (tüpfelung of Schüffner and Goldhorn) of the infected red cells was marked.

Case 4.—Feb. 22, 1907. *History.*—Man, 22 years of age, gave a history of having had chills two years previously. December, 1906, he had two or three chills, coming on every two days, except one day, when he had two chills. For this attack he took quinin. He felt well until Feb. 19, 1907, when he had fever, followed by a chill. At this time he was examined, and the tongue was found in a moist condition and clean. The spleen was not enlarged and not tender. Some tenderness existed over the gall bladder. At 11 a. m. February 21 he had another chill, and then two specimens of blood were stained as above and showed in one microscopic field the signet ring form of the estivo-autumnal parasite (described by Ewing) containing one dotlet of red nuclear chromatin, while in another microscopic field a larger signet ring form was observed, which contained two granules of red chromatin.

Formerly it was held that quinin was a specific for malarial fever and (*while it undoubtedly stands to-day the best of all drugs for this condition*) is was believed that the administration of only a few doses of this drug would eradicate the disease. If there was a recurrence of chills and fever two or three weeks after the initial fever, this was looked on as a fresh invasion, and a few more doses of quinin would be given for the supposed new attack. After further investigations had been made on this subject, it was demonstrated that a few grains of quinin would not make all malarial parasites disappear from the blood, and it is now known that a recurrence of chills and fever a week or two, or often a month or two (as frequently observed during the winter months) after the initial attack, should be looked on as being a relapse of the old disease, produced by an increase in the number of the parasites.

I wish to cite a case of tertian malarial fever in which the patient, after having taken more than 200 grains of quinin, followed later by a tonic, suffered from a relapse of the disease.

Case 5.—*History.*—Initial attack, October, 1905, with recurrence in February, 1906. Mrs. B., aged 36, large and plethoric. On Oct. 24, 1905, at 10 a. m., had a "dumb" chill. On October 26, at 2 p. m., she had another "dumb" chill. The tertian paroxysms now changed into the quotidian, and she had a shaking chill October 27, at 3 p. m., and October 28, at 11 a. m.

Examination.—Oct. 28, 1905, at 4 p. m., a drop of blood was stained (modified Nocht-Romanowski method), and exhibited two groups of the tertian malarial parasite, hence the case was one of double infection. On examination of the room, I found *Anopheles quadrimaculata* present in abundance, in fact the *Anopheles* was more numerous than the common house mosquito (Culex).

Subsequent History.—Quinin was administered in the manner suggested by Koch, giving the drug for four days, then leaving it off three days, then four more days of quinin and leaving it off for three days, and finally four more days of quinin. After a few days the patient got up out of bed and began taking a tonic, and seemed as well as usual for two months. (Altogether she had taken over 200 grains of quinin.) In January, 1906, she began to exhibit peculiar nervous symptoms, such as twitching about the mouth, tremors, and a feeling as though the blood was "rushing to the head." Feb. 26, 1906, she had a "dumb" chill at 3 p. m. February 28 a slight shaking chill occurred, accompanied by general body pains. The blood examination February 28 revealed the tertian malarial parasite still present in double infection.

This case again illustrates how easy it is for certain forms of malarial parasites to resist the action of quinin, how easy it is for the parasite to reside in the human blood all winter, and how hard it will be to exterminate the disease in any given locality.

In Texas, for instance, my investigations[2] have shown that the annual expense to the people arising from malarial fever, is about $5,000,000 and during the same period over 3,000 people die as a consequence of the disease.

When it became fully demonstrated that *Anopheles* acts as the carrier of the malarial parasite this presumed axiom (?) was formulated: "No mosquitoes, no malarial fever." This statement was not broad enough and neither was it correct. It failed to take into consideration the fact that malarial parasites may remain latent in a patient's blood for many months, be transported for thousands of miles, and give rise to chills and fever in localities where it would be impossible for mosquitoes to exist. But it can now be said with truth, that where there are no mosquitoes no *autochthonous* cases of malarial fever can arise. Just how long a time the malarial parasite may lie dormant in the human system previous to becoming active is not known, but a case has been reported in which the parasite seemed to have lain dormant for nearly two years.

In order to produce an attack of malarial fever, it has been calculated[3] that at least 250,000,000 of the parasites must be present in the human body.

Clinically the fact that the malarial parasite may lie dormant in the human blood for many months without giving rise to symptoms, can be proved by going more fully into the history of cases of chills and fever occurring during the months of December, January and February, when mosquitoes are not usually seen, and it will be found in practically every instance that these patients suffered from malaria during the preceding fall.

Craig reports[4] 395 cases of latent or masked malarial infections occurring in soldiers returning to the United States from the Philippines. Of 1,267 soldiers, ill of various diseases and returning from the Philippines, Craig proved that 25 per cent of them showed malarial parasites in the blood, unaccompanied by clinical symptoms or masked by symptoms of some other disease. These patients brought their infection with them a distance of several thousand miles and across the Pacific Ocean.

LENGTH OF LIFE OF A MOSQUITO.

The length of time a mosquito may live in temperate zones has not yet been absolutely determined. In Philadelphia I kept one living in a glass jar and fed on bananas, from October 28 to December 26, or sixty days. At that time I submitted proof[5] that some mosquitoes may live in the latitude of Philadelphia during the months of December, January, February, March and, in fact, throughout the entire year. In Tyler, Texas, I found[6] larvæ of *Anopheles* living on the surface of water of a small pond in midwinter (December 21, 1902) and after freezing weather.

Dr. Alfredo Austin of Tamaulipas, Mexico, has informed me that he has kept mosquitoes in captivity for a period of four months, their only food being water on a moistened sponge.

It is undoubtedly true that mosquitoes may live and propagate in regions near the Arctic zone. Rear Admiral George Wallace Melville informed me that he had found mosquitoes within 500 miles of the north pole, in latiture 65 to 78 degrees N. Mosquitoes are said to be so numerous in regions near the north pole that animals coming southward during certain months of the year are driven back north again by the swarms of mosquitoes infesting that country. The determination of the length of life of this insect is of special interest in the prevention and prophylaxis not only of malarial fever, but also of yellow fever.

I have stained specimens of malarial parasites taken from cases of malarial fever occurring in every month of the year. In every instance but two, the specimens were stained by my modification of the Nocht-Romanowski method, and in these exceptions the carbol-thionin and Wright methods were used. The types of malarial parasites found in the peripheral blood were as follows: *January*, tertian merozoites and a few rosettes. *February*, estivo-autumnal ring and signet ring forms. *March*, tertian rosettes and many rings forms. *April*, tertian rings and full grown forms. *May*, half grown tertian forms. *June*, tertian forms. *July*, tertian rosettes. *August*, estivo-autumnal rings. *September*, estivo-autumnal rings. *October*, swollen estivo-autumnal rings. *November*, estivo-autumnal rings and full-grown forms. *December*, crescents and estivo-autumnal merozoites.

CONCLUSION.

This paper does not specially consider that phase of the question dealing with the spores of the malarial parasite which may lie dormant in the tissues of the mosquito, nor with those forms of malarial parasites found in the blood of birds, reptiles, and some of the lower forms of animal life, nor whether such parasites may be communicated to man and back again to the lower animals through a transformation of type which Koch unsuccessfully endeavored to determine,[7] but my series of cases do exhibit specimens of human malarial parasites I have taken from the peripheral circulation in cases of malarial fever occurring in every month of the year (during winter, when there are presumably no mosquitoes, and also during the spring, summer and fall, when they are abundant), therefore no one can escape the conclusion that the malarial parasite may live and thrive during the winter months, without the existence of mosquitoes, and that *man* is its permanent host.

THE SYSTEMATIC OCCUPATION AND ENTERTAINMENT OF THE INSANE IN PUBLIC INSTITUTIONS.

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When passing through an institution for the care of the insane the visitor is usually impressed with the same unhappy picture, namely, the great number of patients sitting about, in the rooms and corridors of their wards, with no occupation whatever, careless and indifferent, compelled to remain thus practically hour after hour, day after day, many of them even year after year. Can we wonder that so many of our insane descend step by step to the most hopeless dementia? Should we be astonished that the percentage of recoveries, or improvement even, is relatively so small as long as this condition is permitted to exist?

There are probably few hospitals for the insane which do not deplore this condition. On all sides efforts are being made to relieve this situation. The question naturally arises how best to supply occupation and entertainment to these people. Each hospital endeavors to furnish as many of its patients as possible with suitable work in the different departments of the institution, such as the laundry, sewing-room, the farm, garden, the dairy, the shops, in fact in all its avenues of employment. We can not deny that to some degree a selfish motive exists, namely, the question of economy in the saving of labor, but this does not lessen the benefits derived by the patients from these occupations.

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[2] Am. Jour. Med. Sciences, March, 1903.

[3] Instructions for the Prevention of Malarial Fever. Issued by the Liverpool School of Tropical Medicine, 1900, 5th Edition.

[4] Am. Med., Oct. 29, 1904.

[5] THE JOURNAL A. M. A., Feb. 10, 1900.

[6] Am. Med., March 24, 1906.

[7] Brit. Med. Jour., Feb. 10, May 12, June 30, Sept. 1, Nov. 24, 1900.

The different legislatures of the country are awakening to the fact that occupation must be supplied to the inmates of our asylums, and they are more liberally than heretofore appropriating funds with which to build industrial buildings, where the different trades and mechanical arts may be carried on.

Institutions vary greatly as to the amount of industry at their command. Yet the fact remains that even those institutions which are fortunate in having a comparatively large amount of industry within their boundaries can, with very few exceptions, only give systematic employment to a limited percentage of their patients, and that number is usually, or practically always, overshadowed by the number of those who are not systematically employed. Besides the lack of funds to construct industrial buildings, the deficient mentality of a certain number of patients renders them unfit for many pursuits. And, again, there are risks for the safety of the patients and others, which must be considered, though the number of this latter class is exceedingly small when placed under proper guidance and amidst favorable surroundings.

Here are men and women, torn away from their home ties, some from occupations connected with vigorous bodily labor, and the tremendous harm that could be produced by this suspension of exercise of all kinds while the body is still strong and active, must not be underestimated. The plea of lack of industrial means seems an insufficient excuse. A hospital with even limited advantages should arrange methods and means by which these pitiful subjects can receive that which they need and crave—occupation and recreation for their weakened minds and inert bodies.

A brief mention of the method which has thus far offered to me the best solution of these difficulties may not be uninteresting. There is nothing new employed in this method, except, perhaps, the system connected therewith. Its real value lies in the absolute regularity and exactness of its use.

Its main feature is a systematized schedule which satisfactorily accounts for every hour of the patient's day.

After carefully considering the individual needs of each ward as to the class of patients the ward contains, a schedule is arranged in which explicit directions are given how every waking hour must be employed. Only the medical officers have authority to change these arrangements. Physical exercises are provided in the form of outdoor walks, graded calisthenics at regular intervals, and general ward work. Mental occupation is furnished by the use of various games, reading material, picture books, drawing books, colored crayons, and other light pastime with which the mind may be occupied. General kindergarten and primary school work is a splendid method for the entertainment and re-education of certain classes. Classes in needlework for the women should not be neglected, as this is greatly enjoyed by many.

The ward is provided with a sufficient number of folding tables to seat every one comfortably. When not in use the tables are folded and put away. They can be set up quickly when the hour arrives for mental occupation. A ward having an average of forty patients receives from twelve to fourteen tables, and is provided with something like a dozen sets each of different games, such as checkers, lottos, dominoes, authors, crokinole and playing cards. From forty to fifty books are provided, ranging in character from the simple picture book, such as would amuse a little child, to reading material for the adult of average intellect, juvenile books, however, predominating. A few selected daily newspapers and monthly magazines are to be recommended. Other means, too numerous to mention, could be provided.

The occupation of the individual patient must, of course, be directed in accordance with the degree of intellect evinced, and the employment of each patient is daily changed as much as possible in order to lend variety. The reading material is exchanged between wards from time to time.

This plan was first tried experimentally in a ward in which the patients were men, most of whom were in a mental condition termed as chronic. They were irritable, combative, and some even treacherous. Many of them showed histories stained by acts of violence. Dementia was present in greater or less degree in nearly all cases. Yet the method, as outlined, proved more than satisfactory in every way.

If this class of patients can be managed successfully it is surely reasonable to suppose that there are but few wards which can not be equally well provided for and which can not be benefited and entertained in a like manner. There are, of course, a certain number of patients in whom it is impossible to awaken even a spark of intellect. There are others, in the acute stages of mental disease, either in condition of extreme excitement or depression, for whom other measures must be instituted, such as are recognized as the modern therapy of acute psychoses.

Naturally, the cooperation of the attendants and nurses is necessary to the successful carrying out of this program, but this is easily secured by the proper enforcement of discipline. Attendants and nurses, in general, seem pleased with this arrangement, as it helps greatly to break the monotony of their routine work. And, again, the more intelligent of the patients soon learn to assist the attendants in teaching their less apt companions, in whose progress they seemingly take much interest.

With regard to calisthenics, there is no doubt that it is one of the most beneficial ways of providing physical exercise for the patients and can be made one of the best and most convenient methods to exercise and reeducate their minds. The drills should be made as attractive as possible, every effort being observed to employ the mind as well as the body. For this purpose the movements should be varied, continually offering something new to claim the patient's attention. A movement many times repeated presents no attraction and surely does not serve to stimulate the mental function, as it is apt to be executed in a purely mechanical manner. These exercises should be carried out with vigor and in such a way as to bring each set of muscles systematically into play. This serves, incidentally, as a possible means of regaining lost or interfered-with muscle control, be it of organic or functional origin.

Short and frequent drills should be given in preference to long ones. The work should be graded carefully, beginning with the less fatiguing and progressing to those of a more difficult nature. The movements should be executed at the command and following the example of the instructor. Movements in imitation of those employed in the pursuit of manual labor are especially beneficial, such as cutting or sawing wood, mowing grass, propelling a canoe, and so on.

During calisthenics proper methods of breathing should be encouraged, and special breathing exercises should not be overlooked. Rest at frequent intervals during drill is desirable. These intermissions can be filled by selections from the patients' glee club and by various musical and other numbers, contributed so far as possible by the patients themselves. Among a large number of patients some can always be found who possess musical and other talent, which should be encouraged and utilized for their own benefit, as well as for the edification of the fellow patients. Various simple plans could be suggested to fill these intermissions in order that they should become a source of real enjoyment to all. For instance, the patient who can play the violin in old-time fiddler's fashion can almost always be found, and where there is this particular kind of music, clog and similar dances may easily be arranged.

With reference to music, although its use is recognized as in many ways of great benefit to the troubled mind, it appears that it should be given a still more prominent place in the entertainment and treatment of the insane. It is frequently wonderful to observe the soothing effect of music on nearly all kinds of patients, the irritable and combative class as well as those in a depressed state of mind. Above all things, it tends to bring about a condition of cheerfulness and equability of temper, which is the first step to better things.

Glee clubs and other musical organizations should be formed, when practicable, among the patients, and those possessing musical talent should be encouraged in its use and development. Every institution should have its own band and orchestra recruited from among its employés and the more reliable class of patients. Frequent outdoor concerts should be given in season, and concerts, dances and entertainments of different kinds should be arranged for through the winter.

Base ball, basket ball and all manner of rational outdoor sports should be made available to both patients and employés, as both are in need of every healthful recreation which can be offered. Incidentally, we should not lose sight of the fact that a reasonable amount of "time off duty" should be allowed the employés, as they are thus better prepared for their daily tasks and more patient and cheerful in the performance of duties assigned them.

Though all patients in institutions are entitled to attend these entertainments, there is usually a tendency shown by the attendants in charge to regard them as intended only for such patients as are generally well behaved. This is a mistake. The patients deriving the greatest benefit from these amusements are those who are irritable, restless, depressed and indifferent. This should not be left to the choice of the patients themselves nor to the attendants, but should be under the direct supervision of the physician in charge, who alone should be the judge as to which patients should or should not attend the entertainments. An occasional disturbance caused by a patient should be considered of little importance compared with the benefit derived.

I believe that it would prove entirely feasible for an institution to provide itself with competent instructors of music, calisthenics and primary school work. With the methods thus briefly described it will soon become evident that the wards will take on a more cheerful appearance; the faces of the patients will be brighter; restlessness, irritable temper and violence will be observed to be much less, and the use of all kinds of restraints will be reduced. No doubt many patients can be, to some extent at least, reclaimed, re-educated and fitted for the more substantial pursuit of industrial occupation, though at the beginning of this treatment they gave little if any promise.

DIAGNOSIS OF TUMORS AND OTHER LESIONS IN THE CEREBELLO-PONTILE ANGLE.*

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The diagnosis of lesions in the cerebello-pontile angle does not, as a rule, offer much difficulty, but occasionally such a diagnosis is made only to find at operation or necropsy either an absence of a lesion or some other condition which gave sufficient symptoms for the diagnosis of a lesion in this area.

The present paper is concerned with the discussion of the value of different symptoms found in such lesions, and the report of five cases, in two of which a tumor growing from the dura covering the petrous portion of the temporal and the occipital bones gave some of the symptoms of a lesion in the cerebello-pontile angle, to such an extent that an operation was performed in one. In the third case, there was entire absence of headache, nausea, vomiting, vertigo and choked disc, and yet sufficient symptoms were present to indicate a lesion in the cerebello-pontile angle, to find at operation a cyst, with the consequent, almost total, recovery of the patient; the report of a case of abscess of the pia which simulated the symptoms of a tumor in this angle, and, lastly, the report of a case in which a tumor of the fourth ventricle, compressing the inferior vermis, indicated a lesion in the cerebello-pontile angle. These cases are selected for report among others because of their rarity, and as illustrations of the difficulty encountered in diagnosis. In three of these cases a necropsy was done.

The cerebello-pontile angle is that area between the lateral lobe of the cerebellum and the medulla and pons in which are located the eighth, seventh, sixth and fifth cranial nerves. Tumors of this area, as a rule, are fibromata, and grow principally from the eighth nerve, less frequently from the fifth and seventh nerves. Such tumors, especially those growing from the eighth and seventh nerves, are favorable for operative removal.

Lesions in this area may be classified according to their nature and origin. They may be fibromata, sarcomata, endotheliomata, fibrosarcomata, or they may be cystic. According to the location, they may grow from the eighth, fifth or seventh cranial nerves; secondly, they may grow from the substance of the cerebellum or pons, and secondarily involve the structures in this angle, and thirdly, they may grow either from the dura covering the petrous portion of the temporal or the occipital bones, or from both, and secondarily involve the structures in this angle.

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* Read in the Section on Nervous and Mental Diseases of the American Medical Association at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907. The article is here abbreviated, but it appears in full in the Transactions of the Section and in the author's reprints.

Inasmuch as tumors of this area, if sufficiently large, must involve the cerebellum, the motor fibers of the pons and the cranial nerves situated there, it is of the utmost importance to recognize the disease as early as possible, and, therefore, the early symptoms are of the greatest importance. These will depend on the situation of the growth. If a tumor grows from the eighth nerve, there will be, at first, diminution of hearing on the same side, with such irritating phenomena as buzzing, rushing, singing noises, etc. Later, this will be, replaced by total deafness. Very often, however, little attention is paid to the diminution of hearing or the noises in the ear, and the first symptom that the patient will complain of will be that of incoordination as a result of the pressure exerted on the lateral lobe of the cerebellum, or the early symptoms may be those which are the result of increased intracranial pressure, such as, headache, nausea, vomiting, vertigo and choked disc.

The eighth nerve has two divisions, the cochlear, which is concerned with hearing, and the vestibular, concerned with equilibration. Tinnitus or disturbance of hearing will, of course, occur if the cochlear division is involved, but if the vestibular part is also diseased, and this may occur in every case of tumor growing from the eighth nerve, there will be, in addition, a feeling of dizziness, giddiness or vertigo which may be associated with a reeling, swaying or staggering gait and sometimes the sensation of moving either of self or of objects. Cases have been recorded in which the vestibular branch alone was diseased. Mills[1] reported the case of a woman of 34, who had, at intervals, attacks of vertigo, during which she would have a tendency to walk to the left, with the sensation of her head swimming and of objects moving to the left. There was no disturbance of hearing.

Correspondingly a lesion growing from the fifth nerve will give numbness and pain in the face on the same side, to be followed by anesthesia and, if the motor part is involved, of weakness in mastication on the same side.

If a tumor grows from the seventh nerve, it may cause fibrillary twitchings in its distribution, and sometimes convulsions, which appear to be Jacksonian in character. Such was the case in one of the instances reported, Case 2. Here the spasms were limited to the entire distribution of the facial nerve, these coming on without any warning, being first tonic and then clonic in character, and lasting one-half a minute to a minute. It is important to recognize these, for such Jacksonian convulsions will, as a rule, be ascribed to cortical irritation. This is the second such instance reported, the first being a case of Dr. Mills,[2] and referred to and reported by Dr Mills and myself. In the former case a fibroma grew from the eighth nerve and involved the seventh nerve by pressure. The fibrillary twitchings and the convulsions may be succeeded by partial or total palsy in the distribution of the facial nerve, or there may be spasms in the partially paralyzed nerve.

If a tumor grows in the cerebellum and secondarily involves the structures in the cerebello-pontile angle, the first symptoms will, of course, be those resulting from cerebellar disease, and further symptoms will depend on what cranial nerves are involved. Occasionally, however, a tumor growing from the choroid plexus in the fourth ventricle, and compressing the middle lobe of the cerebellum, may give rise to the symptoms of a cerebello-pontile lesion, as in Case 5, in which the tumor grew outward from the fourth ventricle, into and involving the sixth and seventh nerves in the cerebello-pontile area.

If a tumor grows from the pons, and secondarily involves the structures in the angle, the early symptoms will depend on whether the motor or sensory fibers are involved, this causing spastic paresis or disturbance of sensation on the opposite side of the body. Such instances, however, are unusal.

As in two of the cases reported here, if a tumor grows from the temporal or occipital bones, and then involves the structures in the cerebello-pontile angle, the early symptoms may not be manifested until pressure is exerted on the different cranial nerves, pons or cerebellum. In the two cases reported here, the first symptom in Case 1 was right hemiparesis, followed by headache, increasing dizziness, cerebellar gait, disturbance of vision, left external rectus palsy, irritating noises in the ear, later complete nerve deafness, difficulty in eating, talking and swallowing, vertigo, nystagmus, weakness of the left seventh nerve, and later on involvement of the right palate and right vocal cords, ataxia of all the limbs, especially on the left side, a spastic condition on both sides, more on the right, with increased reflexes.

At the necropsy, a tumor was found, which grew from the dura of the petrous portion of the left temporal and occipital bones, and secondarily involved the cerebello-pontile angle. Evidently, in this case, the early symptoms were those resulting from general intracranial pressure, and secondly of an involvement of the cerebellum and nerves in the angle and those which resulted from the compression of the anterior portion of the pons and, lastly, some of the cranial nerves on the other side (Fig. 1).

In the second case, the first symptoms were those of irritation of the optic nerves, to be soon followed by diminution of vision and choked disc, then the general symptoms of brain tumor, such as, headache, nausea, vomiting, then the symptoms of cerebellar involvement on the left side, with weakness of the left sixth and involvement of the left eighth nerves, and on the other side paralysis of the right fifth, sixth, seventh, and eighth nerves with Jacksonian convulsions limited to the seventh nerve. Evidently, here the tumor involved the fifth, sixth, seventh, and eighth cranial nerves on the right side, and on the left the sixth and eighth nerves and the cerebellum. Here the tumor probably grew from the dura covering the right temporal and the right and left occipital bones.

Summing up, the symptoms of lesions growing from the dura covering the petrous portion of the temporal and occipital bones and involving the cerebello-pontile angle secondarily will be bilateral, the greater involvement being on the side of the tumor. There should be present, as in these two cases, implication of the cranial nerves on both sides, with difficulty in eating, talking and swallowing, because of the involvement of the bulbar nerves, incoordination in the limbs, depending on the side of the cerebellum diseased, the general symptoms of brain tumor, and, at times, spastic paresis of the opposite side of the body because of pressure on the pons, all of these coming on gradually.

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[1] The Nervous System and Its Diseases, J. B. Lippincott Co., Philadelphia, 1898, p. 733.

[2] Tumors of Cerebellum, A. R. Elliot Pub. Co., N. Y., 1905, Mills, Frazier, de Schweinitz, Weisenburg, Lodholz.

In both of the cases just enumerated, the possibility of basal syphilis or of multiple sarcomatosis was considered. Often diffuse syphilis of the brain and especially of the base will simulate all of the symptoms of a lesion in the cerebello-pontile angle, as in the case reported by Dr. Mills,[3] which was also studied by me. This man had headache, nausea, vomiting, vertigo, choked disc, left facial paralysis, loss of hearing, more marked on the right side, bilateral ophthalmoplegia, external and internal, incoordination of station and gait, hemiasynergia on the right side, abolished tendon reflexes in both upper and lower extremities, uncertain plantar reflexes and mental weakness. Microscopic examination showed an intense basal round cell infiltration and multiple areas of inflammation throughout the whole brain, extending from the gray into the white matter.

In this case, as in others referred to by Dr. Mills, it was difficult to make a differential diagnosis. The points in favor of a possible syphilitic condition are multiple cranial nerve palsies, especially of the third nerve, for it is hardly possible to have both internal and external ophthalmoplegia in a tumor of the cerebello-pontile angle or even in tumors growing from the petrous portion of the temporal bone. The onset of symptoms in cerebral syphilis is no more rapid than that which is encountered in tumors and the possible aid of a therapeutic diagnosis can hardly be relied on for it is well known that antisyphilitic treatment may cause a temporary improvement in lesions not specific.

When sarcoma grows in the brain it may manifest itself as a diffuse multiple sarcomatosis. This may involve either the nervous substance and the meninges or the meninges alone, when they appear in the form of small tumors or as a diffuse infiltration. When the brain and its meninges are implicated in sarcomatosis, in about two-thirds of the cases a tumor of the cerebellum is found. It is important to remember that when sarcomatosis is present the soft tumor masses grow into the pia about the cranial nerves and spinal roots and may produce little or no compression or destruction of the nervous tissue. It is because of this fact that few clinical symptoms may appear, although there may be extensive alterations in the nervous tissue. In such instances it would be difficult to make a differential diagnosis from multiple cerebral syphilis. In both there may be general symptoms of tumor, plus multiple cranial nerve palsies, and the only possible differential diagnosis might be the presence of sarcomatous tumors elsewhere than in the nervous system. The differential diagnosis from a single tumor in the cerebello-pontile angle would also be very difficult, the points in favor of the former being the greater cranial nerve involvement.

Occasionally, cysts will grow in the cerebello-pontile angle, but their diagnosis will offer no special difficulty, for the symptoms will depend on the cranial nerves involved and the extent of implication of the cerebellum and pons. It should be remembered, however, that cysts may not cause as much pressure as tumors, and, therefore, the general symptoms of intracranial pressure may be absent, as in Case 3, in which there was no headache, nausea, vomiting, vertigo or even choked disc, and the diagnosis was made on the involvement of the left sixth, seventh and eighth nerves and the left cerebellar symptoms.

Rarely, as in Case 4, will an abscess in the pia give the symptoms of tumors in the angle. The diagnosis should not, however, offer very much difficulty for, as in this case, there will be a history of a middle ear disease, with secondary meningeal involvement, and there may be paralysis of the sixth, seventh and eighth nerves and some cerebellar symptoms. It is interesting to note that so far as known by the writer this is the only case of pial abscess correctly diagnosticated in life and proved by microscopical examination.

So far not much reference has been made to the general symptoms of brain tumor found in lesions of tumors of this angle. These symptoms will be taken up in order and discussed.

Headache, as a rule, comes on early and is mostly occipital and liable to be limited to the side of the lesion. Sometimes, however, as in Case 3, headache is a late symptom and in some instances it may not occur at all.

Nausea and vomiting are supposed to be common symptoms, and yet in three of the cases here reported they were absent, while in the other two these symptoms were not marked. In another unrecorded case of the writer in which the symptoms were indicative of a cerebello-pontile tumor, and in which choked disc of eleven diopters was present, showing the greatest amount of intracranial pressure, nausea and vomiting were not present. In my opinion these symptoms are not as frequent in lesions of the cerebello-pontile angle as they are in other cranial tumors.

Vertigo is one of the commonest and earliest symptoms and yet considerable confusion still exists as to its cause and definition. It is variously described, sometimes as giddiness, dizziness, a fainting feeling or a sense of rotation either of self or of external objects. It is probable that all of these are dependent on the same cause, and that the different descriptions are according to the severity of the symptom. An attempt has been made by Grainger Stewart and Gordon Holmes[4] to differentiate the forms of vertigo into, first, the sense of movement of self or surrounding objects, and, second, an indefinite sensation, generally described as a giddy feeling. In both intra- and extracerebellar tumors the external objects in front of the patient move from the side of the lesion to the opposite side, this being also true of the subjective rotation of self in intracerebellar lesions, but in extracerebellar tumors the subjective rotation of self is from the healthy toward the side of the lesion. These symptoms would be valuable in differentiation between intra- and extracerebellar tumors, were they present in all cases, but in my experience this differentiation could not be made, for in my own cases the sense of rotation of objects or self, while it has been present, has always been more or less indefinite.

In the second form of vertigo, described by Stewart and Holmes, the patient suddenly becomes dizzy, generally after some abrupt movement, the surroundings become dark, and there may be numbness or weakness in the extremities associated with intense nausea and a tendency to fall backward or to the side of the lesion; consciousness may be impaired but never lost; objects may seem to swim or intermingle indiscriminately in front of the patient, and he may feel that if not supported he would fall in any direction or collapse. They place no localizing value on this form of vertigo. To this view I can subscribe.

Sometimes, however, these indefinite feelings of giddiness have the greatest localizing value because they may be present only when the head or eyes are deviated in a certain direction. In a case of cerebellar tumor not recorded by the writer, the patient would experience no discomfort when lying flat on her back in the median line, but the moment the head was turned to the right she would experience a sense of dizziness which it was difficult for her to describe, and which would attain its greatest intensity when the head was extremely deviated, becoming less as the head reapproached the median line, ceasing, then, entirely. Deviation of the head to the left would cause no discomfort. A similar case was reported by Osborne.[5] Here a large glioma was found situated in the right cerebellar lobe, and the vertigo was apparent when the patient turned her head to the left. Evidently the dizziness was probably due to pressure exerted on the vermis.

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[3] University of Pennsylvania Medical Bulletin, May, 1904.

[4] Brain, 1904.

Again, this indefinite sense of vertigo may only be apparent when the eyes alone are deviated toward the direction of the lesion, and in such instances would be of the utmost localizing value, as in Case 3, in which the patient experienced a sense of dizziness the moment he turned his eyes to the left, whereas turning his head to the left, with his eyes in the median line would cause no discomfort. Turning the head and eyes toegther, however, would also bring on the dizziness. It is probable that the cerebellum was directly involved.

In discussing this matter with Dr. G. E. de Schweinitz, the latter was of the opinion that dizziness sometimes is present in paralysis of some of the ocular muscles, but that this would be of small degree. This is a rather important point and should be remembered when such palsies are present.

It is probable that vertigo, no matter how described, is the result of a lesion in some part of the vestibular nerve or apparatus, either because of direct involvement of this nerve or its continuation in the medulla and cerebellum proper. Definite proof of this is lacking, but there is no question that involvement of the vestibular apparatus will cause vertigo and disturbances of equilibration and also disturbance in the sense of rotation, as in Case 3. When the patient was placed on a revolving stool and rotated toward the left, he was not aware of the position in which he was turned.

If an individual is placed, as has been done by Raymond,[6] on a small platform suspended a little above the floor, and which turns on a central axis, a normal person can recognize that the platform is being turned and can tell the direction, and if after several revolutions the platform is arrested he will feel as if the platform was still turning but in an opposite direction to the first revolution. Besides, the eyes will, at first, be directed to the side toward which the rotation takes place, and will regain their normal position by slow recession toward the median line, interrupted by forcible nystagmoid jerkings toward that side. In a lesion of the vestibule, the individual is liable not to perceive the motion of the revolving platform, or it may seem to him that the floor is sinking away from under him, and also there will not be as complete deviation of the eyes toward that side.

Choked disc or optic neuritis, as a rule, comes on earlier in cerebellar lesions than in cranial lesions elsewhere, and may be more marked on the side of the lesion. It is usually greater than four diopters. In one unrecorded case, already referred to, the choked disc was as high as eleven diopters. Sometimes, as in Case 3, choked disc may be entirely absent. Here, however, there was a cyst found and removed at operation, and there were present none of the other symptoms of intracranial pressure.

The condition of the pupils and their reflexes are of no aid in the diagnosis of cerebellar tumors, inasmuch as they are dependent on the state of the optic nerves.

Excluding the symptoms resulting from direct involvement of the cerebellum, it is on the implication of the cranial nerves situated in the cerebello-pontile angle that a diagnosis of a lesion in this area is made. We have already discussed the involvement of the fifth, seventh and eighth cranial nerves. The sixth nerve, because of its long course at the base of the brain is one of the earliest to be diseased from a tumor in any portion of the brain, and because of this, paralysis of the external rectus alone, unless associated with paralysis of the seventh and eighth nerves on the same side, is not of much diagnostic value. Bilateral external rectus palsy only rarely occurs in tumors of the cerebello-pontile angle, and, as a rule, is indicative of a middle cerebellar lesion, as in Case 5, in which, besides the cerebellar symptoms, there was present bilateral external rectus palsy with paralysis of the left seventh nerve. Here the paralyses of the left sixth and seventh nerves were due to direct involvement by the tumor, which grew in the fourth ventricle and into the cerebello-pontile angle. In this case, the symptoms were indicative of a lesion in the vermis, but because of the paralysis of the left sixth and seventh nerves it was thought that the tumor was probably situated in the angle and involved a considerable portion of the cerebellar substance.

Unilateral paralysis of the ninth, tenth, eleventh and twelfth nerves sometimes results from a tumor in the cerebello-pontile angle because of pressure, causing difficulty in eating, talking and swallowing, and rarely may also involve some of these nerves on the other side. When this is so tumors growing from the dura covering the petrous portion of the temporal and occipital bones should also be considered.

It is not the purpose of this paper to discuss extensively the symptoms of lesions of the cerebellum and the writer will limit himself in discussing only those symptoms which are pertinent to lesions of the cerebello-pontile angle. Only recently Hughlings Jackson[7] reaffirmed his belief that, just as in the cerebrum, all parts of the body are also represented in the cerebellum, and that there is a constant communication between the cerebrum, cerebellum and the spinal cord, and that if one is put out of gear the functional energy of the related parts must assert itself. He believes that the cerebellum is the center for continuous or tonic movements and the cerebrum for changing or clonic movements. Dr. Jackson also believes that the ataxia which is present in cerebellar disease is due to interference with the afferent impulses, believing, with Edinger, that the cortex cerebelli is an afferent recipient organ, and that the impressions from the trunk and limbs, which it receives by the related spinal tracts from the spinal cord are already coordinated.

Whatever symptoms are produced by lesions of the cerebellum or by those lesions which invade the cerebellum by pressure are dependent on a disturbance of coordination. This is apparent in any or every movement, whether it be in the gait, station, movement of a limb or limbs, of the eyes or of those muscles which are concerned in eating, talking and swallowing.

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[5] Journal of Nervous and Mental Diseases, vol. xxix, October, 1902.

[6] Bull. de l'Acad. de méd., Paris, lxxi, Nos. 11-13, pp. 367-416.

[7] Brain, No. 116, vol. xxix, 1906.

Besides, experimental observation has repeatedly shown that lesion of the cerebellum will produce weakness in the muscles of the limbs and trunk and loss of tone or atony in these parts. There is no question that this also occurs in the human being. In Case 5, for instance, in which a tumor of the fourth ventricle invaded the middle vermis, there was such marked weakness that the patient toward the latter end of the disease was unable to get out of bed. In another unrecorded cerebellar case, already referred to, there was marked weakness in the lower limbs with complete loss of tone. In lesions of the lateral lobe of the cerebellum this weakness or loss of tone may be greater or it may be limited to the side of the lesion. In cerebello-pontile tumors paresis of the homolateral side may rarely be present, this depending on the extent of the involvement of the lateral lobe of the cerebellum. In the cases here recorded it was not found, excepting in Case 2, in which, after the operation, there was marked weakness and loss of tone in the limbs on the same side, this resulting from direct injury of the cerebellum.

The ataxia found in cerebellar disease is usually supposed to be as marked at the beginning as in the completion of the movement and uninfluenced by the closing of the eyes. While the former may be true in acute cerebellar lesions, in chronic cases, especially in cerebello-pontile tumors, the tremor becomes much worse with the eyes shut, and may be of the type known as intention tremor, common in multiple sclerosis. This was true in Cases 1, 2 and 3. Stewart and Holmes believe that the intention type of tremor may be present in chronic cases, and especially where there is a complicating internal hydrocephalus, and that this is especially so in tumors involving the vermis, but they make no mention of the fact that the ataxia is made worse with the eyes shut. Mills[1] has already called attention to this. In fact, in some cases the incoordination, not only of the limbs but of the gait and station, is made so much worse when the eyes are closed that at first the diagnosis of tabes is suggested. Sometimes in lesions of one cerebellar lobe there may be a slight ataxia in the limbs of the opposing side. This, however, is not marked, and will not be as persistent as in the homolateral limbs. The ataxia is equally marked in the upper and lower limbs, if anything more in the upper.

Incoordination is present not only when a whole limb but also when a part of a limb is moved, as in supination and pronation of the forearm or flexion and extension of the forearm on the arm, or in movements of the lower limbs. This is known as Bakinski's diadococcinesia. It was only found in two of my cases.

Sometimes a tremor is noticed in the limbs in cerebellar disease, as in Case 5, in which whenever the patient attempted to move there was violent tremor. It is probable, however, that this is not a special symptom but only an effort at coordination, or rather a symptom of incoordination. Stewart and Holmes have noticed that in unilateral cerebellar tumors, which are not complicated by hydrocephalus, the homolateral arm is held remarkably steady when extended horizontally in front of the patient. This absence of any tremor, vibratory contractions or spasms, and the ability to maintain one position for considerable periods they hold as striking in a limb whose volitional movements are incoordinate and emphasizes the purely kinetic character of the ataxia. The contralateral arm may be unsteady or tremulous when held in the same position, but not, as a rule, to an unnatural degree. In extracerebellar tumors, on the other hand, there is often a regular tremor in the horizontally extended arms, as a rule, equally well marked in the limbs of either side.

The typical gait in cerebellar disease is that described as drunken and reeling. The patient, when walking, suddenly gives way to one side and in my experience to the side of the lesion. Sometimes, as in Case 3, the patient, being aware of his tendency to walk to the side of the lesion, in an effort to correct himself, will walk to the opposite side, swinging this side of the body to the healthy side. Here also, as in the ataxia in all of the cases of cerebello-pontile tumor, the gait was made much worse when the eyes were shut.

The station in cerebellar disease depends on the location of the tumor and will be influenced by the presence of paresis and atony. If a tumor involves the middle lobe or the vermis, incoordination may be so marked that the patient may be even unable to sit up. This has usually been ascribed to the weakness of the muscles of the back and trunk. In extracerebellar lesions the patient, as a rule, will stand with his feet wide apart, and hold himself carefully and may have a tendency, either with the eyes open or shut, to fall to the side of the lesion and sometimes forward or backward.

The attitude of the head will often be characteristic in tumors of the cerebellum; the patient, as a rule, holding his head in such a position as to give him the most comfort, as very often a change in position may cause an increase in the vertigo. If a patient, for instance, has a tumor on the right side he may deviate the back of his head to the corresponding shoulder, the chin being directed to the healthy side. At times this attitude is assumed not because of a possible increase of vertigo if the head is moved, but because in certain positions the patient will avoid seeing double, as in Case 1, in which the patient persistently held her head in a certain direction, resembling markedly the so-called cerebellar attitude. Sometimes in lesions of the middle lobe of the vermis there will be marked retraction of the head and neck with flexion of the upper limbs and extension of the lower, the so-called cerebellar attitude, first described by Hughlings Jackson.

Incoordination of the eyeballs, or nystagmus, in one of the most constant symptoms of cerebellar disease and seems to be present whenever this organ is involved. Only recently Sir Victor Horsley[8] advanced the opinion that in the intrinsic nuclei of the cerebellum the movements of the eyes and head are represented, while in the so-called paracerebellar nuclei, in which are included Deiter's nucleus, the vestibular nucleus and the nucleus magno-cellularis substantiæ reticularis, are represented the movements of the trunk and limbs especially. That being the case lesions of the intrinsic nuclei should cause a greater amount of nystagmus, and this seems to be borne out by clinical investigation. The nystagmus which is present in cerebellar disease is of two kinds; one, that which consists in a constant movement, as in the case of cerebellar agenesis now in the nervous wards of the Philadelphia General Hospital and at one time reported by Dr. Spiller, in which the eyes are constantly in motion, moving from side to side, and, in fact, in all directions, this being to all purposes a constant ataxia of the eyeballs; and the other, the nystagmus which is only apparent when the eyeballs are moved. If the tumor involves all of the intrinsic nuclei of the cerebellum, the nystagmus will be equally marked in all directions, but if the lesion involves only the nuclei of one side, the nystagmus, while it will be apparent when the eyeballs are deviated in any direction will be more marked when looking to the side of the lesion. This nystagmus consists in lateral deviation of to and fro jerking movements, while if the eyes are directed upward and downward to the side of the lesion they will be inclined to be also rotary, the eyeball on the side of the lesion moving always more forcibly. In convergence, as in Case 3, the inward movement of the eyeball will sometimes be performed jerkily and not in coordination with the movement of the other. In this case also, when the patient was asked to look to the side opposite the lesion, associated movements were quickly and promptly performed, but when he was told to look to the side of the lesion there was an appreciative interval between the command and the performance of the movement. In such cases, when the eyes are at rest, they may have a tendency to look to the side opposite the lesion.

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[8] Brain, No. 116, vol. xxix, 1906.

Inasmuch as the cerebellum is the center for all voluntary movements it is only reasonable to suppose that it should be the coordinating center for eating, swallowing, laughing, crying and especially for talking. Definite proof of this, however, is lacking. As a rule, when there is difficulty in eating, talking and swallowing it is because of direct pressure exerted on the cranial nerves which are concerned with these functions. In a case at one time in the nervous wards of the Philadelphia General Hospital, in which it was supposed that the patient had a hemorrhage in the cerebellum, there was a most marked incoordination whenever he attempted to move a limb, and when he attempted to talk his speech was typically incoordinate. Unfortunately this case has passed out of our observation. For the present, the centers for laughing and crying have been placed in the thalamus. It must be remembered, however, that this part is in direct communication, by means of the cerebellar peduncles, with the cerebellum.

One of the commonest complications of both intra- and extracerebellar tumors is internal hydrocephalus, and because of this there will result, in most instances, a spastic condition of both upper, and especially of the lower limbs. Accompanying this there will be increased reflexes on both sides and a possible Babinski phenomenon, all of these symptoms indicating involvement of the pyramidal tracts. In Case 1, for instance, there was a marked internal hydrocephalus and microscopic examination showed a degeneration of both pyramidal tracts. The possibility of such complication must be remembered and its presence will influence considerably the gait and station in cerebellar disease. Sometimes bilateral internal hydrocephalus alone may produce the symptoms of tumor in the posterior cranial fossa, and there may be present all the symptoms of intracranial pressure, with the addition of incoordination and bilateral external rectus palsy. In such cases it is difficult to differentiate from a true cerebellar lesion, but, as a rule, there will not be as marked incoordination and there will always be a more or less spastic condition in the limbs.

SUMMARY OF CASES.

CASE 1.—A woman of 44, with history of two miscarriages, began with a convulsion of the right side of the body, this being followed by a right hemiparesis, headache, no nausea or vomiting, but increasing dizziness. She soon began to stagger, more to the left. Eyesight began to fail, this being followed by paralysis of the left external rectus. Later, she began to have increasing deafness in the left ear, with peculiar sounds, such as "blowing of steam," and the "singing of crickets," and difficulty in talking, eating and dribbling of saliva. Examination showed unequal pupils, the left being larger than the right, the reactions to light and movement being at first normal and later diminished. Nystagmus was present when the eyeballs were deviated upward. There was also a double optic neuritis, more marked on the left side, and later optic atrophy. The head was deviated to the left, the occiput being directed to the left shoulder and downward. Examination showed a deafness of the left eighth nerve, paralysis of the right soft palate and weakness of the right vocal cords, paralysis of the left sixth nerve, and variable weakness of the left seventh, first in the lower and then in the total distribution, and, lastly, in the lower only.

There was present a right hemiparesis with spasticity. The reflexes were increased on both sides, more on the right, but the Babinski reflex was present on both sides. Sensation was normal for all forms all over the body. The station was unsteady, both with the eyes open and closed, the gait was ataxic, and there was a tendency to stagger to the left and backward. The ataxia in the left upper and lower limbs was very marked, there being hardly any in the right limbs. Both the ataxia and the gait were made much worse when the eyes were closed. There was never any disturbance of the sense of position in the limbs. Toward the latter end of the disease, the patient became very stupid and it was impossible to understand her, speech being so difficult. Any movement of the left upper and lower limbs produced a coarse tremor.

At necropsy a tumor was found (Fig. 1) growing from the petrous portion of the left temporal and occipital bones and compressing the left cerebellum, medulla, pons and crus. Microscopically it was a sarcoma.

CASE 2.—A man, about 20 years of age, with an excellent history, began to have some headache. This was followed by diminution of vision, the appearance of black spots, later by white spots, then light flashes; this terminating in loss of vision and bilateral choked discs, more marked on the left side. About six months after the appearance of the headache, he began to be weak, incoordinate, and would stagger to either side or backward, and began to have loss of memory, vomiting and vertigo. About one year after the beginning of these symptoms, which became progressively more marked, he had, in addition, convulsions. These were Jacksonian in character, appeared daily, and were limited entirely to the distribution of the right seventh nerve. The patient had no aura and was not unconscious.

Examination showed gait and station to be unsteady. He would stagger from side to side or backward, and this was made worse with the eyes closed. The pupils were unequal, and the responses to light and movement were slow. The sensory portion of the right fifth nerve was distinctly involved, with a less impairment of the motor part. The right sixth and seventh nerves were paretic, and hearing was disturbed on this side. On the left side, the sixth nerve was weak, and the eighth nerve was more involved than on the other side. There was some difficulty in speech, it being thick and somewhat indistinct, and there was present a constant tremor in the facial muscles, as well as in the lips and tongue. There was no apparent weakness in any of the limbs, but the reflexes were generally increased, more on the left side. The tonicity was normal, but the movements in the left upper and lower limbs were not synergic. A distinct ataxia was present in the limbs of the left side, this being made worse with the eyes shut and resembling strongly, coarse intention tremors. At no time were there any so-called cerebellar seizures. There was no deviation of the head. Sensation was normal.

A diagnosis was made of a tumor, probably involving, principally, the right seventh nerve, also the right fifth and sixth nerves, and pressing on the cerebellum on the opposite side. An exploratory operation was performed in the right cerebellopontile angle but nothing was found. It is probable, that a tumor grew from the right petrous portion of the temporal and from the right and left occipital bones, first involving the cranial nerves on the right, and that the left cerebellar and cranial nerve symptoms were due to similar involvement in the left.

CASE 3.—A young man, 37 years old, began first to stagger in the dark and with his eyes shut, to the left. This became steadily worse. At the same time he noticed that whenever he looked suddenly to the left, objects on that side would have a tendency to swim or gather together, and he felt a little dizzy. Slow deviation of the eyes head did not produce this, but sudden deviation did. Nausea and vomiting were never present, and headache did not become apparent until about five months after the onset, and then it was present over the left side of the occiput and made worse when the head was deviated upward. Soon after the onset, he noticed a slight deafness in the left ear, with some roaring and buzzing on this side. This deafness finally became complete. Sight was at no time involved, and choked disc was never present.

Examination six months after the onset showed the gait to be unsteady, the patient having a tendency to walk to the left and sometimes staggering to this side and backward. Because of the tendency to walk to the left, the patient when walking, would turn the axis of the body to the right, with the left shoulder and body forward. When standing, his feet were wide apart, and both the gait and station were made worse with the eyes shut. The pupils and their reactions were normal, but a marked nystagmic jerking was present when looking to the left or up to or down to the left. In the latter two conditions, the movements of the eyeballs were inclined to be rotatory. Some jerkings were present when looking to the right but these were not marked. Convergence with the left eye was not well performed. Associated ocular movements were well performed to the right, but an appreciable lapse of time was noticeable between the command and the performance of the movement to the left. The left sixth nerve was paretic, and dizziness was present when the eyeballs were directed to the left, the objects in the left field of vision swimming together. The left seventh nerve was weak, especially in the lower distribution, and fine tremors were present. There was total nerve deafness of the left eighth nerve. Power in the limbs was normal, but the movements of the left upper and lower limbs were ataxic, the ataxia resembling that seen in multiple sclerosis and was made worse with the eyes shut. The tonicity was normal and equal on both sides, but the movements of the left limbs soon became incoordinate and asynergic. The reflexes were prompt everywhere and about equally so. Sensation for all forms was normal. There were no compensatory attitudes or tremors in the limbs, and difference in the position of the head did not cause dizziness. When the patient was revolved to the left, on a stool, he was not aware of the direction, when his eyes were closed. An abnormal appetite was present, and digestion as shown by the test meal was quick.

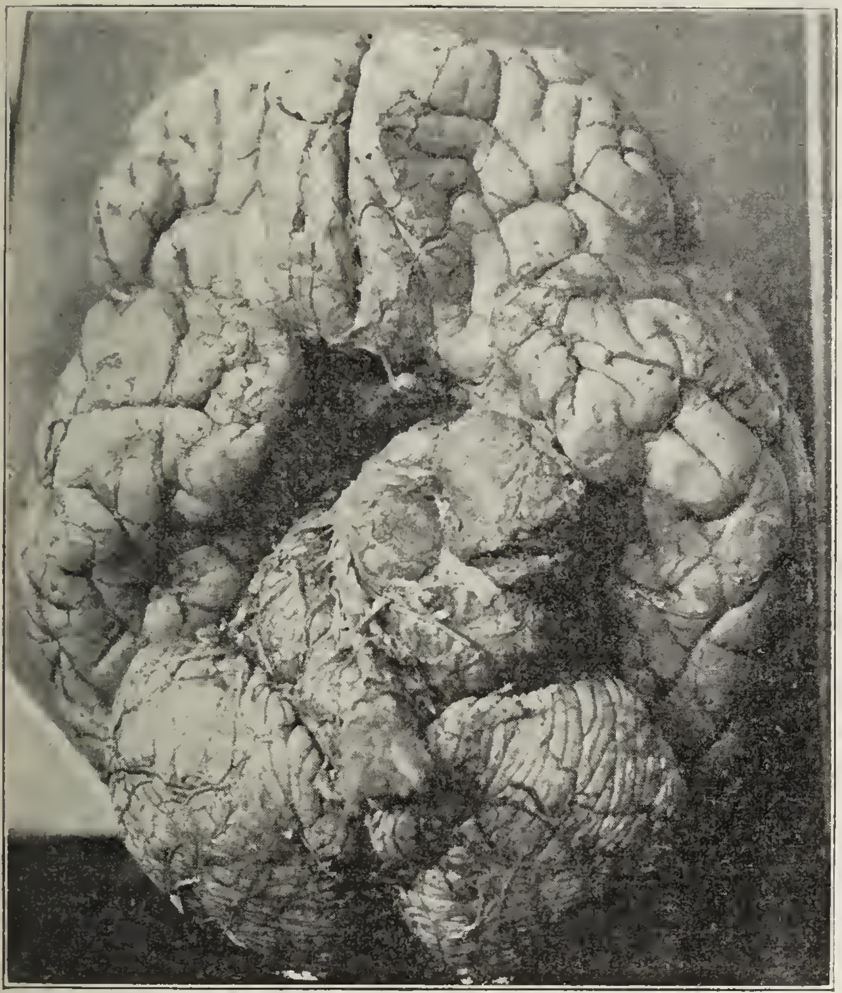

Fig. 1.—Case 1. Sarcoma growing from the left temporal bone, invading the left cerebello-pontile angle, giving symptoms difficult to differentiate from those of cerebral syphilis.

An operation was performed on the left cerebello-pontile angle by Dr. Charles H. Frazier, and a cyst was punctured and the contents removed. The angle was exposed and no other lesions were evident. Since then, the incoordinate gait, the ataxia, the vertigo and the pains have disappeared, leaving only a slight weakness of the left sixth and seventh nerves and a gradual improvement in the deafness on this side. There still remains a slight nystagmus when looking to the left.

CASE 4.—A girl, of 14, with a history of chorea, developed an abscess in the left ear. Soon after she had occipital headache, dizziness, nausea and vomiting of a projectile character. Vision became poor, and choked disc developed in both eyes, more marked in the left. The gait became shuffling, incoordinate, and she would stagger more to the left. Examination showed the pupils to be of equal size, but the reactions to light and movement were slow. The left external rectus and the seventh nerve were paretic. Deafness was marked in the left ear. The head and back were rigid, and there was considerable pain on pressure and movement. The reflexes were generally increased, and about equally so. Sensation for all forms was normal. Ataxia was marked in both upper and lower limbs. With the history of a left middle ear disease, the rigidity of the back and neck, increase in reflexes, the slow reactions of the pupils and the presence of choked disc, the cerebellar gait, the incoordination of the upper and lower limbs, and the involvement of the left sixth, seventh and eighth nerves, a diagnosis was made of purulent meningitis following the left middle ear disease, with an abscess, probably of the pia, in the left cerebello-pontile angle. The autopsy with microscopic examination confirmed this. (Fig. 2).

CASE 5.—A woman, of 34, with no previous history, began to have diminution of vision with headache, which was mostly occipital and temporal. Very soon sight became almost completely lost, and marked choked discs were demonstrated in both eyes. The left external rectus was first paralyzed to be followed later on by the right. The pupils and their reactions were normal, and there were occasional nystagmic movements of the eyeballs. The left seventh nerve was paralyzed in its whole distribution. Station and gait were incoordinate. All of the limbs were ataxic, and a marked tremor was present, this being especially marked in the right side and in the upper limb. All the reflexes were increased. The Babinski reflex was not present and the lower limbs were spastic. For some time before her death she was unable to get out of bed because of weakness and a tremor of her limbs.

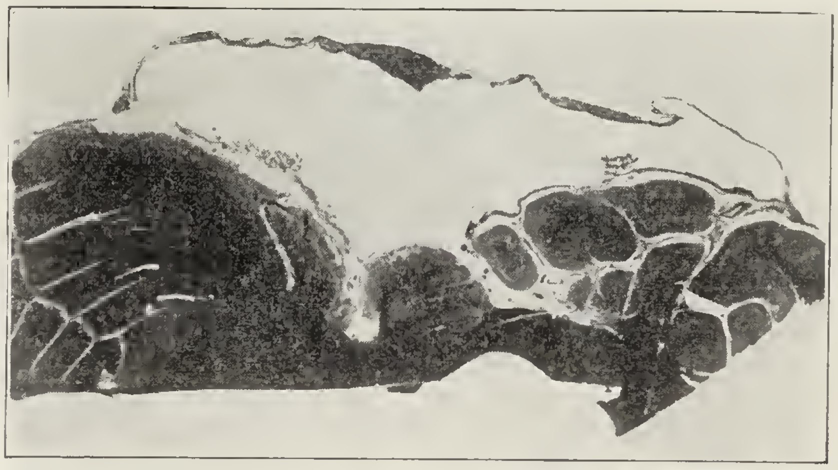

Fig. 2.—Case 4. Abscess of the pia in the left cerebello-pontile angle, secondary to middle ear disease, the symptoms resembling those of tumor in the cerebello-pontile angle.

A tumor was found filling up all the fourth ventricle, the posterior portion of the aqueduct of Sylvius and compressing the inferior vermis and the nuclei emboliformis, globosus and fastigii and to a less extent the dentate nuclei. The former grew from the chorioid plexus. A part of this tumor process grew outward into the left cerebello-pontile angle and compressed directly the left sixth and seventh nerves.

DISCUSSION

ON PAPERS OF DRS. WEISENBURG, SPILLER, ATLEE AND MILLS, THOMAS AND CUSHING.*

Dr. Albert E. Sterne, Indianapolis, Ind., spoke, first, of the uncertainty as to the condition which is found on opening the skull. Everybody, he said, who deals with cerebral operations, in spite of the most careful diagnosis he has made, has often been struck by the fact that the degree of trouble existing beneath the cranium was often extensive when he did not expect much, and where he really expected a considerable lesion to be present, comparatively little or no trouble was apparent. The absence of general symptoms, even of headache, is remarkable sometimes, and this absence sometimes exists even with very large tumors. He has operated in a very large number of these cases. In one case the tumor was of a tremendous size, as large as two fists; part outside of the head, and part inside. There was absolutely no pain, and never had been any. In several cases of large frontal tumors there was no evidence of headache, except occasionally, late in the disease. Second, in regard to the reflexes: There, again, he said, are the manifestations simply out of all proportion to the actual lesion. He has seen cases of tumors in which one would expect to find the reflexes considerably heightened, and yet they were not heightened at all. In one case they were abolished. In this case, which terminated fatally, there was no evidence of any change in the spinal cord. Another point Dr. Sterne mentioned was in regard to optic neuritis and papillitis, which is more common in tumors, and even small tumors of the posterior fossa, than any other division of the cranium. Even large tumors of the frontal portion sometimes exist without this neuritis. When these symptoms are present, there is possibility of their being more marked on the same side as the tumor. The papillitis is sometimes more marked on the side opposite the tumor. This, however, is the exception and not the rule. Everything else being equal, Dr. Sterne said that the side which shows the papillitis is the side to be preferred in the operation. In regard to ataxia, he has made observations several times recently in cases of cerebellar tumor located at the pontile angle, where there was ataxia on both sides, but more on the opposite side than on the side of the lesion. He finds tumors of the cerebello-pontile angle are particularly interesting, because signs of involvement of certain cranial nerves are apt to be shown, in addition to the general symptoms. Tumors of this sort are unlikely to be accompanied by spasms, either of the general kind, or of the Jacksonian type. The fact that these patients usually show difficulty in speech, which Dr. Weisenburg mentioned, Dr. Sterne has noticed time and time again. He has come to the conclusion that we are dealing with an incoordination, as in the ataxic, or that pressure has something to do with the fact. In two cases, where he diagnosed tumors of the cerebello-pontile angle, the tumors originated behind the odontoid process, extending through the foramen magnum to the angle. In one of these cases, during the operation, he was able to amputate the tumor, which was a fibroma about the size of an apple.

Dr. T. H. Weisenburg, Philadelphia, said that Dr. Dercum evidently misunderstood his remarks, for, for some time, he has believed that the difficulty in speech and in eating and in swallowing, which are very often found in cerebellar lesions, are no more than evidences of incoordination in the functions concerned, and are due to a disturbance of these centers in the cerebellum. To have such a disturbance, however, it is necessary that the middle lobe or the vermis of the cerebellum should be involved. Our knowledge of these tumors is by no means definite, and it is impossible sometimes to differentiate them from other growths. For some time Dr. Weisenburg has been examining specimens of gliomatous tumors, but it has been impossible for him to arrive at any definite conclusions as to their nature because of their variance. Some contain a few glia cells, while others have these in abundance, and in still others glia cells are not to be found. It is a question whether an operation will have any influence on further growth of gliomatous tumors. At any rate, there is no evidence to show that such is the case.

Dr. Wm. G. Spiller, Philadelphia, questioned whether a tumor will ever entirely disappear and leave a cyst, although it is well known that a glioma may undergo partial cystic degeneration. He has seen two cases in which convulsions confined to one side of the face were caused by intracranial irritation of the facial nerve. A point in differential diagnosis between spasms of this character and those resulting from cortical irritation, he said, is that in the latter the upper part of the face on both sides is likely to be implicated in the spasms.

In a case in which an operation was performed recently by Dr. Frazier an intracranial clot formed after the operation, and caused frequent convulsions. The dura was opened without an anesthetic, and apparently without great pain.

Dr. Charles K. Mills, Philadelphia, said that the case referred to by Dr. Weisenburg was a very typical one, the spasm beginning in the face and extending to the other parts of the body. With regard to the position of the tumor, although very commonly on the same side, it is probable the occurrence of symptoms referred to the opposite side may be due to pressure. Just as there are cerebellar symptoms from pressure in the frontal region, so, of course, there might be cerebellar symptoms referrable to one side from the pressure of a tumor on the opposite side. With regard to Dr. Thomas and Dr. Cushing's paper, Dr. Mills said that his impression has always been that the dura was a very sensitive structure. Dr. Thomas or Dr. Cushing said that there was no pain caused by its incision. It will become desirable, therefore, to do many intracranial operations in two stages, if these can be done without a general anesthetic. It has occurred to Dr. Mills that some form of local anesthetic, like cocain, might be applied to the dura. It is generally admitted that the cerebral substance is not sensitive.

Dr. H. M. Thomas, Baltimore, Md., said that six weeks after the operation the patient has recovered almost complete use of the left arm and has no demonstrable anesthesia. He has not had a single convulsion.

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* The paper of Dr. Spiller appeared in The Journal, Dec. 21, 1907, p. 2059; that of Drs. Atlee and Mills appeared Dec. 28, 1907, p. 2129; that of Drs. Thomas and Cushing appeared March 14, 1908, p. 847.

GENERAL ANESTHESIA.

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The standard methods of inducing general anesthesia leave much to be desired from the standpoint of efficiency, safety and freedom from unpleasant or dangerous after-effects. In an endeavor to overcome these defects, I have devised an apparatus for the administration of nitrous oxid and oxygen with the ether sequence, which embodies a number of principles not found in methods used heretofore. During the last year this method has been tried thoroughly (1,126 cases), and its superiority over others, in the vast majority of cases, seems to be proved both experimentally and practically. Any combination of nitrous oxid, oxygen, air and ether vapor is obtained, and in any proportion by definite percentages, and the change from one to the other is made slowly, if necessary—a most important consideration in mixed anesthesia.

NITROUS OXID.

Nitrous oxid is safe, quick in action, certain, and very seldom leaves any unpleasant after-effects. Its contraindications are few, chiefly those cases in which there is an obstruction of the air passages. But anesthesia by the administration of pure nitrous oxid is objectionable, (1) because of its necessarily short duration due to troubles arising from asphyxiation, as cyanosis, irregular, stertorous respiration, and (3) clonic spasms. However, the cyanosis of nitrous oxid, although undesirable, is very different, physiologically, from the cyanosis produced by chloroform and ether. The cyanosis resulting from the administration of nitrous oxid with deficient oxygen is due to a lack of opportunity for the blood to absorb the normal amount of oxygen, and not to an abnormal condition of the circulatory or nervous systems. It comes quickly and disappears quickly, when air or oxygen is added, and is no more dangerous than the cyanosis which accompanies a paroxysm of pertussis. Unless caused by voluntary or mechanical interference of the respiration, the cyanosis of chloroform or ether is that of capillary stasis. It comes on slowly, is preceded by a marked interval of ashy pallor, disappears slowly, and is indicative of a loss of vasomotor tonicity or impaired heart action, a most alarming condition.

Nitrous oxid is a true anesthetic (not dependent on anoxemia for its anesthetic properties) mainly for the following reasons: (1) Anesthesia can be induced by the inhalations of any inert gas, such as nitrogen or hydrogen, when pure or with a sufficiently low percentage of oxygen, but this is anesthesia by anoxemia and is slower in its effect than nitrous oxid under the same conditions, and the resulting anesthesia is of shorter duration (Hewitt). (2) Anesthesia can be induced by using the normal 20 per cent. oxygen with the nitrous oxid (Siklikovich, Zweifel, Hillischer), which can not be done with inert gases. (3) In the administration of nitrous oxid, there is a slight and transient, but appreciable sensation of exhiliration, which corresponds to the stage of excitement of all true anesthetic agents. This is not true of inert gases, as nitrogen or hydrogen, but often is quite the opposite—a feeling of depression, malaise and impending suffocation (Turnbull).

NITROUS OXID AND OXYGEN.

If oxygen is given with the nitrous oxid, in amounts varying from 5 to 15 per cent., according to the type and condition of the patient, we obtain a quick, quiet and complete anesthesia, which is entirely free from the objectionable symptoms of pure nitrous oxid anesthesia, and one which can be continued indefinitely. This is a most excellent anesthetic for a considerable portion of major work. I have used it continuously for over one hour, and have never encountered any undesirable effects from its use. As far as I have been able to learn, a death has never been reported from the use of nitrous oxid and oxygen. Animals have been kept completely anesthetized with this combination for three days, without apparent injury (Martin). The objections to the use of nitrous oxid and oxygen in extensive surgical work is the expense (three to five dollars an hour) of maintaining it through a long operation. Then, too, with some types of individuals, complete muscular relaxation can not be depended on.

A practical working zone of percentages of oxygen with nitrous oxid exists in each case. As an example: A certain patient may do well with 8, 9 or 10 per cent. of oxygen, but if only 7 per cent. is given, the patient will soon show marked cyanosis and the other symptoms of asphyxia; or if 11 per cent. is given, excitement, struggling and light narcosis will follow.

Air can not be used successfully instead of oxygen, because if the necessary amount of air is used to supply the oxygen, the nitrous oxid will be too dilute to produce complete narcosis. As an example: Suppose that 10 per cent. oxygen is the lowest percentage we can use in a given case to prolong the anesthesia and prevent the untoward effects of the nitrous oxid, and we use air to supply the oxygen. As 79 per cent. (approximately) of the air is nitrogen, and 20 per cent. (approximately) oxygen, and we obtained 10 per cent. of oxygen in the mixture, then 50 per cent. of the inhalation must be air. This would permit of only 50 per cent. being nitrous oxid, which is at least 20 per cent. less than is necessary to produce narcosis (Kemp, Paul Bert, Martin, Zuntz, Kliowitsch, Goldstein, Van Arsdale). And, conversely, suppose we use 70 per cent. nitrous oxid, the lowest percentage with which it is possible to produce narcosis, this would permit of only 30 per cent. air or 6 per cent. oxygen, which is 4 per cent. less than is necessary, in the given case, to prolong the anesthesia. Therefore, the result with air and nitrous oxid is either a failure to maintain narcosis, or extreme anoxemia, with its accompanying symptoms. Practically, I have found nitrous oxid and air far inferior to nitrous oxid and oxygen for prolonged surgical work.

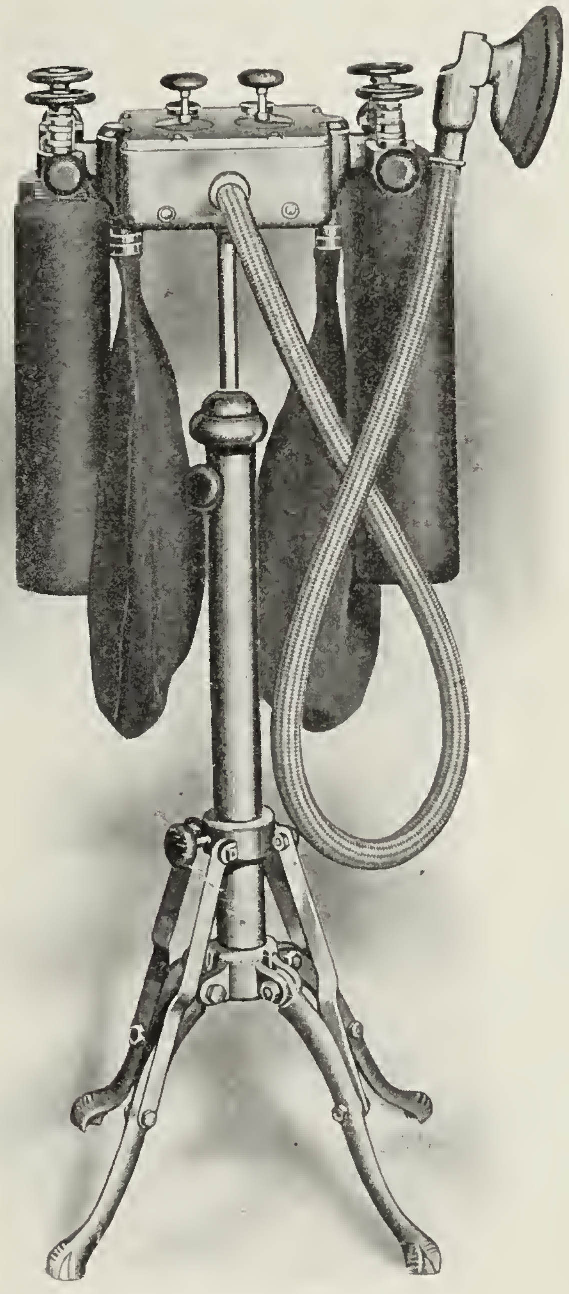
Fig. 1.—Apparatus ready for use.

A point of safety and convenience with my apparatus is that, if necessary, oxygen can instantly be given pure or mixed at any time during anesthesia or afterward to bring about a quick resuscitation. A few breaths of oxygen will completely relieve the occasional laryngeal spasm of incomplete anesthesia without decreasing the amount of ether being used, which can not be done with air. It is well known that the use of oxygen with ether is often of decided advantage in patients of feeble vitality, the tuberculous, the emphysematous, in alcoholics and the very florid. A better narcosis with more perfect relaxation is obtained. "The hyperoxidation of the tissues enables more ether to enter the circulation than could otherwise occur without danger to the nerve centers hampered by deoxidized blood" (Buxton). This use of oxygen, however, is seldom necessary. The oxygen of the air is usually sufficient if there is no rebreathing which gives the patient the full benefit of it. In routine work, with my apparatus, oxygen is used only during the administration of the nitrous oxid, viz., the first three to five minutes of the anesthesia.

The reason for this use of oxygen when the ether sequence is used is explained in the paragraph under "after effects."

ETHER.

It is not within the scope of this paper to discuss the relative merits of ether and chloroform. In summarizing the answers to a circular letter sent to 100 American surgeons, regarding the choice of anesthetic, J. E. Lumbard says: "They show that there has come to be an almost universal consensus of opinion in favor of ether, except under very special circumstances."[1] It is generally agreed that for the great majority of cases ether is very much safer than chloroform, pulmonary and nephritic complications on the whole no more probable, and the postoperative nausea and vomiting, while more frequent, is less severe. The induction period of ether, however, is longer, more disagreeable and accompanied by more excitement. The objectionable features of the induction period are overcome by preceding the ether with nitrous oxid. The after-effects are controlled by mixing oxygen with nitrous oxid. Statistics show that the nitrous oxid-ether sequence method is much safer than ether alone. This is probably due to the elimination of the stage of excitement. Most deaths from chloroform or ether occur in the earlier stages of anesthesia, and appear to be due to functional disturbances of reflex origin.

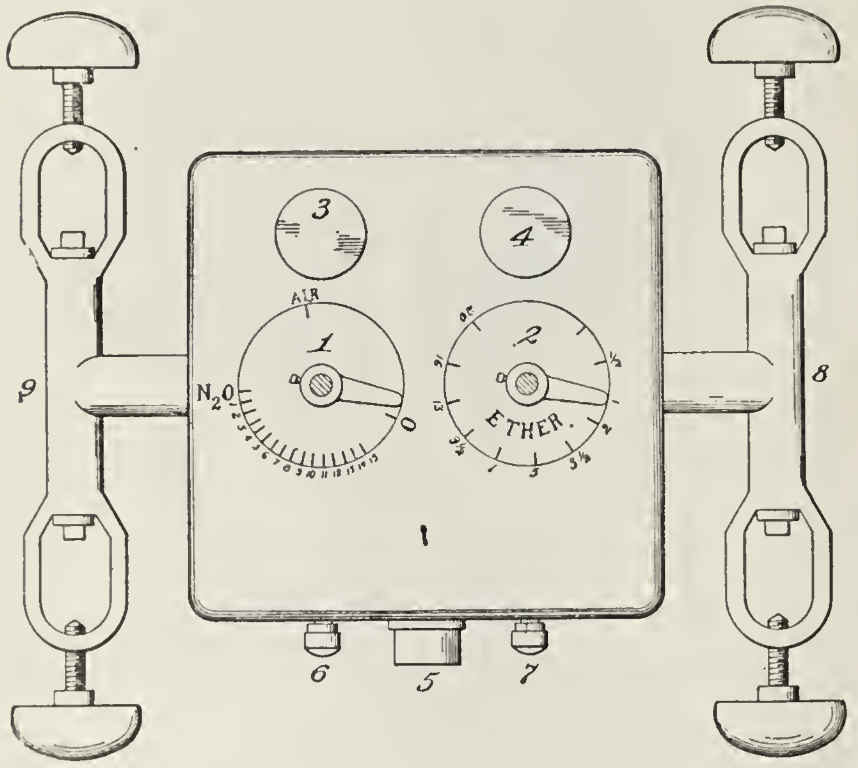

Fig. 2.—Top view of apparatus with knobs of valves removed. (1) Valve which controls supply of nitrous oxid, oxygen and air. The figures 1 to 15 between the nitrous oxid and oxygen marks indicate percentages of oxygen which may be used with the nitrous oxid. (2) Valve which controls ether vapor, with the percentages indicated. (3) Opening for water bath. (4) Opening for ether chamber. (5) Connection for tube leading to inhaler. (6) Opening for removal of water. (7) Opening for removal of ether. (8) Arm for attachment of oxygen cylinders. (9) Arm for attachment of nitrous oxid cylinders.

AFTER EFFECTS.

Some investigation is needed to determine definitely the cause of the postoperative emesis. It may be of central origin. It seems more probable that it is peripheral and due principally to swallowing of ether-laden secretions. Saliva will take up large quantities of ether in solution. The fact that the length of the anesthesia seems to bear but little relation to the severity of the after effects would support this view, since swallowing occurs only soon after the beginning and the close of the anesthesia. The efficacy of stomach lavage immediately following anesthesia is of some value as evidence. Also anesthetists have long observed that, except in the case of alcoholics, patients who are much excited and who struggle during the induction period are far more liable to postoperative nausea and vomiting. The apparent cause of this is that with ordinary methods of inducing anesthesia the reflex of swallowing is practically always present early, is always excessive with struggling, may be excessive when struggling is absent, and always persists longer than the struggling, being one of the last of the reflexes to disappear before the stage of complete narcosis ensues. The gastric mucosa of alcoholics seems to have acquired a toleration for irritants of this kind.

With the Clover apparatus and its modifications, as the Hewitt, Bennett, Gwathmey, Pedersen and others, pure nitrous oxid is used with the ether sequence. The nitrous oxid is continued only one and one-half to two minutes because of the asphyxiation. This makes it necessary to overwhelm the patient with ether and to employ the additional help of the anoxemia obtained by the to and fro breathing into a rebreathing bag when the nitrous oxid is discontinued, and even then the patient will almost invariably "come out" enough to swallow about as much as if "gas" had not been given, and hence nausea and vomiting follow in about the usual percentage of cases.

This is how the oxygen is of the greatest value in the use of the apparatus here described: By mixing oxygen in the proper proportions with nitrous oxid complete narcosis can be maintained indefinitely and is used sufficiently long (three to five minutes, occasionally longer) to permit ether to be administered gradually and slowly until complete ether narcosis is established. Since the nitrous oxid and oxygen are continued until complete ether narcosis is established there is then no return of the reflexes when air is substituted, and consequently no swallowing of the ether-laden secretions. It is very rare, indeed, to find a case in which the proper use of the apparatus will not prevent swallowing, and patients rarely experience a marked degree of postoperative nausea and vomiting. This gradually increased and dilute administration of ether (which seldom exceeds 6 per cent.) also tends not to excite a hypersecretion of mucus.

MEASURED DOSAGE.

A characteristic feature of the apparatus is that the gases and the ether vapor are accurately measured under all conditions. This is done with such ease and simplicity as to make it eminently practicable. The same accuracy of judgment is used as if the dose were given by the mouth or hypodermically. This adds much to the safety of the patient and the convenience of the anesthetist. It is well known that an uneven administration predisposes to anesthetic shock. A measured dosage insures an absolutely even administration.

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[1] Med. Rec., Dec. 1, 1907.

PULMONARY COMPLICATIONS FOLLOWING ANESTHESIA.

The embolic pulmonary processes which sometimes follow extensive operations in all probability occur independently of the anesthetic. It is doubtful if the refrigeration of anesthesia is ever an actual cause of pneumonia. It does, however, greatly reduce the body heat at a time when it is needed. The importance of preventing excessive refrigeration in anesthesia will be appreciated when it is recalled that the alveolar air surface is over one hundred times as great as the surface of the body. Precautions are usually taken that the operating room is 75 to 80 F., but a long-continued icy inhalation is ignored. Whatever heat is taken from the inspired air by the vaporization of the ether is, in turn, taken from the lungs, as the exhalation is always at practically body temperature, regardless of the temperature of the inhalation.

I constructed an inhaler for experimental purposes which completely excluded the exhalation and permitted the heat required to vaporize the ether to come entirely from the inspired air. I used it in thirty-one anesthesias. With the room at 80 F. 2.1 per cent. ether vapor produced an inhalation of 30 F., and 5.4 per cent. ether vapor 9 F., thus causing a loss of about 21,000 calories of body heat for every ounce of ether used. With common methods this refrigeration is reduced only according to the amount of rebreathing employed, so with them it is, at best, a choice between two evils. By the use of the apparatus described in this paper the inhalation never falls more than 10 F. below the room temperature, even though 6 or 8 per cent. of ether vapor is used.

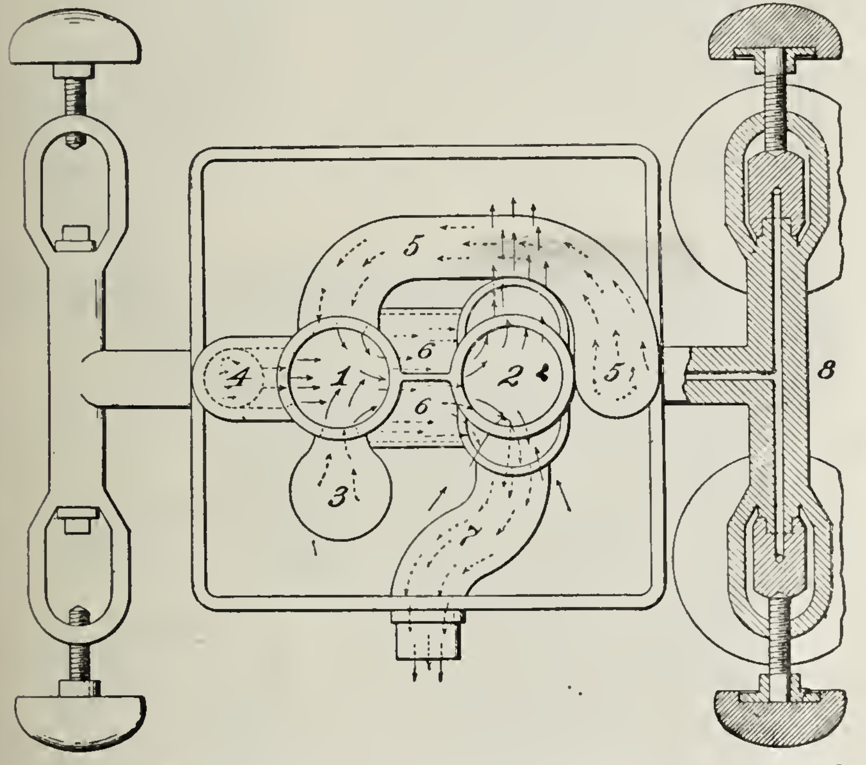

Fig. 3.—View from above with top and both diaphragms removed. (1) Casing of valve which controls supply of nitrous oxid, oxygen and air. (2) Casing of valve which controls supply of ether vapor. (3) Opening from below for air intake to Valve 1. (4) Passageway from nitrous oxid bag to Valve 1. (5) Passageway from oxygen bag to Valve 1. (6) Passageway from Valve 1 to Valve 2, (7) Passageway to tube leading to inhaler. (8) Sectional view of oxygen arm with cylinders attached.

This elimination of refrigeration is accomplished by the combined employment of three methods: (1) The ether chamber is in a bath of 22 ounces of water, at about 90 F., a little below the boiling point of ether. (2) Ether and the corresponding refrigeration is saved by the quick induction of complete narcosis by nitrous oxid and oxygen instead of ether. (3) Only the inhalation passes over the ether and not both inhalation and exhalation, as is the usual custom. This in itself saves half the ether ordinarily used, which also reduces refrigeration. The danger of aspiration pneumonia is lessened by this method, because early vomiting never occurs and also less mucus is secreted.

It is always desirable to have an evenly diffused mixture of ether vapor and air. This is impossible when the ether is applied directly over the face. These irritating "ether streaks" must have an influence in the production of bronchitis and pneumonia. They are also often the cause of coughing or "holding the breath" before complete narcosis is established. The ether vapor is thoroughly mixed with the air in its passage through the apparatus and the three or four feet of tube connecting with the inhaler.

NO REBREATHING.

It is possible to produce complete narcosis in four to six minutes by simply rebreathing. Rebreathing has been the custom in etherization and to a less extent in the use of chloroform. It is for this purpose that stockinette or towels are used instead of a thin layer of gauze in the ether drop method. Many inhalers are provided with a rebreathing bag. The practice is convenient, but it carries with it its ill effects. The effects of the decreased oxygenation and the increased carbon dioxid is certainly undesirable, but we know that greater deleterious effects are due to other substances of expired air. Rebreathing is practically impossible with the apparatus. The inhaler is barely large enough for the accommodation of the facial contour, so that every breath is a fresh one, the exhalation disposed of, and the normal oxygenation maintained.

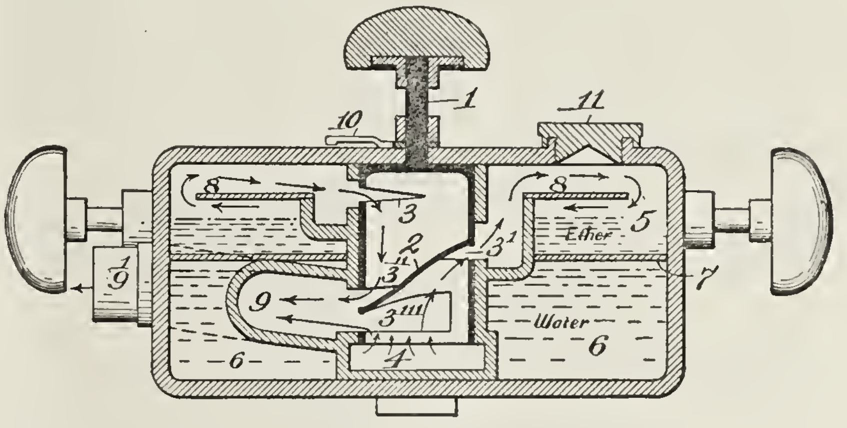

Fig. 4.—Sectional view of apparatus through ether valve from before backward. (1) Ether valve (solid black). The adjustment of the valve, as shown in the cut, permits one-half the inhalation to pass over the ether surface and one-half to pass directly to the inhaler. This position of the valve gives five per cent. ether vapor under "operating room conditions." (2) Spiral partition in ether valve. (3) 3′, 3″, 3‴ openings in ether valve. (4) Passageway from nitrous oxid—oxygen—air valve to ether valve. (5) Ether chamber. (6) Water bath. (7) Diaphragm separating ether chamber and water bath. (8) Partial diaphragm to direct inhalation over ether surface. (9) 9′ passageway to tube leading to inhaler. (10) Indicating hand of ether valve. (11) Tap for opening to ether chamber.

THE APPARATUS.

The complete apparatus (exclusive of the gas cylinders) weighs twenty pounds. It can be assembled or taken apart quickly and is portable, fitting nicely in a case considerably smaller than an ordinary suit case (Fig. 1). Practically no gas is wasted and not one dram of ether is used that does not pass through the patient's lungs. The passageways are large enough to prevent any inconvenience in breathing. There is no gauze or sponge packing, the inhalation passes freely over liquid ether. The flaps of each respiratory valve of the inhaler are made of a round piece of dental rubber dam—thin, pliable sheet rubber—secure in the center, with free edges. They are not affected by moisture or position, can not easily get out of order, may be renewed quickly, and the resistance they offer to respiration is imperceptible. With the "expiratory valve" it is easy to observe the exact condition of the respiration. The inhaler may be sterilized by boiling. The apparatus has no complicated mechanism, but is regulated entirely by two one-piece valves (Figs. 2, 3 and 4). A second cylinder of either "gas" or oxygen may be attached for use in case one becomes exhausted. Nitrous oxid cylinders are sold in twenty-five, fifty, one hundred and two hundred gallon sizes. The gas is in a liquid state. The one hundred gallon cylinder of nitrous oxid weighs about nine pounds. A cylinder of oxygen is about the same size and contains forty gallons of gas. These can be obtained from any surgical or dental supply house at a cost of $2.00 per cylinder, each of which will suffice for twelve to twenty anesthesias if the ether sequence is used. The expense is considerably less than the use of ether by ordinary methods. Of course considerable skill is necessary for the proper use of these refinements of anesthesia. However, the construction of the apparatus is such that practically the only accident a novice might encounter would be a failure to obtain a quick and uninterrupted surgical anesthesia.

Not only may the apparatus be used for prolonged anesthesia by nitrous oxid and oxygen or for nitrous oxid and oxygen with the ether sequence, but also for the administration of ether alone. The detail and technic of this is much simpler than that of any other method. If the "gas" and oxygen is omitted and ether alone used, the induction period and immediate after-effects are but little different from ether given by other methods. We still have, however, the advantages of the thorough mixture of air and ether vapor, the freedom from rebreathing, the decreased refrigeration and the even measured dosage.

The nitrous oxid, oxygen or the ether sequence use of the apparatus makes anesthetic work a pleasure, no struggling or vomiting, quick narcosis, no constant "dropping," the safety and convenience of knowing the percentages used, and practically no after-effects. It removes the art of anesthesia from the mysticism, fancies and uncertainties of empiricism and places it on an accurate and scientific basis.

Clinical Notes

IMPROVED TECHNIC FOR LIGATING THE APPENDIX WITHIN THE CECUM.

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CHICAGO.

I recently described[1] a method of setting a snare within the cecum to catch and ligate the appendix

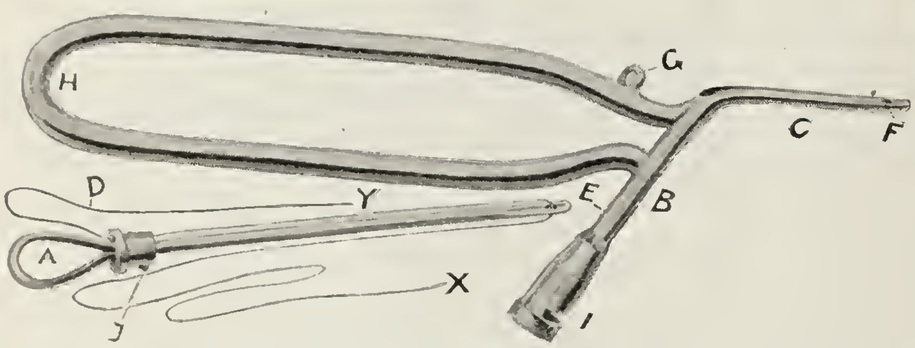

Fig. 1.—Author's compound needle. The needle consists of two parts, A is the straight, blunt-pointed ligature-carrying member with an eye at D and at E. BC is the angular, tapering-pointed, cannulated member, with an eye at its point F, and another, G, in its handle, H. X and Y are the respective ends of the ligature; I is a slot for receiving the pin, J, when locking the bayonet joint, IJ, in Figure 2.

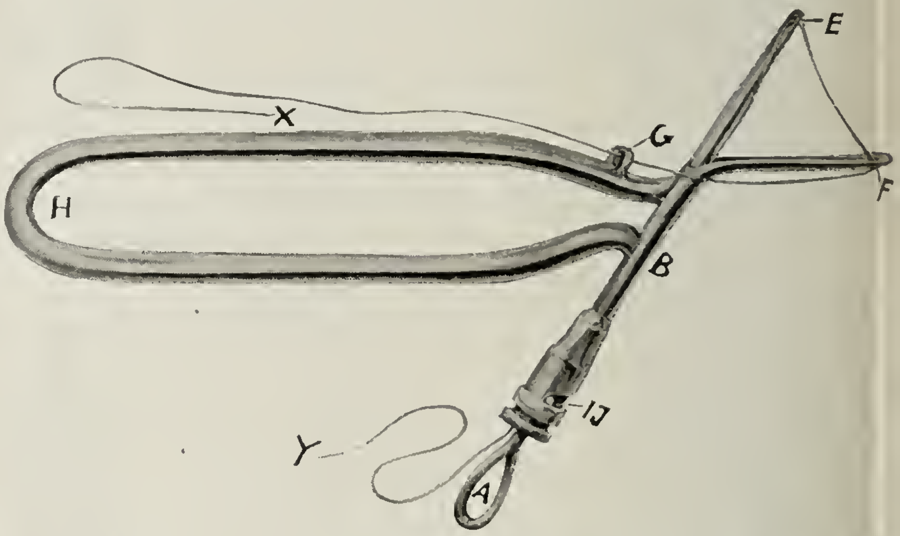

Fig. 2.—This shows the straight ligature-carrying member, A, passed through the cannulated portion, B, and locked at IJ. To thread the instrument the member A is first threaded, as in Figure 1, by passing the ligature through the eye D, and then through the eye E. This member is then carried part way through the cannulated member B, when the end X of the ligature is grasped and pulled through the cannulated member B, then passed through the eye F, and lastly through the eye G. This done, the member A and the ligature Y are withdrawn into the cannulated portion, B, far enough to become concealed. The instrument is then ready for inserting into the cecum as shown in Figure 3.

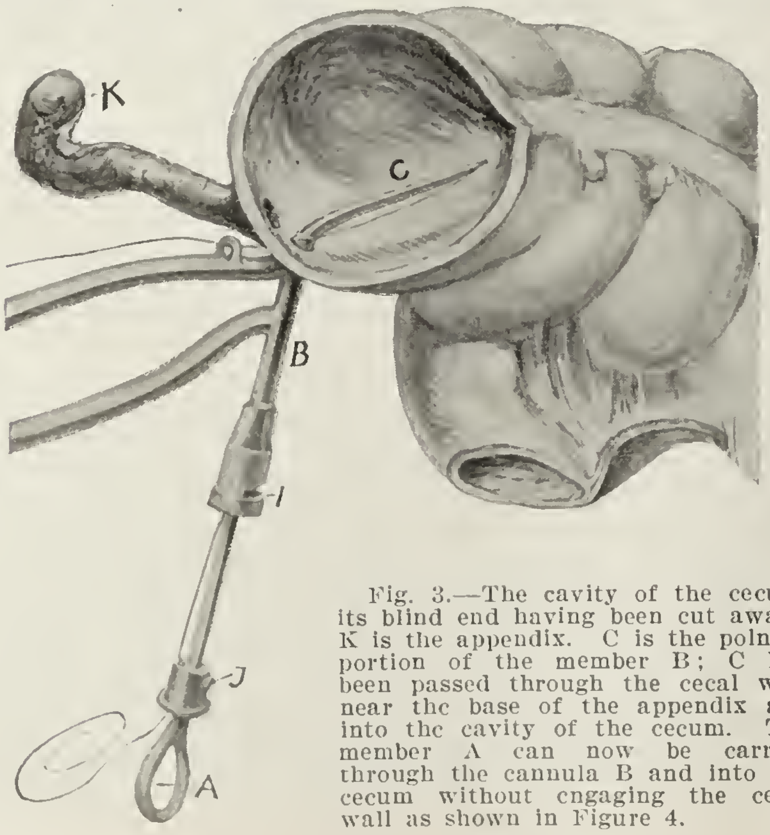

Fig. 3.—The cavity of the cecum, its blind end having been cut away; K is the appendix. C is the pointed portion of the member B; C has been passed through the cecal wall near the base of the appendix and into the cavity of the cecum. The member A can now be carried through the cannula B and into the cecum without engaging the cecal wall as shown in Figure 4.

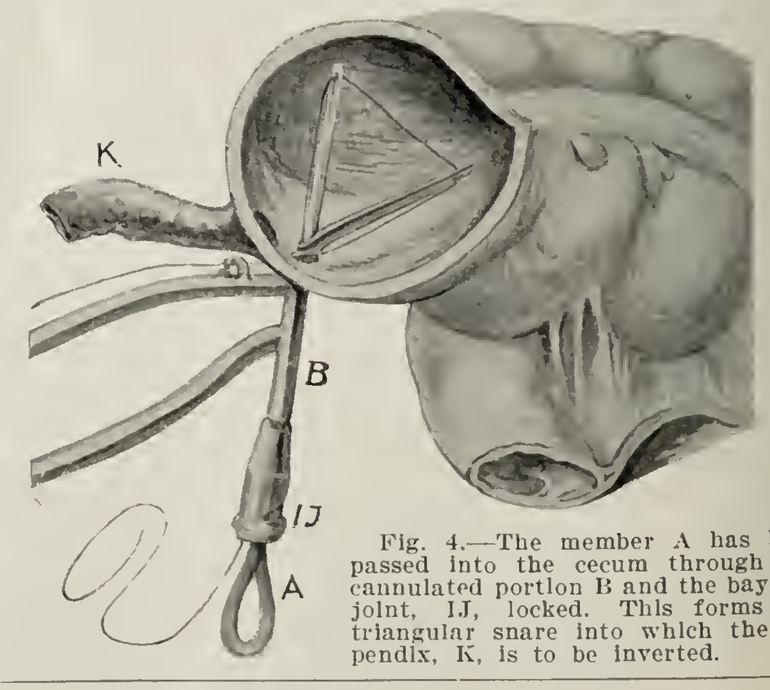

Fig. 4.—The member A has been passed into the cecum through the cannulated portion B and the bayonet joint, IJ, locked. This forms the triangular snare into which the appendix, K, is to be inverted.

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[1] THE JOURNAL A. M. A., Nov. 30, 1907.

therein. That method necessitated three needle punctures of the cecum. Dr. Paul Gronnerud, head of the department of operative surgery, Chicago Policlinic, said that the operation would be ideal if it could be accomplished with only one needle puncture. I have done this and the accompanying illustrations, with their legends, fully explain, without further comment, how this may be done; the procedure is exceedingly simple and easy.

The members, A and C, of the instrument and the needle puncture in Figure 8 have been magnified for the purpose of clearness.

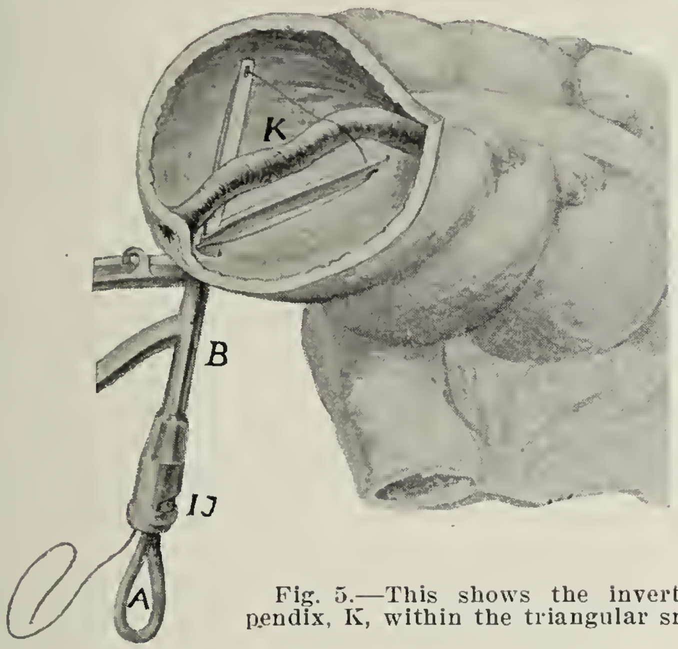

Fig. 5.—This shows the inverted appendix, K, within the triangular snare.

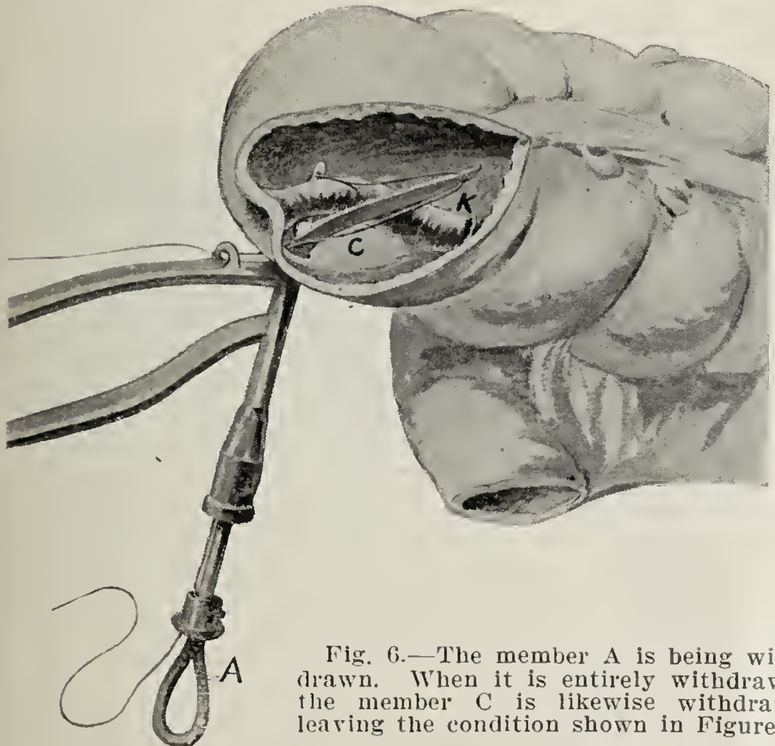

Fig. 6.—The member A is being withdrawn. When it is entirely withdrawn, the member C is likewise withdrawn leaving the condition shown in Figure 7.

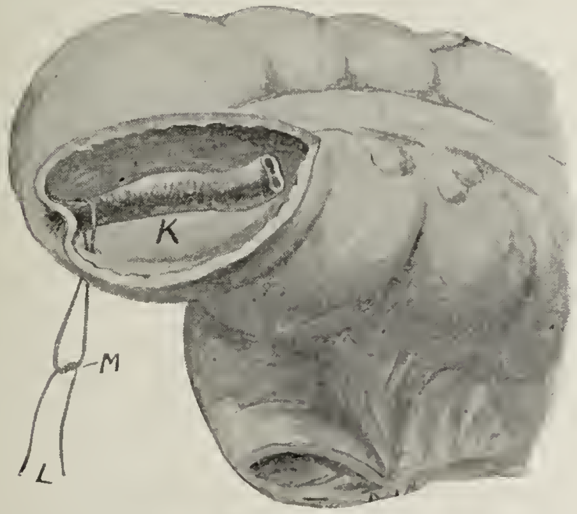

Fig. 7.—This shows the relation of the appendix, K, and the ligature, L, after the withdrawal of the needle, also the formation of the first loop, M, of the knot.

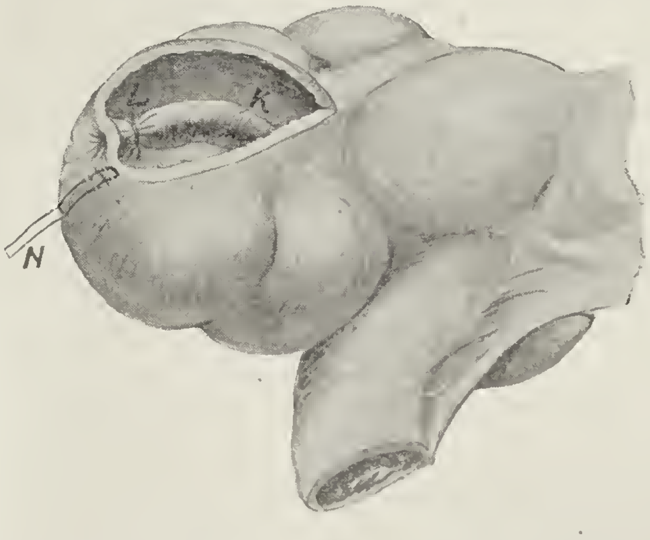

Fig. 8.—This shows that the appendix has been ligated and the knot slipped into the cecum. N is a mattress suture for closing the needle puncture.

THE OPERATIVE TREATMENT OF PULMONARY TUBERCULOSIS.

REPORT OF AN EXCISION OF OVER ONE-HALF OF THE RIGHT LUNG.

W. WAYNE BABCOCK, M.D.
PHILADELPHIA.

In no region of the body does a deposit of tubercles invariably indicate surgical treatment. For the most part the treatment of localized miliary tuberculosis is non-operative. Most of the cases of Pott's disease, a large proportion of tubercular joints, many superficial types of tuberculosis, and many cases of tuberculosis of internal organs are best treated without recourse to the knife. In nearly every situation, however, there is a residuum of cases in which other measures fail, and in which operative intervention is desirable.

Heretofore a marked exception has been made in regard to pulmonary tuberculosis, and, in general, surgical treatment is here considered dangerous, unwarranted and harmful. If one compares the forms of surgical procedure that have been brought to bear against tuberculosis of the lungs with those operations used for tuberculosis of other organs, it becomes evident that the methods that have failed in pulmonary surgery are precisely the methods that have proven ineffective in treating tuberculosis elsewhere in the body.

The operations that have been used in the treatment of pulmonary tuberculosis comprise chiefly the incision and drainage of abscesses, caseous areas, tubercular or bronchiectatic cavities, or imperfect resections of portions of diseased tissue, especially at the apices of the lungs. These operations have been followed by drainage, permitting an added mixed infection and the invasion of the adjacent tissues of the chest wall by the tubercle bacillus.

The results have been almost uniformly bad, just as they have been after incision or incomplete excision with drainage for tuberculosis of the kidney, intestine or other organs. On the other hand, excellent results have been obtained by nephrectomy for tuberculosis of the kidney, and by thorough excision without drainage for tuberculosis of the intestines, testicles and other parts of the body. In cases in which the recognized forms of treatment prove effective against the smaller tuberculous areas, but impotent against associated massive lesions of the lungs, operative measures, bolder and more thorough than those heretofore used may, in selected cases, be warranted by the desperate plight of the patient.[1] Occasionally even a half-hearted pneumotomy is useful.

A few years ago a middle-aged colored man with a large putrid empyema was admitted to the Samaritan Hospital. After a drainage operation his cough and expectoration increased, the sputum contained large quantities of tubercle bacilli and, finally, signs of a pulmonary abscess developed. The opening of the chest was enlarged, and a drainage opening made through the caseous pulmonary tissue into the abscess. Cough and expectoration decreased, the man gained in weight and left decidedly improved, although not cured.

In the following case, while the outcome was disappointing, the feasibility of delivering one or more lobes of the lung through a posterior opening in the chest wall and the controlling of the blood vessels by ligatures applied directly to the hilum without recourse to the cautery was demonstrated. The entire right lung weighed 1,090 grams and 770 grams of pulmonary tissue were removed at the operation without alarming hemorrhage. The remaining 320 grams of the right lung became atelectatic, but the left lung proved adequate to maintain the respiratory function. The patient improved sufficiently to be out of bed; but pulmonary edema from exposure was fatal fourteen days after operation.

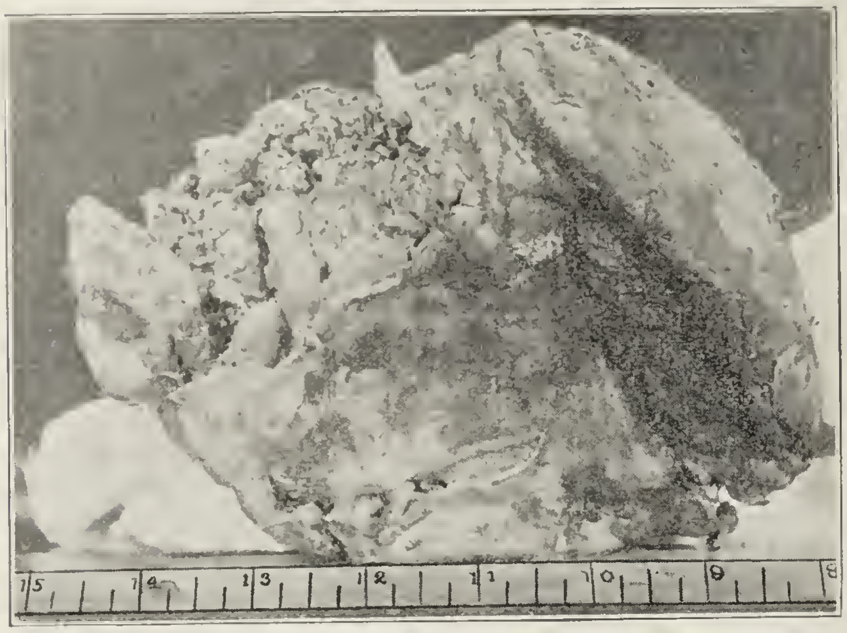

Fig. 1.—Extirpated lobe of the lung showing massive caseous tuberculosis, thickening of visceral pleura and remnants of universal, very dense pleural adhesions. Weight 770 grams.

The case was one of advanced pulmonary tuberculosis, restrained by hygienic and dietetic treatment. There was massive caseation of the lower right lobe. The necropsy indicated the feasibility of the operation and of the removal of even the entire lung.

Mr. N., aged 20; tailor; single; family history obscure; previous health good. During the winter of 1907, he first became ill with increasing cough, dyspnea and evening fever. Three months later, having lost about 36 pounds, he applied to a medical dispensary where a diagnosis of advanced pulmonary tuberculosis was made, and with the belief that he could live but a few weeks he was referred to a special hospital for the treatment of tuberculosis. Here it was noted that the man was very ill and had marked dyspnea, and a temperature of 102 or 103 F. The lower half of the right chest was flat on percussion, and on aspiration about one-half ounce of turbid fluid was evacuated. No empty bed, however, was available in the hospital, and an immediate ejection of the patient from his boarding-house was demanded. I then first saw the patient, and had him admitted to a surgical ward of the Samaritan Hospital, where for sixty-two days he was treated by forced feeding, out-of-door life, and moderate doses of creosote.

The lower lobe of the right lung continued flat, with diminished resonance, and without breath sounds. An aspiration needle introduced into the chest in this region penetrated the lung, showed no respiratory oscillations (indicating pleural adhesions) and on removal, the point of the needle contained caseous material. The condition, therefore, was arrested pulmonary tuberculosis, with massive caseation of the lower right lung, which evidently would soon liquefy and cause death.

Mr. N. and his friends desired surgical procedure, and it was determined to attempt the removal of the entire lower right lobe. On June 14, 1907, he was anesthetized by scopolamin-morphin, reinforced during the operation by small quantities of chloroform, and a rectangular flap, containing segments of four ribs, was turned up from an area below and internal to the apex of the scapula. The pleural cavity was found to be absolutely obliterated, and the thickened pleura was everywhere densely adherent to the lung. With the greatest difficulty the lung was separated from its pleural attachments. Below it was difficult to separate the lung without lacerating the diaphragm, and to the left the adhesions were so marked that the separation was made through the lung substance for fear of tearing into the pericardium. The lower lobe of the right lung was isolated to its hilum and delivered through the chest wall (Fig. 1).

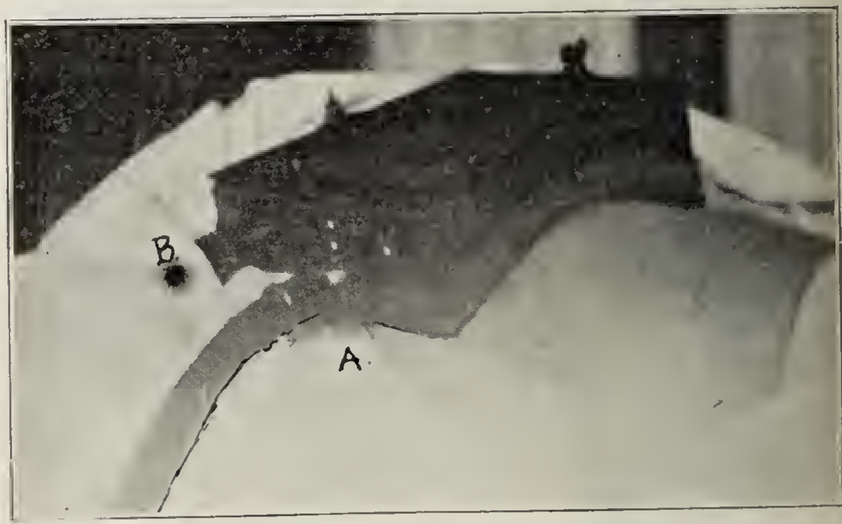

Fig. 2.—Pneumatic shield for the temporary production of negative pressure within the chest during operations on the lung. The shield offers a means of combating crises that result from pneumothorax, and enables the production of a rapid operative emphysema. The shield has an inflated rubber rim, a large glass window, an attachment (A) connected with an aspirating tank, and an arrangement (B) for releasing or regulating the partial vacuum.

With the delivery of the lung and the traction on its root the breathing improved. The hilum of the lung was clamped in segments and the lung tissue divided, step by step, with the application of further clamps. Catgut ligatures were then introduced with a needle into the hilum, the stump ligated in sections, and the clamps removed. There was very little bleed-

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[1] In Th. Gluck's monograph presented before the Thirty-sixth German Surgical Congress (Archiv. f. klin. Chir., lxxxiii, 581) is recorded a resection of the lower lobe of the right lung for tuberculosis in a child of five years. The child had disease of the right femur and ankle, and a right purulent hemorrhagic pleurisy. The extent of the resection and the technic are not described, but the child was alive several months later. In bronchiectasis the sclerosis and shriveling of the functionless tissue are favorable to pneumectomy, and a few successful operations have been recorded for this condition. Gluck reports a resection of the left upper lobe and a total resection of the left lower lobe of the lung for bronchiectasis multiplex fœtida, the patient surviving the operation for seven months. Heidenhain (Archiv. f. klin. Chir., lxiv, p. 891) reports a resection of the greater part of the left lower lobe of the lung on a patient of forty-three. Four operations were done on the same patient and the lung tissue removed in pieces. Although the hemorrhage was profuse, the final result is reported as satisfactory. The quantity of lung tissue removed was about the size of a fist and contained a carcinomatous nodule. Riedinger (v. Bergmann's System of Practical Surgery, 1904, vol. ii, p. 518) mentions the case of a boy of eight years on whom he did repeated operations for the removal of multiple bronchiectatic foci; almost the entire upper left lobe of the lung and the upper portion of the lower lung were finally resected with marked improvement. Murphy's article on the "Surgery of the Lung" (THE JOURNAL A. M. A., July 23 and 30, and August 6 and 13, 1898), contains an elaborate review of the experimental and clinical work done prior to 1898, and this together with Tuffier's "Chirurgie du Poumon" records a number of partial resections of the lobes of the lung for tumor and for other conditions.

ing from the pulmonary vessels. The main bronchus was ligated, and a flap formed of pulmonary tissue sewed over its lumen. The portion of lung tissue adherent over the pericardium was now removed. The lowest segment of the rib was excised and a drain of plain and iodoform gauze was introduced into the enormous cavity. During the ninety-five minutes of operation, the breathing was at all times irregular and tumultuous, especially during the separation of the pleural adhesions, and this with the weakening heart action and the fall in blood pressure led to frequent delays.

The portion of lung removed was solid from caseation and weighed 770 grams. On the evening of the operation the temperature reached 105 F., but the following day fell to 99 F. For two days the blood pressure was so low that the radial pulse was imperceptible, after which the pulse gradually improved. The patient's appearance was better than the low blood pressure would indicate. After the fourth day, the patient was kept constantly in the open air. There was little or no cough, and the patient showed rapid improvement. The pulse at times dropped below 100, and the respiration to 28. On the ninth day the patient was permitted to be in a chair.

On the night of the tenth day following the operation there was a severe thunder storm, and apparently, with almost inconceivable oversight, an attendant neglected the patient on the porch; in the morning the day nurse found the bed drenched, and the patient with marked dyspnea, loud râles, and difficult, frequent and ineffective cough. The pulmonary edema progressed, and on the fourteenth day the patient died.

A limited postmortem examination showed that the skin wound had healed firmly, except for a small area in the lower part used for drainage. The rib ends adjacent to the wound were denuded and bathed in pus. The portion of the right lung remaining in the body, although attached to the chest wall by firm adhesions, was atelectatic and congested. It weighed 320 grams. The middle lobe showed miliary tubercles and areas of caseation; the upper right lobe, small miliary tubercles and puckered cicatrices at the apex. It is believed that the process in the upper lobe was easily within the range of spontaneous absorption. The left lung weighed 590 grams, showed congestive edema and mucopurulent bronchitis, but was nearly free from gross evidence of tubercular disease.

The experience in this case suggested the following: (1) The continuance of life and respiratory action, although all of the right lung was thrown out of function by the operation, indicating the feasibility of removing the entire right lung with a continuance of life, provided the patient could survive the immediate shock. (2) The possible desirability of omitting immediate drainage to avoid early mixed infection and better to maintain a negative pressure within the thorax. (3) The desirability of removing all segments of ribs within the wound area to permit early, partial obliteration of the chest cavity, and to avoid secondary necrosis. (4) In the present operation the flap ran from the fifth to the ninth rib; in the removal of the entire lung the incision should be placed higher, and it might prove desirable to slide the scapula forward and reflect the rhomboid muscles from the scapular attachments, giving a more direct access to the root of the lung. (5) The possible value of a pneumatic shield (Fig. 2) made of glass or of metal, containing a glass window and having an inflated rubber rim capable of close approximation to the chest wall. Such a shield placed over the wound would enable one immediately to overcome sudden catastrophies from pneumothorax or atmospheric pressure operating on the great vessels and heart, and would enable a closure of the wound with the maintenance of a negative pressure within the chest, and permit observations as to the influence of negative pressure on intrathoracic hemorrhage. The shield enables the production of an immediate operative emphysema.

While we have found that a lobe of a lung of the lower animal may be made to occupy even twice the normal space by the negative pressure produced by the shield, the safety of such an abrupt traumatic emphysema as a means of filling pulmonary cavities in human practice has not been ascertained. Such an emphysematous lung does not completely collapse but remains distended. The gradual production of an emphysema is constantly observed in pulmonary tissue free to expand but yet incapable of filling the normal thoracic cavity.

3302 North Broad Street.

A CLINICAL STAIN FOR THE SPIROCHÆTA PALLIDA.*

HARRY S. GRADLE, M.D.
CHICAGO.

The great objections to the staining methods commonly employed in searching for the *Spirochæta pallida* are the large amount of time they require and the uncertainty of the complicated stains. Therefore, a simple staining method that is reliable and short would not only tend to further research on this most important protozoön, but would also make microscopic evidence of the presence of the *Spirochæta pallida* of great diagnostic value clinically. In about twenty-five primary lesions which I have examined for Schaudinn's organism, and in all of which the clinical diagnosis was positive, I have every time demonstrated its presence. Two cases of doubtful nature were also proved positive on microscopic examination, while many other cases were entirely negative. Usually, the spirochete can be found with but a few minutes' search and can be differentiated from other organisms of a like morphology with but little difficulty. In recent cases in which the patients have not yet been treated with mercury, the spirochete can be demonstrated in the circulating blood, but it disappears soon after mercurial treatment has been inaugurated.

Three different solutions are used in this stain and they must be kept separate as when mixed they tend to decompose in about sixty hours.

Solution 1:	
Rectified Grübler methylene blue	0.5
Potassium carbonate	0.5
Water	50.0
Solution 2:	
Potassium cyanid	1.0
Water	50.0
Solution 3:	
Potassium iodid, 1 per cent. solution.	

Equal quantities of these solutions should be used and mixed intimately. If used as a rapid clinical stain, a small drop of the mixture should be put on a clean slide that is free from fat. A small platinum loopful of the material to be examined — best, serum or pus from a primary lesion—should be intimately mixed with the stain, preserving, however, the drop form as much as possible. Allow the staining to proceed for one minute. Then drop on a clean cover-slip, thus spreading the fluid equally and examine at once with an oil-immersion lens. Everything here stains blue, but the *Spirochæta pallida* stains slightly lighter and can be easily seen.

The stain may be employed, however, with smears made in the regular manner. The smear should be made as thin and as evenly as possible and should be allowed to dry in air for at least ten or fifteen minutes. The mixed stain should be put on the slide and allowed to act for one minute without heat. Excess of stain is washed off in water and dried between filter papers. The *Spirochæta pallida* here is also stained blue along with the other substances present.

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* From the Pathologic Laboratory of Rush Medical College.

A NEW EFFICIENT AND INEXPENSIVE FREEZING ATTACHMENT FOR THE SLIDING MICROTOME.*

MARTIN E. REHFUSS.

PHILADELPHIA.

Any process of hardening tissues rapidly at once attracts attention. Within recent years the freezing methods have been very much in use. Their rapidity and ease of application recommend them to the physician and pathologist alike, and the slight distortion occasioned by their use is more than compensated by constant results when properly employed. The fact that no prolonged fixing, dehydrating or constant changing of solutions is necessary, has long been the most potent argument for their use. Frequently, the chemical agent selected for hardening penetrates only the periphery, while this method insures a thorough and uniform hardening of the specimen. Large pieces are no bar to its use—they merely take more time to harden thoroughly while small pieces are more easily manipulated and less liable to tear.

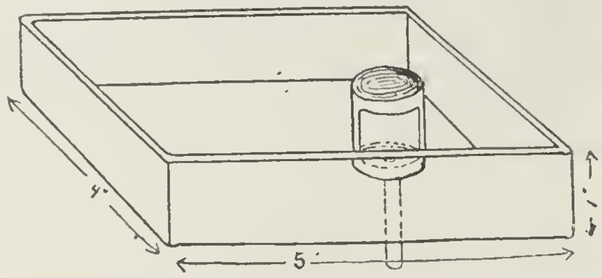

Fig. 1.—The general construction plan and dimensions of the box.

There are many who use the sliding type of microtome exclusively, and must rely entirely on the ether method for their frozen sections. Any simple, clean and inexpensive apparatus which might accomplish this task, and which could readily be applied to their microtomes would be appreciated.

Any one who has had any experience with the ether method knows the inconstancy of results. Often wishing sections early, I have used the other method, but was discouraged by the amount of labor and assistance necessary; therefore, I was compelled to seek some other means of accomplishing the same purpose. Remembering the employment of the freezing mixture, it occurred to me that I might devise some apparatus of a similar nature which would serve the purpose. One thing, however, prejudiced me against freezing mixtures, the constant drainage of brine, which is the source of considerable splashing as well as uncleanliness. Why not utilize the brine? It is the source of contact and the medium for the transmission of the cold. Investigation proved that such a procedure is entirely rational, and on that basis the following piece of apparatus was made:

It consists of a metal box (Fig. 1) (in this instance phosphor bronze), toward one end of which is attached a plug (c, Fig. 2), which can be inserted in the same slot as the universal clamp. Its dimensions are 4 x 5 x 1 inches, although it can be modified to suit the microtome. In the same axis with the plug is the corrugated object carrier (a, Fig. 2) attached to the box by a screw thread (b, Fig. 2). The carrier of the same metal is hollow, its upper and lower discs being connected by two small upright arms, thus allowing the brine to circulate through the carrier. The surface of the upper disc is corrugated by a series of concentric grooves. Its surface projects above the edges of the box so that the free passage of the knife can occur.

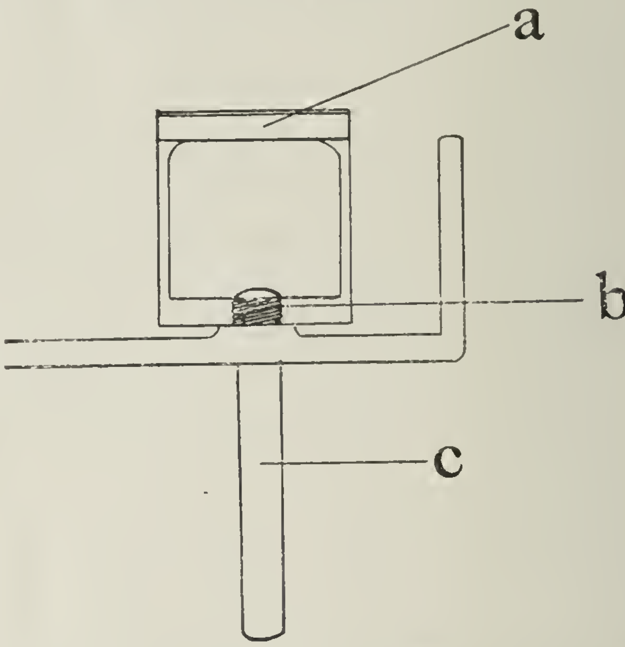

Fig. 2.—a, The corrugated upper plate which is the object carrier; b, the projecting screw by which the carrier may be attached to the box; c, the plug by which the box is fastened to the microtome.

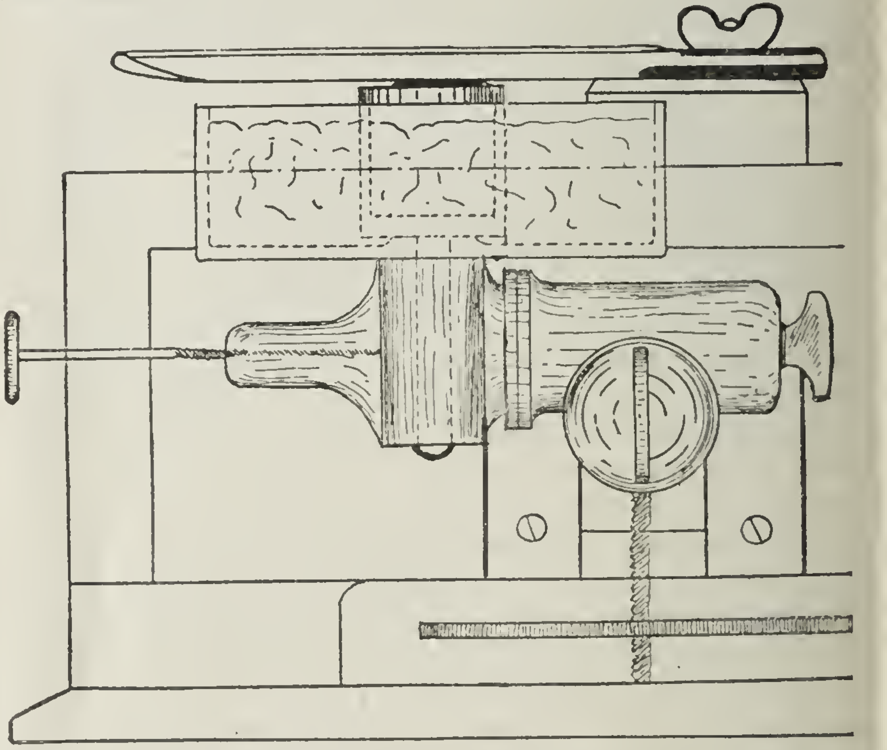

Fig. 3.—The box attached to the microtome.

The box is not perforated. In this it is radically different from other freezing apparatus. The brine is not interfered with, being allowed to circulate through the mixture. My method of using the box is to place it on a table and then transfer a mixture of ice and salt to the box. It is especially desirable to have the ice finely ground to facilitate freezing. It can very readily be transferred by means of a spoon, alternating the ice with the salt. Then place the object, which has preferably been immersed, in a strong gum solution (gum acacia in aqueous solution), or through any media which may be preferred by the operator, fixing, etc. In about one to three minutes the tissue is frozen, the gum turns white and glossy, and the object is ready to cut. No attention need be paid to the brine and freezing. Attention can be concentrated on the cutting. No brine is spilt, there is no splashing—all is neat and clean. When one is finished cutting, all that is necessary is to remove the box and transfer it to a basin of water. Rinse and thoroughly dry the instrument, and it is once more ready for work.

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* From the Pathologic Laboratory of the University of Pennsylvania.

I have used both the ether method and this one in a number of instances, and perhaps a comparison of the results might not be out of place.

Expense.—Ether is expensive and none but the best ether must be used. The cost of the freezing mixture is practically *nil.*

Time.—Ether freezes slowly, and only after frequent exchanging of bottles. This method freezes rapidly, usually in from one to three minutes.

Thawing.—Ether frozen specimens thaw very rapidly; often the mere exchange of bottles is sufficient to bring this about. Using the above method, however, I have frequently kept specimens hard and fit for cutting for one-half to three-quarters of an hour.

Assistance.—In the ether method this is necessary to keep the specimen frozen while sections are cut. This is entirely obviated in the other process.

To some persons the *atmosphere of ether* is objectionable.

Cleanliness.—Some investigators have condemned the ice and salt freezing because of the splashing and slush attached to it, but as I pointed out above, it is because of faulty application and not because of the method. If this method is properly carried out, no such uncleanliness should occur.

I have used this method a number of times, with good results. But one precaution is to be observed, namely, to keep the top of the corrugated plate especially free from salt; if salt gets on the object carrier, freezing will be inhibited.

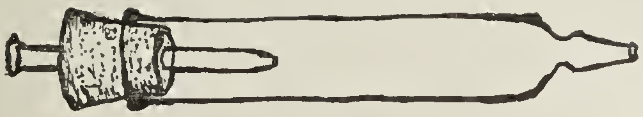
1417 South Broad Street.

AN INSTRUMENT FOR ACCURATELY REGULATING THE AMOUNT OF FLUIDS GIVEN SLOWLY BY RECTUM.

GEORGE B. LAWSON, M.D.
WYTHEVILLE, VA.

This instrument consists merely of the barrel of a medicine dropper fitted air tight, by means of a perforated stopper, into the barrel of a pointed glass urethral syringe as shown in illustration.

The tubing on a fountain syringe is cut near the bag and the apparatus is inserted between the cut ends. The liquid can be seen as it drops from the glass tip to the bottom of the air space in the syringe barrel. A small stopcock is put in the rubber tubing between the apparatus and the rubber bag. One may readily adjust the stopcock so as to get a steady stream or only a few drops each minute. A small catheter is attached to the rubber tubing and inserted into the rectum as is usually done.



This apparatus has the advantage over the old style of partially grasping the tube with an artery clamp because after the tube is inserted in the rectum one does not know whether the liquid is flowing or not, or if flowing how fast.

By previously estimating the number of drops to the dram, one can thus get the total amount of fluid given each hour when this apparatus is used. Thus I have found it convenient to order forty drops a minute continuously for days.

This apparatus has been used for about eight months at the King's County Hospital, and was found singularly convenient in many cases in which the absorption of fluids by rectum was desired—postoperative cases, severe burns, severe infections, etc.

Theoretically, at least, it seemed better in the toxemias to use plain water in place of normal saline so that the osmotic pressure would increase the absorption; also by increasing the fluids of the body without increasing the sodium chlorid one better facilitates urinary secretion.

TRAUMATIC DISLOCATION OF THE HEAD OF THE FIBULA, CAUSED BY INDIRECT VIOLENCE.

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Attending Surgeon, St. Paul's Hospital and Public Free Dispensary.
MANILA, P. I.

This case is reported simply that it may be added to the statistics of dislocation of the fibula. So far as I can ascertain, only four cases of this particular variety have been reported to date.

Patient.—A lad of 17 years received the injury by jumping from a bank of earth, four feet high, to the ground, his foot turning inward.

Examination.—On inspection, a prominence was noted on the outer side of the right leg, a little posterior to the normal situation of the head of the bone. The leg was flexed and the patient unable to walk.

Treatment.—The usual means of reduction recommended, that of simply applying direct pressure, failed. The leg was forcibly flexed in order to relax the biceps femoris, and the foot and toes extended so as to make tense the tibialis anterior, extensor hallucis longus and extensor digitorum longus. The former muscle, of course, aiding owing to part of its origin being from the interosseous membrane, the intermuscular septum between it and the extensor longus digitorum and from the deep surface of the fascia cruris. The operator facing the patient, the limb was grasped, thumbs in front resting over the spine of the tibia, for the fulcrum, palms applied over the head of the bone, the fingers being insinuated posterior to the upper extremity of the same, when the latter was drawn forward by the finger tips and at the same time slightly lifting it outward, it slipped into place without trouble.

A compress was applied over the head of the bone and secured in place with a few turns of a gauze bandage. The patient walked away and pursued his usual occupation, that of student, without interruption.

Farm Work for the Insane an Economic and Therapeutic Measure.—The value of a well-cultivated farm in connection with a charitable institution is strikingly illustrated by last summer's result of the management of the farm connected with the Dunning (Ill.) institutions. Besides providing fresh garden produce from early spring until late in autumn for the 3,300 inmate and employés, enough winter vegetables were grown to provide an ample supply until next May. Fifty-one varieties of vegetables were grown this season. All the work was performed by inmates of the insane hospital under the supervision of the farmer. Less than 100 acres were under cultivation, but the crop of vegetables produced was valued at $7,000. Aside from the money saving which this large production from the institution farm assured, the benefits in the way of providing wholesome and steadying occupation for a large number of quiet insane patients were of importance. —*Cooperation.*

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[*For other information see second page following reading matter.*]

SATURDAY, APRIL 18, 1908.

ANTIVIVISECTION IN NEW YORK AND NEW JERSEY.

Evidently the advocates of the proposed antivivisection laws realize that they are losing ground. The present campaign in New York instead of being based on wholesale denunciation of the medical profession in general and of all biologic investigators in particular, is rather addressed to physicians with the plea to join in preventing the "indiscriminate abuse of animal experimentation by unauthorized persons." Herein the supporters of these proposed laws beg the question, since it has been repeatedly and specifically denied, by those in a position to speak authoritatively, that any such abuse exists or that there is any necessity for restriction aside from that already furnished by existing laws. The burden of proving the existence of such abuse lies with the defenders of the proposed laws. The supporters of these measures, however, have always been distinguished by their disregard of the fundamental facts involved. For instance, a special writer for a city daily recently wrote of the cruelty shown by demonstrators in physiology, who, she said, "cut out the eyes of living rabbits in order to demonstrate their internal structure." Such a statement carries internal proof of its absurdity to any intelligent high-school pupil.

Collier's Weekly is rendering another notable service to the public in its endeavor, by the publication of facts and sane logic, to counteract the annual wave of uninformed sentimentalism manifested by the proposed so-called "antivivisection" legislation in both New York and New Jersey. In a series of editorials running through the last half dozen numbers, that journal has endeavored to inject a sober word of reason and common sense into the heated partisan discussion that has been aroused by the New York bill. In the first editorial it was emphatically stated that the present agitation in New York was not the result of public sentiment, but that it "has been worked up by a newspaper, hungry for sensation, by an absolute misrepresentation of the facts." The motive of one New York newspaper is shown by the following: "The New York County Medical Society was instrumental in having the New York *Herald* legally prevented from carrying certain medical advertising and that paper seldom forgets a grudge. Moreover, this agitation happens to be extremely good business." Attention is also called to the analogous opposition shown to dissection, anesthesia, vaccination, etc. As the editor points out, it would be quite as reasonable, though far less serious, to advocate the abandonment of fishing because the process caused pain to the bait. Regarding the crusaders themselves, *Collier's* says: "They are not to be laughed out of court, these crusaders in a mistaken cause, for their contention of unselfish and ennobling principles. But their apparent humanitarianism is fallacious. Intended to reduce the sum of animal suffering in the immediate sense, it (the proposed law) would in the end immeasurably retard the work of alleviating human pain and saving human lives." Another editorial says: "No more weak and foolish agitation has been started than this attack on medical progress for the sake of the 'poor, defenseless dog.' There is enough wanton cruelty in this world, whether to animals or to children, women and men. Let our sensational newspaper, let excited friends busy themselves with the millions who are needlessly in pain and keep their hands off that profession which is doing most to lessen the suffering of this world. A law opposed by all competent doctors in the world is a foolish and harmful law to pass."

The practice of medicine, in many branches, has not yet become an exact science, owing to the difficulty of proving, through the human organism, the truth or falsity of many theories regarding the causation and course of diseases. For the correct solution of these problems animal experimentation is indispensable. Many of these questions relate to the prevention of disease and all have to do with the alleviation and shortening of disease processes. The public, therefore, and not the medical profession is the gainer through animal experiments. It is only those members of the medical profession who desire to make themselves of more value to their patients, those who have devoted themselves to scientific research for the benefit of humanity, or the leaders in the profession, face to face with an unsolved problem, involving human misery and suffering, who have either the time, inclination, ability or equipment to carry on a course of animal experimentation. The accusation, frequently made by implication, that the same man who tenderly and faithfully ministers to the sick and suffering also wantonly gloats over the writhing dog or the suffering rabbit is palpably absurd. As to the frequently made charge regarding the use of animals in demonstrating the action of drugs or the technic of operations to classes of medical students, the greatest objection at present is not that these things are too common but that they are so uncommon. Too few of our medical colleges are utilizing this method of instruction which is necessary to fit the future physician to cope intelligently with disease. So long as civilization exacts pain and toil, suffering and death, of the lower animals, not only for commercial and industrial reasons, but in many cases simply for the gratification of vanity or the indulgence of luxurious tastes, so long will the reformer, desiring to alleviate animal pain, find an ample field for the exercise of his well-meant efforts, without ignorantly interfering in the most altruistic of all modern scientific movements, viz., the prevention and cure of the diseases to which mankind has long been heir.

COLD AS AN ETIOLOGIC FACTOR IN TETANUS.

Before the days of bacteriology, exposure to cold and wet was regarded as one of the important causative factors in tetanus, and even now it is frequently noted that such an exposure is the incident which precedes an attack of so-called idiopathic tetanus. Considerable experimental work has been done to determine what relationship exists between these phenomena, but it is only recently that any positive results have been attained.

In May, 1907, Ciuca reported to the *Société de Biologie* that he had been able to induce tetanus in white mice, after immersing them for a period in a freezing mixture, by injecting the spores of tetanus, freed of the toxin by exposure to heat. Vincent,[1] going over the same ground, confirms this, but states that it is only after the little animals have been almost killed by the cold that tetanus may be thus induced. Vincent's results with healthy guinea-pigs and rabbits were negative, but he found that if the experiment were tried with animals which were sick, injured or greatly fatigued, tetanus not infrequently followed. An apparently paradoxical state of affairs presented itself in the discovery that while the simple exposure of the entire animal to cold was not sufficient to induce tetanus in rabbits, into which had been injected the spores, the exposure of the extremity injected almost invariably resulted in the development of the disease. This Vincent explains by the fact that the isolated extremity is easily reduced to a temperature at which the phagocytes lose their power of ameboid movement, and therefore their phagocytic power, while it is impossible to reduce the temperature of the whole body to any such degree. Undoubtedly, however, this factor enters into the problem to some extent when the general body temperature is greatly depressed.

Vincent suggests that, with the lessening in activity of the phagocytes, the opsonins and alexins are also inhibited in their action. He has shown experimentally what has long been inferred clinically, that exposure to cold does have a marked influence in the development of tetanus.

TAINTED MONEY.

Cases of syphilis insontium have undoubtedly been contracted by the medium of dirty money; how often this happens no one can say—it is probably not rarely. No one will deny that infections are transmitted by this means, and especially among the careless. In one of the Mills Hotels in New York City, institutions in which men of limited means are accommodated, the superintendent died recently of malignant scarlet fever. The physician who made this diagnosis (which a consultant corroborated) believed that the disease was in this case contracted through the handling of many dirty greenbacks. Indeed, it would be difficult to find anywhere in civilization a medium of exchange so filthy and so much a menace to the public health as is most of our paper currency.

We are now undergoing a wholesome awakening with regard to public health. We are resenting unventilated public places, insanitary vehicles, polluted atmospheres, the depredations of infection-breeding insects, and the sale of impure foods. In our fight against such things we should not neglect currency, which when soiled is a possible means of propagating disease and a certain means of offending every esthetic sense.

There can be only one reason why intelligent citizens expose themselves with so little complaint to the possibility of diseases from this source—and that is the value which such paper represents. Perhaps the situation is endured because it is deemed irremediable. But if it is, this certainly should not be the case. Banks doing much business invariably pay out crisp and clean bills, which they have exchanged at the federal treasuries for the soiled ones that have been deposited with them. That is one of the functions of a bank, which surely all should be able to fulfil. There is no essential reason why bank notes, greenbacks and treasury certificates should not always be clean. The expense to the government and to the banks of retiring from promiscuous circulation all unclean paper money should not be prohibitive, and they would be compelled to take this action were the public to demand it.

At any rate, if clean money were at all times and in all places demanded, a sentiment would quickly be created which could not be disregarded, and which would readily be responded to by the authorities; many of the banks need now no such prompting from their patrons. We have recently become prodigiously excited over the removal of a motto from some of our coins; the expenditure of one-tenth this energy would bring about the reform here urged.

DEMONSTRATION OF TUBERCLE BACILLI IN SPINAL FLUID.

The comparative ease with which tubercle bacilli can be detected in the spinal fluid obtained from patients with tuberculous meningitis, thus establishing a positive diagnosis, does not seem to be so generally appreciated as it should be. A recent article by G. Canby Robinson[1] is therefore timely. This article states that fluid obtained by lumbar puncture from cases of tuberculous meningitis is characteristic in its appearance, being generally almost clear, with a slight opalescence or at most a slight turbidity, and with a tendency to develop a delicate, cobweb-like coagulum after standing for a short time. Normal spinal fluid is clear, watery and without tendency to coagulate: while in acute meningitis due to the meningococcus, pneumococcus, or pyogenic organisms, the fluid is, almost without exception, distinctly purulent. It is fair to say that when clear, slightly opalescent fluid in which a veil-like clot forms in a few hours, is obtained comparatively early in the disease in a patient with symptoms of meningitis, in all probability the patient is suffering from tuberculous meningitis. The finding of the tubercle bacillus, which, of course, constitutes the conclusive proof, is rendered easier by the fact that when coagulation takes place the fibrin begins to deposit on any solid body that may be in the fluid, and hence the tubercle bacilli that are present are, as a rule, nearly all included in the clot, and thus localized in favor of examination. Therefore, if we pick out the clot which forms after the fluid has been allowed to stand, spread it on a slide, fix by heat, and stain as in examining sputum for tubercle bacilli, the micro-organism can usually be found. As an additional precaution, it is perhaps well to centrifugate the fluid left after removing the coagulum, and add the sediment thus obtained to the coagulum before staining. By this relatively simple procedure, applicable by any practitioner who is accustomed to examine sputum, tubercle bacilli can be demonstrated in over 75 per cent. of all cases of tuberculous meningitis, and careful technic will probably give positive results in nearly 90 per cent.

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[1] Bull. de l'Acad. de Méd., Feb. 17, 1908.

[1] Bulletin of the Ayer Clinical Laboratory, No. 4, p. 42.

THE SURVIVAL OF TYPHOID BACILLI IN SOIL.

As far back as 1889 it was shown by Grancher and Deschamps that from soil inoculated with a bouillon emulsion of typhoid bacilli the living organisms could be recovered after a period of five and a half months. Robertson, by the frequent addition of culture medium, was able to keep them alive in the soil for ten months. More recently, Lorrain Smith tried inoculating soil with an aqueous emulsion of the organisms and found that, lacking the presence of the artificial culture medium, they lived a much shorter period. In his experiments twenty-one days proved the longest period that they were shown to exist. W. Mair[1] has recently conducted some investigations which bear on this subject, although the object of his study was primarily to determine the effect on the soil as a habitat for certain organisms of sterilizing it by steam under pressure. The earth which he utilized was taken at a depth of three or four inches below the sod from the grounds of Queen's College, Belfast. It was inoculated with aqueous emulsions of the organisms and was kept under conditions of temperature, light and moisture as closely simulating its natural surroundings as possible. Under these conditions, the *Bacillus typhosus* was shown to be present in a living state after eighty days, though there was no evidence that it was capable of multiplying and leading a saprophytic existence. The *Bacillus coli communis* was found after much longer periods. Some of his samples of soil were shown to be rendered much less hospitable to the bacilli if they were previously sterilized in an autoclave. This he attributed to the development of some bactericidal substance. Of course different soils vary greatly in their suitability for the growth of various organisms, but the fact that it is possible for the typhoid bacillus to live for eighty days in any soil under normal conditions is suggestive of the extent of the danger from certain methods of sewage disposal.

"A NATIONAL DISGRACE."

Our esteemed contemporary, the *New York Medical Journal,* recently[2] discussed under the above caption the subject of misbranding of commercial products. The editorial, which was an excellent one, dealt specifically with but one phase of the misbranding evil—that of placing foreign labels on articles of American manufacture. It concludes: "But it is not with the element of commercial fraud that we are here concerning ourselves. The worst of the whole misbranding business, apart from the substitution of injurious for wholesome products, is its inevitable bolstering up of the disgraceful feeling that we Americans are not justified in holding any of our home products in the highest esteem. That affectation needs to be rooted out. . . . Let us freely admit our shortcomings but let us at least give our products the chance to win under their own names whatever approval they may be found to deserve." While commending this patriotic attitude and concurring fully in the sentiments expressed, we can not help feeling that the more important point in the misbranding business is that very "element of commercial fraud" with which our contemporary states it is not concerning itself. It is this element that bolsters up the un-American affectation complained of. More than this, it is the cause of another type of misbranding, which to the physician is of even more importance than the food question—that of misbranding drugs. For instance, a preparation is advertised to physicians as being a synthetic compound requiring special skill in its preparation and non-toxic in its effects; on analysis this product is found to be a simple mixture of acetanilid and sodium and ammonium carbonates. The physician, we venture to suggest, has a right to feel more indignant over such misbranding than he would when told that the Camembert cheese he had eaten was a product of the State of New York. Or, suppose a preparation on the market is advertised as a cordial of the extract of cod-liver oil; suppose, too, analysis proves that this preparation contains only sugar, alcohol and glycerin—none of which is to be found in cod-liver oil. Is the "element of commercial fraud" here disclosed of no interest to the physician? Or is it of less moment than the fact that Sparkling Moselle is but California Catawba? It is possible, of course, that our contemporary has good and sufficient reasons for not concerning itself with other than the patriotic side of the question. A cursory examination of this journal's advertising pages might suggest that herein lies an insurmountable obstacle to the free discussion of "commercial fraud" in the branding of pharmaceutical products.

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[1] Journal of Hygiene, viii, No. 1.

[2] Feb. 8, 1908.

FEDERAL AID IN THE SUPPRESSION OF QUACKERY.

A verdict recently rendered by a federal jury should be an encouragement to those interested in the suppression of quackery. A certain Mr. Hibbard, said to be the proprietor of the Boston Medical Institute and the Bellevue Medical Institute of Chicago, as well as of similar establishments in other cities, was indicted by the federal grand jury and placed on trial on the charge of using the United States mails for fraudulent purposes. We learn from the newspapers that he has just been sentenced to two years in prison, although a temporary stay of execution has been granted. The news of his conviction is said to have created considerable sensation in the suburban city in which he lived and in which he was regarded as a model citizen. The instructive point to those interested in the suppression of quackery, however, is the prompt and effective results which followed federal interference through the Post Office Department. Repeated efforts have been made to put the advertising "medical institute" or the "medical company" out of business by proceeding under the medical practice acts, which in many states authorize the state board to revoke licenses for "unprofessional conduct." Most of these efforts have been failures owing to the fact that the average lay jury does not appreciate the conditions involved in the charge and is open to arguments from the defendant's lawyers based on "professional jealousy" and like reasons. The charge of using the mails for fraudulent purposes, however, brings the case under the jurisdiction of the postal inspectors and the federal courts, and narrows it down to the plain issue of fraud and dishonesty in the conduct of business. Conviction on this charge is much more easily secured than under the state statutes, since it is safe to say that practically every advertising medical establishment or advertising "doctor" exists by reason of fraudulent and misleading claims and statements made to patients. This fact is well known to the medical profession, but has apparently not been grasped by the public. Conviction on this charge places the culprit in the position of a common swindler and does not allow him to pose as a martyr before the public or as the victim of "medical persecution." It also accomplishes the additional purpose of eliminating the advertisements of the particular institute or individual from the daily papers, since the postal authorities will not admit to the mails as second-class matter any publication containing the advertisement of a violator of the postal regulations. We hope to present some details of the testimony in this case at a later date.

THE PURITY OF THE GREAT LAKES.

A meeting of more than local importance was held at Chicago on Saturday, April 11. State health officers of Indiana, Illinois, Wisconsin and Michigan, as well as representatives of over twenty cities and villages which border on Lake Michigan and which obtain their water supply from it, discussed the problem of maintaining the purity of this great body of fresh water. A permanent organization, embracing the health authorities of the four states which border on the lake and the cities which use it, was formed, to be known as the Lake Michigan Sanitary Association. Interstate cooperation for this purpose is most commendable.

MEDICAL MEDALS.

Historians have come to realize, especially in recent years, that medals constitute important documents of absolutely authentic significance. This is as true for the history of medicine as elsewhere, so that the description of the various medals and medallions of all kinds which has been made with such patience and discriminating study by Dr. Horatio R. Storer of Newport, a former vice-president of the American Medical Association, is likely to be a great help to those who wish to write about medical history. A recent article by him in the *American Journal of Numismatics*[1] on "The Medals, Jetons and Tokens Illustrative of the Science of Medicine," is the seventy-fourth of a series of such articles that have appeared in that publication. In this particular article he discusses about twenty additional medals not previously described. Thus far 2,531 of these tokens have been described. The present list describes, beside the medal given to Dr. Nicholas Senn in 1905, the medal given by the School of Tropical Medicine to Dr. Carlos Finlay chief sanitary officer of Cuba, for his discovery of the transmission of yellow fever by the mosquito, to Col. W. C. Gorgas, U. S. Army, who, as chief sanitary officer of Havana, made practically useful the discovery of Dr. Finlay, and to Dr. Theobald Smith for his investigation on the blood parasite of the so-called Texas fever of cattle. This is known as the Kingsley Medal and bears the name of Mary Kingsley, a distinguished African traveler, who founded it. Dr. Storer remarks: "Strangely enough, the names of the recipients appear only on the cover of the case containing the medal." Probably no better way is open to a historian of telling how a generation viewed a particular discovery or medical advance in any department than the study of the medals of honor awarded to discoverers and investigators. Those who have such tokens in their possession should remember that such collections are most precious.

Medical News

ARIZONA.

State Association Meeting.—Dr. John W. Foss, Phoenix, secretary of the Arizona Medical Association, announces that the annual meeting will be held at Tucson, April 28 and 29, instead of April 20, as previously announced.

ARKANSAS.

Medical Society Meetings.—At the annual meeting of the Tenth Councilor District Medical Society, held in Fort Smith, March 19, Dr. George F. Hynes, Fort Smith, was elected president; Dr. Frank B. Young, Springdale, vice-president; Dr. D. R. Dorente, Fort Smith, secretary; and Dr. Othello M. Bourland, Van Buren, treasurer. The next semi-annual meeting will take place at Bentonville.——At the annual meeting of the Lincoln County Medical Society, held in Star City, Dr. Joseph F. Johns, Grady, was elected president; Dr. W. C. Kimbro, Tyro, vice-president; Dr. Benjamin F. Tarver, Star City, secretary-treasurer; and Dr. Charles C. Price, Douglas, delegate to the State Society.——At the annual meeting of the Northeastern Arkansas District Medical Society, held in Jonesboro, March 11, Dr. L. H. Hill, Greenway, was elected president; Dr. W. J. Robinson, Portia, vice-president, and Dr. Olive Wilson, Paragould, secretary.

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[1] February, 1908.

CALIFORNIA.

Hospital Notes. The Los Angeles Orthopedic Hospital Association has petitioned the superior court of the state to change its name to Mercy Hospital of Los Angeles.——The property owners of Los Angeles, living near the site of the proposed Japanese Hospital have presented a petition to the city council, protesting against such an institution being located in the residence portion of the First Ward.

Enforcement of Vaccination.—Dr. Stanley P. Black, health officer of Los Angeles, is said to have preferred charges against the Pasadena Board of Education for admitting a non-vaccinated student to a local public school. The student in question was admitted to the public schools on a certificate from a local physician that he was not in physical condition to bear vaccination, and later on he contracted smallpox.

Charge Dismissed.—In the case of Thomas Frank Glass, San José, charged with practicing medicine without a license, the defendant is said to have proved to the satisfaction of the court that his license was legal, and the charge against him was dismissed.——The charge of practicing medicine without a license against Ernesto Scofferia, San Francisco, is said to have been dismissed, on the ground of insufficient evidence.

Celebrate Anniversary.—The fortieth anniversary of the founding of the Sacramento Medical Society for Medical Improvement was celebrated, March 17. The speaker of the evening was Dr. Douglas W. Montgomery, San Francisco, professor of diseases of the skin in the Medical Department of the University of California. He spoke on "Stimulants Used in Cooking." The meeting was followed by a banquet at the Sutter Club.

Found Guilty.—Thomas H. Storey, Los Angeles, said to have been a fugitive from justice for five months, pleaded guilty March 9 to the charge of practicing medicine without a license, and was released on $100 bond, his trial being set for May 13.——P. L. Brouillette, Compton, is said to have been found guilty, March 10, of practicing medicine without a license.——The license of Joe Egino, who conducts a dairy farm near San José, was revoked, March 16, because the milk supplied by him had been below the grade required.——Dr. B. Brooks Lee, San Francisco, convicted more than a year ago of making improper use of the mails, is said to have pleaded guilty, March 14, and to have been fined $500.

ILLINOIS.

Wins Malpractice Suit.—In the suit of James Doyle, who charged Dr. John C. Owens, Plainfield, with malpractice in the treatment of a fractured leg, the jury found Dr. Owens not guilty. Dr. Owens has started an assumpsit suit against the plaintiff for $500 to cover the amount due on the medical bill, cost of the malpractice suit, and the loss of time in attending the trial.

Personal.—Dr. William K. Smith, health officer of La Harpe, has resigned. A new board of health has been appointed, consisting of Dr. John C. Ash, president, and Dr. Isaac M. Martin, secretary; Dr. Edward W. Buhrmaster, health officer, and Dr. Levi J. Rhea.——Dr. C. D. Jones, for 18 years medical examiner for the Burlington System, has resigned and will practice in Aurora.——Dr. James L. Lowrie, Lincoln, was seriously cut by broken glass in a collision between his buggy and an interurban car, March 28.——Dr. Vincent J. Cohenour, Joliet, suffered a loss of $200 in the fire which destroyed the Barrett Block.——Dr. Fred K. Ream, Oak Park, suffered slight injuries from an explosion of gasoline in his garage, April 12.

To Study Pharmacology.—The Evanston branch of the Chicago Medical Society recently held a joint meeting with the druggists of the vicinity, at which there was a profitable discussion of nostrums, counter-prescribing, incompatibilities and other matters of interest to both professions. The resolutions suggested by Professor Hallberg concerning prescribing by druggists were adopted. After this meeting there was organized the Evanston and North Shore Pharmacological Society for the purpose of studying the composition, preparation and action of drugs. Licensed physicians and registered pharmacists of Cook County, north of Chicago, are eligible for membership. A banquet was held at Evanston, April 9, to assist the members of the two professions in getting better acquainted.

Epidemic Diseases.—The smallpox epidemic which has persisted for four months in La Harpe, has now assumed such formidable proportions that a meeting was held by the city council, board of education and board of health March 30, to discuss ways and means of checking the progress of the disease.——The Oregon school in East Cass has been closed on account of the prevalence of smallpox.——An epidemic of smallpox is said to be raging in Hillsboro.——Two cases of smallpox were recently discovered in Bloomington.——On account of the discovery of 6 cases of smallpox at Eureka, one in a student at Eureka College, all places of public gatherings, including Eureka College, have been closed.——An outbreak of smallpox is reported at Oreana.——District school 38, in Ephard's Point Township has been closed on account of smallpox.——Five cases of smallpox were reported in one house in Lincoln.——Dr. E. F. Baker, inspector of the State Board of Health, and Dr. Tully O. Hardesty, physician of Morgan County, discovered 18 cases of smallpox in Literberry, in the northern part of the county, all of mild type. None of the patients had ever been vaccinated.——Four cases of diphtheria were reported in Ottawa and five in one family in Paris.——Sterling has an epidemic of measles.

Chicago.

Emergency Hospital to be Opened.—The health commissioner has leased the second floor of 129 Harrison Street and as soon as the building can be put in readiness, will open an emergency relief station, which will be in charge of Dr. George C. Hunt, chief of the ambulance staff.

Gift to Hospital.—As a memorial to his parents, Gustav Freund has given to the Michael Reese Hospital the southeast corner of Groveland Avenue and Twenty-ninth Street, 50½ by 96 feet. The present building is to be improved and used by the hospital as a home for nurses.

Will Prosecute Advertising Specialists.—The city prosecutor promises that he will prosecute physicians and business houses that advertise cures for certain diseases and weaknesses. The ordinance provides fines varying from $25 to $200 for conviction in such cases.——H. E. Lano, who conducts what is called a "Hygienic Institute" on the North Side, is said to have been fined $200 by Judge Scovel April 3, on the charge of maintaining a hospital without license. The plaintiff failed to appear.

The Contagious Disease Situation.—During the week ended April 11 there were 609 cases of communicable diseases reported, of which 51 were diphtheria, 75 scarlet fever, 4 smallpox, 299 measles, 59 chickenpox, 35 typhoid fever, 23 whooping cough, 54 tuberculosis and 9 minor ailments. Diphtheria cases decreased 8 as compared with the preceding week; scarlet fever, 23; measles, 10; chickenpox, 20, and whooping cough, 13. As compared with the corresponding week of 1907 there were 39 fewer cases of diphtheria and 60 fewer cases of smallpox.

March Deaths.—During the month of March the death rate was more than 12 per cent. lower than the average for that month for 30 years. There was a marked improvement as compared with the corresponding month of 1907, in the contagious disease mortality, in which there was a reduction of 34.1 per cent.; a reduction in the chief impure-air diseases of 13.6 per cent., and a promising reduction in the mortality from tuberculosis. The deaths from typhoid fever, acute intestinal diseases was higher than the average for March.

Deaths of the Week.—During the week ended April 11, 600 deaths were reported from all causes, 37 fewer than for the preceding week, 117 fewer than for the corresponding week of 1907, the respective annual death rates per 1,000 being 14.44, 15.33 and 17.74. The reduction of the death rate is chiefly due to the lower mortality from pneumonia, acute contagious diseases, nephritis, cancer, nervous diseases and violence. During the week pneumonia caused 97 deaths; tuberculosis, 69; heart diseases, 58; acute intestinal diseases, 39; violence (including accident) and nephritis, each 36; cancer, 28; scarlet fever, 5; typhoid fever and measles, each 4; whooping cough, 3, and diphtheria, one death.

MISSOURI.

Suit Dismissed.—The suit for damages of Mrs. Mamie Veshion against Dr. Frank J. Dingeman, St. Louis, was dismissed, March 24, for lack of prosecution.

Communicable Diseases.—A number of cases of smallpox are reported by the health officer to exist in Sullivan County.——On account of the prevalence of smallpox at Mount Zion no church services are being held.

Illegal Practitioner Fined.—Mrs. Mary May, St. Charles, claiming to be an Indian, was arrested March 21, charged with practicing medicine, and is said to have been found guilty and fined $50 and costs, execution being stayed on condition that she leave the county.

Personal.—Dr. Pierre I. Leonard has resigned as a member of the city council of St. Joseph.——Dr. Edward O. Greer, St. Louis, has been elected Grand Master Workman of the A. O. U. W.——Dr. James A. Franklin has been appointed local surgeon for the Burlington System, at Cameron.

Dispensaries Merged.—The Free Dispensary, St. Joseph, at Sixth and Messanie Streets, and the Red Cross Dispensary have been merged. The new staff of advisory physicians is composed of Drs. Floyd H. Spencer, Emmett S. Ballard, William H. Minton, Louis J. Dandurant, Gus A. Lau and M. S. Gray.

Osteopaths Mulcted.—The jury in the case of Miss Grace Atkinson against "Dr." Charles E. Still of the American School of Osteopathy, Kirksville, is said to have rendered a verdict, March 22, allowing the plaintiff $10,000. The plaintiff sued for $25,000, alleging that the osteopath, in the treatment, had fractured several ribs.

Society Meetings.—At the annual meeting of the Shelby County Medical Association held in Shelbina, March 26, the following officers were elected: Dr. Henry M. Pollard, Shelbina, president; Dr. William W. Owen, Oak Dale, vice-president; Dr. Adolphus G. Wood, Lentner, secretary and treasurer (reelected); Dr. Dennis E. Singleton, Shelbina, censor, and Dr. William Carson, Shelbyville, delegate to the state association. ——On April 1 thirty members of the faculty of the Kansas City Post-Graduate Medical School and Hospital, organized the Kansas City Post-Graduate Medical Society, with Dr. Bleucowe A. Fryer, president; Dr. B. Clark Hyde, vice-president, and Dr. O. G. Hall, secretary and treasurer.

NEW YORK.

Do Not Want Names Mentioned.—At the March meeting of the Medical Society of Genesee County resolutions were adopted requesting lay newspapers to omit names of the members of the society from notices.

Communicable Diseases.—As the result of the diphtheria epidemic, Concordia College, Hawthorne, has been closed.—— The epidemic of smallpox in Waterloo and Fayette is now reported to be completely under control.——An epidemic of smallpox is reported at Niagara Falls and Youngstown.

Personal.—Dr. John J. Ward has been reappointed physician to the Ellenville health board.——Dr. George P. Harran, city physician of Schenectady, has been made division surgeon of the Delaware & Hudson Railroad.——Dr. John O. Aldrich has been elected president; Dr. Henry J. Wynkoop, secretary, and Dr. D. P. Matthewson, health officer, of Bath.

New York City.

Tries to Rob Physician.—George Miller, who attempted to steal books valued at $15 from the office of Dr. George Price, Brooklyn, has been sentenced to imprisonment for six months in the county penitentiary.

Personal.—The Gibbs prize has been awarded by the New York Academy of Medicine to Dr. Norman E. Ditman, assistant attending physician in St. Luke's Hospital.——Edward B. Bronson sailed for Europe March 31.

Out of Quarantine.—On March 30 the health officer of the port released from quarantine the steamship *Rhein* from Bremen, which had been detained on account of the illness of a third-class passenger with what was suspected to be cholera.

Harvey Society Lecture.—The ninth lecture in the Harvey lecture course, April 18, at the New York Academy of Medicine, is by Prof. Alonzo E. Taylor of the University of California on "The Rôle of Reversed Ferment Reactions in Metabolism."

Hospital Opened.—The new annex of the German Hospital, to be used as an isolation department, was opened March 21. The building is a three-story structure containing 16 rooms and was erected at an expense of $30,000, the greater part of which was donated by Jacob Ruppert.

Osteopath Not a Physician.—The corporation counsel, George L. Sterling, has advised the board of health that it should not register osteopaths and that it should decline to receive death certificates signed by them. The osteopaths will probably bring a mandamus suit to obtain a decision on the constitutionality of the law passed last year by the legislature, legalizing the practice of osteopathy.

Epidemic Diseases.—Scarlet fever and measles are reported to be almost epidemic in Greater New York. For the week ended March 21 there were 961 cases of scarlet fever, 1,607 cases of measles.——As a result of epidemic diseases, St. Malachy's Home, East New York, the Home for Destitute Children, St. Mary's Home for Boys and the Home for Friendless Children have been placed under quarantine.——The steamer *Esperanza* arrived from Vera Cruz, March 24, and was held at quarantine on account of a case of smallpox on board.—— Dr. Alva H. Doty, health officer of the port, has submitted two men of the crew of the yacht *Wakiva* to examination to determine whether or not they are suffering from bubonic plague. The *Wakiva* is anchored at quarantine under the supervision and control of the health officer.

NORTH CAROLINA.

Institute Tuberculosis Society.—Durham City has organized a society for the prevention of tuberculosis, composed largely of laymen, with Dr. Thomas A. Mann, city health officer, as secretary.

Sanitarium Almost Ready.—The Charlotte Sanitarium is almost completed and ready to receive patients. The institution is a private hospital, well built and appointed, and will accommodate 100 patients.

Prevalence of Diseases.—During February measles was reported to be epidemic in 32 counties; whooping cough in 26; scarlet fever in 20; diphtheria in 19; pneumonia in 65; influenza in 37, and smallpox in 23 counties.

February Deaths.—During February 389 deaths were reported in the state, equivalent to an annual death rate of 19 per 1,000. Of the deaths, 108 were caused by pneumonia; 62 by tuberculosis; 25 by heart diseases, 20 by brain diseases; 10 by nervous diseases, and 9 by accidents (including violence).

Communicable Diseases.—During February measles was reported in 33 counties; whooping cough in 28 counties; scarlet fever in 11 counties; diphtheria in 18 counties; typhoid fever in 17 counties; pernicious malarial fever in one county; influenza in 35 counties; pneumonia in 66 counties; cerebrospinal meningitis and mumps, each in 2 counties, and smallpox in 25 counties.

Personal.—Dr. Robert E. Slocum, for several years superintendent of the James Walker Memorial Hospital, Wilmington, has resigned and will practice in the city.——The home of Dr. J. E. Cathell, Tyro, was burned to the ground March 21, with a loss of more than $5,000, on which only $2,000 insurance was carried.——Dr. Alfred A. Kent of Lenoir has been appointed delegate to the National Confederation of State Medical Examining Boards, to meet at Columbus, Ohio.——Dr. N. M. Blalock, Wake County, who removed last year to Oklahoma, has returned and located at Panther Branch, Wake County.——At the annual meeting of the State Farmers' meeting, held in Charlotte, April 2, Dr. Harry Q. Alexander, Matthews, was elected president.

Society Meetings.—At the annual meeting of the New Hanover County Medical Society, held March 26 in Wilmington, the following officers were elected: President, Dr. Edward J. Wood; vice-president, Dr. Wright Hall; secretary-treasurer, Dr. Thomas M. Green; censors, Dr. William D. McMillan Slocumb and Dr. Robert H. Bellamy, and delegates to the state association, the president and vice-president.——The Guilford County Medical Society, at its meeting in Greensboro April 2, elected Drs. Edmund Harrison and J. Pinckney Turner, Greensboro, and Dr. John T. Burrus, High Point, delegates to the state medical society, and Drs. Parran Jarboe, William P. Beall and C. S. Gilmer, all of Greensboro, alternates.——The Lumberton Medical Society was organized March 27, with the following officers: Dr. H. T. Pope, president; Dr. Neil A. Thompson, vice-president, and Dr. John Knox, Jr., secretary-treasurer.

OHIO.

Pathologists for University and Hospital.—The University of Cincinnati and Cincinnati General Hospital will soon employ jointly a pathologist to have the title of professor of pathology in the former and head pathologist in the latter institution, who will give his entire time to research work.——The plan for the new hospital now being erected includes full equipment for the study of pathology.

PENNSYLVANIA.

State Antitoxin.—According to the report of the State Health Department, more than 1,500 lives were saved by the use of diphtheria antitoxin in 1907. The number of cases of diphtheria treated with free antitoxin aggregated 4,693. Of this number 371 died, giving a death rate of 7.9 per cent. In 1906 the death rate was 11.13 per cent. In addition to the diphtheria treated directly, immunizing doses of antitoxin were given to 3,015 persons; of these only 34 contracted the disease and but two died. At present there are 528 stations in the state for the free distribution of antitoxin.

Movement to Abandon Quarantine Station.—The Philadelphia Maritime Exchange is considering the question of dispensing with one of the quarantine stations on the Delaware river and bay. There are two quarantines now in force, the federal at Reedy Island and the state at Marcus Hook. It is proposed to ask importers and those interested in shipping to give an opinion with a view of appealing to the national government for the discontinuance of the Reedy Island station and the enlargement of the facilities of the state service at Marcus Hook, in order that it may be possible to board incoming vessels at any hour of the day or night. Both stations have surgeons constantly on duty by day, but there is no examination of vessels after sunset.

Pennsylvania Railroad Surgeons Organize.—Surgeons of the Pennsylvania Lines east of Pittsburg met at Harrisburg, March 31 and effected organization. A constitution and by-laws were adopted and the following officers were elected: President, Dr. Joseph E. Egbert, Wayne; vice-presidents, Drs. B. Frank Wagenseller, Sunbury, and Francis V. Ware, Millville, N. J.; secretary, Dr. William H. Cameron, Pittsburg; treasurer, Dr. Eugene H. James, Harrisburg; and executive committee, Dr. William B. Henderson, Phillipsburg, chairman, and Drs. William McKenzie, Conshohocken, and Charles B. Wood, Monongahela. The number of surgeons embraced in this territory is 350. The next meeting will be held in Cambridge Springs in September.

Philadelphia.

Tuberculosis Dispensary Opened.—The board of trustees of Jefferson Medical College Hospital has authorized the establishment of a department for the dispensary treatment of pulmonary tuberculosis. This department will be opened on Mondays, Wednesdays and Fridays from 1 to 2 p. m., and will be under the direction of Dr. Henry R. M. Landis.

Contagious Diseases.—On account of the presence of scarlet fever in the Hahnemann Hospital the main buildings of that institution were placed under quarantine by the direction of the board of health, March 31.——The James R. Ludlow public school was closed for disinfection by the bureau of health, April 1, on account of several cases of diphtheria.——Epidemic conjunctivitis is markedly prevalent in various sections of the city.

To End Hospital Charter.—An application was filed March 31 for the dissolution of the hospital founded by Dr. Bushrod W. James, known as the Bushrod Eye and Ear Hospital. A resolution was passed by the board of trustees for the dissolution of the hospital one year ago. The funds of the institution, amounting to $12,770.63, will be turned over to the board of city trusts for the establishment of a new Bushrod Washington James Eye and Ear Hospital, which was provided for in the will of the late Dr. James.

Medical College Society Banquets.—The annual banquet of the Coplin Pathological Society was held April 3. Dr. Hobart A. Hare was toastmaster and those responding to toasts were Drs. William M. Late Coplin, George B. McClellan, Francis X. Dercum, Randle Rosenberger, James C. Wilson, W. Warren Funk and Ross V. Patterson.——The James M. Anders Medical Society of the Medico-Chirurgical College held its annual banquet April 3. Speeches were made by Drs. Charles E. deM. Sajous, James M. Anders, Wilfred W. Hawke and John V. Shoemaker.

Personal.—Dr. Mary E. French was recently elected president of the Philadelphia Club of Graduate Nurses.——Dr. Lewis W. Steinbach was elected vice-president of the Philadelphia branch of the *Alliance Israelite Universelle*, March 29.——Dr. S. A. Sands has returned from Europe.——Dr. Persifor Frazer sailed April 4 from New York for Genoa.——Dr. John N. Rhoads was operated on for tuberculosis of the right kidney in Jefferson Hospital, April 6.——Dr. John G. Clark was the guest of honor of the Kansas City Alumni of the University of Pennsylvania at the annual reunion of the association in Kansas City, March 26.

Bequests.—By the will of the late Arthur Hagen St. Joseph's, St. Mary's and the Jewish Hospital each receives $250. Provisional bequests are also made to St. Agnes' Hospital, St. Joseph's Hospital, the Jewish Hospital and the Methodist Hospital.——The will of the late Emily Norris Billin contains a bequest of $10,000 to the Home of the Merciful Savior for Crippled Children.——Provisional bequests, from an estate of over $100,000 of the late S. D. Smith, are made to the Pennsylvania, University and Episcopal hospitals.——A bequest of $5,000 to the Episcopal Hospital was made by the late John Scholes.——The will of the late James A. Stone contains provisional bequests to the German Hospital.

Health Report.—The total number of deaths reported for the week ended April 4 was 553, a decrease of 2 from the previous week and of 64 from the corresponding week of 1907. The principal causes of death were: Typhoid fever, 13; measles, 5; scarlet fever, 5; diphtheria, 13; consumption, 51; tubercular meningitis, 10; cancer, 24; apoplexy, 11; paralysis, 6; heart disease, 65; acute respiratory diseases, 84; enteritis, 23; cirrhosis of the liver, 4; Bright's disease, 42; puerperal septicemia, 6; congenital malformation, 14; premature birth, 7; congenital debility, 12; old age, 9; suicide, 8; accidents, 13; marasmus, 6. There were 233 cases of contagious diseases reported, with 31 deaths, as compared with 248 cases and 30 deaths in the preceding week.

To Entertain Foreign Delegates.—At a meeting held in the mayor's office on April 4, arrangements were made for entertaining the international delegates who will attend the National Conference on Tuberculosis to be held in this city from September 24 to 26 inclusive. These foreign representatives are delegates to the International Congress on Tuberculosis, which is to be held in Washington, D. C., from September 28 to October 3 inclusive. The general committee is arranging a schedule of lectures to be delivered by some of the foreign delegates during their visits to various cities. Among those expected to speak are the following: Drs. Bernard Bang, Copenhagen; Emil von Behring, Harburg; A. Calmette, Lille; Emil Coin, Buenos Ayres; B. Frankel, Berlin; S. Kitasato, Japan; Arthur Newsholme, Brighton; Gotthold Pannwitz, Berlin; R. W. Phillips, Edinburgh; J. H. Spronck, Utrecht; Carl Turban, Davos Platz; Anton Weichselbaum, Vienna, and Theodore Williams, London.

Hospital Reports.—The report of the Charity Hospital of Philadelphia for March shows that 1,044 patients were treated and 1,126 prescriptions were compounded.——The report of the Polyclinic Hospital for March is as follows: Patients admitted to house, 77; discharged, 128; new patients treated in dispensary, 1,889; total visits to dispensary, 8,430; accident ward, 530.——The report of the Presbyterian Hospital for March shows that there were 228 patients remaining from the preceding month; 209 admitted; total number treated, 437; discharged, 205, and remaining, 232. The number treated in the dispensary reached 1,812.——The report of the Sanatorium Association of Philadelphia, which was instituted in 1877, shows that during its existence it has cared for a total of 2,910,109 persons. Last season, from the middle of June to the end of August, there were 107,758 admissions. There were 3,088 quarts of milk, 22,400 quarts of soup, 4,247 cups of tea and 59 barrels of crackers provided for the beneficiaries; 172 garments were supplied to those insufficiently clad. Since the last annual report a diet kitchen with dormitories and dining room has been erected. The bathing pools have been rebuilt with concrete and a carrousel, with a building for housing it, has been added.

TENNESSEE.

The Southern Medical Journal.—An announcement is out of the publication of a journal under the above title, to be a high-class representative medical journal for the South. According to the announcement, it is to promote "no pet hobby or scheme . . . its sole purpose and aim will be to advance the interests of the entire southern medical profession." Dr. John A. Witherspoon, Nashville, is to be the editor-in-chief.

UTAH.

Dispensary Opened.—The Free Medical Dispensary of the Volunteers of America, Salt Lake City, was opened March 14.

Epidemic Diseases.—Fairview is suffering from an epidemic of diphtheria, which has caused the closure of the public schools and the interdiction of public gatherings.——Diphtheria is said to be epidemic at Willard.——Owing to an epidemic of scarlet fever, measles and diphtheria in Ogden, it is said that 350 children have been taken out of the public schools of the city.——Measles is reported to be epidemic in Huntsville.——The public schools of West Weber have been closed on account of the prevalence of smallpox in the town.——The public schools of Lehi have been closed and public gatherings forbidden on account of the presence of smallpox.

WASHINGTON.

Personal.—Dr. James E. Crichton has been appointed health officer of Seattle.——Dr. James A. Ghent, Seattle, is said to have fallen heir to $250,000 by the death of an uncle, D. A. Ghent, of Toronto, Ont.

Vital Statistics.—During February there were reported to the Seattle Board of Health 147 deaths, a decrease of 32 as compared with January. Among the chief causes of death were: Tuberculosis, 21; pneumonia, 14; other diseases of respiratory organs, 6; cancer and digestive diseases, each 7; circulatory diseases and violence, each, 17; nervous and genitourinary diseases, each, 9; typhoid fever, 2, and diphtheria, 1.

Osteopaths Barred.—The first organized attempt of practitioners of Seattle to effect the removal from the permanent office buildings of the city of practitioners designated as nonprofessional and undesirable, was made March 16, when a number of physicians having offices in the Eitel building demanded that the owners at once serve notice of eviction on all practitioners not graduates of recognized schools of medicine.

Medical Society Organized.—Physicians of Benton County held a meeting and banquet in Prosser, February 29, and organized the Benton County Medical Society, electing the following officers: President, Dr. C. C. McCown, Prosser, vice-president, Dr. D. M. Angus, Prosser, secretary, Dr. H. Welland Howard, Prosser, and treasurer, Dr. F. M. Crosby, Kennewick. Dr. Cornelius J. Lynch, North Yakima, councilor of the district, presided at the meeting.

Plague Prevention Work.—On March 9 Passed Assistant Surgeon Glover reports the work done at Seattle since January 22. During November, December and January 5 rats infected with plague were discovered, but no infected rats have been found since that time. The number of fleas found on rats has decreased from 15 to 20 per rat in November, to 6 fleas in 14 rats in February. Since January 22, 5,931 rats have been examined postmortem.

Communicable Diseases.—Colfax County health officials report that 15 cases of smallpox were reported at Oakesdale February 15.——The health officer of Spokane reports that the epidemics of smallpox and scarlet fever are now under control.——Colville reports 6 cases of smallpox.——On account of the prevalence of diphtheria the public schools of Mount Vernon have been closed.——About 30 cases of smallpox are reported in Yakima County.——Smallpox is said to be spreading in Whatcom County. New cases have appeared in Ferndale and Nooksack.

WYOMING.

New County Society Organized.—The Fremont County Medical Association has been formed at Lander, with Dr. Thomas G. Maghee, Lander, president, and Dr. Neil D. Nelson, Shoshoni, vice-president.

Personal.—Dr. Charles H. Solier, superintendent of the State Asylum, Evanston, is spending a month in California.——Dr. J. P. Keller, for the past year a member of the staff of the State Hospital, Sheridan, has resigned, and has been succeeded by F. M. Warner, Rock Springs.

Warning Against Boy Phenomenon.—Dr. Samuel F. B. Miller, Laramie, secretary of the State Board of Medical Examiners, has received a letter from Dr. William T. Gott, Crawfordsville, Ind., secretary of the State Board of Medical Registration and Examination, warning him against a "boy phenomenon" company of illegal practitioners, whose methods were recently exposed in Indiana.

GENERAL.

American Medical Association Outing Club.—This club is arranging for a nine days' tour of the Middle West after the session of the American Medical Association. Information in regard to this trip may be obtained from Dr. Edward R. Campbell, Bellows Falls, Vt.

Missouri Valley Headquarters.—The secretary of the Medical Society of the Missouri Valley announces that arrangements have been made for headquarters of the society at the Victoria Hotel and that arrangements are now in progress for a "Missouri Valley Dollar Dinner."

Symposium on Pellagra.—A symposium on pellagra will be held during the meeting of the Medical Society of the State of North Carolina at Winston-Salem in June. All having interest in this subject are invited to attend the meeting. Pellagra has become a vital question in the South. In North Carolina they have already about 20 cases to report and cases have recently been reported also from South Carolina and Alabama.

News from Hawaii.—Chief Quarantine Officer Cofer reports that the steamship *Nippon Maru* arrived at Honolulu from Hongkong March 13, with a case of smallpox on board. The patient and 100 contacts were placed in quarantine, and the steerage was disinfected and all on board vaccinated. The plague laboratory at Honolulu reports that during the week ended March 7 109 rats were examined, and that during the following week 173 rats were examined and no plague infection was found.

Mississippi Valley Medical Association.—At a meeting of the committee of arrangements for the Mississippi Valley Medical Association, held in Louisville, March 20, the Seelbach Hotel was made the official headquarters of the association. It was decided that the president's address, the address in medicine, by Dr. George Dock, Ann Arbor, Mich., and the address on surgery, by Dr. Arthur Dean Bevan, Chicago, should be given on the evening of the first day, October 13, the meeting to be followed by a smoker in the Rathskeller. On the evening of the second day a musicale is to be given in the winter roof garden, of which Mrs. F. J. Meyers is in charge, and at which light refreshments willl be served.

Society Meetings.—The American Pediatric Society will hold its annual meeting on May 25, 26 and 27 at Water Gap House, Delaware Water Gap, Pa. Members are urged to send at their earliest convenience the titles of their papers to Dr. Samuel S. Adams, 1 Dupont Circle, Washington, D. C., that the preliminary program may promptly be issued.——The Association of American Teachers of the Diseases of Children will hold its annual meeting at the Great Northern Hotel, Chicago, June 1. To be eligible for membership in this association the applicant must be a regular physician in the United States, Canada or Mexico, in good professional standing; professor, assistant professor, clinical professor, adjunct professor of, or lecturer on pediatrics, or must hold an equivalent position in a recognized medical college or be a member of a properly organized hospital or dispensary staff actively engaged in the treatment of children.

THE KOCH DINNER.

Banquet in New York to the Famous Dr. Robert Koch.

Although and as if in honor of his arrival on these shores, the daily press has been able to locate at least two genuine cases of sleeping sickness in New Jersey and Long Island, Robert Koch's first impression in this country must have convinced him that the disease is not overprevalent with us. Wide-awake reporters and photographers have been dogging his footsteps from the time of his arrival and from everywhere invitations were showered on the man who has come here for a rest and *en route* to Japan.

The American profession will regret not having Robert Koch as its guest at the coming sessions of the American Medical Association and of the International Tuberculosis Congress, but it will also respect his desire for quiet and rest after his arduous labors in the wilds of Africa, whence he has only recently returned. It will also rejoice to know that the esteemed founder of bacteriology promises to come again soon and to give us more of his time. Brief and quiet as his present visit has to be under the circumstances, the only official dinner for which he accepted an invitation, and which was given him under the auspices of the German Medical Society of New York, will remain in the memory of those fortunate enough to attend it one of the most memorable of events and one which can not fail to be a stimulus for American scientific workers, and for those who are furthering medical institutions and education.

The German Medical Society, and especially its president, Dr. Carl Beck, deserve great credit for having been able to assemble for this event in the short time at their disposal, excellent representatives of American scientific work to greet their master. In the gaily decorated ballroom of the Waldorf-Astoria were assembled over 400 men, and the boxes above were crowded with invited ladies.

At the speakers' table the guest of honor sat at President Beck's right, at his left Dr. William H. Welch. Others were Mr. Andrew Carnegie, Drs. William S. Halsted, Baltimore; Abraham Jacobi, New York; Theobald Smith, Boston; V. C. Vaughan, Ann Arbor; C. G. Janeway, New York; V. Y. Bowditch, Boston; Theodore Darlington, Herman Briggs, New York; A. G. Adami, Montreal; T. Flexner, New York, etc.

President Beck gave the first toast, and in it merely greeted the guest in the name of the American profession to whom the name of Robert Koch means so much. He said that he did not wish to enumerate all his great discoveries. He greeted in him the simple man he had remained though all the honors that man could give were bestowed on him. This true "American spirit" in his work, he said, was emphasized also in the practical direction which he always gave to it and on the basis of which such enormous strides have been made in the prevention of disease in so short a time.

Dr. Welch greeted Robert Koch as the foremost representative of German medical thought and method of research, which had conquered the whole world. He alluded to an interesting personal recollection from a time when bacteriology was in its infancy and he working in Cohnheim's laboratory at Breslau. He told how Koch, unknown, came there from the little town of Posen to show Cohnheim his work on anthrax and how he remained closeted with him for a long time, and how Cohnheim afterward told Welch and the other workers: "There is a great man of whom we will hear much in the future."

Dr. Abraham Jacobi spoke of Bichat, Pasteur and Koch as the three founders of modern medicine, and also did honor to the American disciples of Koch who have done so much to introduce his methods into this country.

A telegram from the German ambassador was read, expressing the Emperor's great appreciation of Mr. Carnegie's generous gift of $100,000 to the "Robert Koch *Stiftung*," which he felt sure would further the international strife against tuberculosis.

Mr. Andrew Carnegie jokingly said he would add a cipher to his gift if he could be granted the power to understand and to speak German as well as those present. His English, however, gave faultless expression to his admiration for medical research and endeavors in general, and for Koch and his followers' work particularly.

Then Koch expressed in simple words his warm appreciation for this remarkable reception given to him. He did not consider himself worthy of it any more than others; he had simply tried to do what he considered his duty. He thought himself "fortunate to have sometimes found the gold among the gravel of the road which is open to everyone." Significant was his allusion to the struggle against tuberculosis, in which it was thought the institution of special hospitals was the final step, while it needed much more direct and specific efforts. He expressed the hope that the "Robert Koch *Stiftung*" would help distinctly toward this goal. His promise to come back again for a longer stay was greeted with rousing applause.

CANADA.

Hygienic Institute for London.—The cost of the new Hygienic Institute to be erected in London, Ont., will be $30,000. The city of London gave the land free, and the Ontario government donated $50,000, which leaves $20,000 for equipment.

A Good Showing.—A bulletin recently issued from the laboratory of the inland revenue department, Ottawa, states that out of 196 samples of bismuth subnitrate, potassium bromid and phenacetin collected from different dealers throughout Canada, not one showed any signs of adulteration.

The Cigarette Evil.—A resolution in the Dominion House of Commons proposing to prohibit the manufacture and sale of cigarettes and the importation thereof into Canada, has been discussed freely, but failed to carry. That the cigarette evil is growing in this country is apparent from the figures quoted by the member introducing the resolution. In 1896 there were consumed 89,000,000; in 1906, 277,000,000; and for the nine months (ended March 31, 1907) of the Canadian fiscal year the number stood at 275,000,000.

Communicable Diseases.—The board of health of Quebec has issued an order prohibiting sufferers with scabies and pediculosis from attending the schools of the province until cured.——There were 112 cases of smallpox in Ontario in February, with one death; scarlet fever, 406 cases, with 19 deaths; diphtheria, 211 cases, 27 deaths; measles, 185, 4 deaths; typhoid fever, 73, 27 deaths; consumption, 184, 184 deaths. The total number of deaths in the month amounted to 2,610, equivalent to an annual death rate of 14.9 to 1,000 of population.

Personal.—Dr. Samuel Johnston, chief of the anesthetic department of the Toronto General Hospital, has returned from Europe.——Dr. David A. Shirres, Montreal, is visiting in Jamaica.——Dr. J. H. O. Lambert, Winnipeg, will leave for Europe early in May.——Drs. John W. Stirling and Charles W. Vipond, Montreal, have returned from the West Indies.——Dr. James F. W. Ross, Toronto, will travel abroad during the summer.——Dr. Charles G. Gurd, Montreal, will spend the next five months in Germany.——Dr. Thomas H. Whitelaw has been appointed health officer of Edmonton Alta.——Dr. James F. Cattermole, Toronto, has been appointed assistant physician at the Institution for Feeble-Minded Children at Penetang, Ont.——Dr. W. C. Usher, Wicklow, Ont., has been appointed house physician at the Rhode Island General Hospital, Providence.——Dr. A. D. Unsworth, Hamilton, in charge of the Consumptive Sanatorium, has resigned and will do hospital work abroad for a year.——Dr. C. F. P. Abraham, Niagara Falls, Ont., is spending several months in Europe.——Dr. Robert E. Mathers, Halifax, has gone on a trip to the Mediterranean.——Dr. Thomas W. P. Flinn has been appointed by the United States government, medical inspector of immigration at the port of Halifax, vice Dr. C. Dickie Murray, deceased.——Dr. John Caven, Toronto, is recuperating in Bermuda.——Dr. R. G. Revell has been placed in charge of the new provincial laboratories at Edmonton, Alta.——Dr. J. Nisbet Gunn has returned to Vancouver, B. C., after two years abroad.——Dr. W. Henry B. Aikins, Toronto, editor of the *Canadian Practitioner and Review*, will shortly leave on his annual trip to Europe.——Dr. George R. McDonagh, Toronto, has returned from the West Indies.

Canada and Tuberculosis.—In no province in Canada has there been put forth a more strenuous fight against the inroads of tuberculosis than in British Columbia. The Anti-tuberculosis Society held its annual session March 6. The first annual report shows that a sanatorium was opened at Tranquille, B. C., Nov. 28, 1907, admitting on that date 10 patients, the number being gradually increased to 16, the limit of the institution's accommodation. Two additional cottages were hurriedly constructed early this year and now the institution accommodates 22 patients. The cost of maintaining each patient has been about $55 per month. It is expected that 4 patients will be discharged cured May 1. The receipts of the society amounted to $53,475.20 and the expenditures, $31,259.20.——An interesting debate has recently taken place in the Ontario legislature on a bill proposed to establish county boards of health and thus prevent the spread of tuberculosis throughout the province. The need of this measure was emphasized, as several counties had an average of one death to every 11 people. From the year 1880 to 1905 there were registered 66,000 deaths from tuberculosis in the province. The particular point in the bill was compulsory notification. The consumption problem will be taken into the serious consideration of the government.——Having been successful in establishing the British Columbia Hospital for Incipient Tuberculosis, Dr. Charles J. Fagan, Victoria, the provincial health officer, is now moving in the direction for an institution for advanced cases.——The Canadian Association for the Prevention of Tuberculosis will appoint a medical traveling secretary, to organize and deliver lectures.——A deputation from the province of Alberta recently waited on the prime minister, seeking aid toward establishing a sanatorium for consumptives in that province, as it is contended that consumptives in search of health go to that province from all over Canada.——The provincial health department of Manitoba recently addressed circular letters to the profession in that province regarding the conditions prevailing as regards tuberculosis. To the 350 letters sent out 105 replies were received. The replies showed 398 cases of consumption in Manitoba and that there had been 188 deaths from the disease in 1907. The secretary of the board of health estimates that there are 796 cases in the province.——A public meeting has been held by the residents of Banff, who strongly object to the proposed establishment of a sanatorium for consumptives in the Banff National Park. It was feared that if such an institution were established there tourists would have an aversion to going to Banff.

Hospital News.—At the annual meeting of the Montreal General Hospital, held February 18, it was reported that the number of patients who passed through the wards of the hospital during 1907 was 3,347; in the out-door departments there were 50,840 consultations, or 3,858 in excess of 1906. The president gave a résumé of the work which the hospital had accomplished during the last half century. The number of indoor patients who received treatment in the wards in the year 1857 was 966, and in the outdoor department there were 4,953 consultations. During the past 50 years there have been 100,121 indoor and 1,094,222 outdoor treatments.——Both the General Hospital and the Notre Dame Hospital, Montreal, are asking the provincial government for an increased hospital grant of $10,000 each.——According to the annual report of Notre Dame Hospital, Montreal, there were 2,366 patients treated in that hospital during 1907. Of this number 1,273 left the hospital cured; 693 improved, while 245 died in the institution, of which 87 were in a dying condition when brought into the hospital.——At St. Paul's Contagious Diseases Hospital, Montreal, during 1907 there were 70 cases of diphtheria; 68 of scarlet fever; 5 cases of the two diseases combined; 68 cases of measles; one case each of measles and scarlet fever, and 4 cases of erysipelas. Of the total number 216 patients were sent to their homes cured and 16 died. During the past year the receipts of this hospital amounted to $51,605 and the disbursements to $60,850.——Dr. R. W. Bruce Smith, inspector of hospitals and charities for the province of Ontario, has had his annual report laid before the Ontario legislature.

He attacks the immigration policy of the dominion government, holding it responsible for the country, and particularly the province of Ontario, being at the present time overrun with undesirable and unsuitable immigrants. There are at present in Ontario 65 hospitals, 35 refuges, 31 orphanages, 3 homes for incurables, 2 convalescent homes, 2 Magdalen asylums, and 28 county houses of refuge, each of which shares in the government grant to such institutions. During the past hospital year there have been treated in the hospitals 45,551 patients. The total sum expended for the maintenance of these hospitals he puts down at $1,415,140.68. During the year new hospitals were opened at Niagara Falls, New Liskeard, Wingham and Goderich. In Ontario during the past year 2,667 persons died from tuberculosis. The Ontario government grant to every municipality establishing a sanatorium is $4,000 and afterward $1.50 per week is paid by the government for each patient's maintenance while in residence. In Ottawa, Kingston and Stratford, during the past year, generous provision has been made for the care and treatment of consumptives. The average daily cost per patient per diem in Ontario hospitals is $1.16.——Winnipeg city council has granted $2,500 to St. Boniface Hospital, that city.——Winnipeg is discussing hospital extension and finances in connection therewith. A bylaw to raise $60,000 for the purpose of a new isolation hospital will be soon submitted to the ratepayers of that city.——A delegation of representatives from the general hospitals of Ontario waited on the Ontario government March 18 relative to an increased governmental grant. Hon. Mr. Hanna promised for the government that the grant of 20 cents per patient per diem would likely be augmented when the supplementary estimates were presented to the legislature. The delegation then organized as the Ontario Hospital Association.——The government of Manitoba has appointed a commission to investigate the hospital question in that province.——The boards of Grace and the Western Hospital, Toronto, have had a meeting preliminary to arranging for amalgamation. In a few days a meeting is to be held with the board of control of Toronto, when definite arrangements as to amalgamation will be announced. The Western Hospital has a very fine and extensive site and the new building would be erected on those grounds.——Work on the new Toronto General Hospital will be commenced during the present year.——New buildings to cost $60,000 are contemplated for the British Columbia Hospital for the Insane at New Westminster.——The board of governors of the Winnipeg General Hospital propose to the city council to submit a by-law to the ratepayers for raising $225,000 for hospital purposes; $100.000 of this amount would go toward an isolation hospital; $15,000 for a morgue; $40.000 for a building for tubercular patients, and $60,000 for a maternity and children's hospital.

FOREIGN.

Conference for Social Hygiene at Vienna.—A public meeting of the Austrian Society for Prevention of Venereal Disease was held recently at Vienna, and doctors, lawyers, mothers of families, teachers and others gave brief addresses on various phases of the subject. Jelly of Berne stated that the Swiss public schools have now an organized system of sexual pedagogics for the older children. Eulenburg of Berlin emphasized the necessity for guiding the sexual development of the young along natural lines, not striving to repress the sexual instinct in ascetic style, but by developing character and moral will power, a love of outdoor life and athletics, sports, etc. The diet is of extreme importance, especially abstention from stimulants and restriction of meat. The home and school should share the task, the home by providing broader opportunity for physical development and vigor and by satisfying the child's curiosity with answers that are true in all points but adapted to the child's comprehension. The school should cooperate by aiding to develop the body and the character as well as the mind, and by incorporating the elementary facts of sexual matters in the regular course. A blank circular has been sent out by Professor Fenger to collect data in regard to the prevalence of venereal disease in Austria.

LONDON LETTER.

(From Our Regular Correspondent.)

LONDON, April 11, 1908.

International Conference on Sleeping Sickness.

The second International Conference on Sleeping Sickness met at the Foreign Office, London. The conference was convened at the suggestion of the British Government. The delegates of the seven countries represented are as follows: Germany, Dr. Robert Koch, Herr H. von Jacobs and Dr. Steudel; Spain, the Marquis de Villalobar and Dr. F. Murillo Palacios; Congo Free State, Colonel Lantonnois and Dr. van Campenhout; France, M. Le Myre de Vilers, M. Rousin, Dr. Kermorgant, Dr. Cureau and Dr. Girard; Great Britain, Lord Fitzmaurice, Sir Walter Foster, Mr. A. Walrond Clarke, Mr. H. J. Read, Sir Patrick Manson, Dr. Rose-Bradford, Sir R. Boyce and Col. D. Bruce; Italy, Prof. Rocco Santoliquido and Prof. Adolfo Cotta; Portugal, Dr. Ayres Kopke. The conference being regarded as a continuation of the preceding one, Lord Fitzmaurice again presided and cordially welcomed the delegates on behalf of the British government. The delegates then commenced the discussion of the draft general acts drawn up by the British and German governments. Prof. Rocco Santoliquido delivered a long address, setting forth the views of his government as to the steps to be taken for combating sleeping sickness. The conference terminated without being able to agree to the draft convention before it. The French and Italian representatives declared themselves unable to accept a proposal unanimously recommended at the last conference in June for the establishment of a central bureau in London. They proposed that the work should be taken over by the hygienic bureau, which a conference held in Rome in November last proposed should be established at Paris. This proposal the German plenipotentiaries declined to accept and they strongly supported the British plan for the establishment of a bureau in London. In closing the proceedings, Lord Fitzmaurice said that although agreement had been found impossible, the conference had not been useless. The communications constitute an important record of scientific views, and it is clear that much might be done between the *limitrophe* powers themselves in East Africa by separate conventions to secure uniformity of treatment of the disease, especially on the frontiers. Thereby a further step would be taken toward ultimate agreement on the larger question of the establishment of a central bureau for combating the disease.

Inaccurate Dispensing of Physicians' Prescriptions.

Dr. Teed, public analyst for the city of London, in his last report, calls attention to the fact that over 33 per cent. of the prescriptions analyzed by him were incorrect. Although this is serious, it compares well with his previous report, in which over 85 per cent. of the prescriptions were said to be inaccurately dispensed.

Cremation.

At the annual meeting of the Cremation Society, the president, Sir Charles Cameron, gave statistics showing the progress of the movement. During the first five years of the society's life the number of cremations in Great Britain was 100. During the next five years it increased to 483, and during the next five to 940. That brought them down to 1899, and for two years longer the crematorium at Woking was the only one available in Great Britain. In 1907, the number of cremations was 705, and there were thirteen crematoria at work, of which six have been provided by municipal bodies. In spite of the progress of the movement and the disappearance of prejudices, cremation in Great Britain has been confined to the wealthy and intellectual section of the population, and out of the 6,000 or 7,000 cremations which have taken place, not 2 per cent. has been performed on members of the poorer classes. In order to increase the popularity of the method, the society has reduced the fee for membership from $50 to $25, which entitles the member to cremation free of cost at any of the crematories.

Victim to the X-Rays Awarded a Pension by Government.

Mr. Hall Edwards, the *x*-ray specialist, whose sad case has been reported in THE JOURNAL, has been granted a civil list pension of $600 per annum by the government. As stated previously, his left arm has been amputated. It has now been decided that the four fingers of the right hand will have to be amputated, but it is hoped that the thumb, which so far has escaped injury, can be saved.

Action Against a Physician for Prescribing Alcohol in Bright's Disease.

An action has been brought against a physician under extraordinary circumstances. He attended a woman who died from Bright's disease. After her death her husband brought an action against the physician for malpractice, alleging that he had ordered brandy, gin and beer—most improper treatment in Bright's disease. The physician gave evidence to the effect that he prescribed a milk diet and that only on one occasion, when the patient expressed a great craving for a little beer and said that she could not do without it, did he consent to her having a glass. He would never dream of recommending brandy or gin in such a case. The jury stopped the case and gave a verdict for the physician.

Therapeutics

[It is the purpose of this department to outline an up-to-date management of disease, to suggest scientific treatment for diseased conditions, and to present prescriptions that are simple, useful and palatable. Prescriptions are written in both the metric and apothecaries' systems, but the amounts of the ingredients are **NOT** exact translations of one system into the other, but quantities convenient for pharmacist and physician. It should be understood that solids are weighed in grams or fractions of grams, while liquids are measured in cubic centimeters; that a teaspoon holds five cubic centimeters, i. e., more than a fluid dram, hence a 100 cubic centimeter preparation will contain twenty doses.]

Aloes.

The official aloes is the inspissated juice obtained from the leaves of various species, and in the crude state occurs as brownish masses. Aloes and all its preparations have a bitter taste.

An active principle called aloin has been obtained from aloes. While aloin is less certain in its effect than the purified aloes, it is still generally satisfactory as a laxative. The purgative principle of aloes is said to reside in a principle called emodin, which is probably set free in the alkaline secretions of the upper intestine. The presence of alkalies seems to be necessary for the activities of this purgative principle, and experience seems to teach that many times combination with iron renders the aloes more effective. If a liquid preparation of aloes were administered before meals, if the amount were small, it would act as a bitter tonic or stomachic. The amount, however, must be small, or it would cause nausea.

Aloes stimulates the activity of the muscular coat of the intestine, thus increasing peristalsis, and this action seems to be principally on the large intestine. The movements that aloes causes are soft and dark colored, and the discharges are ordinarily not watery. Aloes seems to have a predilection for irritating or congesting the rectum, and seems to cause congestion generally of the pelvic organs. For this reason it is generally inadvisable to use aloes as a laxative when there are hemorrhoids, rectal or colon irritations, or inflammation of the pelvic organs, or in pregnancy. Its stimulant action to the mucous membrane of the intestines probably reflexly increases the secretion of the liver and pancreas and probably the intestinal glands. Owing to its tendency to cause irritation sufficient to produce griping, the pain from which is referred to the umbilical region, it is generally inadvisable to use aloes in any form as a cathartic, unless it is in combination with some more active drug.

The most important use, then, of aloes is as a laxative, which means a daily dose sufficient to produce one daily movement of the bowels. As the action of aloes is slow, it taking from eight to ten hours or longer to cause a movement of the bowels, the best time to administer this drug is after supper. With some patients a small dose of aloes or aloin three times a day, after meals, is successful, but generally the one sufficient dose after supper is the best method of treating chronic constipation. As aloes or aloin alone, as above stated, is likely to produce griping for some little time before the bowels are moved, it is generally best to combine the aloes with some drug or drugs that correct such unpleasant action. The most effective drug for this purpose is belladonna, the dose of which should not be large, as there is frequently idiosyncrasy against belladonna, and if one pill or tablet of the combined aloes and belladonna does not produce satisfactory movements, the dose could not be doubled without danger of overaction from the belladonna. A small dose of strychnia added to the aloin pill or tablet is often advisable, as it causes a little more activity of the intestines. It is also often well to add a little ipecac, which also stimulates the upper part of the intestine and the secretion or excretion of bile.

The United States Pharmacopeia recognizes the following preparations of aloes:

Aloe: The preparation used is an extract from the leaves of various species of aloes, and contains aloin, a resin, a trace of gallic acid, and a volatile oil to which it owes its odor. The dose is 0.25 gram, or 4 grains.

It is, however, best to use:

Aloe Purificata, or purified aloes, the dose of which is the same, viz., 0.25 gram, or 4 grains.

Purified aloes enters into the composition of the Compound Extract of Colocynth, of which it comprises 50 per cent.; into the Compound Rhubarb Pills, each of which contains 0.10 gram, or 1½ grains of aloes; and into the Compound Tincture of Benzoin, which contains 2 per cent. of aloes.

Extractum Aloes is a powder, the dose of which is 0.10 gram, or 2 grains.

Tinctura Aloes contains 10 per cent. of aloes, and the dose is 2.5 c.c., or one-half a fluidram or one-half a teaspoonful.

Tinctura Aloes et Myrrhæ is known as "Elixir Pro" (Elixir Proprietatis Paracelsi, i. e., a combination which originated with Paracelsus). This tincture contains 10 per cent. of aloes and 10 per cent. of myrrh. The dose is 2.5 c.c., or one-half a fluidram or one-half a teaspoonful.

Pilula Aloes contains 0.13 gram, or 2 grains of purified aloes. The dose is one or two pills.

Pilula Aloes et Ferri contains 0.065 gram, or 1 grain each of purified aloes and of the dried sulphate of iron. The dose is two pills.

Pilula Aloes et Mastiches is known as the "Lady Webster" pill, and contains 0.13 gram, or 2 grains, of purified aloes, and 0.04 gram, or ⅔ grain of mastic. The dose is one or two pills.

Pilula Aloes et Myrrhæ contains 0.13 gram, or 2 grains, of purified aloes, and 0.065 gram, or 1 grain, of myrrh. The dose is one or two pills.

Aloinum (Aloin) is the active cathartic principle of aloes, and the dose is 0.02 gram, or ⅓ of a grain.

The dose of aloes, or any of its preparations, or its active principle, is always *enough*, and no more than enough to cause one good movement a day.

The Pharmacopeia also recognizes:

Pilula Laxativa Composita, which contains 0.015 gram (¼ of a grain) of aloin, 0.0005 gram (1/128 of a grain) of strychnin, 0.008 gram (⅕ of a grain) of extract of belladonna leaves, 0.004 gram (1/16 of a grain) of powdered ipecac, and 0.05 gram (¾ of a grain) of powdered licorice root. The dose is one or two pills.

The National Formulary recognizes:

Pilula Laxativa Postpartum (Barker), is a combination the formula of which is as follows:

R.	gm. or c.c.	
Aloes purificatæ	055	gr. 5/6
Extracti colocynthidis compositi.........	11	gr. 1⅔
Extracti nucis vomicæ..................	025 or	gr. 5/12
Pulveris ipecacuanhæ	005	gr. 1/12
Resinæ podophylli	005	gr. 1/12
Extracti hyoscyami	08	gr. 1¼

M. et fac pilulas.

Various combinations of aloin, belladonna, and strychnin may be obtained in tablet triturate form. Many of them contain too little aloin and too much strychnin and belladonna. A happy combination is the following formula, which contains more aloin and less strychnin and belladonna than generally found in ready-made compound aloin tablets.

℞.	gm. or c.c.		
Aloini	02		gr. ⅓
Strychninæ sulphatis	0015	or	gr. 1/40
Ipecacuanhæ	03		gr. ½
Extracti belladonnæ	006		gr. 1/10

M. et fac tabletam 1.

Felons.

Dr. J. Walter Vaughan, Detroit, in the *Journal of the Michigan State Medical Society*, February, 1908, discusses the treatment of this painful affair. He prefers to use the scientific name of "paronychia," and defines it as an acute infection of the finger which usually ends in abscess, and the cause of which is always bacterial. The severity of the inflammation depends on the kind of bacteria present, the streptococcus causing more serious trouble than other pyogenic organisms.

The first essential of treatment is rest as effected by a finger splint, and it is best to splint the adjacent finger as well as the one involved. The infected finger should be bandaged with a moist dressing, and sometimes a small ice application is sufficient to inhibit the infection and effect a cure. Vaughan condemns all carbolic acid injections and applications as tending to cause necrosis. If the ice application does not inhibit the inflammation, the part should be freely incised, care being taken always to cut parallel with and never across the tendons; then a wet dressing should be applied of either a saturated solution of boric acid or a weak bichlorid of mercury solution, as 1 to 5,000 or 1 to 10,000.

Vaughan thinks that free suppuration, healthy granulations and proper healing are all hastened by Bier's hyperemic measures. He thinks hyperemia alone is of no value, but combined with free incision and wet dressings it is useful. He produces this hyperemia by applying "a broad rubber band from three to four inches wide around the arm a short distance below the elbow. Care should be taken that this elastic band is just tight enough to obstruct the free return of venous blood, but not sufficient to interfere with the arterial flow. This rubber band should not cause pain or paresthesia, nor must the arm below the bandage be cold or feel cold." It may cause, however, some edema, hence the dressing around the infected finger should not be too tight. He applies this constriction treatment for periods of from four to six hours at a time, twice a day. He finds that the white blood count will frequently show a greater number of leucocytes in the arm below the bandage than in the blood of the rest of the body. If the periosteum is involved or if there is tendon infection, these structures should be freely and quickly incised.

In palmar abscesses he applies the Bier hyperemic treatment by means of suction cups, "which should be left on from fifteen to thirty minutes at a time, and this will often hasten a cure."

While acute lymphadenitis is a frequent complication in any form of finger infection, and any involvement of the axillary glands should contraindicate the use of local hyperemia, he believes that the constriction method applied early enough may inhibit the passage of these germs to the glands above.

Alcohol.

A most efficient antiseptic wet dressing, poultice and cold pack may be made in the following manner:

Soak a sufficient amount of gauze in one part of alcohol to three parts of water. Apply to the part to be treated thoroughly wet, just short of dripping, cover with rubber tissue, and bind firmly with a bandage.

Such an application many times takes the place of an ice bag in reducing swellings from contusions, sprains, or acute inflammation, and on the other hand, will hasten the suppuration of a boil or abscess that can not be aborted as well as the old flaxseed poultice. After the abscess has been opened the corrosive sublimate dressings are, of course, more antiseptic, but are more likely to irritate the surrounding skin, unless the solution is very weak.

This alcohol dressing should be changed, or at least resoaked, every twelve hours. If the bandage is put on tightly so that no air gets under the rubber tissue, the dressing becomes a warm one, acting like a poultice. If the bandage is put on more loosely so that air gets under the rubber tissue, allowing the alcoholic solution to evaporate slowly, the dressing is a cold one, acting like an ice bag.

Resorcin.

The *New York Medical Journal*, Feb. 8, 1908, gives the following suggestions for combinations of resorcin which are quoted from *La Presse Médicale*, Jan. 11, 1908. The following is recommended "for follicular eczema, seborrhea of the scalp, pityriasis, etc.:"

℞.	gm.		
Resorcini	1	or	gr. xv
Adipis lanæ hydrosi	25		ʒvi

M. et Sig.: Apply to the diseased part at night, and wash off with soap and water in the morning.

Another combination of resorcin is ascribed to Sabouraud, as:

℞.	gm.		
Resorcini	1		
Ichthyolis	1		
Sulphuris præcipitati	1	or	āā, gr. xv
Olei cadini	5		ʒi
Adipis lanæ hydrosi	30		℥i

M. et Sig.: Use externally as directed.

This preparation is much stronger, and should not remain too long in contact with the skin.

Unna's exfoliative resorcin paste is as follows:

℞.	gm.		
Resorcini	20		ʒv
Zinci oxidi	5	or	gr. lxxv
Kaolini	1		gr. xv
Adipis benzoinati	30		℥i

M. et Sig.: Use externally as directed.

This paste should be allowed to remain in contact with the skin but a few minutes only.

The properties of resorcin are more or less antiseptic and stimulant, and it causes an exfoliation of the epithelial layers of the skin. When the part of the skin to be treated is protected by horny layers or protruding growths, these should be first scraped off with a bistoury or curette; then the resorcin may be applied as follows:

℞.	gm. or c.c.		
Resorcini	10	or	ʒiiss
Glycerini	100		fl℥iii

M. et Sig.: Use externally.

Or the resorcin may be applied in powder, as:

℞.	gm.		
Resorcini	1		gr. xv
Bismuthi subnitratis	5	or	gr. lxxv
Talci purificati	40		ʒx

M. et Sig.: Use externally.

Or it may be advisable for certain parts of the body to use resorcin in collodion, as:

℞.	gm. or c.c.		
Resorcini	2	or	gr. xxx
Collodii flexilis	20		flʒv

M. et Sig.: Use externally as directed.

Differentiation of Pernicious Anemia from Latent Cancer of the Stomach.—Ceconi reports in the *Riforma Medica* for July 6 an instructive case in which pernicious anemia was differentiated by the absence of leucocytosis when all signs seemed to point to latent gastric cancer. The reds numbered from 800,000 to 1,200,000; the whites 3,000 to 5,000. In two other cases, latent cancer was differentiated by the blood findings: reds 1,250,000; whites from 15,000 to 18,000; hemoglobin 20. In Strauss' case the leucocytosis reached 80,000, accompanying gastric ulcer.

Pharmacology

THE BROADER AIMS OF THE COUNCIL ON PHARMACY AND CHEMISTRY.

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(*Continued from page 1206.*)

IV. THE STANDARDS OF THE COUNCIL.

The task which confronted the Council at its organization—that of sorting out the good proprietaries from the bad, the promising from the unpromising—appeared not only gigantic, but almost hopeless. But those who remember the conditions then existing will know that an attempt, at least, was imperatively necessary. It was at once realized that a final classification into good and bad was as yet out of the question. The object must be approached gradually, and in a sense tentatively. It would have been a very difficult task to select those which could be recommended as good enough to use; but it was a relatively simple task to pick out those which were so bad that they should certainly *not* be used. There are three pre-eminent, cardinal faults to which the manufacturers of proprietary remedies are prone, and which no intelligent physician should condone. These are, in the order of their seriousness: Intentional deception, secrecy as to the essentials of the composition, and exploitation to the laity. While most physicians will need no argument to convince them of the reasonableness of this statement, some may have been so influenced by the sophistries of the interested parties, that it will not be amiss to recapitulate the most evident objections to such offenses.

INTENTIONAL DECEPTION.

The individual physician can not investigate in detail every product which he desires to use. He must rely to a greater or less degree on the statements of others; and since most of the statements about proprietary products are disseminated by their manufacturers, he must rely largely on these for his information. If a manufacturer practices deception in one thing, he is apt to practice it in another. The justice of this principle is so self-evident that thus far it has been openly challenged by only one manufacturer,[1] Tyree of Washington. He said, in substance, that it is no one's business but his own if the composition of his remedy does not conform to the formula which he chooses to publish.

SECRECY.

The argument as to secrecy is somewhat more plausible, but none the less vicious. On the surface the statement seems reasonable that the practicing physician is concerned only with the actions of a remedy and not with its composition; that he does not even go to the trouble of acquainting himself with the composition of official preparations; and that, therefore, the publication of the composition of a proprietary remedy would interest no one but its imitators. In all of this there is a grain of half truth, but this is so distorted as to render it worse than misleading.

It is perfectly true that the direct concern of the practicing physician is with the results and not with the composition of a remedy. But the sophist is silent on the point that the knowledge of the composition of a remedy is essential to the complete knowledge of its action. For instance, centuries of experience have been required to build up our present knowledge of the actions of opium, of its dosage, of its indications and contraindications, of the side actions and idiosyncrasies, and of its tendency to form a habit—the knowledge, in fact, which, consciously or unconsciously, governs our everyday use of this drug. Yet the nostrum manufacturer asks us to disregard all this experience so laboriously attained and to reacquire it every time that he chooses to "invent" a "new" formula. The proposition is not only impossible, it is absurd.

It is admitted that relatively few physicians are able to give off-hand the full formula for paregoric, or hive syrup, or compound licorice powder. If they could do this, I would have a higher respect for their memory than for their judgment. But they should know—and I am convinced that the vast majority do know—the essential constituents of the official drugs which they employ, and also the approximate proportion of the dangerous ingredients; and they know where to find the other information whenever they may need it. The physician has no need to inquire into the working formula or into the blending and proportion of the flavors, and the Council does not ask for this information. These data furnish the best protection against fraudulent imitators.

The most skilful pharmacist could not compound a successful copy of any proprietary preparation from the information demanded by the Council, except in the case of patented preparations—and in these cases the working formula is a matter of public record. How unfounded is the pretended fear that the publication of the essential ingredients would lead to imitation, is shown by the fact that, so far as I know, no attempt has been made, since the establishment of the Council, to imitate any of the products which it has described. The policy of secrecy is, therefore, not necessary for legitimate protection; on the contrary, it is often but a device to deceive. It is a fairly safe inference that the manufacturer who is anxious to conceal essential facts is more anxious to hide them from the profession than from his competitors. Either his remedy contains something, like acetanilid, for instance, which physicians do not care to use indiscriminately, or a knowledge of the true composition would convince medical men that the preparation could not possibly possess the wonderful properties with which it has been endowed by its promoters.

EXPLOITATION TO THE LAITY.

As to advertising to the public, the absurdity of the profession fighting the evils of self-medication with one hand, while encouraging it with the other, is self-evident. The absurdity is so self-evident, that no physician of any standing would for a moment put up with such practices, if he knew them; and few nostrum makers have the impudence to advertise their wares openly and simultaneously, both to physicians and to the lay public. Unfortunately, however, "for ways that are dark and tricks that are vain," the nostrum exploiter is peculiar. Few physicians realize how, and how much, they have been "worked." Probably more remedies have been held up by the Council because of the skilful way in which a certain class of manufacturers market products so as to advertise them surreptitiously to the public, than for all other causes combined. It is time that the eyes of the physician also should be opened—but that story is too long for the present chapter.

It seems very clear to me that no remedy is worthy of further consideration by the medical profession, until it is cleared of these three objections. No honest manufacturer can take exception to these principles. They have been the touchstone by which the Council has effected the preliminary classification of the proprietary remedies. They are the foundation of the rules which have been adopted by the Council.

(*To be continued.*)

Improved Yellow Oxid of Mercury Ointment.

Dr. Talbot R. Chambers, Jersey City, N. J., suggests that the following modification of the official method for preparation of the yellow oxid of mercury ointment secures a non-irritating preparation. The pharmacopeial method is followed, with the exception that the yellow mercuric oxid is freshly prepared and, while still moist, is incorporated with anhydrous wool fat and petrolatum. The mercuric oxid is thus secured in an amorphous condition, which, theoretically, should be less painful than when the granules are present. Practically, Dr. Chambers is able to record that individuals who found the old formula too painful to use, register no objection to the improved make. In addition, it will keep indefinitely.

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[1] The Journal A. M. A., Oct. 20, 1906, p. 1316.

NOSTRUM ADVERTISEMENTS IN THE RELIGIOUS PRESS.

The "Baptist Flag" and Its Gallery of Frauds.

We have had occasion at various times[1] to call attention to the nostrum advertisements carried by religious papers. In the last two or three years there has been a marked improvement in the class of advertising found in these journals, and more than once we have commented on this fact. That there is still room for improvement is evident from a copy of the Fulton (Ky.) *Baptist Flag* sent us by a correspondent. It would be hard to find in a sixteen-page publication a more complete list of medical frauds of all kinds—from the ridiculous to the indecent, from the dangerous to the worthless—than is to be found in this paper.

AN EXAMPLE OF THE OLD RÉGIME.

Since the Great American Fraud articles appeared, most religious publications have dropped the grosser types of medical fakes, and a few have dropped all "patent medicine" advertisements. Not so with the *Baptist Flag*. Here we find the medicated booze "Swamp Root" put out by "Dr." Kilmer, and that cruelest and most mendacious of frauds, the "Combination Oil Cure for Cancer," marketed by the Uriah Heep of quackdom—"Dr." Bye. The notorious Blosser offers a free trial package of his catarrh "remedy;" "Dr." F. G. Curts goes one better and sends his "50 cent nasal douche, five days' treatment and illustrated book—all free," while Mr. Cheney, of "red clause" fame, caps all by making believe that he will give "one hundred dollars reward for any case of catarrh that can not be cured by Hall's Catarrh Cure." Dr. W. Bailey Williams of Rhea Springs, Tenn., advertises that his practice is "limited to chronic diseases—Dropsy, Asthma, Catarrh, Cancer and diseases of women." His specialty is "removal of cancer without the knife," his fees for which "range from $25.00 to $500.00." As a clincher he gives "free service to the regular ministry." This is probably a safe offer, as it is unlikely that a "regular" minister would accept the services of an irregular physician. "Anti-Pain Pills," "Capudine," "Tetterine," and "Merit Blood Tablets" are some of the other nostrums to be found in this strange mixture of piety and fraud.

EDITORIALS VERSUS ADVERTISEMENTS.

In the "Home Circle" department is an editorial descanting on the need of clean reading for the young. A warning is sounded against those publications which "taint the imagination and allure the weak and unguarded from the paths of innocence." An advertisement on another page is addressed, presumably, to those who have been thus tainted and allured. It is headed:

"WEAK MAN RECEIPT FREE"

and goes on to offer a free prescription "in a plain sealed envelope" to those who are suffering from the results of "excesses, dissipation, unnatural drains or the follies of youth." On the same page is the advertisement of a philanthropic lady hailing from Kokomo, Ind., who has sent, absolutely free, to more than a million suffering women "a 50 cent box" of a "simple home remedy, also a book with explanatory illustrations showing why women suffer and how they can easily cure themselves at home without the aid of a physician."

This sample of religious journalism belongs to a type now, happily, nearly extinct. From the frenzied appeal to its subscribers to pay up back subscriptions so that it may not be debarred from second-class mailing privileges, we imagine the proprietors see the "handwriting on the wall." Such publications are a discredit to the high cause they are supposed to represent.

ANTIKAMNIA AND THE PUBLIC.

Samples, Form Letters and "Prescriptions" Sent to the Laity.

To the Editor:—The enclosed "literature" is being sent broadcast to the laity by the Antikamnia people and still a great many of the physicians throughout the country are prescribing the preparation thus advertised. Will the time ever come when the medical fraternity will awaken to the fact that it has been humbugged by a great many manufacturing concerns? I certainly hope so.

J. W. DUVAL, M.D., Wichita Falls, Texas.

COMMENT:—The "literature" referred to by our correspondent consists of a form letter and a small pamphlet. The letter reads as follows:

> *Dear Mr.* ————:
>
> Do you ever suffer pain? If so, try Antikamnia Tablets; Sample enclosed. Your druggist will supply them in any quantity (10 cents worth or more), also in our regular "Vest-Pocket-Boxes." Sincerely yours,
>
> THE ANTIKAMNIA CHEMICAL COMPANY.

The pamphlet accompanying the letter is entitled "Practical Prescriptions," and contains a list of diseases and morbid states arranged alphabetically from "Alcoholism," "Asthma" and "Backache" to "Wind," "Women's Pains" and "Worry." For the one hundred and twenty-two conditions listed, "Antikamnia," "Antikamnia and Codein" or "Laxative Antikamnia and Quinin" are prescribed, demonstrating that the "prescriptions" are more "practical" than scientific.

In many respects the methods of the proprietors of "headache powders" and "anti-pain pills" are less offensive to one's sense of professional decency than the course pursued by the Antikamnia people. The former have at least never recommended their products as "ethical proprietaries;" they have not used medical men as their unpaid agents; the claims made for their products have been no more exaggerated; and they have not found it necessary, from the requirements of the Food and Drugs Act, to substitute acetphenetidin for acetanilid to avoid giving the lie to their former claims.

As to the query propounded by our correspondent: We are optimistic enough to believe that the time he longs for is already here. The fact that the proprietors of nostrums of the Antikamnia type are finding it necessary to advertise to the laity is, in itself, evidence of the diminishing demand for such products on the part of the medical profession.

PANKREON.

Report by the Council on Pharmacy and Chemistry, with Comments.

Pankreon, manufactured by the *Chemische Fabrik Rhenania, A.-G., Aachen*, Germany, is sold in the United States by Merck & Co., New York. It is described as a combination of pancreatin with tannic acid. While pancreatin, when administered as such, is destroyed by the action of the gastric juice before it reaches the intestinal canal in which it exerts its specific action, pankreon, it is claimed, is not affected by the gastric fluid, but dissolves in the alkaline intestinal fluids and rapidly develops the action of the pancreatic ferment. If this were true it would be superior to pancreatin.

Pankreon, having been proposed for inclusion in "New and Non-Official Remedies," was assigned to a subcommittee for report. This subcommittee made experiments to determine whether or not pankreon is unaffected by peptic digestion as claimed. The result of the investigations indicated that the compound is promptly digested by pepsin in acid solution, and hence would be rendered inert before it could reach the alkaline intestinal fluid. The subcommittee recommended that its findings be submitted to the manufacturer through the American agent and that, in the meantime, the further consideration of pankreon be postponed. The report having been adopted by the Council, the findings, in accordance with the recommendation, were forwarded by the American agents to the manufacturer. The manufacturer's reply, having been transmitted to the subcommittee, it presented to the Council the following supplemental report:

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[1] THE JOURNAL, April 21, 1906, 1221; Feb. 2, 1907, 435; Feb. 9, 1907, 534; July 6, 1907, 53; Aug. 10, 1907, 510; Nov. 23, 1907, 1790.

"The findings of the referee contained in the report were submitted to Merck & Co. In reply Merck & Co. submit the answer of the *Fabrik Rhenania*, which does not show any inclination to consider the objections made to the product by the subcommittee. Merck & Co. can do nothing in the matter. Your referee recommends that the product be refused recognition."

This report was adopted by the Council and publication of the following directed:

Pankreon is a grayish powder, said to be prepared by the action of tannin on pancreatic material, claimed to contain 10 per cent. of tannin. It is recommended in from four to eight-grain doses for pancreatic affections, disturbances of digestion, diarrheas, dysentery, marasmus, colitis, achylia, nervous dyspepsia, gastritis hyperemesis, jaundice, etc. It is said to be a strong tryptolytic, amylolytic and emulsifiant.

It is repeatedy asserted in the advertising literature that pankreon is "unalterable by the gastric juice," that it is capable of passing through the stomach unmodified, and its medicinal virtue is said to depend largely on this fact. Again it is claimed that: "The characteristic difference that is presented in this newer product is its resistance to the ordinary process of digestion, so that the chief objection to the use of fresh pancreatic substance—which was that it was so readily digested in the stomach—has been largely done away with, and the early conclusions of Langley regarding the destruction of enzymes in the stomach must be modified so far as pankreon is concerned."

Investigation, however, fails to substantiate these statements. On the contrary, it is clearly shown that the enzymic power of pankreon is practically destroyed by subjecting it to the action of an artificial gastric juice. Pankreon was found to digest about forty times its weight of starch in a neutral solution in ten minutes at 40 C. Several mixtures of pankreon and pepsin of proper strength were prepared in a 0.1 per cent. of hydrochloric acid solution and allowed to stand at 40 C. for one-half hour. It was then made faintly alkaline, and various quantities added to different tubes containing 50 c.c. of a 2 per cent. starch paste, and allowed to stand for ten minutes at 40 C. Very little, if any, of the starch was converted after standing the above time. Various other methods were tried to determine whether or not pepsin and acid affected the enzymic action of pankreon. In every case it was found that the action of pankreon was either destroyed or markedly impaired after being in contact with acid and pepsin for one-half hour or more.

If so marked an effect is produced by the action of artificial gastric juice, it is but reasonable to suppose that the same result would be produced even more promptly and to a more marked degree in the stomach under the influence of the normal gastric fluid. The manufacturer distinctly admits that the enzymic activity of the preparation is diminished by the continued action of a pepsin hydrochloric acid solution, but denies that it is completely destroyed physiologically, in the following sentence: "*Wir geben ja ausdrücklich an, dass bei langdauernder Einwirkung von Pepsin-salzsäure eine Schwächung der Wirkung erfolgt, jedoch ist Vernichtung unter physiolog. Verhältnissen ausgeschlossen.*" This statement only tends to substantiate the results obtained in the laboratory. Investigation shows that pankreon does not to any appreciable extent "pass through the stomach unmodified" and that there are good reasons for believing that its enzymic power is completely destroyed by the normal gastric juice. If the product is altered during its passage through the stomach it evidently can not have the physiologic action attributed to it in the advertising matter accompanying the package, nor can it produce many of the therapeutic effects claimed for it by its sponsors.

W. A. Puckner, Secretary.

COMMENTS.

The above results serve to emphasize the need of impartial investigation of proprietary products even when put out by reliable manufacturers. This preparation has been largely used in Germany and has been recommended by reputable authors as an agent for replacing the deficient secretion of the pancreas. It has even been proposed to use the administration of pankreon as a means of determining whether the appearance of free fat and undigested muscle fiber in the stools was due to a deficiency in the function of the pancreas or to some other cause. It was reasoned that if the deficiency was due to imperfect functioning of the pancreas it would be supplemented by the action of pankreon and the undigested fat and muscle fiber would disappear from the stools. Consequently it was thought that if pankreon produced a removal of these undigested residues from the feces the evidence was obtained that the abnormal phenomenon had been due to disease of the pancreas.

It is possible that some of the good results attributed to the digestive action of the pankreon were in reality due to the tannin which it contained. This by limiting peristalsis might promote more perfect digestion by giving more time for the natural digestive ferments to act. If this is the method in which it acts it should be an instructive lesson to therapeutists to seek for the possibilities of our well-known remedies without waiting for them to be revealed to us by the investigation of some highly vaunted synthetic which contains their active principle.

PHENO-BROMATE.

Its Composition Before and After the Food and Drugs Act.

The exigencies of the Food and Drugs Act have forced one of the lesser lights in the nostrum firmament, Antikamniaward. Pheno-Bromate was advertised *before* the act went into effect as a "synthetic combination of derivations of the phenetidin and bromid groups." Analysis[1] indicated that it was, in fact, merely a mixture of about equal parts of acetanilid and potassium bromid! The label on this preparation *since* the act became operative states that it is "a perfect combination of a phenol and a bromin derivative containing 282 grains of acetphenetidin, U. S. P., per ounce." What a boon it was to mendacious manufacturers that the patent rights on phenacetin expired before the Food and Drugs Act went into effect! How otherwise would the acetanilid-scared public have been cajoled into buying preparations containing antipyretics?

In view of the above facts it is not surprising that a correspondent writes to the *Druggists Circular* plaintively inquiring, "What is a 'bromin derivative'?" and suggesting that the doctors who prescribe such a "derivative" (Pheno-Bromate) should be told "what a sweet bunch of suckers they are." The inelegance of diction exhibited by this writer is equaled only by the pertinence of his suggestion.

Correspondence

Cure of Stammering.

New York City, April 1, 1908.

To the Editor:—Referring to the editorial on the "Melody Cure of Stammering," in The Journal, March 28, I beg to offer the following idea as to the cause of stammering and a treatment which is based on it.

In The Journal, Dec. 1, 1906, there appeared a paper by me entitled "Types of Congenital Symbol Amblyopia." In that paper I recited the history of two boys who had experienced great difficulty in learning to read, referred to the original observation of Pringle Morgan of England on this subject, and set forth the idea that this congenital defect was probably one of a number of congenital defects of a similar nature. I referred also to the inability of many otherwise intelligent children who could not learn mathematics easily, and described the defect as figure amblyopia. The two forms I grouped under the heading of symbol amblyopia. I assumed that the lesion is probably a central one, that it is in the nature of a congenital organic defect, and that in the right-handed it probably lies on the left side in the angular gyrus. I suggested further that the basis of treatment should be repetition, after these individuals had been segregated and classified. I offered also the tentative suggestion that inasmuch as it is universally admitted that in right-handed people the centers of speech and allied acts lie on the left side of the brain, left-handedness be taught and established in such individuals as showed symbol amblyopia.

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[1] The Journal, July 14, 1906, 125.

I believe that stammering is simply the result of imperfect coordination, caused by disconnected and erratic discharges from the cortex; that the lesion is organic; that it is congenital; and that those persons who have been apparently cured are not really cured, as a matter of fact. It is well known that however much improvement has taken place in a given case, it has always been the result of long-continued treatment, and that the basis of that treatment is repetition of effort on the part of the subject to control the defect in the manner which he himself has adoped or others have suggested. It is also well known that however much better these individuals may have become, they relapse again into their original condition, temporarily, at least, when under great excitement or psychic shock.

I am convinced that stammering should be classed under the congenital defects of the speech centers, and that it is allied to symbol amblyopia.

I suggest, therefore, that in such persons it is reasonable to attempt to transfer the speech center to the opposite side of the brain.

Now it is in the highest degree unlikely that a congenital defect should occur on both sides of the brain and in the same place, so that if children who stutter could be rendered left-handed as soon as the defect is discovered, it might be remedied in early life. Experience should prove the value of the suggestion. As a matter of interest, I may cite the case of my own little boy of 6 years. He was originally inclined to be left-handed, and as soon as this inclination was noted his mother—who is practically ambidextrous—commenced to correct it. Very soon afterward we observed that he began to stammer badly, and he continued to have periods of stammering for two years. He can still use his left hand easily, and appears to prefer to use it at times, but in general he is now right-handed. Since he has acquired right-handedness his stammering has ceased.

This suggestion is made in the hope that others will put the treatment into practice. As stated, it should be started in extreme youth, as soon as stammering is observed, but, of course, there could be no objection to trying it also later in life.

Incidentally there has never been a postmortem corroboration of the assumed congenital lesion in symbol amblyopia.

J. H. Claiborne, M.D.

The Pittsburg Housing Situation.

Pittsburg, Pa., April 1, 1908.

To the Editor:—I beg to acknowledge with appreciation your editorial in a recent issue[1] on the Pittsburg housing situation. You rightly indicate that there are three prime factors in evil housing conditions—the landlord, the tenant and the health inspector. I feel, however, that your editorial does not do justice to Dr. James F. Edwards, superintendent of the local bureau of health. This bureau is not an independent department of the Pittsburg city government. It falls under the department of public safety. Two-thirds of its appropriations are engrossed by a contract system of garbage removal, over which the superintendent has no control. Since 1899 there has been no published report of the bureau of health. Previous superintendents of the bureau have not been physicians. I state these things to you to indicate the large work of reorganization which Dr. Edwards has had to undertake. In facing the conditions he has shown rare spirit and no mean measure of accomplishment, even with an inadequate staff. The housing movement is a case in point. He has removed hundreds of privy vaults in the city proper. He placed every facility of his department at our disposal in getting together the report on housing for the Pittsburg Survey, to which you referred.

Our findings were used in support of an ordinance introduced by the chamber of commerce, which was in line with Dr. Edwards' recommendations, and which has just passed. This ordinance will double the force of tenement-house inspectors and for the first time will give the superintendent of health an effective staff for this branch of his work. Reform in this direction has been energetically advocated by Dr. Edwards before councilmanic committees, at public meetings, in the press, and in cooperation with special committees of the Civic Club, Chamber of Commerce, Kingsley House and other local agencies, and in enlisting the services of such outside experts as Lawrence Veiller, secretary of the famous Housing Commission of 1900 of Greater New York.

The local health inspector is in truth becoming an important factor in the Pittsburg housing situation—a factor for good.

Paul U. Kellogg, Director, Pittsburg Survey.

An Arraignment of Surgery?

New York, April 1, 1908.

To the Editor:—In The Journal, March 28, page 1025, last paragraph, Dr. Bayard Holmes, professor of surgery in the University of Illinois, describes the hospital requirements of modern surgery. He says:

> All that the surgeon cares for is a room for his patient to occupy during the three or four weeks she is recovering from his incisions. She may then go home and get well or lead a life of invalidism, as it happens. To cure his patient and restore her to a life of usefulness and happiness is not the modern surgeon's conception of duty. He looks on the invalid as an incumbrance to his hospital, and all the essentials of recovery as unnecessary expense and space-consuming impedimenta.

If the professor is not humorously tempting some of us to "bite" in the hope that his paper—otherwise an excellent one—may be more widely noted, then I am indeed sorry for him. I have never met a "modern surgeon" who did not look on it as his highest privilege as well as his duty to do everything in his power to restore his patients, male as well as female, to that state of happiness which the sick always regard as the possession of the healthy. The conscience of the surgeon must be truly callous, if a so-called "operative" recovery satisfies him. To put it very mildly, Dr. Holmes must have come in contact with some very unusual characters in the noble profession of medicine or even of "modern aggressive surgery," to generalize in such a shocking manner.

Let us be glad for the professor's peace of mind that he is evidently sufficiently pharisaical to be grateful that he is not as other surgeons are. But, probably all this preachment is for naught and Dr. Holmes has after all "gotten a rise" out of me.

Howard Lilienthal.

Hysteria in Italians.

Detroit, Mich., April 2, 1908.

To the Editor:—I was very much interested in Dr. Baff's article, "Hysteria in Italians." There are a few Italians four blocks from my residence and I can bear out the doctor's statement that the Latin races are prone to hysteria. They seem to me to be lacking in "sand." A hypodermatic injection of apomorphin will (in all cases) quickly put to flight any case of hysteria, let it be an Italian, a vexed prostitute or high-strung woman. About ten years ago a woman was picked up on the street unconscious (sic), taken to the hospital, and her most remarkable, unprecedented case of twenty-four hours' "unconsciousness" commented on by the lay press. It happened a few times; on the last occasion I was called to see her, and one hypodermic of apomorphin completely cured the "unconsciousness." By the way, apomorphin hypodermatically will often abort an asthmatic attack. But for hysteria a "jab of apomorphin" is the sheet anchor.

E. T. Milligan.

Sign of Typhoid.—Giovanni confirms the diagnostic importance of the yellow tint of the lines and folds in the palms and sole of the feet in beginning typhoid fever. He found it one of the earliest signs, and the more pronounced, the severer the typhoid infection proved. In extremely severe cases the yellow discoloration extended up over the sides and back of the fingers and toes. His communication was published in the *Riforma medica*, January 15.

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[1] The Journal A. M. A., March 28, 1908, p. 1040.

Association News

THE MEETING PLACES.

Where the Sections Will Meet at the Chicago Session in June.

The following is a list of meeting places for the Sections as at present arranged

Practice of Medicine—Sinai Temple, Twenty-first Street and Indiana Avenue.
Obstetrics and Diseases of Women—Second Presbyterian Church, Twentieth Street and Michigan Avenue.
Surgery and Anatomy—Orchestra Hall, 169 Michigan Avenue.
Hygiene and Sanitary Science—Second Presbyterian Church, upstairs, Twentieth Street and Michigan Avenue.
Ophthalmology—First Presbyterian Church, Twenty-first Street and Indiana Avenue.
Diseases of Children — Second Presbyterian Church, Chapel, Twentieth Street and Michigan Avenue.
Stomatology—First Regiment Armory, Sixteenth Street and Michigan Avenue.
Nervous and Mental Diseases—Calumet Club, Twentieth Street and Michigan Avenue.
Cutaneous Medicine and Surgery—Grace Episcopal Church Parish House, Fourteenth Street and Wabash Avenue.
Laryngology and Otology—Sinai Temple, Twenty-first Street and Indiana Avenue.
Pharmacology and Therapeutics — First Presbyterian Church, Twenty-first Street and Indiana Avenue.
Pathology and Physiology—First Regiment Armory, Sixteenth Street and Michigan Avenue.
House of Delegates—First Regiment Armory, Sixteenth Street and Michigan Avenue.

On Wednesday afternoon the Sections on the Practice of Medicine and on Pathology and Physiology will have a joint meeting in the meeting place of the former, and on the same afternoon the Section on Stomatology will occupy the room in the Armory otherwise used by the Section on Pathology and Physiology.

Hugh T. Patrick,
Chairman Committee on Halls and Meeting Places.

Hotels for Chicago Session.

Those desirous of securing definite hotel accommodations for the next annual session in Chicago, June 2-5, should communicate at once, either with the desired hotel or with Dr. L. L. McArthur, chairman of the Hotels Committee, 100 State Street, Chicago. A list of the hotels, with locations and rates, was given in The Journal, March 28, page 1058. This list, as furnished us, contained a misstatement concerning the rates of the Victoria Hotel. A correct announcement is as follows:

Victoria Hotel, Michigan Boulevard and Van Buren Street; 200 rooms; can take 300; rates, for one person, \$1.50 up; with bath, \$2.50 to \$4; two in a room, \$3 to \$4; with bath, \$4 to \$6; double room, with two beds, two persons, \$2 each; four persons, \$1.25 each; with bath, two persons, \$2.50 each, four persons, \$1.50 each.

Miscellany

Protein Nomenclature.

A joint committee of the American Society of Biological Chemists and the American Physiological Society, consisting of Russell H. Chittenden, Otto Folin, William J. Gies, Waldemar Koch, T. B. Osborne, P. A. Levene, J. A. Mandel, A. P. Mathews and Lafayette B. Mendel, appointed for the purpose, submitted at the annual meeting in Chicago last December the following recommendations on protein nomenclature:[1]

Since a chemical basis for the nomenclature of the proteins at present is not possible, it seemed important to recommend few changes in the names and definitions of generally accepted groups, even though in many cases these are not wholly satisfactory. The recommendations, which were adopted by the societies, are as follows:

First, the word proteid should be abandoned.

Second, the word protein should designate that group of substances which consists, so far as at present is known, essentially of combinations of α-amino-acids and their derivatives, e. g., α-amino-acetic acid or glycocoll; α-amino-propionic acid or alanine; phenyl-α-amino propionic acid or phenylalanine; guanidine-amino-valerianic acid or arginine, etc., and are, therefore, essentially polypeptides.

Third, that the following terms be used to designate the various groups of proteins.

I. THE SIMPLE PROTEINS.

Protein substances which yield only α-amino acids or their derivatives on hydrolysis.

Although no means are at present available whereby the chemical individuality of any protein can be established, a number of simple proteins have been isolated from animal and vegetable tissues which have been so well characterized by constancy of ultimate composition and uniformity of physical properties that they may be treated as chemical individuals until further knowledge makes it possible to characterize them more definitely.

The various groups of simple proteins may be designated as follows:

(*a*) *Albumins.*—Simple proteins soluble in pure water and coagulable by heat.

(*b*) *Globulins.*—Simple proteins insoluble in pure water, but soluble in neutral solutions of salts of strong bases with strong acids.[1]

(*c*) *Glutelins.*—Simple proteins insoluble in all neutral solvents, but readily soluble in very dilute acids and alkalies.[2]

(*d*) *Alcohol-soluble proteins.*—Simple proteins soluble in relatively strong alcohol (from 70 to 80 per cent.), but insoluble in water, absolute alcohol, and other neutral solvents.[3]

(*e*) *Albuminoids.*—Simple proteins which possess essentially the same chemical structure as the other proteins, but are characterized by great insolubility in all neutral solvents.[4]

(*f*) *Histones.*—Soluble in water and insoluble in very dilute ammonia and, in the absence of ammonium salts, insoluble even in an excess of ammonia; yield precipitates with solutions of other proteins and a coagulum on heating which is easily soluble in very dilute acids. On hydrolysis they yield a large number of amino-acids among which the basic ones predominate.

(*g*) *Protamines.*—Simpler polypeptides than the proteins included in the preceding groups. They are soluble in water, uncoagulable by heat, have the property of precipitating aqueous solutions of other proteins, possess strong basic properties and form stable salts with strong mineral acids. They yield comparatively few amino-acids, among which the basic amino-acids greatly predominate.

II. CONJUGATED PROTEINS.

Substances which contain the protein molecule united to some other molecule or molecules otherwise than as a salt.

(*a*) *Nucleoproteins.*—Compounds of one or more protein molecules with nucleic acid.

(*b*) *Glycoproteins.*—Compounds of the protein molecule with a substance or substances containing a carbohydrate group other than a nucleic acid.

(*c*) *Phosphoproteins.*—Compounds of the protein molecule with some, as yet undefined, phosphorus containing substance other than a nucleic acid or lecithins.[5]

(*d*) *Hemoglobins.*—Compounds of the protein molecule with hematin or some similar substance.

(*e*) *Lecithoproteins.*—Compounds of the protein molecule with lecithins (lecithans, phosphatides).

III. DERIVED PROTEINS.

1. Primary Protein Derivatives.—Derivatives of the protein molecule apparently formed through hydrolytic changes which involve only slight alterations of the protein molecule.

(*a*) *Proteans.*—Insoluble products which apparently result from the incipient action of water, very dilute acids or enzymes.

(*b*) *Metaproteins.*—Products of the further action of acids and alkalies whereby the molecule is so far altered as to form products soluble in very weak acids and alkalies, but insoluble in neutral fluids.

This group will thus include the familiar "acid proteins" and "alkali proteins," not the salts of proteins with acids.

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[1] Science, April 3, 1908.

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[1] The precipitation limits with ammonium sulphate should not be made a basis for distinguishing the albumins from the globulins.

[2] Such substances occur in abundance in the seeds of cereals and no doubt represent a well-defined natural group of simple proteins.

[3] The sub-classes defined (a, b, c, d) are exemplified by proteins obtained from both plants and animals. The use of appropriate prefixes will suffice to indicate the origin of the compounds, e. g., ovoglobulin, myoalbumin, etc.

[4] These form the principal organic constituents of the skeletal structure of animals and also their external covering and its appendages. This definition does not provide for gelatin which is, however, an artificial derivative of collagen.

[5] The accumulated chemical evidence distinctly points to the propriety of classifying the phosphoproteins as conjugated compounds, i. e., they are possibly esters of some phosphoric acid or acids and protein.

(*c*) *Coagulated Proteins.*—Insoluble products which result from (1) the action of heat on their solutions, or (2) the action of alcohols on the protein.

2. Secondary Protein Derivatives.[6]—Products of the further hydrolytic cleavage of the protein molecule.

(*a*) *Proteoses.*—Soluble in water, uncoagulated by heat, and precipitated by saturating their solutions with ammonium—or zinc sulphate.[7]

(*b*) *Peptones.*—Soluble in water, uncoagulated by heat, but not precipitated by saturating their solutions with ammonium sulphate.[8]

(*c*) *Peptides.*—Definitely characterized combinations of two or more amino-acids, the carboxyl group of one being united with the amino group of the other with the elimination of a molecule of water.[9]

Hemorrhage into the Pons as Cause of Death in Eclampsia.—Carver and Fairbairn, in the *Proceedings of the Royal Society of Medicine*, report a case diagnosed as eclampsia with coma in which the immediate cause of death was hemorrhage into the pons varolii, which remained unsuspected till revealed at autopsy. The patient was in the outdoor maternity district; she was a primigravida, aged 24, about five months pregnant. March 23 she reported that she was suffering from vague pains, and one of the authors saw her. The mental condition was fairly good. She gave a history of loss of appetite, sleeplessness, headache and spots before the eyes for two or three days. There had been no vomiting and no convulsions. She had noticed nothing abnormal about the urine, and considered that she had passed about the usual amount. There was edema of the whole body, which was said to have been present about a week. The uterus reached the umbilicus and the fetal heart was audible. Temperature was normal, pulse rate, 84; the arterial tension was considerably raised. A catheter specimen of urine was obtained and was found to contain so much albumin that it became solid on boiling; the guaiacum test failed to show any blood. The patient was given a saline and told to stay in bed; arrangements were made to take her to the hospital on the following morning. During the night her husband found her unconscious on the floor. When seen at 2 a. m. she was cyanosed and respiration was shallow and inclined to be of the Cheyne-Stokes type. She was at once removed to the hospital where the pulse was found to be weaker and the respiration more pronouncedly of the Cheynes-Stokes type. She was bled from the arm and saline solution injected, but without any improvement. The cervix was forcibly dilated and the child delivered by version; it was living and gasped a few times. The patient died at 7:15 a. m., without having regained consciousness. Autopsy showed extensive hemorrhage into the substance of the pons, which was greatly torn and disorganized. The hemorrhage passed for a short distance into the crura cerebri. The rest of the brain was normal. There was no evidence of disease of the cerebral arteries, nor was there any sign of disease in any other arteries of the body. The kidney changes were slight, but of the degenerative type usually found in eclampsia, and the amount of renal disease was too trifling to admit of its being the primary factor in the case. The changes in the liver were not distinctive of those found in the toxemia of pregnancy, yet the postmortem evidence is on the whole consistent with the interpretation of the case.

Prophylaxis of Stuttering.—H. E. Knopf urges the importance of this subject in the *Kinderarzt*, February. There is inevitably a neuropathic predisposition, he says, for the coordination neurosis causing the stuttering. An acute infectious disease or some trauma may be the exciting cause, and imitation is an unusually frequent factor. One of his little patients began to stutter after he had attended a play where one of the actors stuttered. The cases of assumed "inherited stuttering" are due really to imitation plus the neuropathic tendency, and such patients are generally the hardest to cure, frequent relapses following the apparent cure as the child is exposed anew to the opportunity for imitation. If the child's stammering is noticed and he is pitied or scolded for it the habit is soon permanently established. In treatment, Gutzmann's method gives the best results, Knopf says, showing the child by word and example the normal movements of respiration, formation of words and articulation, and the points in which he is defective. A child beginning to stutter should be removed at once from a neuropathic environment. If he can not be sent to some sensible relatives, then every measure in psychic, physical and pharmaceutic therapeutics should be brought into play to act on the neuropathic predisposition. Everything liable to hinder free respiration, flatulence and constipation should be combated, adenoid growths and other hindrances should be removed, and abnormal position of teeth corrected. Masturbation plays an important part in the origin of stuttering in childhood and youth. Especial attention should be paid to incipient stuttering during convalescence from acute infectious diseases. Stuttering servants should not be hired, and the child should be kept away from stuttering companions. He knows of instances where teachers qualified themselves especially and cured their stuttering pupils of the neurosis. Other teachers sometimes manage to render it permanent, undoing the effect of medical treatment. It is better sometimes to keep the children transiently out of school. Kindergarten teachers and nursemaids, as well as parents and teachers, should have the nature of stuttering explained to them, and the means to combat it. The children sometimes outgrow the neurosis and it subsides spontaneously, but this occurs so rarely that it can not be counted on.

Spinal Anesthesia.—At a meeting of the Paris Surgical Society, March 4, various members related their experiences with spinal anesthesia. Hartmann reported two fatalities which he attributes to it. One was a patient undergoing transvesical prostatectomy. The pelvis was raised to slip a cushion underneath, and at this moment the patient collapsed and died seven hours later. The second patient was a woman with volvulus; during the operation the pelvis was raised and immediate fatal collapse followed. He thinks that diffusion of the anesthetic to the medulla from the raising of the pelvis was undoubtedly responsible. Le Dentu reported complete paralysis of the muscles of the shoulder for three weeks in one case and paralysis of the bladder in another, both to be ascribed to the spinal anesthesia. Rochard reported a case of oculomotor paralysis and one each of incontinence of urine and one of feces. He knows of two fatalities which have never been published and thinks that they are probably more numerous than would appear from the literature. Schwartz has had several cases of retention of urine. Reynier reported a case of syncopal collapse in a patient the evening after an operation under spinal anesthesia. She revived under prompt artificial respiration. In another case unbearable pains in the legs, commencing a week after the operation, persisted for a week. In another case a fracture of the malleolus had been reduced under spinal anesthesia without mishap. A month later the man was affected with complete paralysis of the arms, legs and back of the neck. He could not hold his head erect or turn it; the head dropped back whenever it was passively lifted. He was like a jumping-jack whose strings have all been cut. As there were no sensory disturbances, hysteria was out of the question. The paralysis gradually subsided and he left the hospital in apparently normal condition at the end of two weeks. Reynier has also heard complaints from patients that they could not walk so well as before their operation under spinal anesthesia. Guinard was one of the first and most enthusiastic adherents of spinal anesthesia, but he stated that he had completely abandoned it since his experience in three cases. In the first, a woman of 50 passed successfully through a vaginal hysterectomy. Three months later she developed paresis of the legs with incontinence of urine and feces, and died with symptoms of softening of the brain within the year; this result also occurred in a second case. In a third case the patient died suddenly three weeks after a simple suture of a perineal laceration under spinal anesthesia. He never had such experiences before using spinal anesthesia and he has had none since he discontinued it. Nélaton stated that his experience was similar in two cases, and he has likewise abandoned this form of anesthesia. Tuffier and Chaput reported invariably favorable experiences with spinal anesthesia which they have applied in hundreds of cases each. The latter warned against this technic for elderly and much debilitated patients, as they are peculiarly liable to syncope.

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[6] The term secondary hydrolytic derivatives is used because the formation of the primary derivatives usually precedes the formation of these secondary derivatives.

[7] As thus defined, this term does not strictly cover all the protein derivatives commonly called proteoses, e. g. heteroproteose and dysproteose.

[8] In this group the kyrines may be included. For the present we believe that it will be helpful to retain this term as defined, reserving the expression peptide for the simpler compounds of definite structure, such as dipeptides, etc.

[9] The peptones are undoubtedly peptides or mixtures of peptides, the latter term being at present used to designate those of definite structure, such as dipeptides, etc.

Massive Dosage of Quinin in Pneumonia.—Dr. R. L. Payne of Norfolk, Va., in the *Charlotte Medical Journal* for March, gives his experience with the treatment of pneumonia by large doses of quinin, as a contribution to a question which he realizes is as yet doubtful and is warranted only by results obtained in the experience of a few men. He considers that the profession owes a big debt to Galbraith for his article entitled "Fifty Consecutive Cases of Pneumonia Without a Death," published in The Journal, Jan 28, 1905, in which he advocated the use of large and repeated doses of quinin, differing, however, in his methods from that of A. L. Loomis (1875), and Juergensen (1879). Payne says: "In brief the treatment consists of the administration of from 40 (2.60 gms.) to 80 (5.20 gms.) grains of quinin sulphate at one dose, followed in three hours by 30 (1.95 gms.) or more, and then starting with tincture of ferric chlorid minims 15 (1.0 gm.) to 20 (1.30 gm.) every three or four hours. The second day, and even the third, these doses are repeated, and if at that time the patient is not considerably better or the crisis has not taken place, then 10 grains (0.65 gm.) of quinin are given every three or four hours. Of course these are adult doses, and the doses for children should be proportionate." During the winter and spring of 1906 Payne saw and treated by this method twenty-two cases of pneumonia, and subsequently seven cases more, without a death. He reports three cases, one of alcoholic pneumonia, one in a child aged 3 years, and one of postoperative or ether pneumonia. As against the supposed contraindication from the laboratory teachings, viz., that quinin checks the formation of leucocytes and inhibits their ameboid movements, Payne says that in all his cases careful counts were made of the white cells, with the result that from one to six hours after the exhibition of large doses of quinin the leucocytes invariably increased from one to three thousand. Cinchonism is very rare in such cases, even after massive doses, and he refers to one case in which a patient received 100 grains (6.40 gms.) by mistake for 50 grains (3.20 gms.), with no other symptom or ill-effect than a slight tinnitus. Whenever deafness and tinnitus do appear, which depends largely on the degree of disease intoxication, they invariably disappear in from six to eight hours. Payne does not notice them any longer, but relies on the pulse as a guide in giving quinin, which stimulates the heart, giving a slower, softer pulse and materially increasing the peripheral circulation. There appears to be some neutralizing interaction between the disease toxin and quinin, for before intoxication is marked, cinchonism is induced by much smaller doses than can be easily borne without ill symptoms after the circulating toxins are increased. The small amount of sputum in pneumonia cases treated by quinin, a point to which Galbraith refers in his article, was noticeable also in the author's cases. This result he attributes, not only to the inhibition of ameboid movement in the leucocytes decreasing exudation, and may be to stimulation of the leucocytes by the quinin to increased phagocytosis, but probably also to some influence by it on the pneumococci; for, blood examinations of smears, taken both before and after giving quinin, with a comparative study of the white cells, showed that six or seven hours after giving quinin the leucocytes appeared somewhat swollen and the protoplasm contained granules, fragments of bacteria and débris much in excess of that in the preparations stained before giving the quinin. This was demonstrated by repeated preparations. The increase in the number of leucocytes being so small, it is only reasonable to attribute the increased phagocytosis, which he considers certainly to occur, to the sensitizing of the bacteria by the bacteria circulating in the blood and rendering them more digestible. While the death rate ordinarily in pneumonia is reckoned as from 20 to 40 per cent., Payne says that those using the quinin treatment place the mortality at about 2 per cent. Finally he says: "Don't wait until bacteriolysis has distributed a lethal dose, but give your quinin in large doses from the outset of the disease."

Cactus Method of Destroying Mosquito Larvæ.—The *Presse Médicale*, February 29, describes the method of destroying mosquito larvæ in stagnant waters proposed and effectually applied by S. de Puyberneau, chief of the health department in the French Congo. The principle is the same as that of petrolization of the water, only he uses the leaves of the *Opuntia vulgaris*, the common prickly pear cactus of the tropics. The thick, fleshy leaves contain a mucilage which exudes when the leaves are chopped and added to water, the mucilage rising to the surface and forming a practically air-tight coating similar to that formed by oil. The mucilage is absolutely harmless to man, animals and fish, and it floats on the surface for several weeks or months, not requiring renewal like the oil.

Early Traumatic Arteriosclerosis.—F. Rivalta describes a case of pronounced arteriosclerosis in a man of 20 which had developed soon after a severe fall on the head while riding. The temporal and frontal arteries were enormously enlarged when first seen, six months after the traumatism. He had lain unconscious for ten days after the fall on his head, and the general arteriosclerosis had developed to an extreme degree in the following six months. The temporal and frontal arteries were enlarged and tortuous to an exceptional degree and other arteries also showed pronounced sclerosis, as can be seen in the photographs accompanying the report, which was published in the *Policlinico* for March, 1907.

Medical Education and State Boards of Registration

COMING EXAMINATIONS.

Georgia Homeopathic Board of Medical Examiners, Atlanta, May 4. Secretary, Dr. R. E. Hinman, 153 Whitehall St., Atlanta.

Georgia Regular Board of Medical Examiners, Capitol Building, Atlanta, May 4-5. Secretary, Dr. E. R. Anthony, Griffin.

Missouri State Board of Health, St. Louis and Kansas City, May 4-6. Secretary, Dr. J. A. B. Adcock, Warrensburg.

Louisiana Homeopathic Board of Medical Examiners, New Orleans, May 5. Secretary, Dr. Gayle Aiken, 1102 St. Charles Ave., New Orleans.

Tennessee State Board of Medical Examiners, Memphis, Nashville and Knoxville, May 5. Secretary, Dr. T. J. Happel, Trenton.

Mississippi State Board of Health, State Capitol, Jackson, May 12. Secretary, Dr. J. F. Hunter, Jackson.

Illinois State Board of Health, City Hall, East St. Louis, May 12-14. Secretary, Dr. J. A. Egan, Springfield.

North Carolina State Board of Medical Examiners, Winston-Salem, May 19. Secretary, Dr. G. T. Sikes, Grissom.

Massachusetts State Board of Registration in Medicine, State House, Boston, May 12-14. Secretary, Dr. Edwin B. Harvey, Room 159, State House, Boston.

New York State Board of Medical Examiners, Albany, May 19-22. Chief of Examinations Division, Charles F. Wheelock, Albany.

Louisiana State Board of Medical Examiners, New Orleans, May 21-22. Secretary, Dr. Felix A. Larue, 211 Camp St., New Orleans.

Indiana Board of Medical Registration and Examination, Indianapolis, May 26-28. Secretary, Dr. W. T. Gott, 120 State House, Indianapolis.

Nebraska State Board of Health, State Capitol, Lincoln, May 27-29. Secretary, Dr. E. J. C. Sward, Oakland.

CONFERENCE ON EDUCATION.

Fourth Annual Educational Conference, Held in Chicago.

The fourth annual conference of the Council on Medical Education of the American Medical Association was held in the Auditorium Hotel, Chicago, April 13. Besides the address of the chairman, Dr. Arthur Dean Bevan, and the report of the secretary, Dr. N. P. Colwell, reports of three special committees were given.

The committee on "Preliminary Education" consisted of Drs. J. H. Long, professor of chemistry at Northwestern University Medical School, chairman; Charles R. Bardeen, dean of the College of Medicine of the University of Wisconsin, and George A. Piersol, professor of anatomy at the University of Pennsylvania.

The committee on "What Should Constitute a Medical College in Good Standing?" consisted of Drs. Victor C. Vaughan, dean of the College of Medicine and Surgery of the University of Michigan; William J. Means, chairman of the judicial council of the Association of American Medical Colleges, and George W. Webster, president of the State Board of Health of Illinois.

The commitee on "The Essentials of a Model Medical Practice Act" consisted of Drs. Beverly D. Harison, secretary of the Michigan State Board of Registration in Medicine; F. Dudley Tait, chairman of the credential committee of the Board of Medical Examiners of California, and William Warren Potter, president of the State Board of Medical Examiners of New York.

A special discussion on "The Character of the State Medical Licensing Examination" was participated in by Drs. J.W. Bennett, secretary of the State Board of Medical Examiners of New Jersey; W. T. Councilman, professor of pathology at Harvard University Medical School; F. F. Wesbrook, dean of the College of Medicine and Surgery of the University of Minnesota, and J. A. Witherspoon, professor of medicine at Vanderbilt University Medical Department.

Another special discussion on "Practical Ideas Concerning Reciprocity" was participated in by Drs. A. Ravogli, president of the State Board of Medical Examiners of Ohio; S. D. Van Meter, secretary of the State Board of Medical Examiners of Colorado, and Frank J. Lutz of the State Board of Health of Missouri.

In his address Dr. Bevan told of the progress being made in medical standards, calling particular attention to the merging of the medical colleges in Minnesota and Indiana, and urging that like mergers be made in other localities where two or more colleges exist.

The report of the secretary contained a comparison of preliminary and medical education in European countries with that in the United States, showing that the amount of time required to complete the medical course in the majority of European countries agrees with the ideal standard adopted by the American Medical Association at Portland in 1905. It was also shown that fifty leading medical colleges by 1910 will be requiring one or more years' study in a college of liberal arts, including courses in physics, chemistry and biology. The examining boards of Minnesota and North Dakota, after 1912, require preliminary education equal to two years of university work, while the boards of Colorado, Connecticut and South Dakota will require the equivalent of one year of university work.

Thirty-four states now have reciprocal relations with four or more other states. During the past year 834 licenses were issued through reciprocity, or 149 more than in 1906. Through the Council on Medical Education the American Medical Association is now exerting a constant, steady influence for fairer and more uniform standards of medical education which will continue to bring good results.

Following the report of the committee on preliminary education President Charles W. Eliot of Harvard University was called on to open the discussion. He spoke at length regarding high standards of preliminary education and called attention to the fact that the colleges holding high standards are more apt to secure endowments. The discussion was continued by Dr. Charles S. Sheldon, Madison, Wis., representing the American Academy of Medicine. Dr. Sheldon was of the opinion that the work in physics, chemistry and biology could not well be completed in less than two years of university work. Prof. A. H. T. Barbour of the University of Edinburgh made a few remarks regarding medical standards in Scotland.

The committee on "What Should Constitute a Medical College in Good Standing?" gave an outline of the minimum requirements of laboratory equipment and clinical facilities which should obtain in a medical college before it could be considered as giving a satisfactory course. The discussion was opened by Dr. James W. Holland, dean of Jefferson Medical College, Philadelphia. Special reports were read by two members of the committee on "The Essentials of a Model Medical Practice Act" and the discussion was opened by Dr. Alexander R. Craig, secretary of the committee on public policy and legislation of the Medical Society of the State of Pennsylvania.

In the discussion on "The Character of the State Medical Licensing Examination," the central thought was that the state licensing examination should be such as to discriminate between the man who has been trained in laboratories and clinics and the man who has only a "quiz-compend" education.

About 100 delegates were present.

Connecticut Eclectic March Report.

Dr. Thomas S. Hodge, secretary of the Connecticut Eclectic Medical Board, reports one reciprocal license issued March 10, 1908, through reciprocity with New York, to a graduate of the Eclectic Medical College of New York, 1906.

Queries and Minor Notes

Anonymous Communications will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

OPEN METHOD OF GIVING ETHER—CANCER STATISTICS.

Temple, Okla., March 21, 1908.

To the Editor:—1. Please give open method of administering ether; I have no literature on the subject.

2. Do statistics on surgery in carcinoma coincide with the statements in the enclosed clipping? M. T. C.

Answer.—1. When ether is given by the open method it is given practically in the same way as chloroform; that is to say, it is given drop by drop with a slight admixture of air. An article on this subject appeared in the *Annals of Surgery*, September, 1907, and was abstracted in The Journal, Oct. 19, 1907, page 1401. Another article appeared in the *British Medical Journal*, Nov. 23, 1907.

2. The clipping referred to—"The Hopelessness of Cancer," quoting an editorial from the *New York Sun*—reports "Dr. Robert Bell, formerly senior physician of the Glasgow Women's Hospital" as saying that: "During fifteen years' experience as an operating surgeon, he has been unable to give a single success in dealing with cancer." We can not locate that exact quotation, but in an article by this author on the Cancer Problem in the *Dietetic and Hygienic Gazette*, March, 1907, the following words occur: "During a period of fifteen years I had innumerable opportunities of operating on cancer patients, and it was because I never had a case in which recurrence did not take place—nor did I hear of any other surgeon being more fortunate—that I determined in 1894 never to operate in malignant disease again." He goes on to state that since that period, notwithstanding what Dr. Senn has stated, his patients have recovered from the disease, while, on the other hand, those who have been treated surgically, have, without exception, had their suffering aggravated and their lives shortened. He asks: "Is this not the truth?" Before we answer this closing question, it will be well to examine the premises. What constitutes a cure? Obviously, recurrence after operation indicates that the patient certainly was not cured. On the other hand, no period of freedom, of course, is an absolute guarantee that the disease will never return. What is known as the three years' limit has been arbitrarily fixed as the period before which no judgment at all should be formed. The longer the period of freedom is prolonged beyond three years the greater does the probability of actual cure become. Dr. Bell asserts, not only that he never had a case himself in which operation was not followed by recurrence, but that he has never heard of a surgeon who was more fortunate. So far as the experience of other surgeons is concerned, it betrays not only ignorance, but culpable ignorance, of the present status of the operative treatment of cancer. At the last meeting of the American Surgical Association, in a symposium on "Cancer of the Breast," Halstead, out of 210 cases that he had been able to follow, found 35.6 per cent. alive and well without any evidence of recurrence from 3 to 16 years after operation. Greenough, out of 376 cases which were followed to an end result, found 64 patients alive and well without recurrence from 3 to 14

years after operation. Of this number, 21 had gone 10 years or more without recurrence. Dennis reported 39 patients alive and well from 5 to 25 years after operation, all of whom had been watched from time to time, and most of whom had been seen or heard from recently. Ochsner reported 5 patients alive and well 10 years after operation and 20 patients over 5 years.

But Dr. Bell is a member of the British profession, so we will quote an authority non-acquaintance with which, since he claims to have paid special attention to the subject of cancer, should convict him of culpable ignorance; while, on the other hand, if he is acquainted with it, we must substitute for a charge of ignorance one of deliberate mendaciousness. Mr. Mayo Robson's Bradshaw Lecture on the "Treatment of Cancer" was delivered before the Royal College of Surgeons on Dec. 1, 1904, and published in the *Lancet*, Dec. 3, 1904, i. e., three years before Dr. Bell made the assertion that he had never heard of any other surgeon having a more fortunate experience than his own. In that lecture, Mr. Robson reports, besides very many other cases of patients who have remained well and without recurrence for periods less than 10 years, which will not be further referred to here, one of his own alive and well (having borne two children in the interim) ten years after excision of the sigmoid for cancer; also two twelve and ten years' respectively, after removal of the breast. He also cites the following of other surgeons: T. Bryant, 5 patients alive and well without recurrence, for periods of from 10 to 16 years, and 3 who had died from other causes, without recurrence, from 13 to 20 years after operation; Cullingworth, 1, in which 6 years of repeated operations were followed by 49 years of health; Owen, 1, in whom 3 early operations were followed by 20 years of health; Kocher of Berne, 2, 11 and 16 years after gastrectomy for cancer of stomach; Semon, 15 out of 18 patients with laryngeal cancer "permanently cured;" Duplay and Reclus, 4, from 13 to 16½ years; the Göttingen clinic, 12 for twelve years and 1 for 18 years; Sheild, 1 case, in which a patient died at the age of 81 without recurrence 20 years after operation; Jessett, 2, 11 and 10 years, respectively, after hysterectomy for cancer, and so on. As has been stated, no patient has been included in this list who has not survived without recurrence at least ten years. When, therefore, Dr. Bell asserts that "those who have been treated surgically have without exception had their sufferings aggravated and their lives shortened," and has the effrontery to add, "Is this not the truth?" we have no hesitation whatever in replying: "No, it is not, and Dr. Bell knows that it is not," for it passes the bounds of credulity to believe that any surgeon having held the professional appointments that Dr. Bell once held, could be so hopelessly, crassly, culpably ignorant of what is matter of common professional knowledge.

LITERATURE ON THE SEX PROBLEM AND THE SOCIAL EVIL.

To the Editor:—I am preparing a lecture on the subject of the sex problem and the social evil. Will you refer me to any literature on the subject that may aid me in the preparation of a lecture adapted to audiences of young men. R. A. F.

Answer.—The following articles on the subject have been published by The Journal at various times within recent years:

Morrow, Prince A.: The Sanitary and Moral Prophylaxis of Venereal Diseases, March 4, 1905, 675.

Kelley, Howard A.: What is the Right Attitude of the Medical Profession Toward the Social Evil, March 4, 1905, 679.

Bulkley, L. Duncan: Syphilis as a Disease Innocently Acquired. March 4, 1905, 681.

Editorial: Venereal Disease and Public Health. Aug. 18, 1906, 511.

Morrow, Prince A.: Publicity as a Factor in Venereal Prophylaxis, Oct. 20, 1906, 1244.

Herdman, W. J.: Duty of the Medical Profession to the Public in the Matter of Venereal Disease, Oct. 20, 1906, 1246.

Holton, H. D.: Duty of the State Toward Venereal Diseases, Oct. 20, 1906, 1248.

Carrier, A. E., Whiteside, G., Lewis, D.: A Symposium on What Shall We Teach the Public Regarding Venereal Diseases, Oct. 20, 1906, 1250.

Johnson, J. T.: The Influence of Gonorrhea as a Factor of Depopulation, Aug. 10, 1907, 451.

Keyes, E. L., Jr.: Syphilis as a Cause of Depopulation and Race Deterioration, Aug. 10, 1907, 453.

Chassaignac, C.: Etiology of the Social Evil, Dec. 22, 1906, 2075.

Weiss, Ludwig: Prostitution Problem in Its Relation to Law and Medicine, Dec. 22, 1906, 2071.

Willson: R. N.: The Relation of the Medical Profession to the Social Evil, July 7, 1906, 29.

Kelley, H. A.: Regulation of Prostitution, Feb. 10, 1906, 397.

Other articles of interest are:

Putnam, H. C.: Instruction in Physiology and Hygiene of Sex in the Public School, *Boston Med. and Surg. Jour.*, Jan. 31, 1907.

Lewis, D.: The Social Evil, *Buffalo Med. Jour.*, December, 1906.

For books on the subject the following are recommended by the Chicago Society of Social Hygiene; "Social Diseases and Marriage," by Prince A. Morrow. "Confidential Talks with Young Men," and "Confidential Talks with Young Women," both by Dr. Lyman B. Sperry. "Reproduction and Sexual Hygiene," by Winfield S. Hall, M.D. These may be ordered through any general book dealer.

Several societies have been organized for conducting an educational campaign along these lines. Some of the best known are: (1) The American Society of Sanitary and Moral Prophylaxis, secretary, Dr. E. L. Keyes, Jr., 109 East Thirty-fourth St., New York City. This society publishes educational pamphlets: "The Young Man's Problem," (10 cents); "For Teachers," (10 cents); "The Relation of Social Diseases with Marriage and Their Prophylaxis" (25 cents). (2) The American Health Defense League, with headquarters at 37 Liberty Street, New York City. (3) The Pennsylvania Society for the Study and Prevention of Social Disease, secretary R. N. Willson, M.D., 1708 Locust Street, Philadelphia. (4) The Chicago Society of Social Hygiene, secretary, W. T. Belfield, M.D., 100 State Street Chicago. This society issues a number of circulars for free distribution. (5) The National Purity Association of 79 Fifth Avenue, Chicago, publishes a reprint of five papers read before the Section on Hygiene and Sanitary Science of the American Medical Association, entitled "Protection for the Innocent," which it sells for 6 cents. (6) The National Purity Federation, whose secretary is Miss Hattie Dickson, Marshalltown, Iowa, also publishes and has for sale literature on the subject of personal purity. The Scott County (Iowa) Medical Society issues a "Circular of Warning" for distribution among the young people of that district: Dr. C. H. Preston of Davenport, Iowa, would doubtless send a copy of this circular on receipt of postage.

ALOPECIA AREATA.

————, ————, April 5, 1908.

To the Editor:—I have a case of what seems to be alopecia in a man of 28, who is perfectly healthy and has no specific history whatever. He wore a full beard, but noticed a bare patch on the left side of the chin, so shaved off his beard; the patch is perfectly hairless and presents no sign of any inflammation whatever. It has spread slightly. I have used all the ordinary remedies advised in such cases with no results. Can you advise any further treatment? H. R.

Answer.—This case is undoubtedly one of alopecia areata, the evident characteristic of which is the sudden appearance of patches of baldness without assignable cause. The etiology of the condition is unknown. Sometimes the disease occurs in groups of cases as though it were contagious, and possibly some of the cases are of mycotic origin. In the vast majority of cases, however, the disease occurs sporadically. These sporadic cases are supposed to be of nervous origin, but there are no definite grounds for this belief. The condition tends to get well of itself, but it runs no definite course: only a single patch may appear or patches may appear, get well and new patches appear. Its whole course may be confined to a month or two or it may persist for several years. The treatment is uncertain, but only occasionally seems definitely beneficial. It consists in the use of vigorous stimulants. Perhaps the best one is 95 per cent. phenol. This is painted on, left until the surface becomes whitened and then washed off with alcohol. A new application should not be made until the reaction has subsided. Another method for stimulation is by the brush discharge from a static machine. Probably one form of stimulation is as good as another, although phenol is more frequently successful than any other stimulant.

WANTED—EFFICIENT MEANS TO EXTERMINATE FLIES.

Fieldhome, N. Y., April 6, 1908.

To the Editor:—In reply to the inquiry by J. M. C. in The Journal, April 4, 1908, 1141, permit me to give my experience. For years I was greatly annoyed by house flies and finally I ordered powdered buhach (powdered flower-heads of *Chrysanthemum turreanum*) from the druggist, but he sent me pyrethrum, which was not satisfactory. I then sent to California and obtained powdered buhach, about a pint of which I placed on a metal plate, lighted it and allowed it to smolder. The room was a large one, being about 70 feet long, 40 feet wide and 15 feet high; some hours later three pints of seemingly dead flies were swept up and burned—to make sure. I was within four feet of the smoldering mass, and while the odor was not pleasant I suffered no inconvenience; four of the thirty-seven persons present complained of headache, roughness of the throat or unpleasant sensations in the nose. Four applications during the fly season, with care regarding window and door screens, kept the place free from flies for the season.

A. N. O.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending April 11, 1908:

Carter, W. F., surgeon, and Ragau, C. A., asst.-surgeon, appointed members of an examining board to meet at Fort Monroe, Va., for the examination of officers of the Coast Artillery Corps for promotion.

Davis, W. R., and Juenemann, G. F., asst.-surgeons, appointed members of an examining board to meet at Fort Baker, Cal., for the examination of applicants for commission in volunteer forces.

LaGarde, L. A., deputy surgeon general, arrived at Denver, for duty as chief surgeon, Department of Colorado.

Holmes, T. G., and Kellogg, P. S., contract surgeons, sailed April 6, from San Francisco, Cal., on the *Sherman* for Philippine service.

Dougherty, J. C., contract surgeon, granted leave of absence for four months.

Ashburn, J. K., contract surgeon, relieved from duty at Fort Lincoln, N. D., and ordered to Fort Assinniboine, Mont., for duty.

Marvin, M. F., contract surgeon, left Fort Mansfield, R. I., on leave of absence for two months.

Trotter-Tyler, Geo., contract surgeon, left Fort Adams, R. I., and arrived at Fort Mansfield, R. I., for temporary duty.

Bastion, J. E., contract surgeon, granted leave of absence for fifteen days.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ending April 11, 1908:

Harmon, G. E. H., medical director, detached from command of the Naval Hospital, New York, and ordered hom to wait orders.

Green, E. H., medical inspector, detached from the Navy Yard, New York, and ordered to command the Naval Hospital, New York.

Lung, G. A., surgeon, detached from the *Hancock* and ordered to the Navy Yard, New York.

Bishop, L. W., P. A. surgeon, detached from the Naval Training Station, Newport, R. I., and ordered to the *Hancock*.

Stoops, R. E., asst.-surgeon, commissioned P. A. surgeon from Dec. 26, 1906.

Wickes, G. L., P. A. surgeon, commissioned P. A. surgeon from April 12, 1907.

Chambers, W., Stearne, C. F., asst.-surgeon, appointed asst.-surgeons from March 19, 1908.

Richards, T. W., surgeon, ordered to the *Kansas*, when discharged from treatment at the Naval Hospital, Mare Island, Cal.

Abcken, G. F., P. A. surgeon, detached from the Naval Training Station, San Francisco, and ordered to the *West Virginia*.

Plummer, R. W., P. A. surgeon, ordered to the *Idaho*.

Stalnaker, P. R., asst.-surgeon, detached from the *West Virginia* and ordered to instruction at the Naval Medical School, Washington, D. C.

Melhorn, K. C., acting asst.-surgeon, ordered to the *Wabash*.

Rhoades, G. C., acting asst.-surgeon, ordered to the *Franklin*.

Page, J. E., surgeon, retired from active service from April 3, 1908, under the provisions of Section 1,453, Revised Statutes.

Morgan, C. R., acting asst.-surgeon, resignation accepted, to take effect April 8, 1908.

Biello, J. A., acting asst.-surgeon, ordered to duty at the Naval Hospital, Portsmouth, N. H.

Hough, F. P. W., acting asst.-surgeon, ordered to the Naval Proving Ground, Indian Head, Md.

McGuire, L. W., acting asst.-surgeon, ordered to duty at the Naval Hospital, Charleston, S. C.

Bacon, S., acting asst.-surgeon, ordered to duty at the Naval Hospital, New Fort Lyon, Colo.

Ziegler, J. Z., acting asst.-surgeon, appointed acting asst.-surgeon from April 6, 1908.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended April 8, 1908:

Stoner, G. W., surgeon, granted leave of absence for 5 days, from March 30, 1908, under Paragraph 189, Service Regulations.

Carmichael, D. A., surgeon, leave of absence granted for 10 days, from March 25, 1908, on account of sickness, amended to read for 6 days only.

Wertenbaker, C. P., surgeon, directed to proceed to Cape Charles Quarantine Station for special temporary duty, on completion of which to rejoin his station at Norfolk, Va.

Stimpson, W. G., surgeon, bureau order of March 11, 1908, directing him to report to the commanding officer of the revenue-cutter *Thetis* for temporary duty revoked.

Stimpson, W. G., surgeon, granted leave of absence for 6 days, from April 7, 1908.

Blue, Rupert, and Rucker, W. C., P. A. surgeons, detailed to attend the meetings of the State Health Officers of California, at Coronado, Cal., April 20, 1908, and of the State Medical Society, at the same place, April 21, 1906, and to attend the meeting of the City Board of Health at San Diego, Cal.

Oakley, J. H., P. A. surgeon, directed to assume temporary charge of the Marine-Hospital at Port Townsend, Washington, during the absence of Surgeon Stimpson on leave.

Mathewson, H. S., P. A. surgeon, directed to visit charitable institutions within a radius of 75 miles of Cleveland, Ohio, from time to time, for the purpose of examining aliens reported to be public charges.

Goldberger, Joseph, P. A. surgeon, granted leave of absence for 5 days, from March 3, 1908, under provisions of Paragraph 191, Service Regulations.

Roberts, Norman, asst.-surgeon, directed to proceed to Baltimore, from time to time, for special temporary duty, on completion of which to rejoin his station.

Wightman, Wm., asst.-surgeon, relieved from duty at Callao, Peru, and directed to proceed to Guayaquil, Ecuador, reporting to P. A. Surgeon Lloyd for duty.

Bryan, W. M., asst.-surgeon, bureau orders of March 25, 1908, assigning him to temporary duty at the Quarantine Station, Quarantine, Louisiana, amended to read "for duty and assignment to quarters."

Lanza, A. J., asst.-surgeon, relieved from duty at the Marine Hospital in San Francisco, and directed to report, April 15, 1908, to the commanding officer of the revenue-cutter *Manning*.

Krulish, E., asst.-surgeon, granted leave of absence for 2 days, from March 24, 1908, under Paragraph 191, Service Regulations.

Warner, H. J., asst.-surgeon, directed to proceed to Baltimore, reporting to the medical officer in commanad at that port for duty and assignment to quarters.

Wood, Charles E., asst.-surgeon, directed to report to the medical officer in command at Stapleton, N. Y., for duty and assignment to quarters.

Fauntleroy, Charles M., asst.-surgeon, directed to report to the medical officer in command, New Orleans, for duty and assignment to quarters.

Olesen, Robert, asst.-surgeon, directed to proceed to San Francisco, reporting to the medical officer in command for duty and assignment to quarters.

McConnon, George H., asst.-surgeon, directed to proceed to Port Townsend, Washington, reporting to the commanding officer of the U. S. revenue-cutter *Rush* for duty.

Hart, Lasher, asst.-surgeon, directed to proceed to Stapleton, N. Y., reporting to the medical officer in command at that port for duty and assignment to quarters.

Delgado, J. M., acting asst.-surgeon, granted leave of absence for 23 days, from March 3, 1908, on account of sickness.

Hamilton, Jamin H., acting asst.-surgeon, granted leave of absence for 30 days, from Feb. 22, 1908, on account of sickness.

Simonson, G. T., acting asst.-surgeon, leave of absence granted for 2 days, from March 31, 1908, revoked.

Stearns, H. H., acting asst.-surgeon, granted leave of absence for 1 day, from March 27, 1908, under Paragraph 210, Service Regulations.

Thomas, J. M., acting asst.-surgeon, directed to make inspection of certain stations in Cuba, returning to New Orleans on completion thereof.

Walker, R. T., acting asst.-surgeon, granted leave of absence for 20 days, from April 27, 1908.

Wetmore, W. O., acting asst.-surgeon, granted leave of absence for 1 day, from March 31, 1908, under Paragraph 210, Service Regulations.

Wilson, J. G., acting asst.-surgeon, granted leave of absence for 2 days, from March 21, 1908, under Paragraph 210, Service Regulations.

APPOINTMENTS AS ASSISTANT SURGEONS.

Dr. H. J. Warner, April 3, 1908.
Dr. Charles E. Wood, April 2, 1908.
Dr. Charles M. Fauntleroy, April 1.
Dr. Robert Oleson, April 1, 1908.
Dr. George H. McConnon, April 1, 1908.
Dr. Lasher Hart, April 2, 1908.

RESIGNATIONS.

Stansfield, H. A., P. A. surgeon, to take effect March 23, 1908.
Liuley, W. J., acting asst.-surgeon, to take effect April 1, 1908.

BOARDS CONVENED.

Boards of medical officers were called to meet on April 9, 1908, for the purpose of making physical examination of such officers of the U. S. Revenue-Cutter Service as should present themselves for that purpose as follows:

New York: P. A. Surgeon H. W. Wickes, chairman; Acting Asst.-Surgeon T. Mahoney, recorder.
San Francisco: Surgeon H. W. Austin, chairman; P. A. Surgeon C. H. Gardner, recorder.
Baltimore: Surgeon L. L. Williams, chairman; P. A. Surgeon J. T. Burkhalter, recorder.
Wilmington, N. C.: P. A. Surgeon C. H. Lavinder, chairman; Acting Asst.-Surgeon ——, recorder.
Key West, Fla.: Surgeon C. E. Banks, chairman; Acting Asst.-Surgeon S. W. Light, recorder.
Mobile, Ala.: Surgeon G. M. Guiteras, chairman; Acting Asst.-Surgeon J. O. Rush, recorder.
Port Townsend, Wash.: P. A. Surgeon J. H. Oakley, chairman; Acting Asst.-Surgeon Robert Lyall, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended April 10, 1908:

SMALLPOX—UNITED STATES.

California: Los Angeles, March 14-21, 9 cases; San Bernardino County, March 19-20, 6 cases; San Francisco, 18 cases.
District of Columbia: Washington, March 14-28, 23 cases.
Florida: Jacksonville, March 21-28, 1 case.
Illinois: Rockford, March 21-28, 1 case; Springfield, March 19-26, 4 cases.
Indiana: Elkhart, March 21-28, 1 case; Evansville, April 1, 1 case; Indianapolis, March 22-29, 4 cases, 1 death.
Iowa: Ottumwa, March 21-28, 2 cases; Sioux City, March 1-31, 16 cases.
Kansas: Kansas City, March 21-28, 18 cases.
Louisiana: New Orleans, March 21-28, 10 cases, 2 deaths.
Michigan: Detroit, March 21-28, 2 cases; Grand Rapids, 4 cases; Kalamazoo, 2 cases.
Minnesota: Winona, March 21-28, 2 cases.
Missouri: Kansas City, March 14-28, 16 cases; St. Joseph, March 14-21, 30 cases; St. Louis, March 21-28, 2 cases.
Montana: State, Feb. 1-29, 58 cases.
Nebraska: Nebraska City, March 21-28, 4 cases.
Ohio: Holloway, Feb. 22-March 19, 15 cases; Toledo, March 14-21, 2 cases.
Texas: San Antonio, March 21-28, 14 cases.

Washington: Spokane, March 15-21, 15 cases; Tacoma, March 14-21, 1 case.

Wisconsin: Milwaukee, March 21-28, 2 cases; Racine, 5 cases.

West Virginia: Charleston, March 1-31, 2 cases.

SMALLPOX—FOREIGN.

Brazil: Para, Feb. 29-March 7, 1 case, 1 death.

Canada: Toronto, March 14-21, 7 cases.

China: Amoy (Kulangsu), Jan. 25-Feb. 15, present; Foochow, Feb. 22-29, present; Shanghai, Feb. 9-16, 4 cases, 7 deaths.

Ecuador: Guayaquil, Feb. 29-March 14, 8 cases.

France: Paris, March 17-24, 5 cases.

India: Bombay, Feb. 26-March 3, 50 deaths; Calcutta, Feb. 8-15, 8 deaths.

Italy: Catania, March 5-12, 2 deaths.

Java: Batavia, Feb. 8-15, 3 cases.

Mexico: Aguas Calientes, March 8-22, 2 cases.

Portugal: Lisbon, March 7-14, 1 case.

Spain: Denia: Feb. 29-March 14, 10 cases; Valencia, March 8-15, 27 cases.

Turkey: Bagdad, Feb. 1-15, 89 cases, 20 deaths.

YELLOW FEVER.

Barbadoes: Bridgetown, vicinity, March 7-14, 1 case, 1 death.

Brazil: Para, Feb. 29-March 7, 8 cases, 7 deaths.

Ecuador: Guayaquil, Feb. 29-March 14, 11 deaths.

CHOLERA.

India: Bombay, Feb. 6-March 3, 1 case; Calcutta, Feb. 8-15, 129 cases; Madras, Feb. 22-28, 9 cases; Rangoon, Feb. 15-22, 1 case.

PLAGUE.

Brazil: Para, Feb. 29-March 7, 1 case.

India: Bombay, Feb. 26-March 3, 185 cases; Calcutta, Feb. 8-15, 13 cases, Rangoon, Feb. 15-22, 27 cases.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Dr. McCormack's Work in Louisiana.

AN APPRECIATION BY THE PRESIDENT OF THE STATE SOCIETY.

SHREVEPORT, LA., April 8, 1908.

To the Editor:—We have just been through what would be designated a "series of revivals" had it been in the work of the church instead of that along the lines of the medical profession—but still I think the term is applicable in this instance, covering as it did fourteen important points, where lectures were given both to the medical profession and to the laity. I speak of the recent tour of Louisiana by Dr. J. N. McCormack, from March 16 to March 31, and embracing the towns of Monroe, Ruston, Shreveport, Natchitoches, Lake Charles, Opelousas, La Fayette, Houma, New Orleans, Amite City, Baton Rouge, Donaldsonville and Alexandria, at some of which places he delivered as many as three lectures.

In all my professional experience, covering twenty years of the practice of medicine, I have never had such an uplift and encouragement as I received from this tour with Dr. McCormack. The state of Louisiana is beginning to awaken from its deep lethargy on the subjects dwelt on by the lecturer. At these meetings we had with us not only the leading physicians and druggists, but also the leaders in educational work, teachers and students and leading citizens. My office has received many communications from different laymen speaking in the highest praise of the work which Dr. McCormack is accomplishing. The standard of our profession will be greatly improved by his coming and the people as a whole will have a better conception of what their doctor means to them and to the community, as well as a different view of health conditions. We think the people are now ready to number the days of the flies and mosquitoes. Members of the legislature assured us that they had never before had the proper conception of existing conditions, and they pledged their support toward modern laws. Great numbers of people are discussing the talks given, and war is being made against quacks and frauds, and all the newspapers are standing back of us and endorsing the idea of education of school children in school hygiene and sanitation. We hope to have the support of the newspapers in a crusade against the "patent-medicine" evil.

We feel that no other man could have accomplished so much, as we believe no other man is so well fitted for the work. Dr. McCormack is a man of energy, alert and alive on all questions, possessing great social flexibility and able to adjust himself to any person, pleasant, genial, large hearted, all this combined with good judgment of human nature, making him an exceptionally rare man, one of vast resources and in the vanguard of the profession. We feel his lectures, soon to be published, should be widely distributed and read, thus the power will follow this wonderfully good man. The one great indisputable fact which reaches each hearer is that he not only preaches, but better still practices, and when a speaker convinces his audience that he truly means all he says, his cause is won. Thus we found him. We feel that his coming will result in untold good to the profession and that the results on the general public will be incalculable.

At the general meetings, prominent laymen presided, and gave the speaker unqualified endorsement. At Baton Rouge, Governor Newton C. Blanchard presided and expressed deep gratification for the medical profession and the people of Louisiana. The physicians accorded Dr. McCormack most cordial receptions, and took him right into their hearts. The people of Louisiana now realize there is no more vital question confronting them than self-medication. They realize that a great reduction in the amount of sickness will result if people will only observe the laws of Nature and keep their homes and backyards in perfect condition, and, above all, avoid the use of "patent medicines." Louisiana is on the verge of a great prohibition campaign, and the message is particularly timely that "these 'patent-medicines' are made of the vilest and poorest qualities of whisky, colored with burnt sugar and flavored with spices, besides all the forms of dope contained in them."

To-day our people have a higher regard for the medical man than ever before, and his advice will have due consideration by our city fathers, the state officials and the general public. These things could not have been brought more forcibly to their attention than through the lectures of Dr. McCormack. The druggists are loud in their praises of his meetings and speak in highest terms of the work done. Many druggists stayed away from the meetings, but have joined hands for the uplifting of suffering humanity.

We are promised better meat inspection, clean slaughter houses, better and purer foodstuffs, an improved milk system, and that the pollution of our streams will be discontinued and the purity of our water preserved.

The good work has already been taken up by our schools, and the leading educators advocating strict attention to physical defects, hygiene and sanitary conditions, and that special attention be given the water closets where so many vulgar pictures and vile epithets greet the eyes of the children. All this—and much more—has been brought about by the work started by Dr. McCormack, under the auspices of the Louisiana State Medical Society. OSCAR DOWLING, President

Louisiana State Medical Society.

A Department of Health Wanted in Canada and Great Britain.

The question of the establishment of a department of public health is being discussed in Canada quite as seriously as in this country. In the *Dominion Medical Monthly* for January appeared an article by Dr. F. G. Bushnell of Brighton, Eng., entitled "The Appointment of Ministers of Health." Dr. Bushnell first asks: "Are there reasons for supposing that a minister at the head of an independent health department would lead to an increase of the powers for and the improvement of the health of the community?" This he answers by an analogy showing that the past achievements in science, statecraft, religion, war, commerce or exploration all prove that it is the individual who leads and that one man, if given the authority, can achieve in a year what may take a lifetime under different conditions. As illustrations of the possibilities of such a movement he recalls the fact that the minister of public health in Germany has practically abolished smallpox and that the president of the British local government board has suppressed rabies in England. Considering the work to be done by such a department, he cites the report of the registrar-general of the United Kingdom for 1899, which gives the total number of deaths for the year as 581,799, or 18.3 per thousand. An analysis of the returns shows that zymotic diseases were responsible for 89,235 deaths, or 2,811 per million. Tuberculosis caused 10.4 per cent. of the deaths from all causes, or 60.-659 in one year. Cancer was responsible for 26,325 deaths, 829 per million. There were 163 deaths of infants under one year of age in 1,000 infants. The mortality rate of infants under one year in London was 167 per thousand. Quoting from the vital statistics reports, he states that one-third of the deaths annually registered are due to removable causes.

Taking up the arguments against a national board of health, Dr. Bushnell says in reply to the objection of expense that the possible saving to the public through the regulation of phthisis alone would amount to $450,000, or enough to pay the entire expenses of the department. He then outlines the plan of organization for a department adapted to British needs and conditions.

Commenting editorially on Dr. Bushnell's paper, the *Dominion Medical Monthly* says: "The establishment of a department of public health has been agitated in the Canadian House of Commons and every doctor in the house has favored the project. . . . Year after year the Canadian Medical Association has urged on the federal government the urgency and necessity of this step, but although that association voices the sentiments of the Canadian profession nothing has come of it. It is well known that public health matters in Ottawa are scattered over five or six departments of the public service."

Another Scheme to Separate the Doctor from His Dollars.

Schemes for the exploitation of physicians, based on appeals to selfish motives, are apparently unlimited. The promoters do not always exercise discrimination, however, in selecting the members of the profession to whom their circulars shall be sent. The Industrial Review Publishing Company of Philadelphia appears to have been especially unfortunate in this particular, judging from the number of copies of its recent circular which have been sent us by physicians who were either amused or indignant at the scheme proposed. The *Review*, it appears, is a "semimonthly publication devoted exclusively to accident and health insurance." In the circular mentioned it announces that it has established a bureau of physicians and that a semiannual list of the physicians of this bureau will be furnished to "every accident and health insurance company to enable them to select a competent physician."

Accompanying the circular is a blank contract which provides that the physician signing it shall pay $2 a year as subscription to the *Industrial Review;* make within two days of receipt of request any medical examination and confidential reports on any applicant or policy holder of any health and accident insurance company; use his best efforts to secure the information which the company may desire, and do all in his power to promote the interest of the company; and not charge the company more than $2 for a single examination, $3 for adjusting a claim and $1 for additional examinations of the same individual. The publishers of the *Industrial Review* agree to furnish one copy of each issue of their paper, to insert the physician's name for one year in their list of physicians and to furnish this list to all health and accident companies in the United States.

It is difficult to see what the physician is to gain by entering into such a contract. All that the publishing company agrees to do is to send its paper and to publish the physician's name in the semiannual supplement. The physician, on the other hand, binds himself to make examinations for a fixed amount, which amount, by the way, is less than one-half of what he should receive, while the company is under no obligation whatever to furnish him with any business. Obviously, the company will secure just as many subscribers as possible in each town, so that the presence of an individual physician's name on the list would be of little value. We do not hesitate to endorse this plan as an excellent scheme—for the Industrial Review Publishing Company. We are strongly reminded of certain prize offers advertised by very cheap magazines in which a large cash capital prize is offered to the first person who sends in a correct solution of some absurdly simple problem, but—every person sending in an answer must be a subscriber in order to be considered. The only physicians who will be attracted by such a proposition are those who can get insurance work in no other way and whose examinations are not worth even $2.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES.

DR. JOHN H. BLACKBURN, DIRECTOR.
BOWLING GREEN, KENTUCKY.

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Seventh Month.

FOURTH WEEKLY MEETING.

Abortion.

Definitions: Abortion, miscarriage, premature labor, threatened, inevitable, partial, complete, missed, provoked, therapeutic, criminal.

Causes.—I Spontaneous, unintentional abortion: (a) From stimulation of uterine contractions; drugs, massage, electricity, douches, infectious diseases, syphilis, endometritis, decidual diseases, uterine displacements and distension. (b) From separation of egg; traumatisms, falls, strains, etc. (c) Death of fetus; obstruction of circulation in cord, disturbed placental function, placental detachments or infarcts, syphilis, acute infection of placenta. (d) Disease of fetus; development, acute or chronic (syphilis) infections.

II Provoked abortion: Therapeutic or criminal. Oxytocic drugs, massage, electricity, vaginal and intrauterine injections, sounds and tents, rupture of membranes, curettage.

Symptoms: Pain, hemorrhage.

Dangers: Infection. Hemorrhage.

Treatment: 1. Threatened (a) no infection, (b) with infection. 2. Inevitable (a) no infection, (b) with infection.

Extrauterine Pregnancy.

Definitions: Extrauterine; tubal, interstitial, isthmial, ampullar, ovarian, abdominal (secondary), cornual.

Pathology: Uterine; hyperemia, enlargement, softening, lateral displacement at times, formation of decidual. Tubal; irritation, hyperemia, hypertrophy; tubal decidua; expansion and thinning of tube; adhesion of fimbriæ, occlusion of morsus diaboli (eighth week); prolapse of tube and ovary; tubal abortion, intrauterine, up to fourth week; intraperitoneal abortion, up to eighth week; rupture of tube any time, first to fourteenth week.

Symptoms.—Before rupture: General: history of pelvic inflammation, sterility, general symptoms of pregnancy. Special: Amenorrhea, metorrhagia, polyuria, colicky menstrual pains, enlarged uterus, soft cervix, patulous os. At time of rupture: Intraperitoneal: pain, collapse, pulse and temperature, respiration, sweats, nausea and vomiting, syncope, hyperesthesia of abdomen, muscular rigidity.

Extraperitoneal: Same as intraperitoneal but modified. Displaced uterus, uterine hemorrhage, circumscribed tumor.

Marriages

J. H. MACKAY, M.D., Norfolk, Neb., to Miss Alice Dullin of Denver, March 17.

ARTHUR P. SQUIRE, M.D., Buffalo, N. Y., to Miss Bertha Rathwell of Varna, Ont., March 25.

H. WILSON LEVENGOOD, M.D., Jerome, Ariz., to Mrs. Grace Merry Keith of Portland, Ore., March 28.

FRANCIS E. ROSENBERGER, M.D., Eschiti, Okla., to Miss Emma L. Joiner of Dallas, Texas, March 28.

ALFRED E. BRADEN, M.D., Walla Walla, Wash., to Miss Edna Earle Hauser of Eureka, Ill., at Spokane, Wash., March 31.

WILLIAM DAWSON MORRIS, M.D., Jefferson City, Mo., to Mrs. Emma Waters Child, at Springfield, Dulaney's Valley, Md., April 2.

Deaths

George Washington Griffith, M.D. Long Island College Hospital, Brooklyn, 1866; a veteran of the Civil War: a member of the Kentucky State and Jefferson County medical societies; U. S. pension examining surgeon at Louisville; for many years medical director of the Kentucky G. A. R.; a member of the Louisville school board; for 12 years president of the board of aldermen; chief surgeon of the Louisville & Nashville Railroad, the Louisville Railway Company and the Louisville Bridge and Iron Company; visiting surgeon to St. Mary's and St. Elizabeth's hospitals; president of the Jefferson County Board of Health; for 30 years a member and for 22 years secretary of the board of trustees of the University of Louisville; died at his home in that city, April 10, from cerebral hemorrhage, after an illness of 24 hours, aged 67.

John Crawford Spear, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1861; who entered the U. S. Navy in 1861, and was retired in 1888 on account of incapacity resulting from incident of service; was made medical director, June 29, 1906, and whose latest station was at the Marine Recruiting Office, Philadelphia; a member of the Medical Society of the State of Pennsylvania and Montgomery County Medical Society; died in a hospital at Norristown, Pa., April 3, from injuries received in a runaway accident, aged 68.

James Redmond Healy, M.D. Bellevue Hospital Medical College, New York City, 1870; a member of the medical societies of the State and County of New York, Harlem Medical Association and Physicians' Mutual Aid Association; physician to the Tombs from 1871 to 1879, and medical superintendent of Hart's and Randall's Island hospitals from 1879 to 1892; died at his home in New York City, from mediastinal cancer, March 29, aged 59.

William L. Orr, M.D. Medical Department of the University of Iowa at Keokuk, 1859; surgeon of the Third Iowa Volunteer Cavalry and Twenty-first Iowa Volunteer Infantry during the Civil War; for four terms mayor of Ottumwa; at one time principal of the public schools of the city, alderman, city clerk and justice of the peace; died at the home of his son at Malden, Mass., April 1, from senile debility, aged 84.

William M. Cake, M.D. Jefferson Medical College, Philadelphia, 1850; surgeon of the Fifty-third Ohio Volunteer Infantry, and later the chief surgeon of the Fourth Division, Sixteenth Army Corps, Army of the Tennessee, during the Civil War; died at his home in Portland, Ore., April 1, from the effects of a fall received in January, aged 82.

James C. Molyneaux, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1885; of Woodland, Ill.; local surgeon for the Chicago & Eastern Illinois Railroad; died at the Augustana Hospital, Chicago, April 4, from tetanus, after the amputation of his leg due to a fracture received in a runaway accident ten days before, aged 50.

Henry A. Mumaw, M.D. Hahnemann Medical College and Hospital of Chicago, 1886; a member of the Indiana State Medical Association and Elkhart County Medical Society; founder of Elkhart Institute and Elkhart Normal School; died at his home in Elkhart, April 1, from nephritis, after a long illness, aged 58.

Harry B. Stone, M.D. University of Texas, Medical Department, Galveston, Texas, 1899; of Galveston, Texas; a member of the Hospital Corps, U. S. Army; in 1904 appointed quarantine officer at Virginia Point, Galveston; died from pneumonia at the U. S. Army Hospital, Governor's Island, N. Y., March 23, aged 35.

Frederick Corss, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1866; a member of the American Medical Association and of the American Academy of Medicine; died at his home in Kingston, Pa., April 1, from kidney disease, after an illness of several months, aged 66.

Randolph C. Hunter, M.D. University of Glasgow, Scotland; a surgeon in the Crimean War; one of the founders of Cooper Medical College, San Francisco, and for several years demonstrator of anatomy in that institution; died at Lexington, Ore., suddenly, January 21, from cerebral hemorrhage, aged 75.

Addison Russell Smith, M.D. Dartmouth Medical College, Hanover, N. H., 1892; at one time an alderman and city physician of Rockland, Maine, and attending physician at the Knox County General Hospital; died in a sanitarium in Patten, Cal., recently, from mental disease, aged 41.

Willis L. Snyder, M.D. Eclectic Medical Institute, Cincinnati, 1893; surgeon for the D., S. & U. and U. B. & N. railways; of Urbana, Ohio; died at the home of his father-in-law at Muncie, Ind., April 2, from aneurism, after an illness of a year and a half, aged 39.

Chester G. Higbee, M.D. Hahnemann Medical College and Hospital of Chicago, 1870; a veteran of the Civil War, and a member of the local pension examining board; died at his home in St. Paul, Minn., April 3, from cerebral hemorrhage, after an illness of five days, aged 73.

Edwin B. Allen, M.D. Medical Department of the University of Iowa at Keokuk, 1861; first mayor of Wichita, Kan.; twice secretary of state and a member of the legislature; died in Kansas City, March 30, from cerebral hemorrhage, after an illness of two months, aged 72.

John Fitzgibbon, M.D. Indiana Medical College, Indianapolis, 1875; a member of the Indiana State Medical Association and Daviess County Medical Society; died at his home in Washington, Ind., from erysipelas, March 30, after an illness of two days, aged more than 60.

Marcena A. Carroll, M.D. Western Reserve University Medical College, Cleveland, Ohio, 1881; a member of the American Medical Association; for nearly 16 years coroner of Mason County, Mich.; died at his home in Ludington, April 1, from pneumonia, aged 54.

Edmund Sanford Thomson, M.D. College of Physicians and Surgeons in the City of New York, 1892; of Belchertown, Mass.; died at the home of his father in that place, March 29, from purpura hemorrhagica, after an illness of less than a week, aged 40.

Frank J. Wakeman, M.D. College of Physicians and Surgeons of Kansas City, Kan., 1900; for two years physician to a mining company in New Mexico; died at his home in Kansas City, Kan., March 30, after a prolonged illness from tuberculosis, aged 33.

John Rea Creighton, M.D. Albany (N. Y.) Medical College, 1861; surgeon in a New York volunteer infantry regiment during the Civil War; died at his home in Spokane, Wash., March 27, from Ludwig's angina, after an illness of only a few days, aged 72.

Charles T. Bennett, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1871; of Battle Creek, Mich.; surgeon in the Civil War; died suddenly, April 1, in Nichol's Hospital, Battle Creek, from cerebral hemorrhage, aged 70.

Monroe Livingston Crosier, M.D. University of Vermont, College of Medicine, Burlington, 1877; a member of the Kansas and Leavenworth County medical societies; died suddenly at his home in Lansing, March 29, from angina pectoris, aged 56.

Joseph Francis O'Connell, M.D. Bellevue Hospital Medical College, New York City, 1878; formerly a police surgeon of Brooklyn; died at a hospital in Montclair, N. J., from heart disease, April 4, after an illness of nearly six years, aged 50.

Obediah T. Ellison, M.D. Albany (N. Y.) Medical College, 1856; said to have been the oldest practitioner in Potter County, Pa.; died recently at his home in Coudersport, where he had practiced for 52 years, aged more than 80.

Wilbur Gillett, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1879; an alienist of Detroit, Mich.; died in St. Mary's Hospital, Detroit, from cerebral hemorrhage, April 1, after a short illness, aged 56.

James M. Josey, M.D. University of Maryland School of Medicine, Baltimore, 1904; of Lamar, S. C.; died at the home of his mother, near Lydia, S. C., February 11, from tuberculosis, after an illness of several months, aged 28.

Hiram Langrehr, M.D. Jefferson Medical College, Philadelphia, 1859; a member of the Medical Society of the State of Pennsylvania and Philadelphia County Medical Society; died at his home in Philadelphia, March 15, aged 68.

Thomas J. Adams, M.D. Rush Medical College, Chicago, 1870; a member of the Indiana State Medical Association and Hendricks County Medical Society; died at his home in North Salem, recently, from paralysis, aged 70.

William W. Dailey (License, Ind., 1897); a member of the Indiana State Medical Association and Warrick County Medical Society; was found dead at his home in Selvin, Ind., April 7, from heart disease, aged 60.

Carlos Monroe Maxfield, M.D. Eclectic Medical Institute, Cincinnati, 1870; of Chicago and Waukegan, Ill.; was stricken with heart disease March 31, and died while being taken to a hospital in Chicago, aged 60.

Egbert D. McAfee, M.D. Vanderbilt University, Medical Department, Nashville, 1892; local pension examiner for Hardin County, Tenn.; died suddenly, March 27, at his home in Hamburg, aged about 40.

Isaiah J. Wireback, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1866; died at his home in Monessen, Pa., April 3, from paralysis, after an illness of three years, aged 68.

J. Allen Yates (Certificate, Texas, 1897); local surgeon for the Galveston, Houston & San Antonio Railroad at Marfa, Texas; died at his home in that place recently, and was buried March 7, aged 47.

William J. Pennington, M.D. Albany (N. Y.) Medical College, 1891; for ten years an inspector of the board of health of Brooklyn; died at his home in that city, from myelitis, March 30, aged 41.

Archibald D. McElroy, M.D. Cleveland Homeopathic Medical College, 1893; died at his home in McKeesport, Pa., March 27, from general nervous breakdown, after an illness of two years, aged 45.

William W. Hartsell, M.D. Hahnemann Medical College and Hospital of Chicago, 1883; the oldest practitioner of Rensselaer, Ind.; died suddenly on his farm, near that city, April 3, aged 59.

Henry E. Dwight, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1867; D.D. Washington and Lee University; died at his home in Philadelphia, April 1, aged 75.

Philip Merriman Egert, M.D. University of Vermont College of Medicine, Burlington, 1887; died at his home in Holland Patent, N. Y., April 1, from nephritis, after a lingering illness, aged 44.

Scott Wimbush Anthony, M.D. Atlanta (Ga.) College of Physicians and Surgeons, 1906; died at his home in Griffin, Ga., March 30, from tuberculosis, after a prolonged illness, aged 27.

James Shepard Cabanne, M.D. Jefferson Medical College, Philadelphia, 1856; of St. Louis; died in St. Vincent's Asylum, in that city, April 7, after a prolonged illness, aged 69.

Samuel V. Hopson, M.D. Louisville (Ky.) Medical College, 1875; died at his home in Wallonia, Ky., March 27, from Addison's disease, after an illness of two years, aged 54.

Walter S. Jones, M.D. American Medical College, Eclectic, St. Louis, 1887; local pension examining surgeon; died at his home in Medford, Ore., March 29, aged 42.

Robert Lindsay Harris (License, Ark., 1903); died at his home in Trenton, Ark., March 21, from the effects of a gunshot wound of the brain, self-inflicted, aged 28.

Carl Wuest, M.D. University of Giessen, Germany; a resident of Brooklyn for more than 50 years; died at his home, April 5, from senile debility, aged 81.

James T. Martin, M.D. College of Physicians and Surgeons, Baltimore, 1879; died at his home in Mendota, Va., April 3, from cerebral hemorrhage, aged 63.

Lee Lowengrund,. M.D. Jefferson Medical College, Philadelphia, 1878; died suddenly at his home in Philadelphia, April 1, from heart disease, aged 55.

Mary Olive Ann Hunt, M.D. New England Female College, Boston, 1863; died at her home in Manchester, N. H., March 25, aged 88.

John A. Wilson, M.D. Kentucky School of Medicine, Louisville, 1881; died at his home in Nickerson, Kan., March 1, aged 57.

William C. Sweezey, M.D. Eclectic Medical Institute, Cincinnati, 1856; died at his home in Olivet, Kan., March 26.

John Nisbet Denny (License, Ind., 1897); died at his home in Ligonier, Ind., March 28, aged 73.

Death Abroad.

Karl Gustaf Lennander, M.D., LL.D., Hon. F.R.C.S. Lond. and Edin.; one of the leading surgeons of Sweden; professor of surgery and obstetrics in the University of Upsala; widely known through his writings on surgery and gynecology, especially on appendicitis and its treatment, and for his experimental researches on the sensibility of the abdominal cavity; whose paper on "Abdominal Pain" was read before the Section on Surgery and Anatomy of the American Medical Association at the 1907 meeting, Atlantic City; died suddenly March 15, from acute bronchitis, after cerebral hemorrhage, aged 51.

Book Notices

The Conquest of Cancer. By C. W. Saleeby, M.D., F.R.S., Author of Worry. Cloth. Pp. 361. Price, $1.75. New York: F. A. Stokes Co., 1907.

Thanks to the wealth of acrimonious discussion and to the appeal made to the public through the newspapers and the magazines, it is unlikely that the theme of Professor Beard's views as to the nature of cancer and the method of combating it is now unknown to any members of the medical profession. In brief, Dr. Beard, who, perhaps, it should be said, is professor of embryology at the University of Edinburgh, considers that the alternation of generations, which is known to occur in many forms of life, holds good for all, including the human race. In the latter, however, the life history of the alternating generation is lived through in the womb between conception and the development of the embryo, and thus has hitherto escaped discovery. Dr. Saleeby, in describing Dr. Beard's theory, says: "The common view hitherto has been that the union of the sexual elements produces a new single cell from which the new individual arises, there being no intermediate stage. On this new theory" [Beard's], "however, we assert that an asexual generation is interpolated—in other words, the fertilized germ cell does not directly give rise to a new individual but to this asexual stage, or larva, composed of the tissue called trophoblast. The new individual which is to become a human being is the child of this larvæ, and actually arises in, and upon, it." In the normal course of things, there ensues a "critical period," determined by the development of the pancreas in the embryo. When that begins to functionate, secreting alkaline digestive juices, these latter gradually cause the degeneration and ultimate disappearance of the surrounding trophoblast. Now, according to the theory of the "continuity of the germ plasm," the germ cells of the individual are not the products of the individual's own body, but germ cells that in the embryologic stage were formed in the division of the fertilized ovum, being, as it were, brothers and sisters to the other cells formed in the same process, and set apart to develop into the embryo. Some of these outside germ cells find their way into their brother or sister, the embryo, and become lodged and take up their separate life in their proper receptacles in the embryo's body, ultimately to become the progenitors of a new individual. But not all the trophoblastic germ cells that thus enter the embryo's body, avoiding the destruction by the pancreatic secretions, find their proper resting place; some go astray and become lodged in various parts of the embryo, there to degenerate, to remain quiescent throughout life, or, perchance, from some cause as yet unknown, to reinitiate their life cycle, reproducing the sexual stage, or trophoblastic tissue, at the site of their lodgment. Then we have a cancer, and hence follows Beard's deduction that "the digestive substance or substances which cause the degeneration of normal trophoblast will also cause the degeneration of abnormal trophoblast"—cancer—these substances being, as before stated, the alkaline pancreatic ferments.

This is the thesis that Dr. Saleeby has set himself to maintain in the work under review, which is written not only for the profession, but also, and apparently mainly, for the public, in continuation of the policy inaugurated by him in the monthly magazines and the London daily newspapers, of establishing the verities of science by the verdict of "the man in the street."

Dr. Beard's contentions consist of two separate propositions, which, though assigned by their author the relation of cause and effect, may yet conceivably stand or fall separately. His views as to the origin of cancer necessarily fall with his views as to the alternation of generations, and the nature of the trophoblast, though they do not with equal necessity stand with them. It is sufficient to say that they are not as yet, at any rate, generally accepted; indeed, they are traversed by most of his colleagues. On the other hand, his views as to the trypsin and amylopsin treatment of cancer—in which, by the way, he appears by recent published correspondence to have been preceded, both as to publication and practice, by Dr. Shaw Mackenzie—do not necessarily fall on the destruction of the hypothesis on which they are rested. Their verity can only be ultimately settled by adequate observation and experience, and these they have been receiving in many places. While a certain number of observations are from time to time recorded that lend some color to the view that the method has a beneficial influence, in some cases at any rate, on the growth and distressing effects of cancer, the weight of evidence, so far, in the most trustworthy trials made by competent observers, under conditions calculated to minimize the sources of error, have failed to substantiate the claims so dogmatically advanced; and this not in one place only, but in several.

Regarded simply as a piece of dialectic by a controversialist, the book is indisputably clever; but regarded from the graver and more sober standpoint of facts, viz., as an effort to elucidate truth and to advance medical science, it is disfigured by a dogmatism, an exuberant enthusiasm, a passion, a bias, and a lack of judicial spirit, as well as by charges of prejudice, of disingenuousness—and worse, practically of conspiracy—against those who after careful trial have found themselves unable to consider Dr. Beard's contentions as to the cure of cancer by trypsin and amylopsin proved. The tone of the book is scarcely likely to aid the acceptance of Beard's views—though should experience justify them it will not prevent it—by the medical profession at large in his own or any other country. In this connection it may not be out of place to point out that in *Truth*, Jan. 22, 1908, there is found a half-page advertisement devoted to the exploitation of a preparation known as Sanatogen, of which it is stated—in a quotation purporting to come from Dr. Saleeby's own book, "The Will to Do"—"In Sanatogen Dr. Saleeby has discovered the golden means whereby phosphorus, the vital constituent of the brain and the nervous forces, can be administered so that the hungry tissues can take hold of their proper food and absorb it," with much more to the same purport. To this is annexed the information that "a limited number of complete specimen copies" of the aforesaid book "are available for distribution gratis, post free, on application to the publishers," with the significant addendum that "Sanatogen is sold by all chemists." This, it is true, has not much to do with cancer or Dr. Beard's treatment, but as regards the author's loudly proclaimed solicitude for "the cause of human life," to which his book on cancer is dedicated, it has an aspect that recent and present experiences in respect of other would-be benefactors to the cause of a suffering—and long suffering—public in this country have led us generally to look somewhat askance at. If we do Dr. Saleeby an injustice we are sorry, but in that case we can not exculpate him of "contributory negligence."

THE THIRTEENTH, GREATEST OF CENTURIES. By James J. Walsh, M.D., Ph.D., LL.D., Acting Dean and Professor of the History of Medicine and of Nervous Diseases, Fordham University School of Medicine. With Illustrations. Cloth. Pp. 436. Price, $2.70, postpaid. Catholic Summer School Press: New York, 1907.

Dr. Walsh's present work must materially modify prevailing conceptions as to the extent of the ignorance and darkness and the social submersion of the multitude, in that diversely estimated medieval period, the thirteenth century. The book gives a most comprehensive view of the conditions, literary, artistic, educational, social, legal and commercial, existing at that time. Most of us have been accustomed to believe, or at least were taught in our youth and are still repeatedly informed, that the period dealt with in this book was an age of intellectual darkness. To such it will be a surprise to learn that a far greater proportion of the entire population in those days enjoyed the advantages of the "higher education"—the best that the age could afford—than is the case to-day. We are told that in the thirteenth century the University of Bologna had a larger attendance than any university of modern times; and that no university in America to-day has anything like the number of students present at that date at either Paris, Oxford or Cambridge. In the chapter on "Postgraduate Work," the author cites instances mentioned in the well-known address of Professor Allbutt at the World's Fair, in 1904, on the "Historical Relations of Medicine and Surgery," in support of his contentions, and says: "Perhaps the most surprising thing is the simple statement that Salicet [William of Salicetus] recognized that surgery can not be learned from books alone. His case histories are instructive, even to the modern surgeon who reads them. His insistence on his students making careful notes of their cases, as the soundest foundation of progress in surgery, is a direct contradiction of nearly everything that has been said in recent years about medieval medicine, and especially the teaching of medicine." Walsh dilates on other points referred to by Allbutt, e. g., the discovery by William of Salicetus of the relations between *durities renum* and dropsy, thus antedating Bright by some five centuries, and this at a period when the physician was, according to many modern historians, "not supposed to occupy himself at all with ante- and postmortem studies of the patient, but with the old-time medical authorities."

The author attributes the widespread and persistent ignorance concerning the true character of the medical learning of the Middle Ages to two causes: First.—"The writers of the history of medical education have, until recent years, drawn largely on their imaginations, and have not consulted the old-time medical books. In spite of the fact that printing was not discovered for more than two centuries later, there are many treatises on medicine that have come down to us from this early time, and the historians of medicine now have the opportunity, and are taking the trouble, to read them, with a consequent alteration of old-time views as to the lack of encouragement for original observation in the later Middle Ages. These old tomes are not easy reading; but nothing daunts a German investigator bound to get to the bottom of his subject, and such men as Pagel and Puschmann have done much to rediscover for us medieval medicine." Second.—"The notion, quite generally accepted, and even yet not entirely rejected, by many, that the Church was opposed to scientific advance in the centuries before the reformation, so-called, and that even the sciences allied to medicine fell under the ban."

One other point in the present work deserves special comment here, viz., the subject of organized charity, and especially the foundation of city hospitals. We are so accustomed to regard the municipal care of the sick as having its origin in modern philanthropy, that it will come as a surprise to many to learn that it is to the first pope of the thirteenth century, Innocent III., that we owe the modern city hospital as we have it at the present time.—"With its main purpose to care for the acutely ill who may have no one to take care of them properly, as well as for those who have been injured or who have been picked up on the street, or whose friends are not in a position to care for them."

The author's considerations of the Science, Technical Crafts, Art, Literature, Law, and particularly of the Social Economics of that age, are even fuller than his consideration of medicine; so that from whatever intellectual standpoint he may view history the reader will be sure of finding much of interest in this illuminating work. The book making is in every way worthy of the literary contents.

CONFESSIO MEDICI. By the writer of "The Young People." Cloth. Pp. 159. Price, $1.25. New York: The Macmillan Co., 1908.

This is not a "confession," as one might suppose by the title. "I only want to confess what I have learned, so far as I have come, from my life, so far as it has gone," is the way the author explains it. The fact is, it is a group of essays on medical subjects—but not so intensely medical that the layman will not enjoy them. The first is on "Vocation," and his conclusion is that if a doctor's is not a divine vocation, then none other is and nothing is divine. "Hospital Life" is the theme of one chapter, and, by reading this chapter, one will be impressed that hospital life is a pleasant and profitable life for the medical student if he will but make it so. Every hospital is a charity; but there is a difference between charity and hospitality. They who give money to a hospital are charitable; we who have the spending of it are hospitable: "And of course it is we who get the fun out of the money. And we spend it well, entertaining in good style our innumerable guests." "An Essay for Students" is not a dry sermon, but a witty philosophic discourse on many subjects. One of these is "Psychology," which the author does not regard as a science by any means.

Under the caption of "A Good Example" is a delightful chapter on Ambrose Paré, who is set on a high pedestal—but none too high, considering his many and wonderful deeds—with a good broad base that can not topple over. And when one finishes this chapter, one wonders what Paré would have been and done had he lived in the twentieth and not in the sixteenth century.

"Practice," "The Discipline of Practice," and "The Spirit of Practice" are the titles of three chapters, and in them the author soliloquizes on a variety of subjects. Eddyism is one of them, and we are told that if we are to fight Eddyism we must make haste, for it will not long survive its founder. "It will die before it gets to the poor. Not that it shows any great anxiety to get to the poor, so long as it can get at the rich." In the chapter on "Retirement" we are told about "Velox," a man with a huge practice, going day and night. For thirty years he did without a holiday, never afraid of the day's work, the night calls, the meals obtained anyhow. For thirty miles around he was the man to have. In time of peril the cry was, "Send for Velox." Then he fell ill. "They fought it out between them; Death would not budge an inch for Velox, nor he for Death. Each had a long score against the other, run up at a thousand bedsides. The struggle was of unprecedented length and severity, till exhausted Nature finally separated them and declared that honor was satisfied. Velox was permitted to survive, to Death's disgust, but was compelled to retire, to Death's relief." And so Velox could not practice any more. "The bitterness of retirement, the full and sudden bitterness had come to him whose life's work had filled with sweetness so many lives."

The philosophy, the wholesome common sense, the wit, the human delightful charm of these essays can not be described. They must be read to be appreciated. Whoever the author is—we surmise he may be a London consultant, a "Velox," a surgeon—whatever he may be, he is a delightful writer of inspiring essays. Besides finding pleasure in the reading of this book, a physician will find profit also, for with the wit there is much of medical wisdom well worth having.

Thirtieth Annual Report of the Department of Public Health, Augusta, Georgia. Pp. 97. Published by the Board, 1908.

The sanitary conditions of Augusta may be judged from the fact that not only are the white mortality returns low, but the negro returns also, which have gradually decreased from 36.68 per 1,000 in 1900 to 22.78 per 1,000 in 1907, show "the lowest death rate of our colored population since the days of slavery, and in all probability the lowest in the entire South." The report gives great credit to the colored physicians for the aid rendered by them in the establishment of better sanitary conditions among their own race. Free vaccine and antitoxin have been supplied when necessary, a charity demanded alike, as the report states, by humanity and self-interest. A system is in vogue regarding tuberculosis whereby physicians are invited to report their cases on the understanding that, unless at the instance of the physician, the department shall not interfere, merely reporting the case and disinfecting the premises on vacation or death. Here, as in most places, the peculiar susceptibility of the colored race somewhat swells the mortality statistics, though not to any disquieting degree. Typhoid shows no increase during the past four years.

Diseases of the Nose and Throat. By D. Braden Kyle, A.M., M.D., Professor of Laryngology and Rhinology, Jefferson Medical College. Fourth Edition, Revised and Enlarged. 219 Illustrations, 26 in colors. Cloth. Pp. 798. Price, $4. Philadelphia: W. B. Saunders Company, 1907.

About twenty-five new subjects are included in this edition, ranging from "taking cold" and lithemic rhinitis and the relation of voice to hearing, to surgery of the larynx including laryngectomy. Many chapters have been altered and enlarged to keep pace with the advancement of knowledge. Under such subjects as deformities of the septum practically every legitimate operation is fully described. As in previous editions, the etiology and pathology, and especially the relation between the local diseases and systemic conditions, are emphasized as the true guide to treatment. The author has maintained the excellent reputation of his text-book and it will be gratefully welcomed by student and specialist alike.

Society Proceedings

COMING MEETINGS.

American Medical Association, Chicago, June 2-5.

Arizona Medical Association, Tucson, April 28-29.
Medical Association of State of Alabama, Montgomery, April 21.
Medical Society of State of California, Coronado, April 21-23.
Med. Assn. of District of Columbia, Washington, April 28.
Med. and Chir. Faculty of Maryland, Baltimore, April 28-30.
Kansas Medical Society, Iola, May 5-7.
Ohio State Medical Association, Columbus, May 6-8.
American Therapeutic Society, Philadelphia, May 7-9.
American Association of Physicians, Washington, May 12-13.
State Medical Association of Texas, Corpus Christi, May 12.
Utah State Medical Association, Salt Lake, May 12-13.
Louisiana State Medical Society, Alexandria, May 12-14.
Montana State Medical Association, Butte, May 13-14.
Arkansas Medical Society, Little Rock, May 13-15.
New Hampshire Medical Society, Concord, May 14-15.
Oklahoma State Medical Association, Sulphur, May 14-16.

THE MEDICAL JURISPRUDENCE SOCIETY OF PHILADELPHIA.

Regular Meeting, held Feb. 17, 1908.

William W. Smithers, Esq., in the Chair.

Value of Present Practice Law.

Dr. John B. Roberts spoke on the subject, "What the People Have Gained Through the Present (Though Defective) State Examination Law." He stated that the present medical law has been of value to the public because:

1. It has made necessary a higher preliminary education before entrance on medical studies than existed before its enactment.
2. It has insisted on a four years' college course, with a diploma from a college having such a course before the candidate for license to practice in Pennsylvania can appear before the board.
3. It has increased the requirements in the curriculum of medical schools, and made the lower schools come up nearer to the standard of the higher schools before the students can pass the final examinations.
4. It has given the state indirect control, instead of no control at all over medical education.
5. It has prevented ignorant graduates of medical schools outside of Pennsylvania from coming to practice in Pennsylvania when rejected by other state medical examining boards.
6. It has prevented the repetition of the scandal due years ago to the notorious diploma mills which then existed in Pennsylvania.
7. It has encouraged other states to recognize licenses to practice medicine from boards of other states having similar requirements. Pennsylvania was the first state to incorporate a recognition of other licenses in its medical law.

Newspaper Publicity.

Mr. Edmund Sterling, of the *Public Ledger*, said that among the means most effective in tearing away the mask of convention and prejudice which obscures the truth and obstructs progress will be found unsparing publicity for every danger and evil. To enlist the interest of the people, the concrete facts concerning existing systems of medical examinations must be spread broadcast. If it be true that applicants rejected for incompetence and ignorance by one examining board are systematically passed by another board by reason of lower standards and lower educational requirements, publicity of the facts alone can prepare the way for the remedy. If it be true that the faculties of medical colleges called "sectarian" furnish almost the sole opposition to the reformation of conditions that menace the safety of the community, and that the movement for the correction of these evils is being met with vituperation and false accusation, publicity is the best corrective. The necessity of frank cooperation on the part of the medical profession in enlisting the support of an intelligent publicity was emphasized.

Regarding criticism of the average newspaper treatment of technical medical subjects, Mr. Sterling thinks it is for the medical profession to consider to what extent its own deliberate policy of silence and of aloofness from secular publicity can be held to account for conditions of which its members now complain so bitterly. It is the "closed door" that begets inaccuracy and furnishes the temptation for the substitution of speculation and guesswork for the sober statement of the unadorned truth. He pointed out, however, that the situation will not be met by the creation of a bureau of publicity or by the appointment of a press committee through which information "fit to be printed" shall be filtered to all the papers simultaneously. As a specialist in its own field, the newspaper will have to continue to be the judge of what is "news." The great movements in medical science, the preparation of serums that are to save human life, the discovery of new methods of treatment that are to relieve suffering, are of value as news in direct proportion as they come fresh from the minds of those who conceive them. The plea was not made for a relaxation of the privacy that should be maintained between physician and patient, reference being made solely to the growing activities of the profession as a whole in which the community, with increased intelligence and understanding, has a vital interest. If it be admitted that newspaper publicity is an essential element in the success of any reform movement, the duty of those who are fighting for that reform is clearly marked out.

Commercialism in Medical Colleges.

Dr. Henry Beates read a paper on "Some Facts Relating to Medical Education in the United States Demonstrated by the Operation of the Act Regulating Practice in Pennsylvania." He said that if there is one topic intimately associated with the forces and greatest possibilities of man, about which humanity, in general, is deplorably indifferent and ignorant, it is the economic value embodied in the relationship of medicine with humanity. Medicine—the healing art—is an existence determined by those inherent and material forces which are incident to being, and the inevitable consequence of the law of cause and effect. While afflicted humanity seeks relief through the medical profession, it is utterly indifferent to the degree of qualification which the practitioners of the art of this science may, or may not, possess. Unprincipled commercialism finds the blind and unsuspecting public ardent advocates of groups of individuals, who unblushingly deceive the authorities of commonwealths, and obtain charters and found medical colleges for commercial purposes. Medical education in the United States, it was asserted, finds its escutcheon defaced by the commercial renegades who take advantage of this public confidence and trust and most basely betray them. If there is one firm rock on which the qualification and success of medicine is based it is character. The meaning of "character," in matters institutional, is best appreciated by quotation from the legal definition of the term "reputable;" because, as is self-evident, a reputable institution—and consequently diploma in a legal sense—can be reputable only when conditioned on a fearless administration of the curriculum; and that can only be effected by a board of trustees, supervising a faculty, every member of which must be a man of character.

It is to be regretted that occasionally, in a faculty, there are found one or more members who are not individuals of character, who are party to a great variety of fraudulent schemes, constructed in order to deceive and to rob, whose certificates are documents framed with criminal intent; to effect injustice, perpetrate great wrong and accumulate illy gotten wealth. Just such faculties, it is declared, seriously affect the welfare and the interests of humanity and confer the medical degree on illiterate and ignorant students, who are thus robbed of four years of their life, and four years' money.

The Single Examining Board.

Adolph Eichholz, Esq., speaking on "Consolidation of Multiple Medical Examining Boards into one Board Required to Give Full Protection," cited the case of Dr. Buchanan and his medical diploma mill as an example of the almost incredibly loose methods regarding the qualifications of physicians prevailing in Pennsylvania a quarter of a century ago. While the act of 1893, creating three boards of examiners, was a step in the right direction, he believes the principle of the multiplicity of boards of examiners is entirely wrong. He advocates one board of examiners in which all the recognized "schools" of practice are properly represented, with the examinations in materia medica and therapeutics conducted by the respective representatives of the systems indicated. The examination on other knowledge recognized as requisite to an intelligent practice of medicine should be the same for all candidates.

He regards it as of the highest importance that the law at least attempt to give an exact definition of what is intended to be embraced under "practice of medicine." Nothing should be left to judicial interpretation. Further, the law should provide for the revocation of a license to practice where such continuance constitutes a public menace, as obtains in a licentiate who has become a habitual drunkard, or is addicted to a drug habit, or who has committed abortion, or who has been guilty of other dishonorable conduct likely to deceive the public. Forty-four states and territories have adopted laws framed substantially on the lines mentioned and found them to work satisfactorily.

DISCUSSION.

Dr. Henry W. Cattell emphasized the importance of having incorporated in a new medical bill the provision whereby a practitioner may be debarred if he assumes certain habits or does certain things not becoming his oath taken when entering on the practice of medicine.

William Righter Fisher, Esq., referred to the state board of law examiners as a creation of the Supreme Court. It is not in any sense a creation of the legislature, nor is it influenced by political considerations of any kind. None of the examiners have any clue whatever to the personality of the men who write the papers. There is a provision of the Supreme Court requiring that every candidate for registration as a student at law, no matter what may have been his preliminary advantages educationally, shall pass a preliminary examination before a board of examiners. While there has been much criticism against the requirement of such examination for a college graduate, it is the experience of the board that such examination is of the greatest importance. The effect of the examinations has been to stimulate the educational institutions. Mr. Fisher believes that a man who can not pass a rigid preliminary examination is not fit to undertake the study of medicine or law; that he has not the material in him.

Dr. Seneca Egbert agreed with Mr. Fisher on the value of the preliminary examination. The fault at issue, he feels, is not in the medical school, but in the school before it. He would not be sorry to have the state examining board examine every man who came into the medical schools of Pennsylvania. In the last four years the medical schools have been constantly asking to have the standards raised. Of the 258 applicants for the right to practice sent out by the Philadelphia schools only ten had failed.

Dr. Henry Leffman said that there was another side to the question; the men were under strain and that their general education was obtained a number of years before they took the medical examination before the state board. He thinks it would be a great improvement if anatomy, physiology, chemistry and materia medica could be examined on at the end of two years and the other branches taken after the completion of the medical course.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON GENERAL MEDICINE.

Regular Meeting, held March 17, 1908.

Dr. Herbert S. Carter in the Chair.

Cardiac Complications in Pulmonary Tuberculosis.

Dr. Lawrason Brown, Saranac Lake, considered this subject from two standpoints: 1, The heart itself not diseased; 2, the heart itself diseased.

I. THE HEART ITSELF NOT DISEASED.

The position of this organ in patients with pulmonary tuberculosis depends directly on the pathologic changes in the lungs. Adhesions often prevent dislocation of the heart. In right apical lesions of some standing the right border of the absolute cardiac dulness is found three-fourths to one inch or more to the right, or about the middle of the sternum. When there is extensive cavity formation on the right; when a pneumothorax or an effusion supervenes on the left; when the right lung is the seat of fibrosis consecutive to pulmonary tuberculosis, or, as some affirm, to pleurisy, the heart may be found entirely on the right side. Pulmonary tuberculosis is probably by far the most frequent cause of non-congenital dextrocardia, but this usually develops only when the left lung is slightly affected and is not bound down by pleuritic adhesions. Contraction of the left lung or a pneumothorax on the right side may so greatly displace the heart that the point of maximum impulse may be beyond the left anterior axillary line. Many theories have been advanced to account for the smallness of the heart in pulmonary tuberculosis. Postmortem observations are not entirely satisfactory for the solution of this problem. Rueter, in 250 autopsies on patients with pulmonary tuberculosis, found a small heart in 29 per cent. of the men and in 56 per cent. of the women. Few observations indicating enlargement of the heart in pulmonary tuberculosis have been made until recently, and even some of these authorities have attributed the hypertrophy in many cases to alcohol. Palhier believes that hypertrophy occurs only when pathologic changes are found elsewhere in the body. In 200 autopsies at the Phipps Institute hypertrophy was present 13 times, six times of the left ventricle, two of the right and five of both. Emerson believes that if the general nutrition is maintained or is increasing, the general blood pressure remaining normal, and if there is a rapid heart action and an accentuation of the second pulmonic sound, cardiac hypertrophy is, in all probability, taking place, even though absent in clinical examination. Laennec, Louis and others found dilatation of the heart to be exceptional; it has been found more in acute types of the disease (Brun), especially when they occur in patients with chronic fibroid changes.

In acute miliary tuberculosis of the lungs dilatation and hypertrophy of the right ventricle is not rare, and is essentially a mechanical result, due to the impeded pulmonary circulation. Sequer, in 271 autopsies, found it present 21 times in patients with fibroid, 7 times in patients with ulcerative tuberculosis. At the Phipps Institute dilatation of the right heart was noted clinically in 9 per cent. of 1,491 patients, and at autopsy in 24 per cent. of 200 cases. According to Norris, it occurs clinically in 32 per cent., at autopsy in 21 per cent. of patients with pulmonary tuberculosis. Dilatation of the right side is often accompanied with hypertrophy of the right ventricle, which Jaccoud believes is favorable. The area of cardiac dulness was rarely changed in 1,289 patients at the Adirondack Cottage Sanitarium unless some valvular disease was present. In 53 cases absolute cardiac dulness was noted as absent.

A study of the heart of 1,289 patients at the Adirondack Cottage Sanitarium showed that 65 per cent. presented some slight deviation from normal. In 75 per cent. of the cases the heart sounds were found of normal relative intensity. A weakened first sound is rather frequent in well-advanced stages and is often more pronounced during acute attacks. Functional murmurs were present in 6 per cent. of these 1,289 cases, and in 2.6 per cent. of 639 at the Phipps Institute, but the latter were in much more advanced stages when such murmurs would seem more likely to occur. A systolic whiff due to compression of a cavity during systole is not very rare, and murmurs may be produced in cavities by the systolic distension of a large vessel or of an aneurism. Reduplication of the heart sounds has been rarely noted, occurring in only 1 per cent. of the 1,289 cases. Irregularity of the heart action, and a skip of the beat, is infrequent in the early stages. The pulse in tuberculosis is a very valuable guide, both for prognostic purposes and in the regulation of exercise.

The majority of the patients have at first a slight increased pulse rate (90-100), even when apyretic, and frequently when at rest in bed. The cause for the increased frequency is still unsettled. A neuritis of the vagus, the fall in blood pressure, irritation of the sympathetic, increased irritability of the cardiac ganglia or muscle fibers, myocarditis, anemia and dyspepsia, have all been suggested as factors. The most probable cause, especially in incipient cases, is a weakening of the cardiac muscle and its nervous control due to the tuberculous toxin. The blood pressure in many cases of pulmonary tuberculosis is lowered from the very onset and some have held that hypotension is present in the predisposed. Palpitation occurred in 21 per cent. of the 1,289 patients, but it is a rare thing for patients to complain of this symptom in the early stages.

II. THE HEART ITSELF DISEASED.

Heart disease developing during pulmonary tuberculosis may be found in the order of frequency, in the pericardium, the endocardium or the myocardium. Non-tuberculous changes in the myocardium are not infrequent at autopsy, but difficult to diagnose clinically. They are very rarely tuberculous in nature and consist of fatty degeneration, fragmentatio myocardia as well as hypertrophy of the muscle nuclei. Fatty degeneration may follow this muscular atrophy, but unless the pericardium is also affected, these changes often pass undetected, but when cyanosis, edema, dyspnea and a frequent and irregular, small pulse occurs, such changes are very probable. Adynamia is not common and occurs usually only late in fibrosis. Kidd believes that attacks resembling angina pectoris are only coincidences. The great increase in weight, which some patients who are kept perfectly quiet exhibit, must at times affect the heart.

Tuberculosis of the myocardium is very rare, occurring about once in 1,000 tuberculous autopsies. It has little clinical significance and is practically never diagnosed, except postmortem. It is said to occur most frequently in miliary tuberculosis, less often as large solitary tubercles, and more rarely still as a diffuse tuberculous fibrosis without caseation. These changes seldom produce functional disturbances. The disease usually extends by direct continuity from the pericardium or endocardium into the myocardium. The pericardium is said to be more frequently attacked in tuberculosis than the endocardium or myocardium. The symptoms are frequently very obscure and often overlooked. Out of 7,646 cases of pulmonary tuberculosis Norris found only 31 instances of pericarditis. Tuberculosis ranks next to rheumatism in the etiology of pericarditis. A tuberculous pulmonary cavity may, in very rare instances, perforate into the pericardium, producing pneumopericarditis. The occurrence of pericarditis naturally aggravates the symptoms of tuberculosis and the prognosis is unfavorable.

Clinically endocarditis is found associated with pulmonary tuberculosis much more frequently than pericarditis, but at autopsy it is less frequent. In 8,154 autopsies collected by Norris valvular disease was present 293 times. Records of 60,428 patients with pulmonary tuberculosis showed that valvular disease of the heart occurred in 1 per cent. of the cases. Endocarditis in pulmonary tuberculosis may be due to secondary organisms or to the tubercle bacillus. Endocarditis occurring during pulmonary tuberculosis is most often a late complication. Norris has no recollection nor any definite record of endocarditis developing in a patient with pulmonary tuberculosis. Tuberculous endocarditis is very rare, and many instances reported as such can not be accepted. It is not improbable that tubercle bacilli, circulating in the blood, may lodge in the valves in a pre-existing endocarditis. True tuberculous changes must be present in the vegetations or, if only miliary tuberculosis occur, they must lie above the elastic membrane to uphold a diagnosis of tuberculous endocarditis. Tuberculous endocarditis is so rare that it has no clinical significance and has seldom been diagnosed antemortem.

Thrombi in the right ventricle are rarely diagnosed antemortem, and rarely occur in acute cases, but usually are found late in chronic cases. They are due to changes in the endothelium, to stasis and to changes occurring in the blood. Warthin found thrombi in 10 per cent. of his tuberculous patients. A sudden onset of dyspnea with crises of suffocation and a tumultuous heart action are suggestive of this condition. Syncope or pulmonary apoplexy may occur. In more than 3,000 patients who have been more or less closely followed for a number of years, Brown has yet to see an instance where undoubted valvular disease developed in a patient with pulmonary tuberculosis, unless he was in a far advanced stage of the disease. A smaller number of patients with cardiac disease present signs of pulmonary tuberculosis than are found in the general population. Meisenberg concludes that given either endocarditis or pulmonary tuberculosis the other is less frequent than usual. Otto believed that cardiac disease is more frequently associated with pulmonary tuberculosis in women than in men, but 4 cases out of 6 which Brown has had were men. The left side of the heart is usually affected. The disease of the mitral valve is much more frequent than that of the aortic and both are more often affected singly than together. Pure mitral insufficiency is the most frequent lesion associated with pulmonary tuberculosis, but it does not apparently predispose to pulmonary tuberculosis. The age incidence of this lesion and of pulmonary tuberculosis coincide. In 36 instances of "organic murmurs" at the Phipps Institute pure mitral insufficiency occurred 24 times and was present in connection with other murmurs 7 times. In 77 instances of valvular disease in connection with pulmonary tuberculosis, Brown found pure mitral insufficiency 44 times. In 4 other cases it was associated with other lesions. It seems, if well compensated, to exert little influence on the course or the symptoms of pulmonary tuberculosis. Mitral stenosis is far less frequent than insufficiency, and pulmonary tuberculosis is far less frequently associated with it than with other forms of heart disease. Patients with mitral stenosis often do remarkably well. Aortic insufficiency is much rarer than many authorities have stated and occurs, according to Meisenberg, in 5.4 per cent., according to Norris in 3.6 per cent. of all cases with lesions in pulmonary tuberculosis. Neither inhibiting nor predisposing influences have been attributed to it. De Renzi and others believe that this type of valvular heart disease is the most frequent in pulmonary tuberculosis.

Aortic stenosis is, as would be supposed, less frequent than insufficiency, judging from both the clinical and autopsy records. Meisenberg saw it twice in 4,649 cases of pulmonary tuberculosis and Ruck once in 3,009. Brown has seen no instance of it. Pulmonary stenosis is rare, occurring, according to Norris, in 0.12 per cent. of patients with pulmonary tuberculosis and in 4 per cent. of patients with pulmonary tuberculosis and cardiac disease. Pulmonary stenosis predisposes to pulmonary tuberculosis. Pulmonary stenosis is always the primary disease, mitral insufficiency and aortic insufficiency usually the secondary. Pulmonary tuberculosis occurs more frequently in patients with pulmonary stenosis than in any other form of cardiac disease. Mitral insufficiency is associated with pulmonary tuberculosis more often than any other form of valvular disease. Aortic stenosis is very rarely associated with pulmonary tuberculosis. Involvement of several valves simultaneously is rare in these cases. Heart disease may render the diagnosis of tuberculosis difficult and in many instances impossible.

The treatment of the various forms of valvular heart disease occurring in connection with pulmonary tuberculosis differs in no way from that employed in ordinary cardiac disease. Arsenic, strychnin, ice-bag over the precordium, carbonic acid baths, and rest are of value. Nitroglycerin may give relief. Excitement, alcohol and tobacco should be avoided.

Cerebral Complications of Ulcerative Endocarditis.

Dr. Thomas B. Futcher, Baltimore, reported two cases of cerebral embolism complicating acute ulcerative endocarditis. In the first case there was an embolic or thrombotic obstruction of the posterior inferior cerebellar artery. As a result of the obstruction of this vessel, the foci of softening are always situated in the dorsal and lateral aspect of the medulla and these structures are more or less involved, viz., the lateral aspect of the reticular formation; the descending root of the fifth nerve and its nucleus; Gower's ventro-lateral ascending tract; the direct cerebellar tract; the inferior cerebellar peduncle and the fibers going to it. In the second case there was a blocking of the middle cerebral artery, with a hemiplegia of the opposite side.

Dr. Futcher presented an analysis of the cases of cerebral embolism in ulcerative endocarditis that had occurred in the medical wards of Johns Hopkins Hospital since May 15, 1889. Up to March 1, 1908, there had been 22 cases of cerebral embolism complicating acute endocarditis. In all of the cases there were marked cardiac features indicative of an acute endocarditis, with definite evidences of valvular lesions on physical examination. There was a hemiplegia in all but one case; in this there was a monoplegia of the arm. During these nineteen years there were 22,300 medical admissions to the wards, and during this period there were 48 cases diagnosed as ulcerative or malignant endocarditis, so that cerebral embolism occurred in 45.8 per cent. of the cases. In addition to the 48 cases of ulcerative endocarditis there were 122 cases diagnosed acute endocarditis, making a total of 170 cases with an acute endocardial process. In other words, out of 170 cases of acute endocarditis cerebral embolism occurred in 22 instances, or in 12.9 per cent. There were 10 males and 12 females. The largest number of cases, 7, occurred in the fifth decade. The cases were chiefly in the young adults, 13 occurring before the fortieth year, before arterial changes would be likely to occur. The predominating number of cases showed an affection of the mitral valve. Clinical signs of mitral stenosis and insufficiency occurred in 19 of the cases. In 3 there was also aortic insufficiency. The hemiplegia was left-sided in 10 cases only. A. Ernest Jones found that in 13 autopsies on cases of cerebral embolism in the University College Hospital, London, 8 were on the left side and 5 on the right. Out of a total of 558 cases he collected from the literature 236 were right-sided, and 322, or 60 per cent., were left-sided. The duration of life after the initial embolism in the fatal cases varied between two days and ten months. In their wards there have been 220 cases of hemiplegia, and in 21 of these the lesion was due to cerebral embolism. This would leave 198 cases in which the hemiplegia was due to apoplexy, cerebral thrombosis, tumor or meningitis.

Clinical Features of Myocardial Disease.

Dr. Alfred Stengel, Philadelphia, discussed the clinical aspects of myocardial disease from two points of view, (1) of the heart itself, and (2) of the individual pathologic lesion. Weakening of the heart, failure of heart power, chronic insufficiency of the heart, or hyposystolism showed itself by symptoms referable to the heart itself, but were so often vague as to lead to mistakes in diagnosis. The subjective symptoms were the early expressions of this weakening of the heart muscle; the myocardium resented the ordinary strains of life. Of the visceral manifestations hepatic symptoms were the most common, and enlargement of the liver often took place a long time before there were evidences of failing compensation. Cyanosis, edema, dropsical conditions, etc., occurred later in cases of myocardial disease than in valvular disease. In some cases of myocardial disease there occurred only the general symptoms, nutritional and neurotic. In many cases these were the earliest manifestations. Myocarditis had its origin in infectious diseases, rheumatic fever, infections of later life, strains of a severe nature occurring in early life, etc. In simple, pure endocarditis there were the same symptoms which were said to be significant of a weakened heart in general. Bradycardia, occurring after typhoid fever, was due to a myocardial weakness. In simple myocarditis the heart might attain a large size, such as described by Quain. In chronic myocarditis there might be an enlarged heart with inadequate apex impulse. Again, there was a type of cases in which the heart was enlarged but with a strong impulse; in this the heart muscle fibers were in a relaxed condition and gave a "slapping impulse." There was much slack to be taken up. In pure chronic myocarditis one found a prolonged vibrating first sound which was easily transformed into "murmurish.".

There was another group of cases associated with sclerosis, with angina and with paroxysms of asthma, not occurring spontaneously. The effect of exercise on the heart in developing an attack of this nature was the same as the effect of exercise on the leg muscles in developing cramps and weakness of the legs. One of the most difficult things to diagnose was pure degeneration of the heart, and a diagnosis of fatty degeneration was impossible except conjecturally. There was a fibrous degeneration which occurred in patients with fibroid tumors of uterus and adnexa, and oftentimes sudden death after myomectomy resulted because of this. Enlargement of the heart was associated with syphilitic disease of the heart.

DISCUSSION.

Dr. W. Gilman Thompson said it was interesting to note how much displacement of the heart could occur without any special functional disturbances. He had watched experiments made by the late Dr. H. P. Loomis at Bellevue Hospital, injecting nitrogen gas to produce an artificial pneumothorax in order to compress the lung; he had seen the heart displaced to the opposite side in the course of twenty minutes or more without producing any special disturbance or discomfort. Patients at Bellevue Hospital had, as a rule, been subjected to deprivation, were alcoholics or syphilitics, and there were other underlying factors which weakened their resisting powers; therefore, they acquired tuberculosis more readily. Bradycardia might result from a neuritis of the vagus nerve, but this was a matter for clinical debate and not of actual demonstration.

Dr. Alexander Lambert said that in looking over more than 125 autopsy records at Bellevue Hospital he could not find a single instance where a normal heart was found in an alcoholic.

Dr. Henry Koplik said it was rare for a child to suffer from myocarditis, pure and simple. The heart symptoms following acute infectious diseases in adults, if present in children, would be most serious. In children myocardial diseases were always very serious.

Dr. L. F. Bishop said that there were many symptoms supposed to be due to myocardial disease; but in the light of recent studies were now known to be due to peripheral disease with reflex symptoms referable to the heart.

Dr. Thomas B. Futcher said he knew of no instance of hemorrhage occurring in ulcerative endocarditis.

Dr. Lawrason Brown said that among 1,300 cases referred to there were but 6 of valvular disease, 4 mitral and 2 aortic insufficiency. Five or six cases sent to the sanitarium with a diagnosis of pulmonary tuberculosis were really cases of cardiac disease.

BOSTON MEDICAL LIBRARY MEETING.

Regular Meeting, held Feb. 19, 1908.

Dr. Richard C. Cabot, Chairman.

Serum Treatment of Cerebrospinal Meningitis.

Dr. Simon Flexner, director of the Rockefeller Institute for Medical Research, referred to the epidemic two years ago, in New York City, during which there occurred 5,000 cases, with a mortality of 70 per cent. Many peculiarities of the meningococcus were noted. It was found that the effects on guineapigs were not like those on man. Experiments with goats succeeded occasionally only. Hence, they turned to the use of monkeys. The most virulent strains of the germs were employed. These lose their pathogenicity in cultures, and do not recover it by being passed through animals. Sometimes they are efficient for months, and then suddenly become inactive. Hence, they must be tested constantly.

The lesions in monkeys resemble those in man both macroscopically and microscopically, but in monkeys there is more involvement of the central nervous system, shown by a high degree of encephalitis. Death ensues so rapidly as to suggest that it is by the contained poison instead of by any elaborated one.

It is more difficult to check the disease in monkeys than in men. Goat's serum was found to be fatal to monkeys. Hence, a monkey was immunized, and after eight months the serum obtained was used in testing. The five control monkeys died within twenty-four hours. One monkey, given serum one hour before the dose fatal to the others, had no symptoms. One, given serum mixed with the dose fatal to the others, had no symptoms. Two monkeys, given serum as late as six hours after symptoms appeared, survived, and one monkey who received the serum died.

Encouraged by these results, they began to immunize a horse, and after eight months this serum was first tried on man. At first the dose was small, 5 c.c.; later it was increased to 10 c.c. and 15 c.c., and then still larger. Always it has been injected directly into the spinal canal.

An epidemic in Ohio gave the opportunity for a test. Soon there appeared a report of 40 cases treated, with 29 recoveries and 11 deaths, a mortality of 27.5 per cent.

To these 40 cases have now been added 17 cases in New York, with 12 recoveries and 5 deaths; 20 cases in Boston, with 17 recoveries and 3 deaths; 15 cases in Philadelphia, with 9 recoveries and 6 deaths; 3 cases in Baltimore, with 2 recoveries and 1 death; 30 cases in Belfast, with 22 recoveries and 8 deaths; 5 cases variously distributed, with 4 recoveries and 1 death. This makes a total of 90 cases not reported before, with 66 recoveries and 24 deaths, or a mortality of 26 per cent. The total of all reported cases up to the present is 130 cases treated, with 95 recoveries and 35 deaths, a mortality of 27 per cent.

The reports from Belfast are from an epidemic where the mortality had been over 70 per cent. The serum was administered during the months of September, October, November and December, 1907, with the results above stated. During the same period 34 other cases, studied by the same physician, were not so treated, and of these 29, or 85 per cent., died.

In 22 cases the serum was given within seventy-two hours of the onset of the disease, and of these patients 16 recovered. Of 25 patients who recovered, 12 did so by crisis and 13 by lysis.

Dr. Flexner stated that good results may be obtained even though the fluid in the canal is thick pus. The number of germs decreases, the extracellular ones disappear, the intracellular ones change, swell, stain badly and do not grow. They may persist for some time, but they do not grow. The fluid itself rapidly clears up. Relapses do occur. Germs are then abundant, but if the serum has previously been injected, the peculiarity that they will not grow persists. Cases may terminate by crisis as late as the fifth week.

It is believed that the meningococcus does not elaborate a soluble toxin. The toxin is within the cellular organism. By the autolytic action of a ferment, the germ disintegrates rapidly and early and this toxin is set free. The experiment can be tried and proved artificially by the use of toluol. The amount of antibodies present is very small. The whole action of the serum is not clear. It does to some extent neutralize the poison, but by no means as the antitoxin of diphtheria neutralizes the toxin elaborated by the Klebs-Loeffler bacillus. Here the poison is an endotoxin, and the chief value of the serum seems to be that it increases phagocytosis. Within the phagocytes the toxin is broken up apparently and rendered harmless.

The serum is injected intraspinally, for here it chiefly acts, not subcutaneously or intravenously. Concentration is necessary, and can not be obtained otherwise. Hypersensibility of the spinal canal is not feared. There is danger of causing an abscess in the skin and subsequent infection of another germ. Hence the need of most careful asepsis.

DISCUSSION.

Dr. Charles Hunter Dunn reported the details of 15 patients treated by him in or near Boston. Eight have made complete recoveries; 2 have died and 5 are still pending. The two fatal cases were both treated late and were moribund. The same is true of one of the pending cases. The patient is now not doing well. The other four are fairly convalescent and barring a relapse will make good recoveries. Only one patient has the sequel of deafness, and is the only one to have any sequel whatever. Two cases ran a long course. Usually the temperature has fallen sharply and the symptoms have rapidly disappeared. The dose was 30 c.c., repeated daily for three or four days, if needed. No harm has resulted. Abortion of the disease, before unknown, is common. Recovery is nearly always complete. The serum should be given early, without waiting for a bacteriologic report if the fluid from the canal is cloudy. Inject at once the same amount as has been removed. Late cases are helped if the fever persists and germs are present.

Dr. John L. Ames reported 6 cases treated with the serum at the Boston City Hospital. All were typical cases, severe, on the dangerous list. Four showed the meningococcus present in the spinal fluid; in one no germ was found and in one the pneumococcus was present. This last patient died. Another fatal case was a fulminating case. The patient was treated within thirty-six hours, but showed no improvement. The other three patients recovered. One of these showed swelling of the lymph nodes of the neck and groin, and an arthritis. Treatment in this case was begun on the third day and consisted of 30 c.c. of serum, given daily for four days. From 1890 to 1906 there have been treated at the Boston City Hospital 166 cases of cerebrospinal meningitis, of which number 120 (72 per cent.), terminated fatally.

Dr. William T. Councilman spoke briefly of the epidemic in Boston in 1897-8, where the mortality was about 66 per cent. Dr. Flexner's work, he said, gives much promise for the future. This is the first serum to be efficient against an endotoxin. Probably there are many others to be yet discovered. The number of meningococci varies greatly in different cases. Specially abundant are they in foci in the lungs from 1 to 2 cm. in diameter, filled with pus and masses of germs.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Regular Meeting, held Feb. 12, 1908.

The President, Dr. Albert M. Eaton, in the Chair.

Zander Gymnastic Method of Treatment.

Mr. Max J. Walter described the Zander system of medicomechanical gymnastics invented by Dr. Gustaf Zander of Stockholm, Sweden, in 1857. In this system of gymnastics, better execution and precision of exercises is obtained by means of mechanical apparatus, and by his ingenious construction he has solved the question of replacing the executor of resistance by an exact uniform working power, which is, at any time, in sufficient quantity, at the disposal of the physician and allows him to determine accurately and to control the force of the exercise. Remedial gymnastics have, therefore, the advantage of exact dosage. The apparatus consists of active machines, where the patient performs the exercise himself against certain resistance; passive and balancing machines where the exercises are performed by a force outside of the patient; machines for mechanical massage, and machines for orthopedic and corrective gymnastics.

For the physiologically correct execution of muscular exercise it is of importance to bear Schwann's law in mind, that a weight which a muscle can lift during the continuation of its contraction is gradually decreasing, and at its maximum point is relatively small. On the Zander machines we find that, according to Schwann's law, the resistance decreases during the second half of the contraction; the amount of resistance and the amount of muscular work to be done are exactly parallel during the different consecutive stages of muscular contraction. Muscular power and muscular task are thus always in the right proportion to each other. Experience has shown that regular muscular exercises with progressive exertion do not only develop and strengthen the muscle, but also remove morbid changes in the tissues, strengthen the nervous system and accelerate the circulation of the blood and lymph, as well as enhance the functions of many organs. The author regards it, therefore, as self-evident that these exercises should be introduced among the auxiliaries of therapeutics.

Chronic Disabilities Treated by the Zander Method.

Dr. J. Madison Taylor regarded chronic disabilities as the most troublesome disorders encountered by the physician. All are relievable and many are curable, but only by exhibiting resourcefulness, patience, thoroughness in estimating contributory causes, and in securing adequate cooperation of the patient. Active exercises accomplish most, but many, especially aged, sedentary individuals are unwilling, unable or organically unfit to perform them. A masseur, while best for them, may not be available. In these cases Zander's machine gymnastics are very useful. The essential prerequisite of organic competence is a fair measure of elasticity, especially in the supporting structures. Where activities are not feasible by voluntary stretchings, torsions, rotations, Dr. Taylor regards the Zander machines peculiarly adapted to gradually produce this elasticity. Hence, the patient may receive much better results from massage and gymnastics—passive and active—and be led on to open-air life. Furthermore, by a course with the Zander machines a stiffened, water-logged patient, disabled by contractures, adhesions, partial ankyloses and stases, is placed in a condition of organic regeneration by which the normal responses to other remedial agencies are greatly encouraged.

Dr. S. Solis-Cohen said that there are innumerable methods infinitely superior to any drug in the Pharmacopeia—in certain cases. On the other hand, there are many cases in which some of the drugs are far superior to other means. Thus the physician has at his command all the resources of nature and of art. He insists on having abdominal massage done by a skilled and intelligent operator, and at first under his own supervision, not indirectly through steel and wire, but directly through the sensitive finger tips. Only the human hand could tell when to avoid, relax or increase pressure. He considers all machines inferior to the human hand under ordinary conditions. There are, however, some extraordinary conditions in which machines are superior, among which are adhesive conditions about the joints. The psychic influence also in submitting to the mechanical treatment is a valuable element. The physician has no right to prescribe mechanical treatment vaguely, but should watch his patient in the first application as carefully as in the first administration of mercury to a patient whose idiosyncrasies he does not know.

Dr. E. A. Newton believes that much can be done with such machines in beginning stiffness of joints, soreness of muscles, etc. With old adhesions he considers the hand preferable.

Dr. R. Tait McKenzie pointed out as disadvantages of the Zander machines, the unintelligence in comparison with the educated hand, and the enormous expense of installing. As advantages were mentioned accuracy of movement and of dosage.

Medicolegal

Statute Must be Followed in Defining Practice of Medicine.

The Supreme Court of Arkansas says, on the appeal of Foo Lun vs. State, where the party appealing had been convicted of practicing medicine without first having procured a certificate and license as prescribed by the statutes, that a witness named Montgomery testified for the state: "I went up and got some medicine from defendant, paid him, and he gave me a receipt. I was requested by the medical board to go there to get evidence to see whether or not he was practicing medicine. He asked me my symptoms. He has an office something like a doctor's room." Cross-examination: "I answered the questions he asked me. He felt my pulse, and asked me if I had pains. I did not ask him to feel my pulse or tell him I had stomach trouble. I acted as a detective. He didn't tell me he only sold medicines, but he told me to take this until Wednesday. I saw other persons in the waiting-room." The state then introduced the county clerk, who testified that there was no certificate of the state board allowing the defendant to practice medicine. This was all the evidence. There was a jury trial and a verdict of guilty.

A reversal of this case was asked on the ground that the trial judge had erred in instructing the jury that "by the term of 'practicing medicine' it is meant to charge a person who undertakes to consider the nature of the ailment of a patient and to prescribe for him a remedy therefor; and if you find from the evidence in this case that defendant examined into or in any manner considered the physical ailments as represented to him by the witness Montgomery, and prescribed or attempted to prescribe a remedy therefor, you will find him guilty." The Supreme Court agrees that in this there was cause for reversal.

A number of the states, the court says, have passed statutes regulating the practice of medicine. In some instances the legislatures have undertaken to define what is meant by the phrase "practice of medicine." In others they have not. In cases where the legislatures have not undertaken to define the meaning of the phrase it has been construed to be used in its ordinary and popular sense. In cases where the words "practice of medicine" have been defined by the legislatures, the definition has been followed by the courts.

Section 5243 of Kirby's Digest (the Arkansas statute) provides that "any person shall be regarded as practicing medicine, in any of its departments, within the meaning of this act, who shall append M.D. or M.B. to his name; or repeatedly prescribe or direct, for the use of any person or persons, any drug or medicine or other agency for the treatment, cure or relief of any bodily injury, deformity or disease." The court thinks it was the intention of the legislature to define the crime by the use of the language quoted. The statute defines practicing medicine as repeatedly prescribing or directing, etc. The trial court erred in giving its own meaning to these words in the instruction quoted, and in not defining them in the meaning of the statute. It was the duty of the court to give effect to the intention of the lawmakers as embodied in the statute.

Construction and Sufficiency of Petition in Action for Malpractice.

The Court of Appeals of Kentucky says that in the alleged malpractice case of Blackburn's Administrator vs. Curd, the plaintiff's petition stated that the "decedent (Leon Blackburn) was a stout, able-bodied person, and in good health, but had a growth on his head, which the defendant after an examination thereof pronounced a tumor; that said growth was on the right side of the top of the head, and was about the size of an egg; that the defendant, after examining the same, advised his intestate (Leon Blackburn) to have it removed, and assured him that the removal thereof would not endanger his life or health, or give him any trouble longer than a few days —at most not longer than two weeks; that after the said examination and assurance by the defendant his intestate in the month of July, said year, engaged the defendant to perform said operation and entrusted same to him; that the defendant performed said operation and undertook the treatment of the deceased after said operation was performed, and for that purpose had his intestate visit his office, and he visited the home of said decedent. Plaintiff says that the directions given by the defendant as to the care and attention to be given the incision on the head of the deceased, where said operation was performed, were carefully followed by the deceased and the members of his family; that the services of the defendant in the treatment of deceased were continued and exclusively relied on by the decedent and the members of his family until the defendant failed to attend decedent when sent for for that purpose, and neglected properly or at all to treat the decedent for several days, to wit, three days, during which time defendant was sent for to attend deceased, and was notified by the messenger sent after him that the deceased was suffering greatly and badly in need of proper attention by the defendant; that defendant failed and refused to attend or treat deceased during said three days, and because of said failure and his neglect to bestow proper and ordinary care, skill and diligence on the deceased after said operation was performed and during said three days his intestate got into such a condition from the effect of such failure and neglect that he was beyond any relief which other medical or surgical aid could render, and died therefrom on the eighth day of September, 1905. Plaintiff says that through and by reason of the carelessness and negligence of the defendant his intestate lost his life, to the damage of the plaintiff in the sum of $10,000."

The defendant demurred to the petition, and, by his general demurrer, admitted every material fact alleged in the petition. His counsel contended that the petition was defective and insufficient, for the reason that it was only alleged therein that the directions given by the defendant as to the care and attention to be given the incision on the head of the deceased, where the operation was performed, were carefully followed by the deceased and the members of his family; that this limited care and attention to the wound on the head and the directions of the defendant with reference thereto; that this language implied that the defendant gave other directions which were not followed. But in the court's opinion this point was not well taken. The incision on the head of the deceased made by the defendant was the thing to be treated by the defendant, and it was to be presumed that the directions of the defendant with reference to the care and attention were all given to that end, and as the effect of the allegation in the petition that those directions were followed by the deceased and the members of his family it was not necessary to allege minutely all the directions and advice given to accomplish a cure.

The second proposition was that the petition was insufficient for the reason that it was not alleged that another physician could not be obtained to treat the deceased when the defendant failed to treat him. A contract, or such a state of facts as made it obligatory on the defendant to continue to treat the deceased, were alleged, and that he failed to comply therewith and render the proper and necessary treatment to the deceased, by reason of which failure the deceased was injured. This stated a cause of action against him. The matter contended for might be pleaded by the defendant.

For these reasons the judgment of the lower court sustaining the demurrer and dismissing the plaintiff's petition on the ground that it did not state a cause of action, was reversed, and the cause remanded for further proceedings consistent herewith.

A Corporation Is Allowed the Same as Hospitals Are to Engage in the Business of Contracting for the Practice of Medicine.

The St. Louis Court of Appeals had, in the case of State vs. Lewin and others, a quo warranto proceeding to oust the respondents, and all others acting conjointly with them, from the exercise of the privileges of an incorporation under the name of a hernia cure company. The information charged that under said name the respondents claimed the right and privilege to furnish treatment for hernia and medical and surgical treatment for all other diseases, accidents and deformities, and as such pretended corporation exercised the right and privilege of engaging in the practice of medicine and surgery, treating hernia and all other diseases, accidents and deformities without any legal warrant, franchise, charter or grant. In the return to show cause the respondents disclaimed that the company claimed the right or privilege of engaging in the practice of medicine, but set up that the company claimed the right of engaging in the business of contracting for the practice of medicine. It was alleged therein that the respondents were duly incorporated under the laws of the state of Missouri, and that the charter specifically empowered the corporation in the following: "The company is formed for the purpose of furnishing treatment for hernia and medical and surgical treatment for all other diseases, accidents and deformities." The trial court sustained a motion for judgment on the pleadings and rendered judgment for the respondents, from which the state appealed, and which is here affirmed.

The Court of Appeals says that it was conceded by the respondents that a corporation could not be organized to practice medicine in Missouri. The state's contention was that the corporation was indirectly practicing medicine, as shown by the return, in this: that a physician who owned 98 of the 100 shares of the capital stock of the corporation, was its superintendent and was employed by it to practice medicine. It contended that power granted the corporation to furnish medical treatment meant that it might practice medicine through its human agencies. The respondents' contention was that the power granted the corporation was only contractual; that is, it was only authorized to furnish regularly licensed physicians to treat parties who might apply for treatment. These contentions could only be settled by a proper judicial construction of the term "furnish," as used in the charter of the corporation. If it meant to give, then the charter conferred the power on the corporation to practice medicine, and was void. But the court thinks that the word "furnish," as used in the charter, should be construed to mean "supply." The corporation was not restrained by its charter from entering into contracts with persons to supply medical treatment, nor from entering into contracts with physicians to render medical and surgical services, and had, in this respect, the same right to contract as a private individual.

In all the larger cities, and connected with most of the medical colleges in the country, hospitals are maintained by private corporations, incorporated for the purpose of furnishing medical and surgical treatment to the sick and wounded. These corporations do not practice medicine, but they receive patients and employ physicians and surgeons to give them treatment. No one has ever charged that these corporations were practicing medicine. The respondents were chartered to do, in the main, what these hospitals are doing every day—that is, contracting with persons for medical treatment and contracting with physicians to furnish treatment—and the fact that the physician referred to was the principal stockholder and the manager of the respondent corporation, and was employed by it to furnish medical and surgical treatment to the patients who might contract with it for such treatment, did not alter the legal status of the corporation, or show that it had violated the terms of its charter.

The corporation, as before stated, expressly disclaimed the right to practice medicine, and the court concludes that it had a right to do what the return said it was doing, and affirms the judgment in its favor.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

April 4.

1 *Deep Intraocular Lesions of Infantile Inherited Syphilis and Tardy Inherited Syphilis, from the Standpoint of General Pathology. Prognosis and Treatment. C. S. Bull, New York.
2 *Treatment of Intraperitoneal Hemorrhage from Rupture or Abortion of Tubal Pregnancy. H. N. Vineberg, New York.
3 Acute Lobar Pneumonia—A Study in Inflammation. G. K. Dickinson, Jersey City.
4 *Chronic Rheumatism and Its Treatment. J. Dardel, Paris, France.
5 Obstruction of Duodenum by Gallstones. Preoperative Localization; Operation; Recovery. G. A. Friedman, New York.
6 *Treatment of Epithelioma and Carcinoma of Mucous Membrane. W. D. Witherbee, Charlotte, N. C.

1. **Intraocular Lesions of Inherited Syphilis.**—Bull makes an urgent appeal for an earlier and more careful examination of the eyes in children born of parents or of a family, supposed or known to be syphilitic. In his experience, intrauterine disease of the deeper tissues of the eye is more common than is supposed. He rejects the idea that cases of congenital syphilis of the eye are usually comparatively mild. Lesions of deep structures of the eye are often actually congenital, e. g., iritis, cyclitis, choroiditis, cataract, exudation in the vitreous, more rarely retinitis, optic neuritis, and atrophy of the optic nerve have been observed in infants within a few hours of birth. He believes that disease of the uveal tract is more frequently seen in young infants than is keratitis. He describes five cases of actual congenital syphilitic eye disease. In tardy inherited syphilis the subject is more complex and the diagnosis more difficult. Physicians must beware of referring all obscure conditions to inherited syphilis. A searching investigation, not only of the patient, but of the family, is necessary. The stigmata in the fundus oculi may appear either as gross lesions or as slight rudimentary signs of former lesions. Functional ocular troubles, such as amblyopia, night blindness, nystagmus and apparent myopia, occur in tardy inherited syphilis. Certain aural stigmata are of value as diagnostic aids. The indication for specific treatment seems to exist in all cases in which there are lesions of possibly syphilitic origin, especially if one or more undoubted stigmata are present. In infantile iritis a mild mercurial ointment acts very well. A proper supporting dietary is necessary for infants. The parents should also be subjected to specific treatment if there are other children in the family showing marks of inherited syphilis.

2. **Intraperitoneal Hemorrhage and Tubal Pregnancy.**—Vineberg considers the question of immediate or delayed operation. His position is that in the vast majority of cases of rupture or abortion of tubal pregnancy it matters little whether the operation be done as soon as expedient or deferred for one, two or more days. It is only in those very rare cases of abortion or rupture in which the amount of blood poured into the general peritoneal cavity is so overwhelming as to place the patient *in extremis* from anemia and pressure on the heart and lungs that, to his mind, immediate operation with prompt intravenous salt infusion is imperative. Still, it is not his custom to defer operative interference more than a few days in any case in which he has been able to diagnose ectopic pregnancy with a fair degree of certainty.

4. **Rheumatism.**—Dardel adopts the following classification: 1. Chronic, progressive, deforming rheumatism (Trousseau's *rheumatisme noueux* and Besnier's osseous rheumatism). 2. Chronic forms of rheumatism following acute or subacute articular rheumatism or secondary to infection of some kind. 3. Chronic rheumatism of a dyscrasic or toxic type often described as rheumatic gout. He considers each of these conditions in detail and states that he regards the first as an infective or trophic trophoneurosis. Cases of the second group follow acute or subacute articular rheumatism, gonorrhea and tuberculosis, more rarely eruptive fevers and dysentery. The third group appears to have a dyscrasic or toxic origin. He discusses treatment under the heading of hygienic and dietetic, medicinal, local and mineral and thermal waters.

6. **Treatment of Mucous Carcinoma.**—Witherbee holds that if in cases of malignant growths of the mucous membrane, the operator first does a radical operation and then makes an incision through the mucous membrane well down to the basement membrane and well out from the margin of the wound, carrying this incision completely around so as to cut off the circulation of the entire area, except that from the basement membrane, he will by this means starve rather than stimulate all the cells for a short time. He can then further guard against recurrence by keeping the wound open and thus obtain drainage and at the same time expose the whole part to the *x*-ray daily until the wound is healed.

Boston Medical and Surgical Journal.

April 2.

7 *Intussusception: Review of Recent Literature with Report of Cases. J. S. Stone, Boston.
8 *Intussusception: Suggestion for a New Method of Operation in Cases in which Reduction is Not Possible. E. A. Codman, Boston.
9 Anomalous Folds in the Nasopharynx. J. P. Clark, Boston.

7. **Intussusception.**—Stone discusses the literature, quoting from a monograph by Charles P. B. Clubbe of Sydney, N. S. W., who reports a remarkable series of 144 cases of which only 14 were in subjects over a year old. Of the 144 cases, 14, or about 10 per cent., were reduced by injections. Of the 124 patients treated by laparotomy 84 were cured, giving a mortality of less than one-third. Apart from Clubbe's personal skill he has educated his medical community to a prompt recognition of the disease and an acknowledgment that it is surgical from the outset. The clinical picture, as presented by Clubbe, is so plain that it is worth quoting: "The very sudden onset in a previously healthy baby is a peculiarity of intussusception. The child is seized suddenly, screams, turns pale, vomits, and in a short time seems to recover itself, only to cry again at intervals as if in pain. Soon after the first scream it may pass a normal motion. In from two to ten hours, in the majority of cases (97 per cent.), blood will be passed by rectum. The mass, which varies much in size and position, can nearly always be made out by careful palpation when the child is under an anesthetic. The child may not look ill, its pulse rate may be hardly raised, and its temperature may be normal." Clubbe employs irrigation, not as a curative measure, but as a preliminary aid to operation. It reduces a considerable portion of the mass, thus avoiding handling and diminishing shock; it also enables the incision to be made directly over the point where the work must be done. Stone discusses those cases in which the tumor is easily found and reduction is rapid at first, stopping, however, before completion. Taxis ruptures the peritoneal coat and the inner layers of the receiving bowel. Traction tears the entering bowel and may tear a segment of bowel from its mesentery. Immediate

resection is the measure for adults, but in children it is practically always fatal. The alternatives are an artificial anus or the insertion of a tube just above the obstruction; or an incision of the constricting bowel at the point of entrance may be made. The former, on the whole, offers the best chance for preserving life.

8. **Id.**—Codman, like Stone, eulogizes Clubbe's monograph and quotes the same passages. He gives a tabular report of twenty-seven cases from the Massachusetts General Hospital during the last eleven years. One case indicates that tying off the blood supply of the intussusceptum is likely so to shrink it as to allow removal by gentle traction at least as soon as the fourth day. He discusses Conant's operation and suggests modifications. He summarizes his conclusions as follows:

1. In infants and children, in whom the diagnosis can be made and who are not already very feeble, should be given one forcible oil enema under an anesthetic on the operating table. This should be followed by laparotomy whether the tumor disappears or not.
2. Before using efforts at reduction forcible enough to cause increased shock, the surgeon, if he does decide on it, should make up his mind to carry out reduction up to the limit of the patient's strength.
3. If reduction is considered too doubtful, resection with double enterostomy is the choice when (a) the mass is wholly composed of small intestine; (b) when it is wholly composed of large intestine and the mechanical conditions make resection easy.
4. If reduction is abandoned and the mass is wholly composed of large intestine and resection can not readily be performed, excision of the intussusceptum is indicated by Barker's or Mikulicz's method.
5. In irreducible cases in which the small intestine is invaginated into the large, simple enterostomy without resection and resection of the mass should be abandoned and replaced by ligation of the impacted mesentery and enterostomy.
6. In infants in whom there is already evidence of severe exhaustion, ligation and enterostomy could probably be done very rapidly and with less operative shock than even a successful reduction, provided the operator from the beginning abandoned any idea of reduction.

New York Medical Journal.

April 4.

10 *What We Have not Done for the Insane. F. Peterson, New York.
11 *Surgical Considerations of Joint and Bone Tuberculosis. J. Wiener, New York.
12 *Gastroenterostomy in Cancer of the Stomach. J. J. Gilbride, Philadelphia.
13 Chronic Alcoholism. G. E. Pettey, Memphis, Tenn.
14 Carious Teeth in the Tenement Population of New York City. H. Emerson, New York.
15 *Practical System of Medical Inspection with Trained Nurses, Adapted for Public Schools of Large Cities. S. W. Newmayer, Philadelphia.
16 *The Clinical Laboratory of the General Practitioner. H. Mackay, Windsor Mills, Quebec.
17 Lactacid Milk in Infant Feeding. C. E. Carter, New York.

10. **The Insane.**—Peterson, while bearing testimony to what has been accomplished, points out that there are still defects to remedy and ideals to attain. More must be done for prophylaxis, by attention to preventable causes, such as alcohol, by outdoor clinics in connection with each hospital, extending free treatment in early cases to the insane poor. The public must be educated out of the dread of the insane hospitals and must be taught that insanity is a preventable and curable condition. Emergency cases, especially, require attention and should no longer be sent to jail and police stations until they can be committed to an asylum. Psychopathic hospitals or special wards in the large general hospitals should be established, and it should be possible, without any legal process whatever, to commit emergency cases to them for ten days' observation, on the same principle that obtains with quarantine. Commitment to an insane hospital, if necessary, would have the necessary safeguards. After committal, unsatisfactory conditions are found in overcrowding, inadequate supply of physicians, nurses and attendants; in the comparative absence of recreation and occupation, i. e., of a most important form of psychotherapy. Overcrowding must be met by new hospitals, which, at the rate of 1,000 patients a year increase, requires practically a new hospital for the insane annually. Something could be done by reducing the hospital population. A noticeable percentage of inmates are not really insane, but are simply physiologically senile dotards, between 60 and 100 years of age. It would be cheaper for the state to pay the actual cost of their board in state institutions, adopting the boarding-out plan which has been so successful in Scotland and in Massachusetts. As regards methods and manner of care, study, etc., the private institutions are behind, rather than in advance of, the state institutions. Finally, the author commends the establishment of after-care organizations and recommends their extension to include "forecare" or prophylaxis. He considers that physicians should take an active part in these and that the returns in increased study would repay them.

11. **Joint and Bone Tuberculosis.**—Wiener discusses the diagnosis and prognosis and divides the treatment into three heads: 1, General hygiene; 2, prevention of further involvement; 3, direct treatment of the lesion. Under the latter he describes the technic of iodoform injection. He applies his principles in detail respectively to the hip and knee joints and to the bones of the foot, shoulder, elbow and wrist.

12. **Gastroenterostomy in Cancer.**—Gilbride states that if the methods of diagnosis now in our possession were more generally applied many more cases would be recognized at a time when a radical operation could be performed. He describes three types of onset and says that the presence of a tumor, if small and movable, is not a contraindication to radical operation, for the majority of tumors occur at the pylorus, which is accessible to examination, and symptoms earlier direct the patient's attention to them. As to the operation of gastroenterostomy in gastric cancer, he considers the posterior no loop method with a double row of sutures as that of choice. He reports three cases and says that every patient who, in middle or advanced life, is suffering from dyspepsia should have the stomach contents examined, not once, but several times if necessary. Suspicion of the presence of malignant disease of the stomach calls for exploratory laparotomy.

15. **Medical Inspection of Schools.**—Newmayer discusses the requirements for satisfactory cooperation in the medical inspection of schools and describes the method which he has devised for use in Philadelphia. Cooperation between teacher, nurses and physicians is effected by the use of but one card and one blank, of which Newmayer gives specimens. The teacher decides each day what new cases shall be seen by the inspector. The preliminary data on the cards are filled in by the teacher once for all, and repetition is thus avoided. Instead of examining and re-examining normal children, every new child should receive a thorough physical examination on enrollment. The same child with the same ailment should not be sent to the inspector each day. After the first examination the nurse, in the absence of orders, should be the judge as to when the inspector should see the child again. The cards are filed in three compartments: 1, new cases; 2, unfinished cases; 3, cured cases. Each pupil sent to the medical inspector is returned with a slip ordering exclusion from class-room, when necessary, and indicating disposition of the patient—whether referred to nurse, dispensary or family physician for treatment. The nurse begins her work by seeing individually each child with a new card containing the inspector's instructions. She can then perform her work without troubling anyone and the card is placed in compartment 2. The unfinished cases are next seen, and as each child is cured or otherwise disposed of, its card goes into compartment 3. Once a month all finished cards go to the bureau of health or of education and are filed according to school and disease.

16. **General Practitioner's Clinical Laboratory.**—Mackay describes a practical laboratory, with all essential instruments, apparatus, reagents, etc., such as can be obtained at little expense by almost any practitioner, and details the work that can be done in it.

Lancet-Clinic, Cincinnati.

March 28.

18 *Disposition of the Appendiceal Stump. B. M. Ricketts, Cincinnati.
19 *The Use of Cheap Hammers as a Factor in Penetrating Wounds of the Eye. S. C. Ayres, Cincinnati.

18. Abstracted in The Journal, Oct. 26, 1907, page 1467.

19. **Wounds of the Eye.**—Ayres points out that the combination of *x*-ray with the eye magnet renders possible in the present day the saving of many eyes injured by metal splinters that would formerly have been doomed. Inquiring into the causation of such injuries, however, he finds them largely due to the use by workmen of cheap hammers which are not

steel throughout. The soft core shrinks, through repeated hammering, causing the surface steel to crack and splinter. Mechanics must be educated to the danger of such cheap tools as the public is being educated to the danger of infected milk.

Medical Fortnightly, St. Louis.

March 25.

20 Treatment of Acute Otitis Media. J. C. Buckwalter, St. Louis.
21 Glimpses of Early St. Louis Medical History. (To be continued.) W. B. Outten, St. Louis.
22 *Renal Surgery and the Importance of the Cystoscope as an Aid in Diagnosis. J. F. Menestrina, St. Louis.
23 Etiology and Diagnosis of Surgical Kidney. H. N. Lyon, St. Louis.
24 Dr. Senn as a Man. W. B. Outten, St. Louis.
25 Dr. Senn as a Surgeon. A. H. Meisenbach, St. Louis.
26 Dr. Senn as an Operator. C. Smith, St. Louis.
27 Dr. Senn as a Writer. G. Homan, St. Louis.
28 Dr. Senn as a Teacher. W. H. Stauffer, St. Louis.

22. **The Cystoscope in Renal Diagnosis.**—Menestrina emphasizes the importance of the cystoscope as an aid in the diagnosis of traumatic conditions of kidney substance; renal hemorrhage from other causes; pyonephrosis due to renal calculi; pyonephrosis due to exanthemata; perinephritic abscess communicating with the kidney; hydronephrosis; tuberculosis of the kidney; the various forms of malignant metastases; floating kidney, etc. He describes two cases illustrating its use in the diagnosis of unilateral renal tuberculosis.

American Journal of Physiology, Boston.

March.

29 Pyrimidine Derivatives in Nucleic Acid. T. B. Osborne and F. W. Heyl, New Haven, Conn.
30 *Increase in the Osmotic Concentration of the Blood During Ether and Chloroform Anesthesia. A. J. Carlson and A. B. Luckhardt, Chicago.
31 Union of the Proteins of Serum with Alkali. L. J. Henderson, Boston.
32 Relationship Between the Strength of Acids and Their Capacity to Preserve Neutrality. Id.
33 Reaction of Blinded Lobsters to Light. P. B. Hadley, Providence, R. I.
34 *Relation of Ions to Contractile Processes. Rôle of Calcium Salts in the Mechanical Inhibition of the Ctenophore Swimming-Plate. R. S. Lillie, Woods Hole, Mass.
35 Influence of Various Lymphagogues on the Relative Concentration of Bacterio-Agglutinins in Serum and Lymph. B. Braude and A. J. Carlson, Chicago.
36 Relative Resistance of the Heart Ganglia, the Intrinsic Nerve Plexus, and the Heart Muscle, to the Action of Drugs. W. J. Meek, Chicago.
37 Relative Hemolytic Power of Serum and Lymph Under Varying Conditions of Lymph Formation. W. T. Hughes and A. J. Carlson, Chicago.
38 Compressibilities of Gelatine Solutions and of Muscle. L. J. Henderson and F. N. Brink, Boston.
39 Sensory Nerves of the Heart and Blood Vessels as a Factor in Determining the Action of Drugs. D. E. Jackson and S. A. Matthews, Chicago.
40 Feeding and Injection Experiments Following the Establishment of the Eck Fistula in Dogs. P. B. Hawk, Philadelphia.

30. **Blood in Anesthesia.**—Carlson and Luckhardt conclude that the osmotic concentration of the blood is increased during anesthesia, in consequence of the solution of ether or chloroform in the serum.

34. **Relation of Ions to Contractile Processes.**—Lillie discusses the nature of the contractile process, and concludes that it is due to an alteration in the ionic content of the contractile fibrils due to rhythmic alterations in their ionic permeability. The ultimate source of the energy of contraction is in the metabolic processes occurring in the contractile tissue. The conditions of activity in such a tissue depend intimately on the ionic constitution of the medium. In sea water, the presence of sodium and magnesium salts in favorable proportions is essential. Sodium salts can not be replaced by those of other alkali metals, such as potassium and ammonium. In sea water the maintenance of the normal rhythm depends on the presence of the magnesium, while the intermittence and ready inhibition of movement depend on the calcium; potassium, in some manner not yet clear, constitutes an important element in the general favorability of the medium. From a study of the mechanical inhibition of the ctenophore [a class or order of cœlenterates with paddle-like locomotive plates in eight meridional rows on the outer surface of the body] swimming plate Lillie makes the following summary: 1. Mechanical stimulation arrests the automatic activity of the ctenophore swimming-plate in sea water and in certain artificial media similar to sea water in general composition (van't Hoff's solution, mixtures of NaCl and $MgCl_2$). 2. This susceptibility to mechanical inhibition is dependent on the presence of calcium salts; decrease in the proportion of calcium increases the automatic activity of the plates and diminishes, and finally altogether removes, the above susceptibility; increase in calcium diminishes automatic activity and greatly facilitates inhibitions. Calcium can not be replaced by strontium or barium. 3. The essential action of the calcium in producing this effect appears to consist in an alteration of the permeability of the contractile tissue to ions. The contractile activity is explained as due to rhythmic alterations in the ionic content of the contractile fibrils, due to rhythmic alterations in their ionic permeability—of which the action current is evidence. Aggregation changes in the coloidal constituents of the fibrils accompany these rhythmic changes in their ionic content and form the direct condition of the rhythmic contraction. Calcium salts check or inhibit contractile activity by decreasing the ionic permeability of the fibrils; mechanical stimulation acts by facilitating the entrance of calcium ions into the tissue.

University of Pennsylvania Medical Bulletin, Philadelphia.

March.

41 *Ludwig's Angina: An Anatomic Clinical and Statistical Study. T. T. Thomas, Philadelphia.
42 *Is Veratrum a Circulatory Depressant? H. C. Wood, Jr., Philadelphia.

41. This article appeared in *Annals of Surgery*, January and February, 1908, and was abstracted in The Journal, March 21, 1908, page 993, and April 11, 1908, page 1220.

42. **Veratrum Viride.**—Wood describes a series of experiments leading to the conclusion that the current idea that veratrum is an active sedative to the heart and vasomotor system is an error, and that the drug is unfitted for many of the purposes for which it has been employed, particularly for its use in the early stages of pneumonia.

Journal of the Michigan State Medical Society, Detroit.

February.

43 *Treatment of Felons. J. W. Vaughan, Detroit.
44 *Epidemic Anterior Poliomyelitis. W. L. Griffin, Shelby.
45 Case of Poliomyelitis. C. F. Smith, Whitehall.
46 Case of Otitic Meningitis. R. B. Canfield, Ann Arbor.
47 Acute Mastoiditis. C. R. Elwood, Menominee.
48 *Treatment of Diabetes Mellitus. H. A. Freund, Detroit.
49 Etiology and Prophylaxis of Tuberculosis. J. O. Nelson, Howard City.

43. Abstracted in Department of Therapeutics, this issue.

44. **Anterior Poliomyelitis.**—Griffin reports an epidemic of this disease among children and young people in Oceana County, Michigan. Most cases occurred in the latter part of July, and in August and September. They numbered about twenty. In proportion to the population there were ten times as many cases in Oceana County as in the New York epidemic. Considered from the standpoint of age, the summary is as follows: Nine cases occurred between the ages of 2 and 3 years; one at 7 months, two at 7 years, two at 10 years, one at 13, two at 14, one at 22, and two at 24. The classification as to the location of the paralysis is as follows: In 9 cases one arm was paralyzed; in 7, one leg; in 2, both legs; in 1, one side of the face, and in 1 all the limbs were paralyzed. He reports 7 cases.

48. Abstracted in The Journal, July 13, 1907, page 181.

The Journal of the South Carolina Medical Association, Greenville.

February.

50 *What are Pellagra and Pellagrous Insanity? Does Such a Disease Exist in South Carolina and What Are Its Causes? J. W. Babcock, Columbia, and others.
51 Eight Consecutive Cases of Gunshot Wound of the Abdomen, with One Death. Le G. Guerry, Columbia.
52 Acute Rheumatic Fever. J. H. Allen, Spartanburg.
53 Acute Gastritis. F. L. Potts, Spartanburg.
54 *Use and Abuse of the Curette. J. Carroll, Summerville.

50. **Pellagra and Pellagrous Insanity.**—This is a report by the superintendent and chief of staff of the South Carolina Hospital for the Insane. It is divided into two parts: First, general, the definition and description, history, symptoms and mental symptoms, etc.; second, case reports, with a view to

showing the existence of the disease in South Carolina. The authors of the report detail their conclusions practically as follows: 1. True pellagra is a disease long known in southern Europe, due to eating defective Indian corn and manifesting itself in the spring by intestinal, skin, mental or nervous symptoms. Pellagrous insanity is a mental condition, usually of the melancholic type, developing in patients already suffering from pellagra, as shown by the pre-existing skin and intestinal lesions. 3. A pellagroid disease occurs in South Carolina, but whether it is the true pellagra of Italy remains to be proved, as the observations, though very suggestive, are yet too few for a final opinion. 4. While the conditions described do not harmonize entirely as regards the season of the year, yet at least the disease closely resembles Egyptian pellagra, even to the association with ankylostomum worm. 5. The condition is not the form of pseudopellagra sometimes described, since it does not stop at the erythematous stage, but presents the triad of symptoms—dermatitis, diarrhea and depression. 6. A form of mental disease has come under observation that in its clinical aspects is identical with pellagrous insanity. 7. The discovery of the hookworm in some of the cases is a most interesting association with the disease, but whether etiologic, accidental or otherwise demands further inquiry. 8. The probable occurrence of such a disease in South Carolina having been established, further clinical and pathologic research is called for. 9. The relationship between mental symptoms and hookworm disease (uncinariasis or ankylostomiasis) and kindred diseases, especially in the southern states, should also be a subject of further investigation. The authors state that these conclusions were arrived at before they learned of the contributions of Searey (The Journal, July 6, 1907, page 37), and of Merrill (The Journal, Sept. 14, 1907, page 940).

54. **The Curette.**—Carroll lays stress on the fact that caution in technic and care in asepsis are quite as important in curettement as in abdominal surgery, and that while this operation is within the reach of any cool-headed, careful practitioner, it is by no means too insignificant to refer to the specialist.

Journal of Nervous and Mental Diseases, New York.

February.

55 *Functions of the Corpora Striata, with Suggestion of a Clinical Method of Studying Them. C. L. Dana, New York.
56 Nature and Relationships of Hysteria. (To be continued.) R. C. Woodman, Middletown, N. Y.

55. **The Corpora Striata.**—Dana summarizes his article as follows: The corpus striatum has not any independent or specific motor function. It probably has some supplmentary motor function, and especially in connection with articulation. It may have some control over the bladder (double lesions). It seems to have some control over vasomotor and trophic conditions of the skin (and lungs?). It has no thermic center. It may have some supplementary and associated psychic function so that lesions affect memory or initiative. It is an organ of less importance relatively in the higher vertebrates. In severe gas poisoning there is a double softening of the lenticular nuclei due to thrombosis of "the artery of cerebral thrombosis," and there result vasomotor and gangrenous conditions of the skin, so that these conditions in connection with a history of coma from gas poisoning form a group of symptoms called "the syndrome of the corpus striatum."

Yale Medical Journal, New Haven.

February.

57 *Phases of Appendicitis. G. A. Blumer, New Haven, Conn.
58 Pathology of Renal Tuberculosis. W. R. Steiner, Hartford, Conn.
59 *Notification of Tuberculosis. D. R. Lyman, Wallingford, Conn.
60 Demand for an Open Change of Attitude Toward the Social Evil. T. N. Hepburn, Hartford, Conn.

57. **Appendicitis.**—Blumer discusses the relation of appendicitis to cholelithiasis and cholecystitis under the following heads: 1. Acute cases in which the two diseases occur together, and in which symptoms of both are present. 2. Cases in which there is evidence that the gall-bladder affection preceded the appendicitis. 3. Cases in which there is evidence that the appendicitis preceded the gall-bladder disease. When appendicitis precedes the cholecystitis it is likely (Lartigau) that the infection reaches the gall bladder through the portal circulation. Where cholecystitis precedes appendicitis it is probable that infectious material discharged into the upper intestine lodges in the unusually vulnerable appendix and causes inflammation. The possibility of infection being carried from one organ to another by adhesions must be considered. He suggests the possible advisability in most appendicitis cases of exploring the gall bladder and vice versa. He also discusses hematemesis after appendicitis.

59. **Notification of Tuberculosis.**—Lyman discusses the chief objections on the part of the medical profession to notification, namely: 1, the classing of pulmonary tuberculosis with other contagious and infectious diseases; 2, breach of professional confidence; 3, the entailing of publicity; 4, the unnecessary subjection of families of ordinary means and intelligence to the disagreeable publicity of visits from the health department. He admits the force of these objections, but endeavors to show that they are not insuperable.

The Journal of the New Mexico Medical Society, Albuquerque.

March 15.

61 *Uncinariasis. J. W. Colbert, Albuquerque.
62 Pelvic Diseases of Women. J. H. Worth, Albuquerque.
63 Scarlet Fever. R. E. McBride, Las Cruces.
64 Report of Special Health Officer. B. Ruppe, Albuquerque.
65 Plea for Reasonable Harmony in Medical Therapeutics. G. K. Angle, Silver City
66 An Unusual Hysterectomy. H. Crutcher.

61. **Uncinariasis.**—Colbert gives the results of his observations from the treatment of 5,000 cases of uncinariasis in Porto Rico, where the disease is found in its worst form. He has observed the disease in Brazil, Panama, Guatemala and Mexico, and has studied the reports of European cases and those of the southern states and the Philippines. He is of the opinion that the "light infections" of Porto Rico would be classed as severe in any of those places. He has not found the old-world parasite in Porto Rico, but only the *Uncinaria americana*. He regards Stiles' opinion, that this worm is a blood sucker, as erroneous. In many of his most severe cases, but very few parasites, not enough to cause marked loss of blood, were found, yet expulsion of the worms was followed in each case by cure. Of 200 worms examined only 3 contained blood, which he regards as accidental contamination. Were the worms blood suckers, blood should be found in the feces. Yet of 21,403 specimens of feces personally examined, only 12 contained blood sufficient to be macroscopically visible, and in only 23 specimens could red blood cells be found. In his opinion a toxemia is the true cause of the symptoms. As to method of entry, penetration of the skin by the larvæ, in Porto Rico at any rate, he regards as practically the only method. Latrines are unknown and soil pollution occurs everywhere, while the laboring people go barefoot. Moreover, 4,956 of his 5,000 cases gave a history of uncinarial dermatitis, indicating skin infection. Infection by the mouth he considers unlikely, for the parasite dies rapidly on drying. One part of solid matter, he says, to the thousand in water has been proved fatal to the larvæ, while water containing a greater proportion than this would be too repulsive to drink. Stiles' observations, that uncinariasis is preeminently a disease of sandy localities, does not hold good, Colbert says, in Porto Rico, where all kinds of soil, with sufficient shade and a relatively high temperature, furnish cultures of larvæ. As to symptomatology, more than moderate pallor was shown in 63.5 per cent. of his cases. The average hemoglobin percentage was 44.1. Age: 71.4 per cent. of cases occurred under 30 years of age. He gives figures to show that the supposed immunity of the negro can exist to only a very slight extent. He describes his method of examining feces for ova and shows the disease to be easily curable on removal of the parasite; 81.1 per cent. being cured, 18.6 improved, and 0.3 per cent. having died. Only two remedies are worth consideration, beta-naphthol and thymol. After a day's liquid diet one ounce (30 gm.) of magnesium sulphate is administered at 3 p. m. At 7 a. m. 15 grains (1 gram) of beta-naphthol in capsule are given and repeated in an hour, and at 11 a. m. again one ounce (30 gm.) of magnesium sulphate. The patient reports ten days later, bringing feces, when, if ova are still found, treat-

ment is repeated. Of Colbert's cases 82 per cent. required from one to five treatments. The largest number of worms expelled by a first dose was 4,016; the largest total number in six treatments, 4.872.

California State Journal of Medicine, San Francisco.

February.

67 *Permanent Eradication of Plague. W. A. Briggs, Sacramento.
68 *Medical Expert Testimony. A. E. Osborne, Santa Clara.
69 Acromegaly with Facial Hemihypertrophy. V. C. Thomas, San Francisco.
70 Report of Eleven Cerebral Complications Due to Acute and Chronic Suppuration of the Middle Ear, with Complete Analysis of Five Cases. C. F. Welty, San Francisco.
71 Successful Suturing of a Double Stab Wound of the Femoral Artery, and a Single Wound of the Femoral Vein. H. M. Sherman, San Francisco.
72 *Rheumatism in Children. M. Cosgrave, San Francisco.
73 Clinics for Diseases of the Skin. D. W. Montgomery, San Francisco.
74 *Subjective Symptoms and Painful Sensations in Heart Disease. E. Schmoll, San Francisco.

67. **Plague.**—Briggs proposes a series of measures having in view the permanent eradication of plague, which may be summarized into the establishment of a national bureau of health; the extermination of rodents, fleas, flies, etc., rat-proof buildings in localities exposed to plague; frequent examination of rats in districts exposed to infection; killing of domestic animals that have been exposed; the quarantining of all cases; the immunizing of all nurses, physicians, inspectors and those exposed to plague infection; skilled official inspection of all dead bodies before enbalming or interment; destruction or disinfection of all fomites, and the burning of all infected material not capable of disinfection. Finally, he urges the passage and enforcement of ordinances to facilitate the work of boards of health in reference to freeing premises from rats, etc., discharge of cargo, wharfing of ships, quarantining of warehouses, etc., inspection of hotels, lodging houses, etc.

68. **Medical Expert Testimony.**—Osborne cites the various objections to the present system coming respectively from the legal profession, the intelligent laity, and the medical profession, and considers that the two essential objections are to be found in the partisanship of experts and the hypothetical question. He proposes a bill to be brought before the state legislature, the sections of which provide for the appointment of disinterested persons as expert examiners by the court; their findings and opinions to be presented verbally or in writing to the court, the said experts not being permitted to take the stand for cross-examination or otherwise; the judge to determine on the fees and necessary expenses to be met by the county treasury and paid as part of court expenses.

72. **Rheumatism in Children.**—Cosgrave divides her cases into four classes: First, those who come to the clinic suffering from acute articular rheumatism with enlarged joints; second, those suffering from chorea; third, those with tonsillitis; fourth, those with endocarditis. She finds it impossible to doubt the specific infectious nature of the disease. The frequent ushering in by tonsillitis, the endocarditis and polyarthritis following in some cases, the chorea in others, all point to a germ invasion. As to whether Cole and his followers are right in ascribing it to a pyemia or Beattie to a *Micrococcus rheumaticus* remains for further study to prove.

74. **Heart Disease.**—Schmoll says that it has been held an axiom that heart disease runs a painless course so long as the heart is well compensated. His study of a great number of diseased hearts has led him to the conviction that painful sensations, ranging from hardly perceptible constriction in mitral insufficiency to annihilating pain in coronary sclerosis, exist in every case of heart disease. The study of the symptoms during an attack of angina pectoris and other considerations has shown him that the symptoms are due to a segmental lesion of the spinal cord caused by reflex irritation from the heart. This reflex irritation takes place in every case of heart disease. He divides the subjective symptoms of heart disease into sensory, motor and vasomotor. Taking a painful attack caused by coronary sclerosis as a subject, he finds that the sensory symptoms can be divided into sharply defined groups: 1, the sensation of impending death; 2, pain in the heart and surrounding structures. Motor symptoms show themselves in the form either of irritation or of paralysis. Vasomotor symptoms, by changes in blood distribution, have never been missing in any attack he has seen, or in any description of an attack given him by an intelligent patient. Examination between attacks shows that the same symptoms exist in attenuated form and that sensory, motor and vasomotor disturbances are produced in the segments of the spinal cord affected during the attack. The sensory symptoms during the intervals consist of hyperesthesia of those segments in which the pain prevails during the attack. Sometimes the pain feels like a rheumatic pain. The tonus of the muscles corresponding to hyperesthetic areas is increased. The vasomotor symptoms of the intervals are not usually so well marked as the sensory and motor symptoms. The explanation of the pathogenesis of these symptoms favored by the author is that of MacKenzie, that by the disease of the heart a constant stimulus irritates the nervous system of the heart. This constant irritation of the sympathetic nerve leads to an irritation of the spinal segment, at which the heart fibers connect with the spinal cord. The irritation of the sensory part of the spine leads to a sensation, which, according to the law of Muller, is projected into the periphery supplied by the nerves of the spinal segment: the irritation of the sensory part may become so strong that the cells get overtired, and are incapable of conducting the stimulus-producing anesthesia. Similar conditions prevail for the motor part of the spinal cord. Irritation of the spinal segment leads to tonic or clonic contraction of the muscles, receiving their innervation from this spinal segment. Long-lasting irritation may lead to paralysis. Similar conditions prevail for the vasomotor disturbances. The innervation of the vasomotor processes has been definitely shown to be of the same segmental character as motor or sensory innervation.

Wisconsin Medical Journal, Milwaukee.

March.

75 *The Physician in His Relation to Contagious Diseases and the Public. C. A. Harper, Madison.
76 *Variola: Facts Regarding Absolute Immunity by Vaccination. J. P. Cox, Spooner.
77 *Late Syphilis of Bone. M. Iverson, Stoughton.

75 and 76. Abstracted in The Journal, Aug. 31, 1907, page 795.

77. **Late Syphilis of Bone.**—Iverson pictures the evil results of allowing syphilis of bone to continue unmolested, and says that if a complete operation is performed, removing all diseased bone and periosteum, the lesion will heal with the aid of specific treatment, and the bone in time may regenerate almost entirely from the periosteum. He describes a case in point.

Atlanta Journal-Record of Medicine.

February.

78 *Education and the Social Evil. A. W. Stirling, Atlanta.
79 *Perfect Mechanical Reduction of Fractures and Method of Absolute Immobilization. J. H. Downey, Gainesville, Ga.
80 Importance of Testing the Ocular Muscles. R. B. Ridley, Atlanta.
81 *Diagnosis of Kidney Disease, with Special Reference to the Significance of Slight Albuminuria. E. Ballenger, Atlanta.

78. **The Social Evil.**—Stirling discusses this subject and arrives at the conclusion that continence and a pure monogamy are the western ideals. The assertion that prostitution has always existed and always will exist—is, in short, a necessary evil—he answers by pointing out that those who advance this view would be as quick as their neighbors to resent the idea that any of their own people should embark in this necessary, and, according to themselves, saving profession. This puts them on the horns of a dilemma. Prostitution, if necessary, can not be immoral, because it stands to reason that no necessary position in life is immoral. On the other hand, if it is not necessary, enough has been said to show that its effects are so destructive physically and morally that it is high time something is done to demolish it.

79. A similar article by this author appeared in The Journal, Dec. 29, 1906, page 2160.

81. This article was published in the *Medical Record*, Nov. 30, 1907.

Cleveland Medical Journal.

February.

82 Studies in Aneurism. (To be continued.) J. G. Mumford, Boston.
83 Medical Code of Hammurabl, King of Babylon. H. E. Handerson.
84 *Value of Blood Examination in Surgery. F. E. Bunts, Cleveland.
85 Case of Vaginal Cesarean Section for Acute Cardiac Dilatation and Pulmonary Edema. F. S. Clark, Cleveland.
86 Treatment of Club Foot. H. O. Felss, Cleveland.
87 Syphilitic Myelitis. J. V. Shoemaker, Philadelphia.

84. **Blood Examination in Surgery.**—Bunts considers in detail the hemoglobin, the coagulability of the blood, iodophilia, the leucocyte count, and the differential count. He concludes that hemoglobin examination is a valuable aid in prognosis, giving a clue as to the safety of general anesthesia, but that in emergencies, however low the percentage may be, it must not be considered a bar to operation. The coagulation time, under ordinary circumstances unimportant, is of import, outside of hemophilia, in jaundice cases, in which its delay beyond ten minutes is a contraindication to any but the most urgently necessary operation. The inconstancy of iodophilic reaction in suppurative cases lessens its value, but it may aid diagnosis in obscure cases, and its disappearance after operation in suppurative cases points to successful evacuation and drainage, while persistence or recurrence suggests incomplete operation or a fresh accumulation of pus. The greatest value of leucocytosis will be found, he asserts, in certain differential diagnoses. Its presence decides emphatically against unmixed tuberculous infection, and excludes typhoid as against appendicitis. Acute abscess formation is accompanied by it, yet the walling off of the abscess may cause it to return to the normal. Its absence is diagnostically important in neuralgic or painful abdominal or pelvic conditions unaccompanied by inflammation. It is present in fractures, pneumonia, cancer or malignant growths, burns, and during certain stages of digestion. Bunts believes the differential count is destined to replace the simple leucocyte count, and that accumulating observations will place it on a much more positive and scientific basis than that of leucocytosis.

Journal of the Arkansas Medical Society, Little Rock.

January.

88 Strangulated Inguinal Hernia. L. E. Willis, Newport.
89 Amputation of a Leg Under Local Anesthesia. R. C. Dorr, Russellville.
90 Case of Epibulbar Sarcoma. F. Vinsonhaler, Little Rock.
91 Clinical Experience with Gonococcus Vaccine. A. Watkins, Little Rock.
92 Management of Acute Traumatic Infections. W. A. Snodgrass, Little Rock.

Southern California Practitioner, Los Angeles.

March.

93 Work of the California State Board of Health. LeM. Wills, Los Angeles.
94 Examination of the Eye as an Aid in General Diagnosis. D. J. Frick, Los Angeles.
95 Nature and Value of Ausculted Voice Sounds in the Diagnosis of Diseases of the Chest. R. Hutchinson, Los Angeles.
96 Recent Experience with Smallpox. W. S. Fowler, Bakersfield.
97 Intumescent Rhinitis. F. W. Miller, Los Angeles.
98 Proper Diet in Acid Dyspepsia. B. Reed, Los Angeles.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London.

March 21.

1 *Tuberculosis of the Kidney and Malignant Disease of the Cecum. C. J. Symonds.
2 Surgery of the Spinal Cord and Its Membranes. D. J. Armour.
3 *Acquired Diverticula of the Sigmoid Flexure Considered Especially in Relation to the Secondary Pathologic Processes and Their Clinical Symptoms. W. H. M. Telling.
4 *Splenic Anemia. G. A. Gibson.
5 Obstruction Caused by Sarcoma of Small Intestine. A. C. D. Firth.
6 Deaths Under Anesthetics. F. J. Waido.
7 Case of Pancreatitis with Jaundice and Acute Parotitis in Scarlet Fever. S. P. Phillips.
8 *Do Fleas Spread Cancer? V. G. Webb.
9 Case of Multiple Congenital Defects. J. S. Pearson.

1. **Tuberculosis of the Kidney.**—Symonds' first Lettsomian lecture is devoted to tuberculosis of the kidney. He reports in detail five cases dealing with the early symptoms and methods of diagnosis and compares the condition of the kidney when removed with impressions gained thereby. He particularly illustrates the value of cystoscopic diagnosis. The article is accompanied by colored plates.

3. **Diverticula of the Sigmoid.**—Telling records an extensive search of the literature on this subject. He discusses the etiology, summarizing the views held by recent investigators under the heads of advanced age; sex; obesity; cachexia and absence of fat; the normal structure of the large intestine; the physiologic rôle of the sigmoid flexure; pressure from within the bowel, by (a) constipation, (b) flatulence; the vascular conditions, (a) relation of diverticula to points of entrance of vessels through gut walls, (b) variation in size of vessels, (c) connective tissue round vessels, and, as an underlying cause (Beer), muscular deficiency of the gut wall. Probably no one factor is sufficient in itself to bring about the condition. Constipation is extremely common; the outpushings are comparatively rare. Venous congestion is also common and the combination of this with constipation is by no means infrequent; possibly there needs to be in addition a muscular weakness, either acquired or due in some cases to abnormal arrangement, of congenital origin, of connective tissues of the vessel spaces or of the muscle fibers of the gut wall. Secondary pathologic processes in the diverticula he summarizes as follows, considering each heading in detail: 1, Thinning of the diverticulum wall; 2, perforating action of the retained concretion; 3, the presence of micro-organisms and their toxins; 4, inflammatory reaction of varying type and degree. With these data one could forecast almost with certainty the various kinds of cases that might be expected to occur clinically, and the list provides examples of nearly all of them. The following is a summary of the secondary pathologic processes to which sigmoid diverticula are liable: 1. Infection of the general peritoneal cavity, from thinning of the sac walls, without perforation. 2. Acute or gangrenous inflammation—diverticulitis. 3. Chronic proliferative inflammation with thickening of the gut wall and stenosis of the bowel. 4. The formation of adhesions, especially adhesions to (a) the small intestine, and (b) the bladder. 5. Perforation of the diverticula, giving rise to (a) general peritonitis, (b) local abscess, (c) submucous fistulas of the gut wall, and (d) fistulous communication with other viscera, especially the bladder. 6. The lodgment of foreign bodies. 7. Chronic mesenteritis of the sigmoid loop. 8. Local chronic peritonitis. 9. Metastatic suppuration. 10. The development of carcinoma. 11. Perforation into a hernial sac. These are all considered in detail.

4. **Splenic Anemia.**—Gibson reports an interesting case of a patient who, subsequently to a railway accident, suffered from vomiting, with swelling of the abdomen and great enlargement of the spleen, restlessness, throbbing in chest, head and neck, diffuse pulsation, etc. The blood showed 50 per cent. hemoglobin, 2,250,000 erythrocytes and 3,600 leucocytes. The film gave the following differential count: Polymorphonuclears, 73 per cent.; small lymphocytes, 23 per cent.; large mononuclears, 3 per cent., and eosinophiles, 1 per cent. Subsequently the patient suffered much with abdominal pain, diarrhea and vomiting, to which severe epistaxis was added. Splenectomy being contemplated, it occurred to Gibson that it might be well to ascertain the state of the bone marrow, to determine whether any useful end would be attained by surgical intervention. The left tibia was accordingly trephined, and the bone marrow being found in a state of gelatinous degeneration without any hope of regeneration, operative procedure was considered hopeless. Hemorrhage followed from most of the mucous membranes and the kidneys, with anasarca, hydrothorax and hyperpyrexia; death occurred six weeks later. The subsequent examination showed the characteristic appearances of splenic anemia and the state of the bone marrow fully confirmed the conclusions arrived at during the patient's life.

8. **Fleas and Cancer.**—Webb reports the following case as possibly having some bearing on the transmission of cancer:

A woman, aged 58, in good health, visited toward the end of November, 1907, a poor woman suffering from advanced rectal cancer. The visitor was severely flea-bitten on the right breast. On December 2 Webb was shown the breast, which was inflamed and resembled that of a woman the third day after delivery, except that the nipple was somewhat retracted. The condition was diagnosed as interstitial mastitis, and after a weeks' treatment external signs of inflammation were gone and the breast was nearly its normal size, but in a week or so it had enlarged again. There was little pain and the size fluctuated; later blood was discharged from the nipple. On February 1 obstruction of ducts by papilloma and congestion was diagnosed. On February 17 the entire breast and an enlarged gland were removed. On microscopic examination the growth showed in part simple papilloma, but in others it had the malignant characters of a duct carcinoma. While it may have been only a coincidence, Webb emphasizes the following points: 1, The patient was bitten by fleas from the bed of a cancer patient; 2, there followed an inflammation (though not necessarily *propter hoc*); 3, after about a fortnight a definite growth developed, ending in duct carcinoma.

British Medical Journal, London.

March 21.

10 *Visible Signs of Visceral Disease. J. Galloway.
11 *Anaysis of 263 Cases of Tabes. B. Bramwell.
12 *Treatment of Syphilis by Intramuscular Injections. J. E. Lane.
13 Case of Syphilis, Phthisis and Locomotor Ataxia. H. G. Sutherland.
14 *Extragenital Syphilitic Infection. H. Bayon.

10. **Visceral Disease.**—Galloway says that it must have been the experience of most of us, while watching patients during the course of an illness, especially if the illness happened to be a prolonged one to note the occurrence of intercurrent troubles, which, at the time, seemed to have little or no relationship to the malady from which the patient was suffering, but which on after-thought have appeared to be connected in some way with the main cause of the disease. The idea would then certainly have occurred, that had we been in a position to understand the relationships of the intercurrent affection, it would have served as a sign, and we should have become possessed of information as to the nature and progress of the patient's illness, and even of sugestions for effective treatment. He confines his remarks in this lecture to disease of the liver, an organ which he discusses with reference to its blood purifying function, the influence of obstruction of the portal circulation on its function, and the relation of cutaneous eruptions to alimentary disorders. I. Erythematous type in relation to portal obstruction (1) urticaria, (2) erythema exudativum, (3) erythema exudativum hemorrhagicum, (4) erythema with skin atrophy. II. Dilatation of superficial blood-vessels (1) from the groin upward toward the intercostal veins (2) radiating venules from the umbilicus (caput medusæ) and enlargement of venules along the lower border of the thorax, (3) telangiectases, frequently observed in the skin of the face in children. III. Indications occurring in the course of the lymphatic vessels. IV. Primary new formations in disease of the liver, xanthoma. V. Anomalies of pigmentation as signs of visceral disease. These are very numerous and the author discusses only hemochromatosis and jaundice.

11. **Tabes.**—Bramwell gives an elaborate analysis of 263 cases of tabes, of which 192, or 73 per cent., were in the ataxic, and 71, or 22.9 per cent., in the preataxic stage of the disease. The three most important questions showed up as follows: Sex.—239, or 90.8 per cent., were males, and 24, or 9.1 per cent., females. Etiology.—The question of venereal disease was noted in 250 of the 263 cases. Of these a definite history of some form of venereal disease was obtained in 197 cases, and in 12 other cases it is practically certain that the patients had had syphilis. Other causes attributed are marked sexual excess, 13 out of 263 marriage (meaning thereby that the disease showed itself at or became greatly aggravated soon after marriage), 7 in addition to the 13 cases in which sexual excess was admitted; alcoholic excess, 26; injury, 7; exposure, 8; mental worry, 4; infectious diseases, 4; lead poisoning, 1. The incidence of the first symptom was noted in 258 of the cases, with the following results: Lightning pains alone, 133 cases (51.5 per cent.): diplopia, dimness of vision, 20 (7.7 per cent.); ataxia, 17 (6.5 per cent.); lightning pains and ataxia, 14 (5.4 per cent.); derangements of urination, 10 (3.8 per cent.); then gastric crises, numbness, pains and loss of vision, ataxia, pain in back and numbness in feet, and vomiting not due to gastric crises. Bramwell analyzes the individual symptoms and discusses the nature of the paresthesia in 178 cases, the reflexes, the conditions of the pupils and other ocular symptoms, the lesions of bones, joints, skin, etc., mental symptoms and special senses, and conditions of general health, and summarizes his results in tables. The results of his inquiry to date are: Of the 263 patients 70 have died; 88 are known to be still alive, and in 105 the result is unknown. Of the 88 patients still alive, 4 are well, 21 are better, and 59 worse or *in statu quo*.

12. **Intramuscular Injections in Syphilis.**—Lane does not advocate intramuscular injections as a routine treatment, but considers them especially useful when ingestion by the mouth or inunction are for various reasons unsuitable, and also in cases in which rapid action is essential, as in the more malignant forms of the disease. This form of medication is especially indicated in progressive ulcerative lesions, syphilitic iritis, syphilis attacking the brain or spinal cord, and destructive tertiary lesions. Lane describes his technic, as used at the London Female Lock Hospital by him in 375 cases with a total number of 4,516 injections. The buttock is the best site, and to avoid injury to nerves or vessels, the center of a line drawn between the anterior superior spine of the ilium and the summit of the intergluteal fold is a point of almost perfect safety. He recommends that the needle be thrust in first to the desired depth, and if no blood appears, the syringe may be attached and the injection introduced, but if blood issues another site must be sought. He now utilizes the insoluble preparations almost entirely, prefering calomel, ⅔ grain (0.043) of the sublimed powder suspended in 17 minims (1.05) of sterilized olive oil. The insoluble preparation is given once a week or once a fortnight, the course being from 10 to 12 injections. Pain gradually diminishes from the first injection, so that the later ones are practically free from inconvenience.

14. **Extragenital Syphilitic Infection.**—Bayon deals with syphilis insontium, and reports three cases with two doubtful ones. Incidentally he states that the *Treponema pallida* has a special predilection for the connective tissue immediately beneath the epithelial cells, which explains the efficacy of inunction in secondary eruptions. He has recently examined thirty-three patients for spirochetes without result after one or two weeks' treatment, while in untreated papules they could be demonstrated easily.

Medical Press and Circular, London.

March 11.

15 Fetid Bronchitis. H. Rabe.
16 Malignant Disease of the Cecum. C. J. Symonds.
17 *Personal Health Problems—Early and Late Growths. J. L. Tayler.
18 Practical Points in the Treatment of Gonorrhea. H. de Merie.

17. **Personal Health Problems.**—Tayler points out that there are so many individual types of children and adults of both sexes, that until we know the healthy type standard to which any given person should conform, it is impossible to generalize regarding the health or unhealthiness of small size, small weight, and shortness of stature. Some families mature quickly and others slowly. The children of the former group are big and tall for their age; those of the latter are often small at first, but gain in health markedly from adolescence onward. Tayler's observations lead him to the opinion that early and rapid growth is largely associated with early sexual development. Some definite information on the subject is much needed, not only because we do not know if the late growing type is, or is not, an unhealthy one, but also on account of the fact that the children of this type appear small and stunted at school, when afterward they often pass the average and thus vitiate school statistics in which height considerations have been included. Further, if the asexual form

is unhealthy, it may be that our system of education is fostering it, or some other element in our social life may be favorable, and its presence should throw light on many obscure phenomena of sterility, and also on the increasing difficulty experienced by many women in regard to lactation.

Clinical Journal, London.

March 18.

19 *Case of Addison's Disease. W. H. White.
20 Chronic Intestinal Obstruction. H. L. Barnard.
21 Nervous Phenomena in Pneumonia. S. West.

19. **Addison's Disease.**—White calls attention to the accuracy of generalization of Addison's original description of the disease in regard to diagnosis. The most common fallacy is to mistake Addison's disease for pernicious anemia; the peculiar lemon tint of the skin in the latter condition, however, is different from that of the characteristic case of Addison's disease; but in slight cases confusion often arises. Fortunately, modern means of examination of the blood, which in Addison's disease is but little abnormal, enable us to recognize the marked blood characteristics of pernicious anemia. White, however, cautions against being content with negativing a diagnosis of pernicious anemia because a single blood examination fails to show characteristic changes. The blood in pernicious anemia varies from day to day and from hour to hour. Another possible source of confusion is the discoloration consequent on prolonged administration of arsenic. By inquiry of many persons of considerable experience in arsenical poisoning he finds that the occurrence of pigmentation in the mouth is in favor of the case being Addison's disease. In malignant disease the wasting is apt to be much more marked, and local evidence of malignancy can usually be found. Other conditions sometimes confounded with Addison's disease, but which ought to be easily distinguishable, are the filthy, dirty patients, infested with lice, sometimes seen in hospital outpatient departments; phthisical and syphilitic pigmentation; Hanot's cirrhosis of the liver, and bronzed diabetes. Any condition that destroys the functional activity of the medullary part of the suprarenals may cause Addison's disease, by far the most common being tuberculous degeneration. Calmette's reaction helps in this matter. The comparative frequency of malignant disease as a cause, White considers due to the necessity of having both suprarenals affected and, perhaps, to the fact that in malignant disease death will be occasioned before the evolution of characteristic phenomena. The proportion of cases in which clinically characteristic Addison's disease has failed to show disease of the suprarenals is so small, about 12 per cent., as to be within the margin of allowable error due to erroneous diagnosis, inefficient postmortem examination, or the possibility of functional disturbance of the suprarenals. Further, other glands, e. g., the internal carotid and the coccygeal, have cells functionally resembling those of the suprarenals, and it is conceivable that very rarely disease of these glands may cause Addison's disease and lead to death before the suprarenals are affected. On the other hand, when the suprarenals have been found to be diseased and yet no Addison's disease has been present, it may be that the vicarious activity of these other glands may have formed sufficient internal secretion to prevent the patient having Addison's disease. The treatment is entirely unsatisfactory. Adrenalin was given in the case discussed by White without any effect; it did not even raise the blood pressure. White says that it has been used in so many cases without success, that a reported successful case makes one think either that the success was not permanent, or that there was a mistake in diagnosis.

Australasian Medical Gazette, Sydney.

January.

22 *The Precipitin Reaction in Hydatid Disease. D. A. Welsh and H. G. Chapman.
23 Medical Matters in Queensland. W. Love.
24 Acute Pancreatitis—Laparotomy—Recovery. F. S. Hone.
25 *High Blood Pressure. A. E. Mills.
26 Medical Defense in South Australia. W. T. Hayward.
27 Case of Gangrene of the Ileum. E. H. Binney.
28 Case of Malta (Undulant) Fever. T. S. Dixson, Gillespie, and A. Aspinall.
29 British and Foreign Clinics. R. Worrall.
30 Case of Fleshy Mole. J. W. Browne.

22. **The Precipitin Reaction in Hydatid Disease.**—Welsh finds that the interaction between selected hydatid fluids and the serum (antiserum) of a patient affected with hydatid disease has never failed to give a positive precipitin reaction. Not all hydatid fluids, however, are capable of eliciting a positive reaction, and this failure is not associated with any noticeable diminution of their protein content. Persistence of a marked reaction some weeks after operation probably indicates the continued presence of the parasite, but the disappearance of the reaction does not necessarily indicate complete removal of the cysts. A positive reaction is independent of the site of the hydatid cyst (hepatic, peritoneal or muscular), and independent also of the nature of its contents (clear, turbid or purulent).

25. **High Blood Pressure.**—Mills insists on the importance of instrumental aid, and asserts the impossibility of gauging with anything like accuracy by the finger the approximate amount of increased blood pressure, though the fact of such increase may be easily perceptible. He uses the instrument three or four times a day, and is surprised to find what a number of people have increased pressure. As a rule, pressure is high in the obese, and he has found that in patients with high blood pressure inquiry not infrequently elicits the information that one of the parents died of a paralytic stroke. Many people with high blood pressure have led blameless and, so far as alcohol goes, temperate lives. Overeating, though the charge is often resented, is commonly the cause, especially in female patients who are becoming fleshy. He discusses high blood pressure: 1, In relation to heart and respiration; 2, in relation to arteriosclerotic or granular kidney; 3, as affected by diet, and 4, as affected by drugs. In regard to the effect of drugs on blood pressure he is disappointed in all the drugs usually recommended—potassium iodid, nitrites, erythrol tetranitrate, potassium acetate, and ammonium acetate. He asserts, however, that opium, all pharmacologic assertions to the contrary notwithstanding, or its derivative, morphin, in arteriosclerotic cases in which the usual pressure from any cause is increased always relieves the increased blood pressure, affording relief to immediate symptoms. The fact that the livid skin gives place to a marked flush suggests that the fall is due, in part at least, to dilatation of the superficial vessels. He reports two cases of arteriosclerosis with granular kidney, in which acute dyspneic conditions were promptly relieved by the administration of morphin, the blood pressure falling in the first instance from 220 to 178 within an hour, and in the second from 200 to 170 in less than half an hour. In the first case the morphin given was ¼ grain (0.016), immediately followed in fifteen minutes by ⅛ grain (0.008), which was repeated in another fifteen minutes.

Glasgow Medical Journal.

March.

31 *Consumptive Sanatoria: Are They Worth While? D. Lawson.
32 *Case of Injury to Motor Area of Brain. G. B. Buchanan.
33 Multiple Exostoses in a Rachitic Subject. A. Young.
34 Operative Procedures in Disease of the Frontal and Sphenoidal Sinuses. W. S. Syme.
35 *Quinin Sulphate as Factor in Causation of Blackwater Fever. D. McCay.

31. **Consumptive Sanatoria.**—Lawson discusses individually the historical, clinical and commercial objections to consumptive sanatoria, and considers them disproved. He adds some notes on the sanatorium movement in America, New Zealand, Norway, Sweden and other countries.

32. **Injury to Brain.**—Buchanan describes the case of a ship's carpenter on whom a block of wood, one foot square by three feet long, fell from a height of twenty-five or thirty feet, inflicting a compound fracture of the skull. A piece of wood was imbedded in the brain. The peculiar points about the case are: The small amount of damage done by the wood falling from such a distance, the concussion being so slight that the patient regained consciousness more or less, before arrangements were made to remove him from the scene of the accident to the hospital; the absence of suppuration, notwithstanding the dirtiness of the wound and the continued loss of brain substance, a fact culled from repeated cultures of the discharge; the relief of restlessness and insomnia by the re-

moval of surface irritation and the recovery of certain parts formerly paralyzed, just as in cases of cerebral hemorrhage followed by rigidity; the absence of Jacksonian attacks in spite of the extensive cicatricial process, confirming the general rule that such attacks almost never appear in recent attacks, but only after cicatricial contraction has been well established.

35. This article was published in the *Indian Medical Gazette*, December, 1907, and was abstracted in The Journal, Jan. 25, 1908, page 319.

Journal of Laryngology, Rhinology and Otology, London.

March.

36 *Abnormal Pulsating Vessels in the Pharynx. J. G. Connal.
37 *Chronic Middle-Ear Deafness. W. S. Bryant.

36. **Abnormal Vessels in the Pharynx.**—Connal reports nine cases, with notes of three others, showing abnormal pulsating vessels in the pharynx. In some cases the pulsating vessel was bilateral. It was situated behind the posterior pillars of the fauces and in most cases ascended to the nasopharynx. The choice as to the identity of the vessel seems to lie between the ascending laryngeal artery and the internal carotid.

37. **Middle-Ear Deafness.**—Bryant summarizes twenty-four cases, which he considers show that all forms of middle-ear deafness, except the congenital cases, are amenable to treatment, and that the amount of improvement justifies the effort expended.

Annales de l'Institut Pasteur, Paris.

February, XXII, No. 2, pp. 97-208.

38 Experimental Research on Treatment of Trypanosomiasis. A. Laveran and A. Thiroux.
39 Antibodies of Albuminoids and Cells. M. Nicolle and G. Abt.
40 New Researches on Toxin and Antitoxin of Cholera. A. Salimbeni.
41 Normal Intestinal Flora of Children Between 1 and 5. H. Tissier.

Bulletin de l'Académie de Médecine, Paris.

February 25, LXXII, No. 8, pp. 251-294.

42 "Catching Cold" in the Origin of Diseases. (Le froid et les maladies "a frigore.") Kelsch.
43 *Quinin in Treatment of Exophthalmic Goiter. Lancereaux and Paulesco.
44 Was Montaigne a Hypochondriac? Armaingaud.
45 *Diagnostic Importance of Partial Hypertensions in Respect to Symptoms and Complications of Arteriosclerosis. J. Teissier.

March 3, No. 9, pp. 295-314.

46 Plate to Wear on the Lower Teeth to Break Up Habit of Biting the Nails. (Traitement de l'onychophagie par les appareils de prothèse dentaires.) Didsbury.

March 10, No. 10, pp. 315-326.

47 *Thyroid Treatment of Chronic Rheumatism. Leopold-Lévi, H. de Rothschild and Lancereaux.

43. **Quinin in Exophthalmic Goiter.**—Lancereaux attributes the symptoms in this affection to the active vasodilatation, primary or reflex, in the vessels of the head and neck. This explains, he thinks, the enlargement and excessive functioning of the thyroid, the cerebral symptoms, tachycardia, tremor and emaciation. Quinin is remarkable for its pronounced vasoconstricting action on the vessels of the head and neck, and thus seems ideally adapted, he says, to cure the vasodilatation of exophthalmic goiter. He has used it in treatment of twenty-one patients since 1898, and announces that the results have been satisfactory. He administers it in doses of 15 or 22½ grains (1.-1.50) at the evening meal, divided into three capsules, taken at fifteen-minute intervals; he keeps this up for twenty days each month, with suspension for ten days. He generally commences with 7½ grains (0.50) and sometimes supplements the action of the quinin with another powerful vasoconstrictor—ergot—giving from 1½ to 7½ grains (0.10 to 0.50) daily, in the morning. One of his patients took from 15 to 22½ grains (1.-1.50) quinin every day for six months with scarcely any intermissions and can now be regarded as clinically cured. A clinical cure was the rule in all his cases.

45. **Localized Partial Hypertension and Arteriosclerosis.**—Teissier relates a number of instances of arterial hypertension localized in a certain region or side of the body. Under normal conditions the dorsal artery of the foot shows a difference of about 3 cm. mercury and the temporal artery of about 7 cm. in comparison with the pressure at the radial artery. These differences are modified by localized arteriosclerosis in any region. When the hypertension is general, he ascribes it to some kidney affection if there is any tendency to albuminuria. If the kidneys are sound the general hypertension is usually the result of excessive functioning of the suprarenals, especially if noted in a young patient. The localized hypertension corresponds to and parallels some localized visceral or vascular change. By reflex action this may induce a spasmodic contraction of the peripheral capillaries in the tributary vascular zone, and if often repeated the condition may become chronic. In some patients he observed excessively high pressure in the temporal artery on one side, and very soon glaucoma in the eye on that side developed. One patient had a pressure of 22 cm. in the dorsal artery of the foot, 18 cm. in the radial artery, and 14 cm. in the temporal artery. It was noticed that when the pressure increased above these figures in the parts below the diaphragm, sugar appeared in the urine. In another case, a patient with sclerous nephritis presented one day a pressure of 23 cm. in the right temporal artery, and almost at once facial paralysis developed, followed by fatal syncope. When there is excessive tension in the temporal artery, localized or diffuse cerebral disturbances are generally impending. Excessive tension in the artery of the foot corresponds to manifestations localized in the abdomen, arteriosclerosis of the vessels of the stomach, intestine, abdominal aorta, pancreas, etc. Excessive tension in the vessels of the arms corresponds to sclerotic changes in the thoracic aorta or coronaries. He illustrates these various types by a number of examples.

47. **Thyroid Treatment of Chronic Rheumatism.**—The first two authors report 39 cases of chronic rheumatism during the last three years in which treatment was with desiccated and pulverized sheep thyroids; from one to three doses a day of 10 cg. each, equivalent to 50 cg. of fresh glands, were given. The patients' ages ranged from 12 to 75 years, and in 5 cases the deformity resulting from the rheumatism had confined the patients to bed for years. In 9 other cases the persistence of the pains, recurrence of subacute attacks and deformities were very distressing. In 19 grave or severe cases, 2 of the patients can now be regarded as clinically cured under the treatment, and in 14 cases there was great improvement either in the pain, the functional impotence or the deformity in the joints or elsewhere. In 20 moderate or mild cases of chronic rheumatism, 18 of the patients were immeasurably improved or cured. The results were better the more recent and milder the cases. The benefit has persisted in the various cases. Lancereaux has been preaching the benefits of thyroid treatment for chronic deforming rheumatism for nearly nine years.

Revue de Médecine, Paris.

January, XXVIII, No. 1, pp. 1-88.

48 Spasmodic Cerebral Hemiplegia at 12. Bouchaud.
49 Pathology of the Meninges. A. Porot.
50 *Attacks of Sleep and Epileptic Narcolepsy. A. Sézary and C. de Montet.

February, No. 2, pp. 89-208.

51 *Mute Pneumothorax. (Le pneumothorax muet.) C. Sabourin.
52 *Pathogenesis and Treatment of Hemophilia. M. Labbé.
53 Influenzal Splenopneumonia with Hemoptysis. Romant and Guignot.
54 Marmorek's Serum in Tuberculosis. E. Uhry.
55 Paroxysmal Symptomatic Tachycardia and Gastroenteroptosis. G. Reynaud.
56 Glycogenesis without Glycogen. (Dégagement de glycose aux dépens du sucre virtuel.) R. Lépine.
57 *Syndrome of Familial, Spasmodic Paraplegia. A. Deléarde and I. Minet. Commenced in No. 1.

March, No. 3, pp. 209-304.

58 *Familial Spasmodic Paraplegia. A. M. Bono.
59 Anatomic Study of Pleuro-cortical Reactions. L. Mallolzel.
60 *Influenzal Aortitis with Thrombosis of Basilar Artery. (Etude des aortites grippales.) M. Marmorstein.

50. **Attacks of Sleep.**—Sézary and Montet describe two cases of children of 8 and 15 who suddenly dropped to sleep during the day, sometimes ten or fifty or more times. The sleep lasted a few seconds or minutes; it came on without prodrome and the child woke with mind clear. The sleep occurred in one case at about the same hours each day, but in the other at irregular hours. The fear of danger or of punishment sometimes postponed the attacks. Bromids and deprivation of salt had no effect, but marked improvement amounting to a cure to date in one case was obtained with isolation and psycho-

therapy. In the older patient there were indications of angioneurotic edema, and transient hysteric hemiplegia developed later. Both children were girls, standing well in their classes, and there was nothing otherwise to suggest epilepsy. Psychotherapy for children must be of the imperative type, Dejerine says; he calls it "schoolmaster therapeutics." The children are scolded, humiliated or punished, the appeals being to their pride, emphasizing their faults.

51. **Mute Pneumothorax.**—Sabourin applies this term to a pneumothorax which gives no sign of its existence although functional symptoms point to its presence. He gives the details of four such cases and the autopsy findings in a fifth in which the pneumothorax had not been diagnosed during life. In the four clinical cases the pocket of gas behaved like a tumor for a time, mute so far as external manifestations were concerned. Then the contents of the pocket broke through the adhesions which had caused its encapsulation, and at once its presence was revealed by auscultation findings, etc.

52. **Hemophilia.**—Labbé's extensive study of hemophilia concludes with a review of the various measures that have been employed in treatment. All have occasionally been successful, but far oftener have demonstrated utter inefficiency. He thinks that a fortunate coincidence is probably responsible for the few successes reported. He also remarks that the syndrome of hemophilia may be due to a number of different causes and may be benefited by different measures in different cases. The largest proportion of cures has been obtained with injections of fresh normal blood serum—human, horse or rabbit—as suggested and practiced by P. E. Weil. (See editorial in THE JOURNAL, Jan. 18, 1908, page 209.) This seems to be the remedy needed for the inherited or sporadic hemophilia resulting from insufficiency of the blood plasma, but it can do little good in hemophilia resulting from abnormal permeability of the vessel walls. In sporadic hemophilia intravenous injection of from 10 to 20 c.c. of fresh serum causes coagulation to occur in a few minutes instead of the seventy-five-minute interval previously noted in some patients. It thus allows an operation to be performed without dread of abnormal hemorrhage. The effect of the serum is at its height in forty-eight hours, but it has entirely passed away by the end of five weeks. Repetition of the injection then has the same effect as at first. In familial hemophilia the effect is less marked. Coagulation is hastened, but it is not rendered normal; the hemorrhagic tendency, however, becomes less pronounced. Rebellious hematuria subsided in one case and vanished by the third day. The effect of the serum is not evident for longer than a month in the familial cases. The serum should be fresh, at most not over fifteen days old; human, horse or rabbit serum can be used, or even antidiphtheria serum. Beef serum must be avoided as a febrile reaction is liable. The dose is from 10 to 20 c.c. injected into a vein at the elbow. If a subcutaneous injection is made this dose should be doubled. Gauze dipped in the serum has a powerful hemostatic action when a bleeding wound is dressed with it or the nose plugged in rebellious epistaxis. The gauze has proved successful in a number of cases in which hemorrhage persisted for hours after extraction of a tooth.

57. **Familial Spasmodic Paraplegia.**—Deléarde and Minet report the case of a girl, three of whose brothers and sisters had succumbed to the syndrome of spasmodic paraplegia, and she was fast traveling the same road. They regard the syndrome as common to a number of familial affections of different nature and localization, ranging from pure spinal paraplegia to cerebral diplegia, amyotrophic lateral sclerosis, cerebellar heredoataxia, familial sclerosis in patches, etc. The intelligence may be normal or may be impaired to total mental decay, and the prognosis is grave, although the affection in itself is not menacing. Treatment is powerless to arrest it, but hot baths, massage of contractured members and mobilization of joints are recommended. Electricity should be applied only with great caution, as it might exaggerate the contractures and accelerate the course. Physical fatigue should be avoided, especially exercises requiring repeated movements by spinal reflex action as in bicycle riding. Section of nerves and of tendons has been done a number of times in recent years—sometimes with negative and sometimes with favorable results. The question of surgical treatment is to come up for discussion at the next French congress of surgery. The history, symptomatology, etc., are discussed and summaries of 59 cases from the literature are appended with a hitherto unpublished typical case of a girl, nearly 4, three of whose brothers and sisters had succumbed to the same affection; three older sisters were healthy except for transient chorea in one and a transient series of convulsions in another.

58. **Id.**—Bono goes over much the same ground and adds the details of two cases personally observed. One was in a painter, 39 years old, the other in a woman of 28. In both the first sign of trouble was observed about the twelfth year.

60. **Influenzal Aortitis.**—Marmorstein's two patients both had primary aortitis with secondary thrombosis of the basilar artery, without hypertrophy of the left ventricle. One patient succumbed; the pulmonary edema and unconsciousness in this case had masked the aortic symptoms. He agrees with Thayer and Brush that infectious aortitis is much more frequent than is generally recognized, citing their article in THE JOURNAL, Sept. 10, 1904, page 727. Chronic lesions may develop later from the acute infectious process, especially dilatation of the aorta and aneurismal weakening and thinning of the walls. In two other cases he was able to find evidences of acute dilatation of the aorta on the basis of old aortic lesions. Dynamic forces are not responsible altogether for the dilatation in these cases. He thinks that there is reason to accept the assumption that acute aortitis may develop in young people entirely free from chronic lesions in the aortic wall. This acute aortitis may occur in the course of influenza or alone, with or without inflammatory processes in the other arteries or endocardium. If the process involves the valves, aortic insufficiency may develop as the last stage of the evolution of acute aortitis. The acute aortitis is revealed by dyspnea, dulness over the aorta, distressing, retrosternal pain and pallor. The pyogenic properties of the influenza bacillus and its discovery in the suppurating focus in his case suggest that this bacillus is chiefly responsible in these cases.

Archiv für Kinderheilkunde, Stuttgart.

XLVII, Nos. 4-6. pp. 241-484. Last indexed, Feb. 1, p. 408.

61 *Orthostatic Purpura in Children with Tuberculous Heredity. (Orthostatische Symptome bei Purpura mit Tuberculose hereditär belasteter Kinder.) M. Wolf.
62 Transmission of Antibodies from Mother to Child. (Antikörperübertragung von Mutter auf Kind.) M. Pfaundler.
63 *Diagnosis of Congenital Heart Defect and Importance of "Different Pulse" for Differentiation. (Fall von angeborenem Herzfehler.) J. A. Schabad.
64 *Tuberculin Test Injections and Inoculations of Infants. (Diagnostische Tuberkulininjektionen und Impfungen bei Säuglingen.) A. Reiche.
65 Serotherapy of Scarlet Fever. (Serumtherapie bei Scharlach.) L. Bilik.
66 *Convulsions in Children and Their Consequences Later. (Kindliche Krämpfe und ihre Folgen für das spätere Alter.) K. Potpeschnigg.

61. **Orthostatic Purpura in Tuberculous Children.**—In this communication from Baginsky's clinic at Berlin, Wolf reports five cases of purpura in children with tuberculous parentage. The purpura developed without any apparent cause, without an intercurrent affection, and without any evidences of possible transmission from one patient to others. There were no signs of tuberculosis in the children except spondylitis in one. Study of the conditions in these cases has strengthened the assumption that purpura is not always due to the same cause, and that it is by no means an independent entity. It is merely the result of disproportion between the blood pressure and the resistance of the vascular walls. In tuberculous children the purpura seems to be essentially orthostatic. In these conditions it may possibly prove a useful warning. Any attempt to act on the purpura by administration of drugs internally is futile. No remedies produced the slightest effect in his cases, and ergot and other drugs to induce contraction of the vessels are directly contraindicated as they increase the blood pressure even more by narrowing the vessels. After administration of ergot in these cases blood appears in the urine with much disturbance of the general health and fever.

The same negative results can be expected from hydrastis and suprarenal preparations. Ferric chlorid and lime proved equally useless. Great benefit, however, was derived from bandaging the legs to the hip, supplementing this by iron and arsenic internally. The children were allowed to be up and out of doors as soon as the purpuric patches had lost their red color. The cases in the literature also confirm the orthostatic nature of purpura in tuberculous children.

63. **Congenital Heart Defect.**—The signs in the case reported indicate, Schabad is convinced, that the child has stenosis of the pulmonary artery with a defect in the ventricular septum. There are no positive signs indicating patency of the duct of Botallo. Among the signs observed are the Gerhardt dulness, a difference between the pulse in the radial arteries on the two sides, the somewhat accentuated second sound over the pulmonary artery and the propagation of the sound into the large vessels. Seven cases of pulsus differens are cited from the literature. In Popoff's case the difference vanished under regained compensation in a case of combined stenosis of the left venous ostium and bicuspid insufficiency. The pulse was weaker in the left radial artery, which he ascribed to pressure on the aorta near the origin of the subclavian artery by the excessively dilated left ventricle, auricle and pulmonary vessels. In nearly all the cases of pulsus differens on record the patency of the duct of Botallo has been assumed, but Schabad thinks that this can not be the case in his patient. He is a boy of 9 with striking cyanosis, drumstick fingers, no edema, hemoglobin 115 per cent. He has passed through measles, scarlet fever, diphtheria, typhoid and whooping cough, but the cyanosis was noticed by the mother at five months, and he has always been subject to occasional attacks of dyspnea, when he would scream and fall unconscious. In a few minutes the attack would be over and the child playing as before, except for tachycardia. No signs of convulsions or biting the tongue had ever been observed. These attacks had been frequent in early life, but lately had occurred only two or three times a month. Three skiagraphs show the heart, front and back.

64. **Tuberculin Test Injection and Inoculation of Infants.**—Reiche gives the details of 39 cases in which infants were given an injection of tuberculin or were inoculated with it for accurate diagnosis. He considers it as necessary that tuberculous infants should be isolated as tuberculous adults. About 225 injections were made on 39 weakly infants suspected of tuberculosis, but only 4 gave a decided positive reaction, and at autopsy of 2 of this group no traces of tuberculosis could be discovered, as was also the case in 2 other infants out of a group of 6 who responded to the injections with a dubious reaction. The v. Pirquet cutaneous inoculation was tried on 105 infants without a positive response in any instance. His conclusions from this research, and from experiences in the same line with older children, are that tuberculin seems to act like a toxin in a weakly infant, irrespective of the presence or absence of tuberculosis. In older children tuberculin injections have great diagnostic value, even more than in adults, but it is different with infants, especially those under six months old. These experiences further emphasize, he says, the rarity of tuberculosis in infants, even among the very poor. Among 250 infants examined during the last year he found only one with certain tuberculosis, confirmed by autopsy. Consequently, latent tuberculosis can not be accepted as the explanation of the lack of thriving of certain infants. He warns in conclusion that these exploratory injections of tuberculin can by no means be regarded as absolutely harmless for infants.

66. **Convulsions in Children and Consequences Later.**—Potpeschnigg reports from Pfaundler's children's clinic at Munich 109 cases of children with convulsions with the later history of a large number. Fully 45 per cent. were breast-fed entirely or partially; the first convulsions were observed between the ages of four months and three years. The boys somewhat outnumbered the girls, and in 20 cases other children in the same family were affected. The mortality was unusually high, fully 72 per cent. of all the children died, and 52.6 per cent. of those who left the hospital alive died before puberty. In 37 children with no apparent affection except the convulsions, 57 per cent. died in the clinic. The number of attacks became reduced, as a rule, during the stay in the clinic, whether phosphorus and cod liver oil were given or not. The bowels were kept open and the diet restricted to tea, diluted milk and gruels without any appreciable influence from these measures being apparent. He concludes from his experience and from study of the literature that a tendency to convulsions—"spasmophilia"—in children is a severe permanent injury, at least in its more pronounced degrees. It is immaterial from this point of view whether the tendency is manifested in tetany, laryngospasm or actual convulsions. A large number of such children, if they survive the first attacks, especially the laryngospasm, do not live long thereafter; only a fraction grow up in good health. The majority suffer from organic or neuropathic affections, and epilepsy or its equivalents may develop later, but must then be differentiated from latent "spasmophilia." They usually develop during the stress of puberty or of some external cause, fright or other emotion. The functional character of the affection must be kept in view without entirely losing sight of the favoring influence of the diet and of thyroid functioning. In the experiences related, the severer manifestations occurred, as a rule, in families with an inherited neuropathologic taint, but epilepsy was not discovered in the ancestry in any instance. In many cases the tetanoid child had both older and younger healthy brothers and sisters. All this material is reviewed from various standpoints and tabulated, special regard being paid to the differentiating signs. The Erb sign was present in all the 109 cases, the Trousseau sign in 86.6 per cent., and rachitis also in a very large proportion. The spasmophilia develops generally in the winter months into March with but few exceptions.

Archiv für klinische Chirurgie, Berlin.

LXXXV, No. 3, pp. 615-840. Last indexed, April 4, p. 1155.

67 Experimental Necrosis of Pancreas and Cause of Death in Acute Pancreatic Affections. N. Guleke.
68 Relations Between Bacterial Findings and Clinical Picture in Acute Appendicitis. (Beziehungen zwischen dem Bakterienbefunde und dem klinischen Bilde bei der acuten Wurmfortsatzentzündung.) M. Cohn.
69 Operative Treatment of Perforated Gastric Ulcer. (Operative Behandlung des perforierten Magengeschwüres.) A. von Khautz, jun.
70 Radical Operation for Excessively Large Hernias with Aid of Systematic Stretching of Abdominal Walls. (Ueberhernien.) J. Hahn.
71 Experimental Study of Influence of Suction Treatment on Local Foci of Inflammation. (Einfluss der Saugbehandlung auf locale Entzündungsherde.) P. Frangenheim.
72 Foreign Bodies in Upper Part of Esophagus with Special Reference to Their Removal from the Exposed but not Incised Esophagus. (Fremdkörper im oberen Theile des Oesophagus, mit bes. Berücksichtigung ihrer Entfernung aus der freigelegten, aber nicht eröffneten Speiseröhre.) H. Thiemann.
73 Principles of Conception, Etiology and Treatment of Coxa Vara. F. Kempf.
74 Typical Injury of Lower End of Femur. (Typische Verletzung am unteren Femurende.) A. Stieda.
75 Compression Fracture of Head of Humerus. F. Staffel.
76 Apparatus for Treatment of Oblique or Compound Fractures of the Leg. (Apparat für die Behandlung der schrägen oder complicierten Fracturen des Beines.) E. Martini (Turin).

Berliner klinische Wochenschrift.

February 17, XLV, No. 7, pp. 341-388.

77 Organization of Bacteriologic Determination of Epidemic Disease in Prussia. (Bakteriologische Seuchenfeststellung.) M. Kirchner.
78 Treatment of Perforation of Ulcers in Stomach and Duodenum. (Behandlung des Durchbruchs von Magen- und Duodenalgeschwüren.) M. Jaffé.
79 Hemolysis by Combinations of Sodium Oleate, Oleic Acid, Silicic Acid and Serum. (Hämolyse durch Kombinationen von ölsaurem Natrium, Oelsäure, Kieselsäure und Serum.) von Dungern and Coca.
80 The So-called Nodose Periarteritis. C. Benda.
81 Differentiation of Various Kinds of Plant Albumin by the Aid of Specific Sera. (Unterscheidung verschiedener Pflanzeneiweissarten mit Hilfe spezifischer Sera.) D. Gasis.
82 Connection Between Anatomy and Affections of the Pancreas. A. W. Mayo Robson. Commenced in No. 6.

February 24, No. 8, pp. 389-440.

83 Treatment of Fistula of the Pancreas. J. Wohlgemuth.
84 Mechanism of Pancreatic Secretion During Digestion. Id.
85 Extractives in White and Dark Meat. (Gehalt an Extraktivstoffen des dunklen und weissen Fleisches.) M. Adler.
86 Diagnosis of Gastric Ulcer. (Ulcus ventriculi.) M. Bönniger.
87 Experimental Arterionecrosis. G. Morelli.
88 Hemolytic Action of Normal Beef Serum with Less Salt Content. (Hämolytische Wirkung des normalen Rinderserums bei vermindertem Salzgehalt.) K. Tsuda.

89 Route of Infection with Tuberculosis. A. Most.
90 Inhalation of Mercury in Syphilis. (Neue Quecksilberinhalationskur bei Syphilis.) Kromayer.
91 Automobile Fracture of Scaphoid. (Fraktur des Kahnbeins.) S. Peltesohn.
92 Selection of Children for "Vacation Colonies." (Auswahl der Kinder für die Ferienkolonien.) B. Salge.

Deutsche medizinische Wochenschrift, Berlin.

March 5, XXXIV, No. 10, pp. 401-448.

93 *Intravenous Injections of Quinin in Syphilis. (Eine neue Behandlungsmethode der Syphilis.) R. Lenzmann.
94 Electric Fulguration Treatment of Cancer. (Carcinombehandlung nach Keating-Hart.) Benckiser and Krumm. Id. Nagelschmidt.
95 Operative Treatment of Emphysema of the Lungs. (W. A. Freundsche Operation.) M. Cohn.
96 Locally Aggressive Lymphomatosis. Case with Testicular Tumor. A. Salomon.
97 Myotomy During Pregnancy on Account of Axial Torsion of Uterus. F. Spaeth.
98 Experimental Transmission of Common Warts from Cattle to Man. (Experimentelle Uebertragung von Verrucae vulgares vom Rinde auf den Menschen mit ausserordentlich langer Inkubation.) F. Schultz.
99 Legal Decisions of Interest to Physicians. (Rechtsfragen für die ärztliche Praxis.) Flügge.

93. **Quinin Treatment of Syphilis on New Principle.**—Lenzmann has revived the treatment of syphilis with quinin, modeling it on the dosage of arsenic in trypanosome affections. He injects 7½ grains (0.50) quinin hydrochlorate and repeats this dose the next day, then injects 9 grains (0.60) and repeats this latter injection four times at four-day intervals. By the ninth intravenous injection all symptoms had vanished in his cases. In order to obtain the beneficial action of hyperleucocytosis he makes additional injections of a mixture of 40 parts nucleinic acid and 60 parts quinin, one part of this mixture being suspended in 20 parts olive oil; 10 c.c. of the suspension is the dose for intramuscular injection. His experience with fourteen patients has demonstrated to his satisfaction—as he describes in detail—the prompt curative action of the quinin. Whether the cure will be permanent or not, time alone will show. This technic, he says, may prove useful in cases in which mercury fails or is not tolerated. As a rule he uses from 4.5 to 5.5 gm. (67-82 grains) quinin hydrochlorate in the course of from fourteen to twenty days.

Medizinische Klinik, Berlin.

March 15, IV, No. 11, pp. 352-390.

100 Diagnosis and Treatment of Acute Cholecystitis. L. Arnsperger.
101 Clinical Importance of the "Conditional Reflex." (Der bedingte Reflex.) A. Bickel.
102 *Reaction and Induced Phenomena During Courses of Hydrotherapy. (Reaktions- und Provokationserscheinungen bei hydriatischen Kuren.) C. Kraus.
103 Treatment of Epilepsy. P. Leubuscher.
104 *Attempt to Apply to Syphilis the Principle of the Ocular and Cutaneous Differential Reactions as Practiced in Tuberculosis. (Die vitale Antikörperreaktion im Vergleich zur Komplementbindungsmethode bei Tuberkulose und Syphilis.) A. Wolff-Eisner.
105 Campaign Against Tuberculosis in Children. (Tuberkulosebekämpfung im Kindesalter.) W. Hufnagel.

102. **Induced Phenomena During Course of Hydrotherapy.**—Kraus applies the term *Provokationserscheinungen* to such experiences as the following: A patient was being treated with local douches and packs to relieve chronic recurring pain in the perineal region, with other measures for an old chronic urethritis, when signs of a small abscess in the prostate became apparent the fourth day of the treatment. In other cases an attack of malarial fever was observed soon after commencing the hydrotherapy. It is evident, he declares, that latent foci of infection may be aroused to renewed or primary activity by the stress of the hydrotherapeutic measures. In one case a patient developed intense slightly febrile chorea while under treatment for relics of subacute articular rheumatism. He has never observed severe hemoptysis in consumptives directly after hydrotherapeutic measures, and Brehmer's experience confirms this. One tuberculous patient with cavities in the lungs, showing marked clinical improvement under hydrotherapy, took his usual chamber douche at 7 a. m., spent the morning reclining, ate a hearty dinner, and succumbed at 2 p. m. to fulminating hemoptysis, evidently the result of the digestive raising of the blood pressure. Kraus has sometimes noticed that patients had toothache after the hydrotherapeutic measures; it is not neuralgia, but is merely the flaring up of some latent carious process. He consequently advises patients to have their teeth put in order before taking the course. Caution in application of the measures will prevent the flaring up of an old adnexitis or gonorrheal genital process. In treatment of joint affections the aim is to realize that degree of hyperemia which promotes absorption of morbid products; too little is absolutely ineffectual and too much does harm. The tissues must be coaxed into proper assimilation. Experience brings skill in the application of the measures, and this is the main point, not so much the special technic. Besides these "induced phenomena," there may be an isolated morbid reaction to the hydrotherapeutic measures. A day or two of rest usually restores conditions to normal in this respect. This disturbance in the vasomotor reaction to the nerve stimulus is most liable to persist longer in nervous persons with a tendency to arteriosclerosis. There may be nervous crises, vertigo or buzzing in the ears, but these are transient and can be avoided by caution. Although such patients can not be delivered from their arteriosclerosis, yet they can be relieved from many of its unpleasant consequences. He even goes so far as to maintain that if the aim is kept constantly in view—to adapt the work of the tissues to the given disturbances—hydrotherapy stands in the front rank of measures for such cases. Paralysis absolutely excludes hydrotherapy, and if it is even suspected, caution must be exercised. In syphilis these measures are liable to induce cutaneous manifestations, bringing on the secondary cutaneous stage. They are, therefore, sometimes extremely valuable for revelation of a latent syphilis, both in the primary and secondary stage, while their general tonic effect on the system may be invaluable.

104. **Differential Ocular and Cutaneous Reactions in Tuberculosis and Syphilis.**—Wolff-Eisner relates experiences which seem to promise that the same principle of a biologic reaction to instillation of or inoculation with tuberculin in the tuberculous can be also obtained with a preparation of syphilis virus in the syphilitic. The question now is to find a suitable extract to take the place in syphilis of the tuberculin in tuberculosis.

Münchener medizinische Wochenschrift.

March 10, LV, No. 10, pp. 489-544.

106 Behavior of Heart After Prolonged and Exhausting Bicycling. (Untersuchungen an Teilnehmern der Fernfahrt Leipzig-Strassburg, 1907.) H. Dietlen and F. Moritz.
107 *Absorption of Fat by Infants. (Fettresorption des Säuglings.) Schelble.
108 Research on Opsonins. H. Much.
109 Bactericidal and Hemolytic Action of Substances in Leucocytes, Blood Plates and Lymph. (Bakterizide und hämolytische Wirksamkeit der Leukozyten- und Plättchenstoffe sowie der Oedem- und Gefässlymphe.) R. Schneider.
110 Binding of Complement. (Methodik der Komplementbinding.) A. Lode and F. Ballner.
111 *Cutaneous Reaction to Inoculation with Diphtheria Toxin. B. Schick.
112 *Clinical Importance of Difference Between Temperature in Axilla and Rectum, Especially in Peritonitis. Propping.
113 Color Photography and Its Application for Clinical Demonstration. (Lumièresche Farbenphotographie.) Wilms and Eggenberger.
114 *Medicine Glass. (Medizineinnehmeglas.) Strube.
115 Exudation of Cholesterin in Pleural Cavity. Ruppert.
116 Tearing Loose of Mesentery in Contusion. Recovery After Resection of 115 cm. of Intestine. (Ausgedehnte Mesenterialabreissung.) Autenrieth.

107. **Absorption of Fat by Infants.**—Schelble describes a simple method with which he was able to supervise the extent and time required for absorption of fat in infants, and tabulates his findings in 100 tests. He regards the hemoconias or "blood dust" seen in the blood with the ultramicroscope as consisting of particles of fat, and notes that the turbidness of the serum is proportional to the number of these fat particles. He never found this blood dust in fasting children nor in those fed exclusively on oatmeal gruel. A single drop drawn from the great toe is enough for the test. The absorption reaches its highest point between the second and third hours, and examination of the blood at this time will show the extent of the process in the child in question. It is dependent on the age and condition of the child, the amount of fat ingested and the length of the interval since the meal. Comparison with a normal standard gives the best oversight of the conditions, especially with a graduated series of standards showing different

grades of turbidity. The findings in his tests showed that the fat ingested seemed to be evenly distributed through the blood, both in adults and in infants. The simple technic allows instructive oversight of the infants' capacity to absorb the fat ingested, and thus to regulate the diet to correspond to the individual needs and avoid accumulation of undigested fat in the digestive tract.

111. **Cutaneous Reaction to Inoculation with Diphtheria Toxin.**—Schick has been experimenting with cutaneous inoculation of diphtheria toxin and states that the reaction which follows is specific. There is no reaction if the diphtheria toxin is previously neutralized with the corresponding amount of antitoxin, or if a preventive injection of antitoxin is made the day before sufficient for passive immunization. His experience suggests that certain persons display a greater susceptibility to the diphtheria toxin than others. The cutaneous reaction to diphtheria toxin does not have much value as a diagnostic measure, but it allows the development and subsidence of toxic and antitoxic processes to be studied from a new point of view, liable to throw light on the problems of immunization, and also to establish a basis for scientifically accurate dosage for the given case.

112. **Clinical Importance of Difference Between Temperature in Rectum and Axilla.**—Propping calls attention to the difference in the temperature as recorded by the thermometer in the axilla and in the rectum. The difference between the two seems to be in inverse proportion to the amount of heat being generated in the muscles either by exercise or chemical processes. The temperature rose in the axilla under cold douches, exposure to cold air and during a chill in sepsis; this was evidently the result, he states, of enhanced chemical processes in the muscles of the axilla. One of the practical conclusions of this research is the discovery that in 25 out of 100 patients with appendiceal peritonitis the difference between the temperature in the rectum and in the axilla was exceptionally great—2 degrees Fahrenheit, or more—and in this group 12 of the patients died, while only 10 died out of the 75 other patients. He thinks that this shows that a great difference between the rectal and axillary temperature must be accepted as a bad omen, indicating unusually severe peritonitis. The rectal temperature is not high on account of the vicinity of the focus, as no abnormal difference was observed in certain cases of various other febrile abdominal affections, while it was present in others. The manner of origin of the fever is probably responsible for the varying conditions.

114. **Medicine Glass.**—To protect the teeth or to overcome the taste of medicine Strube uses a little tube inside a second tube. The first carries a glass bulb to hold the medicine, the outer tube carries a larger bulb for water. When the tip of the double tube is placed far back in the mouth and the outer end raised, so that the fluids run into the mouth, the stream of medicine is entirely surrounded with a stream of water.

Wiener klinische Wochenschrift.

March 12, XXI, No. 11, pp. 345-378.

117 Study of 15 Cases of Erysipeloid. M. Reich.
118 Polycythemia. J. Löw and H. Popper.
119 Clinical Study of Galvanic Auditory Reaction. (Galvanische Akustikusreaktion.) A. V. Mackenzie.
120 Value of Ocular Reaction to Tuberculin, Especially in Military Circles. (Ophthalmoreaktion.) A. Fertl.
121 *Serum Diagnosis of Syphilis. E. Klausner.
122 *Precipitation in Tuberculosis. E. Stoerk.

121. **Serum Diagnosis of Syphilis.**—Klausner's simplified serum diagnosis was summarized in The Journal, March 21, 1908, page 1002. He here reports the application of the technic in 110 syphilitic and 70 non-syphilitic patients. He draws a drop of blood from the finger in the morning and dilutes the serum one-third; that is, to 0.2 c.c. serum he adds 0.6 c.c. distilled water. The specific reaction was obtained in all but three of the syphilitic cases and the exceptions were in persons who had taken unusually prolonged and intense mercurial treatment. The reaction was also obtained in one case of severe inherited syphilis. Among the 70 presumably non-syphilitic patients, 5 with typhoid gave a positive reaction, 3 with pneumonia and 5 with lupus.

122. **Precipitation in Tuberculous Serum.**—Stoerk found that tuberculous serum sometimes shows precipitation merely on addition of a 0.5 per cent. solution of carbolic acid, without adding any antigen. This never occurred with non-tuberculous serum.

Zentralblatt für Chirurgie, Leipsic.

March 21, XXXV, No. 12, pp. 358-392.

123 *Prolonged Saline Infusion in Rectum. (Der protrahierte rektale Kochsalzeinlauf.) H. Seidel.
124 Sterilization of Metal Instruments. L. Spiegel.

123. **Technic of Prolonged Rectal Saline Infusion.**—Seidel describes the technic which has proved extremely satisfactory in recent years in Lindner's service at Dresden. He gives an illustration of the small stand for the irrigator; it is screwed to the edge of the bed and allows the irrigator to be raised or lowered at will, although the pressure is always very slight. It is important to use a tube too small to induce mechanical irritation of the sphincter; a Nélaton No. 20 answers the purpose, with a smaller one for children. A pint of the fluid is poured in the irrigator and the stopcock turned to allow the passage of only about one drop a second. At this rate five hours are required for infusion of one liter. Seidel thinks that one or two liters a day are sufficient, and even in the severest cases does not go above two or three. Cool fluid seems to stimulate the peristalsis more than warm, and there is no need for keeping the fluid in the irrigator at any special temperature. The body is supplied with the needed water, and the bowels stimulated to normal functioning. It is especially valuable in peritonitis.

Gazzetta degli Ospedali, Milan.

March 1, XXIX, No. 26, p. 265-280.

125 *Treatment of Typhoid. E. de Renzi.
126 *Poisoning and Anaphylaxis from Dead Red Corpuscles. Relations to Febrile Malarial Attacks. (Anafilassia necro-eritrocitica.) S. Mircoli.
127 For Rodents, the Immunizing Power Against Rabies of Normal Nerve Substance is Equal to that of Pasteur Vaccine. (Confronto tra il potere immunizzante della sostanza nervosa normale e del vaccino Pasteur.) R. Repetto.

125. **Treatment of Typhoid Fever.**—De Renzi had not had a death from typhoid in his clinic until a month ago. He ascribes this success to the combination of fresh air, open windows, very cautious feeding, two quarts of milk and two eggs a day, abundance of cold water to drink, temperate and cold baths and spongings, and a certain amount of "hydrochloric lemonade." When the patient drinks from two to six quarts of water at 50 F. during the day, the water absorbs the heat from the tissues and helps to reduce the temperature. He says that intestinal antiseptics do not reach the actual morbid process, which is in the glands. There is always more or less nephritis in typhoid, he asserts, and most drugs are liable to affect the kidneys injuriously, but he approves of ichthyol.

126. **Dead Red Corpuscles a Source of Fever in Malaria?**—Mircoli believes that the febrile paroxysms in malaria are the result of destruction of the red corpuscles by the malarial parasites rather than of any special action or influence of the latter. The febrile attack may occur when there is not one parasite left in the blood, and it can be reproduced at will under the influence of chilling the body or trauma. He relates a series of experiments on rabbits and guinea-pigs which shows that the red corpuscle which has lost its vitality by desiccation, without other artificial injury, acts like a severe poison when reinjected into the animal, inducing not only fever, but also trophic and dynamic disturbances. It has a distinct pyrogenic power when injected under the skin. Besides the development of fever, symptoms are observed on the part of the nerves and metabolism which suggest that hypersusceptibility results rather than any tendency to immunization.

Hospitalstidende, Copenhagen.

January 15, LI, No. 3, pp. 49-72.

128 *Remarks on Ileus. H. Maag.

January 29, No. 5, pp. 97-128.

129 *Apparatus for Suction-Traction-Massage. (Sugetræk-Klokker.) L. Bramson.

February 5, No. 6, pp. 129-160.

130 *Uratic Psychoses. (Den uratiske Sindsygdom.) F. Lange. Commenced in No. 4.
131 Sterilizer for Sputum. (Sterilisator til Opspyt.) C. Bang and F. Tobiesen.

February 12, No. 7, pp. 161-192.

132 Phototherapy. (Bidrag til Kendskabet om Lysbade.) V. Bie and H. J. Bing. Commenced in No. 6.

February 19, No. 8, pp. 193-216.

133 *Double Infection of Pleura and Peritoneum. H. Kaarsberg. Commenced in No. 7.

February 26, No. 9, pp. 217-248.

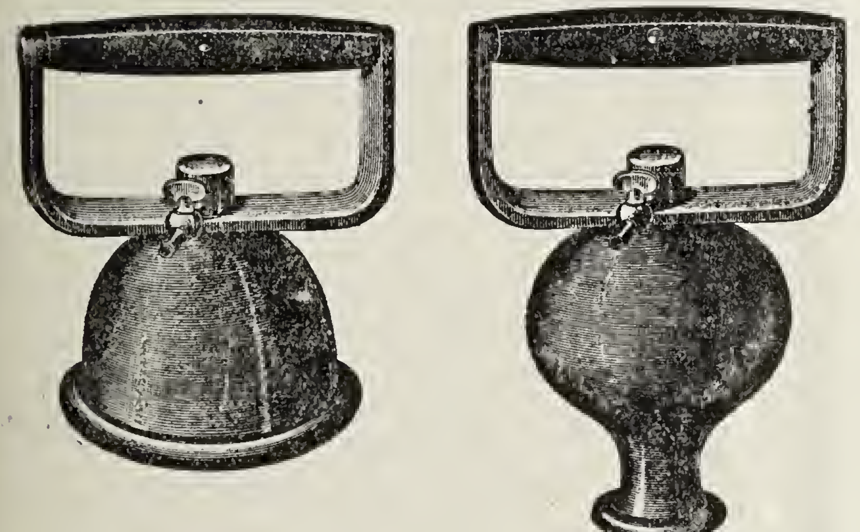
134 Disturbances in the Associated Movements of the Eyes. (Forstyrrelser i Øjets associerede Bevægelser.) H. Rønne. Commenced in No. 8.

March 4, No. 10, pp. 249-280.

135 *Nerve Lesions from Extirpation of Glands in the Neck. V. M. Westergaard. Commenced in No. 9.

128. **Ileus.**—Maag states that his experience has taught him that an operation is indispensable in every case of mechanical occlusion of the intestines that can not be remedied in any other way; also that the operation on a patient with ileus should invariably be preceded by thorough rinsing out of the stomach, and that the operation should be done as rapidly as possible, avoiding all unnecessary maneuvers. The stagnating contents of the intestine should be "milked" along or evacuated through a fistula into the intestine. In dubious cases it is well to leave the wound so that a secondary fistula can be made at need. In the after-treatment every effort should be made to promote intestinal functioning, and no opium should be allowed except for children after correction of an invagination.

129. **Suction-Traction-Massage.**—Bramson has perfected an instrument with which the benefits of vacuum suction are combined with traction alternating with pressure—the whole combined in his "suction-traction bell." The air is aspirated from the bell with an air-pump and then the bell is pulled out with the handle and then pressed in, thus alternating traction and deep pressure for massage of the tissues loosened by the suction into the vacuum. He describes his personal and clinical experience with this method of treating lumbago, sciatica, etc., and Clod-Hansen also reports extensive experience with it in neuralgia, headache, cicatricial contractures, relics of hematomata, false ankylosis, chronic spinal cord affections, nervous heart, stomach, abdominal and pelvic affections, cutaneous hyperesthesia, etc. The results have generally been good, lumbago and sciatica even of many years' standing soon yielding to the application of the suction bell. It is made of metal and the handle turns in a horizontal plane to adapt itself to the part to be treated. Bramson refrains from using the bell for patients with much arteriosclerosis or tendency to varices or hemophilia, and Hansen adds to this list of contraindications, recent erysipelas, acute eczema or erythemata, as the application of the bell might induce a relapse. The latter says that the technic is as simple and easy as possible while it is absolutely harmless, even in its maximal application. The relief from pain is almost instantaneous. The technic also allows localization and individualization of treatment to the widest extent with the least demands on the time, strength and purse of both physician and patient. One writer says in regard to it that the action combines that of the old cupping methods (without their dangers) and that of Bier's constriction hyperemia, while at the same time the action of mechanical traction is superposed, either vibratory, continuous, rhythmic pumping or by jerks, according to the effect desired—the general aim being to loosen up the tissues beneath. After the application of the bell the part is in peculiarly favorable conditions for passive and active movements, application of electricity or other measures which then produce better effects. He sometimes greases the skin and moves the bell along from point to point, following the course of the nerve, cicatrix or muscle on which it is desired to act. There is no other means at the command of the physician, he concludes, with which localized hyperemia in the subcutaneous tissue can be induced to such an extent as with this suction-traction-massage.



130. **Mental Symptoms from Retention of Products of Metabolism.**—Lange reports ten cases of what he calls "uratic brain troubles," that is, periodically recurring depression of spirits—actual psychoses—due to retention of only partly oxidized products of food metamorphosis. In all the cases described the diagnosis was based on the discovery of uric acid crystals in the urine. The patients were between the ages of 38 and 58, with the exception of one girl of 17. The prognosis of the separate attack is good, he says, but recurrence is the rule.

133. **Double Infection of Pleura and Peritoneum.**—In the four cases of simultaneous infection of both pleura and peritoneum reported there were no signs of the involvement of the latter in two instances until late in the course of the disease. In three of the cases there was nothing to indicate that the appendix was responsible for the trouble, and in the other merely a possibility, although each of the cases had been diagnosed as appendicitis by experienced surgeons. The primary lesion was generally a subphrenic abscess.

135. **Nerve Lesions Following Extirpation of Glands in Neck.**—Westergaard has encountered two cases of serious symptoms from nerves suffering from involvement in the cicatrix after removal of tuberculous cervical glands. The cicatrix in each instance was over the emerging point of the accessory nerve and paresis of the trapezius muscle was the result, with pains, anesthetic areas, and disturbances in the shoulder suggesting arthritis without effusion. He reviews other cases in the literature of damage to the accessory nerve, and concludes that experience teaches that the incision for removal of the cervical glands must not be carried beyond a point corresponding to the middle of the posterior margin of the sternocleido muscle. The incision in the upper half of the neck should parallel the folds in the skin and, in the lower half of the neck, it should parallel either the folds in the skin or the sternocleido muscle. An accessory incision or several parallel incisions should be applied if the gland is so enlarged that it is necessary to extend the incision beyond this point. In case more extensive intervention is required, Küttner's technic is preferable to others as this respects the accessory nerve. One of the patients continued to have pains in shoulder and arm persisting in spite of vigorous treatment in the hospital. They were finally banished by the use of an apparatus which takes the place of the paralyzed trapezius muscle. A leather corset around the pelvis and trunk carries a hinged shoulder crutch which sustains the shoulder and with elastic pressure keeps the scapula in its normal place. The present entire absence of the previously constant pain confirms the assumption that the dragging of the shoulder is the cause of the pain in these cases of paralysis of the trapezius.

Hygiea, Stockholm.

February, XVII, No. 2, pp. 97-224.

136 *Psychopathology in Light of Medical History. (Psykiatriska sjukdomsformer i historisk belysning.) B. Gadelius.
137 *Historical and Critical Study of Prevailing Views on Morbid Heredity. (Läran om den förvandlande ärftligheten jämte en anti-hypotes.) E. Vestberg.
138 *Successful Tendon Transplantation for Industrial Accident. (Fall af sentransplantation.) K. Dahlgren.
139 *Pneumonia and Alcoholism. A. Karlsson.

136. **Historical Psychopathology.**—Gadelius reviews the historical instances of supposed demoniacal possession and hallucinations, citing among others Joan of Arc, Peter the Hermit, Richard III., and instances from Swedish history. He then reproduces the documents in a case of paranoia with a ten-

dency to catatonia, possibly of alcoholic origin, in which the victim accused a certain small group of acquaintances of having bewitched him with their wiles and being responsible for all his sufferings. He brought suit for damages against them (1732), and the description of his symptoms reads like an ordinary case history of the day only for his constant references to the individuals whom he affirmed were responsible for his condition. The case is on record in the judicial archives at Stockholm. The court appointed a committee to pass on his sanity, and their report stated that he seemed thoroughly sound in mind except on the subject of the individuals in question, when his statements showed unmistakable mental derangement. Gadelius discusses the difference between hysteria and catatonia, which he regards as essentially different in their nature although sometimes so similar in their manifestations.

137. **Morbid Inheritance.**—In this exhaustive historical-critical study of the prevailing ideas in regard to morbid heredity, Vestberg quotes profusely from the international literature and advances arguments to sustain the theory that nervous affections occur in families according to the same laws which govern the etiology of all the other affections that we know anything about. That is, the main factor in all is found to be a specific, external element, and for none of them has heredity and the generally injurious influences of the environment been proved to possess more than a merely predisposing action.

138. **Tendon Transplantation After Industrial Accident.**—Dahlgren's patient was a man with traumatic paralysis of the quadriceps femoris resulting from an injury in the factory. After failure of other measures transplantation of the antagonist tendons, followed by exercises and electricity, completely cured the patient. Recovery of function required several months, but then the patient was able to walk, ride a bicycle and otherwise use both legs normally. The details of the operation are described, with an illustration.

139. **Pneumonia and Alcoholism.**—Karlsson's statistics show 1,127 or 10 per cent. pneumonia cases among 11,267 male patients, and 4.9 per cent. among 10,840 female. Studying these cases shows, he thinks, the influence of abuse of alcohol so plainly in the etiology of pneumonia that he is inclined to class acute pneumonia among the so-called alcoholic affections.

Upsala Läkareförenings Förhandlingar.

February, N. F., XIII, No. 4, pp. 211-306.

140 *Epilepsy and Mental Affections in Brothers and Sisters. (Epilepsi och sinnessjukdom hos syskon.) H. Lundborg.
141 Case of Psammoma-Carcinoma of the Mamma. E. Belfrage.
142 Mixed Tumors of Lips and Gums. (Blandsvulsterna i läpparna och gommen.) O. Wiman.
143 Cutaneous Reaction to Tuberculin. (Försök med v. Pirquet's kutane tuberkulinprof.) E. Belfrage and V. Hedesström.
144 Criticism of Head's Theory in Regard to Centripetal Nervous System. S. Alrutz.
145 Jawholder for General Anesthesia. (Käkframhållare vid narkoser.) L. Bergström.

140. **Epilepsy and Mental Derangement in Brothers and Sisters.**—Lundborg reports 22 instances of this kind. He has found 32 cases on the records of 2,000 patients at the Upsala Hospital in which one member of a family had epilepsy while another showed signs of mental derangement. The records show further the frequency of the coincidence of alcoholism in the parents and epilepsy in the children. It seems evident also that one child may present epilepsy while another develops dementia præcox; this occurred in 15 out of 25 cases. The catatonic form was observed in 7 of these, the hebephrenic form in 5 and the paranoiac in 3. Severe epilepsy was observed in 3, and in 3 cases there was what he calls an epileptoid constitution with an actual psychosis. Typical mania was not encountered in any of these cases. They are all reported in great detail.

Policlinico, Rome.

March 8, XV, Practical Section, No. 10, pp. 293-324.

146 Diagnostic Value of Ocular Reaction to Tuberculin. (Oftalmoreazione.) P. Bertoli.

Correction: The title No. 69 on page 925 of The Journal, March 14, should read: 69 Operation on Maxillary Antrum by Way of the Nose.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interest of our readers.

Index of Treatment by Various Writers. Edited by Robert Hutchison, M.D., F.R.C.P., Physician to the London Hospital, H. Stansfield Collier, F.R.C.S., surgeon to St. Mary's Hospital. Revised to Conform with American Usage by Warren Coleman, M.D., Professor of Clinical Medicine and Instructor in Therapeutics in Cornell University Medical College. Cloth. Pp. 888. New York: William Wood & Co., 1908.

Diets in Tuberculosis. By Noel Dean Bardswell, M.D., M.R.C.P., F.R.S.(Edin.) Medical Superintendent, King Edward VII Sanatorium, and John Ellis Chapman, M.R.C.S., L.R.C.P., Medical Superintendent, Coppin's Green Sanatorium. Cloth. Pp. 184. Price, $2.50. New York: Oxford University Press, 1908.

Nervous and Mental Diseases. By Charles S. Potts, M.D., Professor of Neurology in the Medico-Chirurgical College of Philadelphia. Second Edition. Revised and Enlarged. Pp. 570, with 142 illustrations. Price, $2.50. Philadelphia: Lea & Febiger, 1908.

Medical Gynecology. By Howard A. Kelly, A.B., M.D., LL.D., F.R.C.S. (Hon. Edin.), Professor of Gynecologic Surgery in Johns Hopkins University. Cloth. Pp. 662, with 163 illustrations. Price $6.00. New York: D. Appleton & Co., 1908.

The International Medical Annual. A Year-Book of Treatment and Practitioner's Index. By various authors. Cloth. Pp. 647. Price, $3.50. New York: E. B. Treat & Co., 1908.

Eleventh Annual Report of the Loomis Sanatorium and Annex for the Treatment of Tuberculosis, at Liberty, Sullivan County, New York. Paper. Pp. 64.

Proceedings of the American Medical Editors' Association, Thirty-eighth Annual Meeting. Paper. Pp. 91. New York: Published by the Association.

The Mellin's Food Method of Percentage Feeding. Cloth. Pp. 183. For gratuitous distribution to physicians. Boston: Mellin's Food Co., 1908.

Chasing the Cure in Colorado. By Thomas Crawford Galbreath. Paper. Pp. 52. Price, 25 cents. Published by the Author.

Transactions of the American Climatological Association, Vol. XXIII, 1907. Cloth. Pp. 330. Published by the Association.

First Annual Report of the Hospital for Deformities and Joint Diseases, New York. Paper. Pp. 61.

New Operating Theater of the New York Hospital. Cardboard. Pp. 29, with illustrations.

Guatemala, the Country of the Future. By Charles M. Pepper. Paper. Pp. 80.

Second Annual Report of the Roosevelt Hospital, Philadelphia. Paper. Pp. 31.

Panama and Back. By Henry T. Byford, M.D., Pp: 384. Chicago: W. B. Conkey Co.

NEW PATENTS.

Recent patents of interest to physicians:

880115.	Bottle label. J. F. Ahrens, New York.
880481.	Stereoscope. E. E. Clark and H. A. Douglas, Kalamazoo, Mich.
880444.	Abdominal supporter. M. Donaldson, Oklahoma, Okla.
880204.	Composition for generating formaldehyde. A. Eichengrun, Dusseldorf, Germany.
880452.	Apparatus for sterilizing foods. I. Hislaire, Brussels, Belgium.
880489.	Producing magnesium. F. von Kugelgen and G. O. Seward, Holcombs Rock, Va.
880389.	Surgical pad. J. A. Murray, New Haven, Conn.
880041.	Belt and support for abdominal treatment. H. T. Renton, Oakland, Cal.
880433.	Syringe. J. Wilson, Belmont, Mass.
880496.	Syringe. F. C. Barnes, Fremont, Ohio.
880716.	Electrothermal garment. B. R. Charles, Portland, Ore.
880718.	Bandage. M. S. Clendenin, Mexico, Mo.
880641.	Manufacture of artificial aromatic balsams. F. Evers, near Dusseldorf, Germany.
880801.	Vibrator. H. Larsen, Springfield, Ohio.
880559.	Truss. M. W. Milligan, East Las Vegas, N. M.
880928.	Catamenial bandage. A. R. Slater, Fruitvale, Cal.
881218.	Truss pad. E. R. Bathrick, Akron, Ohio.
881533.	Sterilizing. E. P. Beckwith, Cazenovia, N. Y.
881114.	Electric vibrator. J. M. Dinkins, Indianapolis.
881855.	Combination steam and water bath cabinet. J. F. Grubbs, Oklahoma, Okla.
881238.	Insufflator. S. Hasbrouck, Providence, R. I.
881130.	Catamenial device. A. I. Jordan, New York.
881321.	Massage apparatus. J. H. Kellogg, Battle Creek, Mich.
881142.	Lunar-caustic holder. J. P. O'Connor, Chicago.
881343.	Arch-support for flat feet. B. Ruhmann, Jersey City, N. J.
881525.	Distilling glycerin. F. J. Wood, New York.
882188.	Abdominal support. V. V. Davids, New York.
882301.	Catamenial bandage. M. E. Doyle, Constableville, N. Y.
882312.	Apparatus for putting on india-rubber gloves. C. A. Hoefftcke, London, Eng.
882410.	Sanitary appliance. J. H. McCall, Huntingdon, Tenn.
882532.	Pneumatically-operated massage apparatus. T. A. McCall, Xenia, Ohio.
882176.	Therapeutic pessary. F. M. Siner, Diamond, Ind.
882509.	Apparatus for producing ozone. A. C. Wood, Philadelphia.

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Original Articles

A NEW AND MORE RATIONAL METHOD OF TREATMENT OF LEUKEMIA BY THE *X*-RAY.

PRELIMINARY REPORT.*

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PART I.

Before reporting the technical aspects of the method of treatment which we have recently practiced it may be well to consider very briefly those aspects of the pathology of leukemia which bear on the matter of the topical treatment with agents such as the *x*-rays and also to review the facts that have become known regarding the probable effects of the *x*-rays on the tissues in this disease.

PATHOLOGY OF LEUKEMIA.

The gross lesions observed in leukemia, whether of the lymphatic or lienomedullary form, are much the same. There is found an infiltration of a grayish white character in the spleen, bone marrow or lymph nodes, or in all of these structures, and not infrequently a similar change in the liver, kidneys and other glandular organs. In the so-called lymphatic form, these changes are especially pronounced in the lymphatic nodes, and macroscopically may be confined to these structures. In the lienomedullary form the changes are more evident in the spleen and bone marrow.

Discussions regarding the essential pathology of leukemia have grouped themselves about several main propositions: (a) The organ or structure first involved; (b) the nature of the process; (c) the question whether the secondary infiltrations in other organs represent simple infiltration processes or active proliferative growth from deposited cells derived from the original foci.

(a) The first of these questions has finally been settled, in the opinion of the great majority of pathologists, in favor of the bone marrow. Until late years cases of lymphatic leukemia were supposed to have no relation to disease of this structure, but numerous recent studies have proved that even in lymphatic leukemia, whether of the acute or chronic variety, definite changes are found in the bone marrow, and in some of these cases the medullary changes have been present when no alteration was yet discoverable in the lymph nodes, either macroscopically or microscopically. So far as lienomedullary or mixed forms of leukemia are concerned, pathologists have, for a long time, more unanimously regarded the bone marrow as the primary seat of disease.

(b) Regarding the nature of the process it is impossible to dogmatize. Our own opinion, expressed in other places, has, for a long time, inclined us to believe that the disease is closely related to neoplastic processes. There is an undoubted close connection between certain sarcomata and leukemia. The histologic features, the progress of the disease, the metastases, and the clinical analogies suggested by cases of undoubted sarcoma tend to confirm this opinion.

(c) So far as the secondary changes in the spleen, liver and other organs are concerned, opinions have differed widely. Virchow, in his early descriptions, indicated the resemblance of these lesions to metastases of tumors, but subsequently a different interpretation gained ground, attributing the secondary lesions to a metaplasia of the normal tissues of the organs involved, to proliferation of "rests" of myeloid elements or to hyperplasia of the ordinary structural components of the organs involved. It is important to recognize that the histologic study of the secondary lesions in mixed leukemia shows a large proportion of myeloid elements (myelocytes, eosinophile myelocytes, erythroblasts). The picture is that of a myeloid transformation of the normal structure.

Three interpretations of this are possible: (1) That there has been a direct myeloid metaplasia; (2) that there has been a rapid proliferation of myeloid "rests," and (3) that there has been metastatic deposit of myeloid elements, with subsequent proliferation *in loco*. We can not enter into a complete discussion of this matter here, but may state that practically all recent writers incline to the belief that the third of these possibilities is the most probable. In the case of lymphatic leukemia, the evidence is somewhat less satisfactory, though in this case, also, the trend of recent opinion is in the direction of proliferation of metastatic cells in the organs in which they have been deposited.

To a certain extent the cellular elements of the lesions in the liver, spleen, lymph nodes, etc., are purely filtration deposits which have resulted from the excessive number of leucocytes in the circulating blood. The rapid fluctuation in the size of the spleen and lymph nodes observed in some cases is evidence in favor of the presence of new deposits of cells that have no fixed relation to the structure of the organs involved.

TREATMENT.

It is unnecessary to enter on a discussion of the medical treatment of this disease. So far as drugs are concerned, it has been clearly shown that, with the exception of arsenic, which occasionally exercises an inhibitive or even temporarily curative effect, medicaments are practically valueless.

The fact that certain cases of leukemia have undergone spontaneous cure as a result of intercurrent infections, or more often have been profoundly altered in their course by such an event, has led to the use of vaccination (vaccinia) and more recently to injections of various sera in the hope that a similar effect might be produced. These experiments have thus far proved ineffectual.

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* Read before the American Roentgen Ray Society, Cincinnati, Oct. 3, 1907.

The most striking results from treatment have been those obtained from exposure of the patient to the *x*-rays. Experiments have heretofore directed the rays to the organs obviously enlarged, such as the spleen and lymph nodes. A consideration of the pathology of the disease and of the known facts regarding the effects of *x*-rays has, however, convinced us that this method of application can accomplish a desired result only in a round-about fashion.

The experiments of Heineke, Linser and Helber, and Capps and Smith have shown that the *x*-rays have a decidedly destructive effect on leucocytes, especially the mononuclear cells and myelocytes, and Capps and Smith particularly found that there are thus produced leucolytic substances which have the power of destroying other leucocytes, either in the exposed individual or in others into whose circulation the serum from the exposed case has been injected.

The effect, then, of treating with *x*-rays the spleen or lymph nodes of leukemic patients may be stated as follows: First, there is destruction of certain cells (mainly mononuclear leucocytes and myelocytes) in the parts treated; second, as a result of such destruction, leucolytic substances are produced and liberated; third, these substances, reaching the bone marrow and other affected parts, destroy a certain number of cells in these situations. It is apparent, then, if the asserted facts are true, that the source and origin of the disease (the bone marrow) is reached in a round-about way. If this could be treated more directly, the effect on the whole course of the disease might be controlled more readily. Moreover, it might be expected that the violent reactions (fever, collapse, etc.) sometimes caused by exposure of large deposits of vulnerable cells (as in the spleen and lymph nodes) could thus be avoided, while a much more direct and beneficial influence on the continued existence and spread of the disease would be exercised. Our experiences seem to justify the probable truth of these assumptions. In the cases in which we have substituted treatment of the bone marrow for that of the spleen, we have found a decided diminution in the reactions that have been so commonly observed when the older method of treatment was employed, and at the same time the effect on the number of leucocytes in the circulating blood and on the size of the spleen has been altogether more continuous and progressive.

PART II.

From the standpoint of *x*-ray therapeutics, the unsatisfactory ultimate results which have been uniformly obtained up to the present time, and the lack of conformity of these results, as a whole, with the comparatively large percentage of primary symptomatic cures or initial improvements which have been reported, certainly justify a fair trial of any radical departure from the technic hitherto employed, provided such a change is rational and is based on sound scientific principles.

In a paper read before the American Roentgen-Ray Society in September, 1907, one of us presented a statistical report of the results, as a whole, which had been obtained up to that time. The data were derived from a review of the literature on the subject, and from replies to personal letters requesting the final outcome in a number of cases, the reports of which were incomplete in one way or another.

The results of this investigation were discouraging, so far as they concerned the ultimate success of the treatment, but were not surprising. From the two sources mentioned, reports of 123 cases of leukemia treated by the *x*-rays were collected. Of this number, 83, or about 67.5 per cent., were of the splenomyelogenous variety; 30, or about 24.5 per cent., were lymphatic cases, and 10, or about 8 per cent., were unclassified. Complete and final reports were obtainable in 69 of these cases, or about 56 per cent., and the ultimate results of the treatment of this number, corrections being made for data received later, are represented in Table I:

TABLE I.

	Splenomedullary.	Lymphatic.	Unclassified.	Totals.	Approximate Per cent.
Permanent cures	3	3	0	6	8.7
Died, or in critical condition at last report	35	20	4	59	85.5
Still under treatment for relapses following symptomatic cures	4	0	0	4	5.8
Totals	42	23	4	69	100.0

It is plainly to be seen, therefore, that the *x*-ray as a therapeutic agent does not offer much hope of *ultimate* success as hitherto employed in the treatment of leukemia. On the other hand, the results indicated by Table II show that it has a very decided and powerful therapeutic action when applied to leukemic patients:

TABLE II.

	Splenomedullary.	Lymphatic.	Unclassified.	Totals.	Approximate Per cent.
Primary symptomatic cures, not permanent	20	5	0	25	36.23
Initial improvement noted, not permanent	14	6	1	21	30.43
Total cases in which more or less benefit was noted, primarily	34	11	1	46	66.66
Cases in which there was little or no favorable reaction	5	9	3	17	24.64
Permanent cures	3	3	0	6	8.70
Totals	42	23	4	69	100.00

The fact that a therapeutic agent is capable of so profound an influence on a disease as to produce such primary results as are indicated by these figures is sufficient reason for us to make every effort to satisfactorily explain our inability, when employing it in the treatment of the disease, to effect permanent cures in more than 8.7 per cent. of the cases treated.

This lack of conformity of ultimate results with favorable primary effects means one of two things: (1) Either *x*-ray treatment is not capable of accomplishing any better results than those so far obtained, or (2), taking for granted that it is capable of curing the disease by a removal of the cause, directly or indirectly, if properly employed, then there must be something radically wrong with our present method of administering the treatment. The latter hypothesis gives a more promising outlook for the patient and at the same time is rational and conservative. It is our purpose to suggest a form of *x*-ray treatment for leukemia which not only seems more appropriate and more scientific theoretically, than the method hitherto employed, but its merits have been demonstrated practically by superior clinical results.

Personal experience and the information derived from discussions and an incomplete perusal of recorded reports had almost led to the expectation that a review of the literature would reveal the fact that not a single case of leukemia had ever been permanently cured directly and solely by x-ray treatment. Therefore, even the small percentage of cures found on record was somewhat surprising. Small though this figure is, however, no other form of treatment can accomplish more nor perhaps as much, and it is sufficient to have made the employment of the x-ray worth while. But the large percentage of ultimate failures following, with comparative frequency, the most promising primary results, has been discouraging to most radiographers, and in some instances almost brought the treatment into disrepute. An important fact is revealed by a careful study of the records. Undoubtedly the x-ray has been used carelessly and injudiciously in many instances, although such a charge could be definitely proved in connection with but few of them.

The discouragement shared with others who have had experience with this treatment has been an incentive to investigate the cause of our failures rather than to give up hope of better success. Numerous modifications in minor details of the technic were tried experimentally, but failed to yield any better results.

Certain facts which have been satisfactorily proved, experimentally and clinically, may be mentioned as additional evidence in support of the modification of the treatment herein suggested:

1. Heincke and Warthin have proved conclusively that the effect on the bone marrow of animals subjected to prolonged x-ray exposure is essentially the same as that on the lymphoid tissue.

2. If we assume that the bone marrow is most likely the actual seat of the disease, and that the enlarged spleen is but a secondary manifestation, then the treatment by applications of the x-ray to the latter is directed against a result, and not the cause or seat of the disease. The comparative ease with which this large mass of lymphoid tissue is destroyed, when exposed directly, has been explained in the results of the experiments of Heineke and Warthin on animals and the metabolism investigations of Edsall and others in connection with leukemic patients. In animals the rapid destruction of the lymphatic tissues and bone marrow is ascribed to an autolytic process, instituted or stimulated by the prolonged direct x-ray exposures. It can not be proved that the same phenomena take place in man, because we can not subject our patients relatively as long. Moreover, we are not justified in drawing definite conclusions nor in making comparisons from the results of x-ray exposures on healthy animals, on the one hand, and leukemic patients, on the other. But, at any rate, there is some similarity in the results in the two instances.

Our clinical observations have shown that a single application directly over the enlarged spleen of a leukemic patient is usually followed, in a few hours, by a very decided drop in the leucocyte count, and if the exposure has been long enough, by evidences of a toxemia. As a single exposure does not perceptibly reduce the size of the spleen, we must assume, from our present knowledge, that this rapid destruction of leucocytes in the blood is also due to an autolytic process. The fact that the count will invariably rise soon afterward to a point as high as or even higher than those before shows that the spleen is still active.

There is also reasonable ground for the belief that the products of disintegration of the leucocytes become active factors in the destructive process and may, perhaps, exert some inhibitory influence on the activity of the pathologic parent cells. The destructive action of some of these products on renal cells has been demonstrated postmortem in a few cases in which death has resulted directly or indirectly from a toxemia during x-ray treatment.

During the earlier exposures it is the cells circulating in the blood which are actually destroyed. Whether or not the destructive agents are active in the blood or in the lymph structures, especially the spleen, or in both, it is almost certain that they are present in the blood. Repeated experiments by Smith and Capps have shown that the serum of leukemic patients under x-ray treatment, when injected into other leukemic patients, caused a rapid and decided drop in the leucocyte count of the latter, followed soon afterward by a rapid rise, to a point as high as or higher than before. When such serum was injected into healthy animals, the effect was similar, and the more favorably the patient had responded to the treatment the more marked was the reaction. On the other hand, injections of normal serum or that taken from leukemic patients before x-ray exposures were begun were followed by a leucocytosis. These same observers have noted that the sera of lymphatic and splenomedullary cases under treatment seemed to have a selective action on the lymphocytes and myelocytes, respectively, in the blood of patients who had not been treated.

After several applications have been made directly to the spleen, a gradual and progressive reduction in size usually follows. This may be due to the destructive effect of the cumulative action of the rays, such as has been observed in animals, but such an explanation is not altogether satisfactory, in view of certain observations that have been made in connection with the treatment of some of our cases. These points will be discussed later in the conclusions drawn from our study of clinical results.

3. A rapid destruction of lymphoid tissue, such as is apt to follow direct splenic exposures, is not always wise or safe, as a toxemia is easily induced thereby. That death has frequently resulted under such circumstances can not be denied. At any rate, such procedures are far from beneficial to the patient and are likely to lessen the chances of ultimate cure, for any conditions which tend to lower the general vitality may thereby give the factors causing the disease an opportunity to operate with increased vigor.

CLINICAL OBSERVATIONS.

Five patients have been treated so far by the method herein suggested, and the clinical results have, on the whole, fully justified the change. It is too early to make deductions as to the ultimate success of the method or the special technic we have adopted, but there is every reason to believe that the final results will be superior to those heretofore realized, and especially in connection with the splenomedullary type of the disease. One result of our experience and observations has been a decided change of view in regard to many points in connection with the treatment. For example, comparatively little attention is now paid to the total leucocyte count as an index to the effect of the treatment on the disease, while far more is given to the differential counts and to the general qualities of the blood. Our rules are not influenced by a tendency of the leucocytosis to remain high for a comparatively long period after the treatment has been started, and our efforts are now directed, the least of all, to a reduction of the count, and, in fact, a rapid and decided drop is considered most undesirable.

THE TECHNIC.

The details of the technic as now carried out are based largely on our clinical experience and observations. The following points are to be considered in its application:

1. The length of each exposure.
2. The frequency of exposure.
3. Avoidance of toxic reactions.
4. Systematic applications.
5. Avoidance of early splenic exposures.
6. The duration of the entire treatment.

1. The duration of our standard exposure is based primarily on the observations of Heineke, that the shortest time in which any perceptible degenerative changes in the lymphoid tissues of a moderate sized dog or rabbit could be induced was fifteen minutes, and that the reaction of bone-marrow in a given time was much less marked in all instances. The reaction of the same tissues in man is, of course, much less prompt and less decided. An attempt to bring about any perceptible degenerative changes in these tissues by a single application to a leukemic patient would be dangerous, and probably fatal, but our experience has shown that an exposure of fifteen minutes to the bone-marrow, under standard conditions, is not attended with any risk, as a rule, and is sufficient to produce some reaction. On the other hand, even this is sometimes too long an exposure, especially when applying the rays near the splenic region, or sometimes over the knees even, as will be shown later.

Heineke and Warthin observed that a single short exposure produced no perceptible reaction in the bone-marrow of animals, while repeated short exposures did so ultimately. They also found that regeneration was possible if the applications were discontinued. Therefore, in view of these facts, it would seem necessary to expose a given area repeatedly before leaving it to take up another part of the body. In the beginning it was our custom to expose each separate area three times in succession, but later observations have led to a slight modification of this rule.

Taking fifteen minutes as the standard length of exposure, the actual duration of each application depends on the particular circumstances attending each individual case. The duration of exposure is a matter which requires careful consideration for the reason that it is an indefinite factor, subject to more or less variation in the determination of a standard dosage. Under ordinary circumstances the slight variations in the therapeutic *x*-ray dose, arising from the differences in apparatus, are unimportant, but in the treatment of leukemia unusual accuracy is desirable. Time can not be an absolutely uniform unit, because, being under control as a measurable quantity, it must be the factor to be adjusted in order to allow for the uncontrollable variations in the other factors which determine the therapeutic dose. As there is no accurate method for determining directly the volume of the rays generated in a tube, this unit must be measured approximately, and is most accurately estimated from the relations of the vacuum of the tube and the milliamperage of the current delivered to it.

As the quality of the rays also depends more or less on the vacuum of the tube, and as the quality or degree of penetration must be as nearly uniform as is possible in the treatment of leukemia, it follows that the vacuum will not be a very variable factor, because it must, of necessity, be a uniform unit, and it is more or less controllable as such. A "four-inch" vacuum is about right for the purpose, and there should be a tendency for it to rise and not to fall. Such a vacuum must be maintained by automatic regulation. If the tube and its vacuum can be made a uniform unit it is very easy to make the measurement of the current the same for all cases.

The only important variable factor now remaining is the variety of interrupter used. All other factors remaining practically the same, there is undoubtedly some difference in the resulting doses when a mechanical spring interrupter is used and when a Wehnelt instrument is employed. The adjustment of this difference is largely a matter of experiment and experience. Marked variations in distance, of course, necessitate corresponding changes in the time unit.

2. The frequency of the applications is a matter requiring some consideration, although its importance was not evident to us at first. In our experience daily exposures, when it is possible to give them that often and they are not followed by undesirable effects, are advisable, for the reason that it requires a considerable period of time to cover the entire body, and it is not best to allow too long an interval to elapse between the time one area has received its series until its turn comes again for the next. Regeneration might take place were this interval too long, or at least the cells might have a chance to recover from the effects of the previous applications. This form of treatment requires a much longer time than the older method, but by making the applications daily its duration may be shortened several weeks or even months. At any rate, our best results have been noted in those cases which have received daily exposures.

3. There is reason to believe that any exposure which produces the slightest toxic manifestations may be harmful rather than beneficial. Toxemia is most likely to follow direct applications to the spleen or enlarged lymph glands, but it sometimes follows exposures to the bones alone, especially when they are made over the knees. Evidences of toxemia early in the course of the treatment have been taken as a warning, first, to keep away from the spleen for some time, and, second, to shorten the applications. If toxemia still follows, the prognosis is unfavorable.

It is not likely that any benefit is to be derived from the treatment of acute cases, whether the attack is primary or a relapse. The same may be said of those in which there are evidences of a marked toxemia. In fact, Roentgen-ray applications may shorten life in such cases.

4. To be of any real value this treatment must be systematic. The exposures to the different areas of the body must be made with some definite regularity and system. Heretofore when the bones were exposed, in connection with the splenic applications, either it was carried out in a more or less general exposure of the patient's entire body, or only a very few areas received direct applications, which were usually of comparatively short duration. In the former instance the element of distance was disregarded and uniformity was out of the question. Even if such widespread applications were of sufficient duration to induce any reaction in the bone-marrow the exposure of such a large extent of surface at one time would have incurred risk in many instances.

AREAS FOR EXPOSURE.

In any method of applying the treatment to the bone-marrow the body should first be divided into definite regions, and each of these should be exposed with regularity. The manner in which we have mapped out the areas for exposure is as follows:

(1) The feet, ankles and lower halves of the legs.

(2) From the middle of the legs to the middle of the thighs.

(3) The right half of the abdomen and pelvis and the upper half of the right thigh.

(4) The corresponding area on the left side, carefully avoiding the spleen in the earlier applications, but including its lower half later on.

(5) The right half of the thorax and the right shoulder, including as much of the upper extremity as possible.

(6) The corresponding area of the left side, again avoiding the spleen early, but including its upper half later on.

(7) Later in the treatment the entire thorax and both shoulders are often included in one application, making the proper correction in time for the increase in distance. In stout subjects it may be advisable to treat this part of the body posteriorly as well.

(8) When it is safe to expose the entire spleen it is advisable to approach it from the back and thus include the lumbar spine and the posterior aspect of the pelvis.

Each of these regions is treated in rotation and receives three successive exposures. For reasons to be mentioned later, a fourth is sometimes given. By dividing the body up in this way, and making the relations of distances and exposures uniform, it becomes a simple matter to give each portion of the skeleton its proper share of treatment. We have assumed that it is safer to expose every portion of the skeleton, except the cranium. If it is found necessary to expose the head the patient must accept the risk of a possible loss of the hair.

5. In direct contrast to the older method of directly exposing the spleen from the start, our experience has demonstrated that this is an unwise procedure. This does not mean that the spleen should never be exposed, for to avoid it at all times would be almost impossible, and, besides, more or less exposure is no doubt necessary, but should not be attempted while the organ is still very large and the leucocytosis is still high. It is best to wait until the count is materially reduced and the patient's general condition has improved considerably. This mass of lymphatic tissue is far too susceptible to *x*-ray influence, and the patient is not in a condition at first to stand the strain imposed by its exposure.

In all our cases except one the spleen has diminished in size steadily, and with comparative rapidity without direct exposure, while the applications were confined strictly to the bones. Direct exposure to the spleen, however, caused a more rapid decrease in size. It has been clearly demonstrated, in our lymphatic case that early splenic exposures are harmful. This patient had been previously under the care of another physician, who gave him three or four exposures directly over the spleen, and he at once became much worse, while following the bone exposures alone, after he came under our care, the leucocyte count dropped steadily, his general condition from the start showed a corresponding improvement, and the spleen steadily diminished in size. During this time every precaution was taken not to expose the enlarged lymph glands. Any application near the spleen, when it would be more or less in the path of stray rays, was immediately followed by toxic symptoms. Similar manifestations were associated with the earlier exposures to the lymph glands, unless the applications were made much shorter than usual.[1]

The appropriate time for beginning splenic exposures depends on the circumstances attending the case. It has been our rule to go over the entire body at least twice with the bone exposures, keeping well away from the spleen, before considering its exposure. In the average case, with moderate leucocytosis, moderate splenic enlargement, and little or no evidence of toxemia, it may be safe to try the experiment of including the lower half of the spleen with the left hip during the third series, provided the patient's general condition has improved to a considerable extent. We have found it best to try an exposure of only eight minutes, or not more than ten at first, and then if there is no unfavorable reaction a second application may be given, followed by the third if all goes well. We never expose any part of the spleen for the full fifteen minutes until much later.

The reason for these precautions has been demonstrated practically in connection with Dr. Stengel's patient, who has the first to be treated by this method. Being himself a physician, he was in a position to render valuable assistance in the experimental stage of our work. Early in the course of his treatment he found that thirteen minutes' exposure over half or more of the spleen would be followed in from two to six hours by mild toxic symptoms, accompanied by the appearance of a trace of albumin in the urine; fourteen minutes made him decidedly toxic, and fifteen minutes was not then tried. Later on we found that fourteen minutes was the border line, and at the present time he can stand a fifteen minutes' exposure without the slightest evidence of toxic manifestations. We have now reached the point of seventeen minutes, although the first time it was tried there was a suspicion of toxemia, but no albumin appeared in the urine.

This patient has observed that the series of splenic exposures invariably resulted in considerable local disturbance, which he attributed to a shrinking of the spleen, and sometimes there was an additional sensation which he thought might be due to the breaking up of a slight adhesion. These phenomena, which were noted only after the institution of the present method of treatment, were always accompanied by a decided increase in the leucocytosis, but after the third exposure of the series the count usually dropped to a point as low as or even lower than it was before. Previously the patient had received seventeen direct applications to the spleen. These exposures were accompanied by a very decided progressive drop in the leucocytosis, without any appreciable diminution in the size of the spleen, which would tend to prove that these early, direct, splenic applications destroyed only those lymphocytes circulating in the blood. With the institution of the bone treatment the count soon rose again, but the general condition began to improve at once and continued to do so. With this early reduction of the leucocyte count there was no corresponding reduction in the number of myelocytes, their percentage rising proportionately.

It should be borne in mind that the periods of time mentioned above are relative factors in the dosage and are not intended to be taken as uniform standards.

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[1] This patient later became dissatisfied with our treatment, and went to another hospital, where his spleen and enlarged glands were again exposed in the old way. As a result, when he came back to us he was so much worse that *x*-ray treatment was contraindicated.

While the spleen still remains very large, it does not seem advisable to expose the entire organ at any one time, but this may be attempted with safety when the enlargement has diminished to a moderate size, provided other conditions do not contraindicate such a procedure. This would be at a comparatively late stage in the treatment, after the leucocyte count has become steady and is not subject to wide variations, and there has been a decided improvement in the patient's general condition.

There is no reason to fear any damage to the kidneys from their direct exposure to the rays while making applications to the spleen through the back. It has been satisfactorily proved that all renal complications which have arisen during the treatment of leukemic patients have resulted from oxer-taxation in the elimination of waste tissue products and have not been due to direct *x*-ray exposure.

6. The point about which we acknowledge the greatest indecision is the appropriate time to stop treatment altogether. If we stop too soon, before the elimination of the cause is complete, we run the risk of a possible regeneration of leukemic tissue, with a resulting relapse. Experience has demonstrated that the prognosis in the treatment of relapses is far less favorable than in the case of a primary attack. And at any rate, we would have the same ground to go over again. On the other hand, it is not desirable to prolong the treatment unnecessarily, at the expense of both time and money to the patient, and with the possibility that overexposure may be productive of harmful results. Our experience has not yet decided this point.

We have noted that toward the apparent end of the treatment the leucocyte count falls very slowly, but it becomes quite steady. One of the evils of splenic treatment was the too early reduction of the leucocytosis, which, when it reached a numerically normal figure, was taken as an indication of a symptomatic cure long before it was possible for the disease to have been eradicated. A continuance of the treatment resulted in a subnormal count, which might be harmful. No such confusion exists in connection with the bone-marrow treatment. We are paying less and less attention to the leucocytosis, for it is by no means an accurate index of the patient's condition. For example, one of our patients has had a count hovering steadily between 20,000 and 26,000 for several weeks, and we consider him very nearly cured. In another case the count has been under 20,000 for nearly as long, and yet the patient is very far from being well. In the splenomyelogenous cases it is most important that the myelocytes be driven out of the blood and that they remain out.

It is mentioned elsewhere that every time a new area is exposed for its series a rise in the leucocyte count follows the first or the second application. We have noticed that this tendency diminishes and the count becomes more steady as the patient's general condition approaches the normal. Earlier in the treatment the count frequently does not come down after the third application to where it was before the first treatment of that part. Under such circumstances we repeat the exposures until there is a satisfactory drop. As a rule, only one additional application is required.

A reduction of the leucocytosis to a moderately low count, with very little fluctuation, a reduction of the spleen to nearly a normal size, and a return of the general condition to normal may be taken as indications to let up in the treatment, but applications would best not be stopped altogether for some time. While any splenic enlargement persists there is apt to be a slight leucocytosis. It would hardly seem wise to stop the treatment while the spleen still shows a tendency to diminish in size, but it must be remembered that an enormously enlarged spleen can rarely be reduced to a normal size by treatment.

Not only is it a serious mistake to stop treatment too soon, but it is equally as injudicious to allow long intervals of rest during the course of the treatment. There is reason to believe that the latter was the cause of a fatal result in one of our cases. The patient was permitted to take a rest of ten days, but no longer, at the seashore. She remained there for nearly a month, had an acute relapse, and soon died. Under certain circumstances some benefit may be derived from a short restful vacation of a week or ten days, but no longer than that.

Judging from our experience, it would not be safe in the average case to stop the treatment short of 100 applications, and in some instances as many as 200 might be necessary. Daily exposures may diminish the total number of applications necessary.

GENERAL CONCLUSIONS.

The reason for presenting such a detailed discussion on this subject is the desire to give to others the full benefit of our experience in the application of what promises to be a more successful method of treating leukemia. As clinical reports are lengthy and uninteresting, and as there are already on record a sufficient number of them referring to the *x*-ray treatment of this disease to give a fairly correct idea of the results in general, detailed reports of our limited number of cases will be omitted. The following conclusions are a résumé of what we have accomplished so far in the treatment of five cases by this method, together with the more important observations that have been made:

1. The primary results of this method are equally as good as those of the one hitherto employed.

2. The treatment herein suggested is more rational because it is directed against the primary focus of the disease, so far as it is known, and not against a secondary manifestation.

3. Toxemia resulting from the treatment may be avoided, and the patient's general condition is, on the whole, better from the start.

4. Under exposures to the bone-marrow the enlarged spleen is diminished in size just as it is under direct splenic applications, only the process is somewhat slower.

5. Although this treatment requires a much longer period of time, the misleading tendency of a comparatively quick symptomatic cure, such as follows direct splenic exposures, is avoided. Applications confined mainly to the spleen reduce the size of that organ, destroy the leucocytes in the circulation, including the myelocytes, and possibly have some inhibitory influence, secondarily, on the cause, and hold the disease in check, leading to an impression that the case is cured, whereas statistics show that this is seldom the case. Applications to the bone-marrow also reduce the size of the spleen and destroy the leucocytes circulating in the blood, but, in addition, they are more likely to reach and remove the cause of the disease.

6. The spleen should be exposed at some time, but never until it is considerably reduced in size and the patient's general condition is markedly improved, and even then it should be done with caution

7. The comparatively slow reduction in the size of the spleen, while it is not being directly treated, may be a factor in keeping the leucocyte count high. This is in a measure advantageous, as it guards against stopping the treatment too soon. The count will not become normal while the spleen is still enlarged and is still diminishing in size.

8. That actual destruction of the splenic tissue results from the cumulative effect of direct *x*-ray exposures is, in a measure, disproved by the following observations:

(a) The spleen is diminished in size by applications to the bones alone.

(b) In all of our cases which have reacted favorably to the treatment, it has been noted that after the spleen has been included in the applications, the first or second exposure in each series is usually followed by a decided rise in the count, associated very often with evidences of more or less diminution in the size of the tumor. A third or fourth exposure usually brings the count down again by a destruction of the lymphocytes in the circulation. These facts would seem to indicate some direct connection between the decrease in the size of the spleen and the increase in leucocytosis and lymphocyte percentage.

(c) In the first patient seventeen, almost daily, splenic applications of short duration, made before starting the bone-marrow treatment, reduced the leucocyte count from 386,000 to 133,000, with a relative increase in myelocytes from 16⅔ per cent. to 25½ per cent., but there was comparatively little diminution in the size of the spleen.

(d) In the two unfavorable cases with acute relapses, repeated direct applications had no effect whatever on the spleen, which continued to grow larger. At the same time the leucocyte count rose rapidly, although the first one or two direct splenic exposures were followed by a decided drop, which lasted for a day or two only. It may be well to explain that the reason for these direct splenic exposures was the fact that bone-marrow applications had no effect whatever in checking the extremely rapid enlargements of these spleens, and it was hoped that comparatively short and safe direct exposures might have some such influence. So rapid was the enlargement in one of these two cases that death occurred very suddenly, following phenomena which may have been due to a rupture of the spleen.

9. A peculiarity of this treatment is the fact that the patient may feel perfectly well, but still have a moderately high leucocytosis and a comparatively large spleen. In our first case, after 112 treatments during a period of ten months, the count still averages from 75,000 to 100,000, with 3 to 4 per cent. of myelocytes, and the spleen is still moderately large, but the patient feels as well as he ever did in his life, and is able to attend to all of his work. He has been in this condition for the past four months. His leucocytosis decreases very slowly, but a slight drop is noted each time a new area is exposed in its turn, as compared to the count at the time of the previous series to the same part. The only explanation for this long continued high leucocytosis is that in its slow but steady decrease in size the spleen, which receives but comparatively few direct exposures, pours out large numbers of lymphocytes into the circulation, where they are destroyed slowly. The presence of 3 to 4 per cent. of myelocytes shows that this patient is still far from well.

10. Daily exposures, when not contraindicated, may frequently yield quicker and better results. The slow progress made by the case just mentioned may be accounted for by the fact that he received but three treatments per week, and for a while only two. Our most favorable case was treated daily.

11. All cases will not respond to even this method of treatment. In acute primary attacks and relapses *x*-ray treatment is perhaps, as a rule, contraindicated.

12. Lymphatic cases also respond well to this method of treatment. It is advisable to observe the same precautions in regard to applications to the glands as those mentioned in connection with the spleen.

13. Cessation of treatment for long intervals is to be guarded against, especially in the early stages. Even short interruptions are not advisable until the disease is well under control.

14. The proper time to stop treatment is still a somewhat uncertain question. The frequency of the applications should not be lessened until the general condition is normal and the size of the spleen and the leucocyte count nearly so. It would seem wiser to stop gradually rather than abruptly.

15. The leucocyte count, *per se*, becomes a matter of minor importance, but the differential count is always one of the important indices to the effect of the treatment. The failure of the count to drop, after the third application in the series to any particular area, to a point as low as or lower than before the first, has been taken of late as an indication to give more than the three customary exposures to that part. As conditions begin to indicate the approach of a cure this tendency of the leucocytosis to increase becomes less marked.

16. The distribution of the applications over almost the entire body renders the risk of a severe dermatitis, with ordinary care, very slight.

17. The bone pains, noted especially in splenomedullary cases, are relieved early by this method of treatment.

COMPARATIVE POTENCY OF HYOSCIN AND SCOPOLAMIN HYDROBROMID IN REFRACTION WORK.*

WENDELL REBER, M.D.
PHILADELPHIA.

Some years age in some notes[1] on the mydriatic alkaloids I made mention of a youth of 16 with emmetropic eyes on whom I had tested the effects of hyoscin hydrobromid and scopolamin hydrobromid. One drop of a 1/10 per cent. solution of the hyoscin salt was used in the right eye and one drop of a 1/10 per cent. solution of the scopolamin salt was used in the left eye. The effect of the two drugs on the pupil is shown in Figure 1 and on the ciliary muscle in Figure 2. From these results I leaned to the conclusion that the two drugs were practically identical in action and, therefore, interchangeable, and I so put myself on record at that time. For some time afterward I ordered 1/10 per cent. of solutions of scopolamin or hyoscin hydrobromid indiscriminately in my office refraction work, but it was not long before the scopolamin cases began to show uncertain cycloplegia, while the hyoscin cases seemed to be much surer in result. Cases were, therefore, sought out that offered favorable conditions for further pharmacodynamic comparative tests of the two drugs. Within two years three persons were found who were so doubtful about the acceptance of even a plus 0.25 D. sphere (under cycloplegia) as to fit them for these tests. One showed two degrees of esophoria, one showed one degree of esophoria and one lateral balance. The first was 26 years of age, the second 22 years of age and the third 20 years of age. In the right eye of each of these patients was instilled one drop of a 1/10 per cent. solution of hyoscin hydrobromid (Merck) and in the left eye of each patient one drop of a 1/10 per cent. solution of scopolamin hydrobromid (Merck). These solutions were prepared for me by Messrs. Shinn & Kirk, of Philadelphia, who dissolved the drug in saturated boric acid solution and then filtered the solution. Mr. Kirk himself exercised particular care in their preparation, as he had been told that they were to be used for experimental purposes. The two solutions were stood for three minutes in a flat-bottomed shallow bowl of water brought to a temperature of 80 F. A standard dropper was used, and after use in the right eye was carefully washed out before using for the left eye. Hyoscin was used in each case in the right eye and scopolamin in the left eye and all other minutiæ so arranged as to eliminate the possible sources of error. The effect on the pupil in each case is shown in Figures 3, 4 and 5, while the effect on the range of accommodation in each eye is shown in Figures 6, 7 and 8.

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*Read in the Section on Ophthalmology of the American Medical Association at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

[1] American Jour. Phar., 1899.

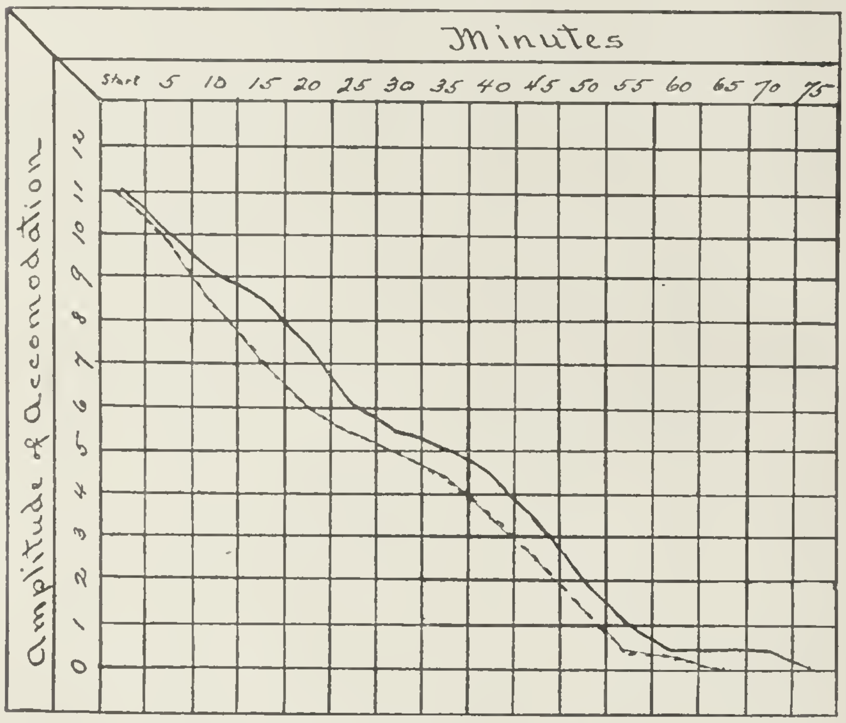

Fig. 1.—Effect on accommodation; T. K., aged 16. Scopolamin solid; hyoscin dotted.

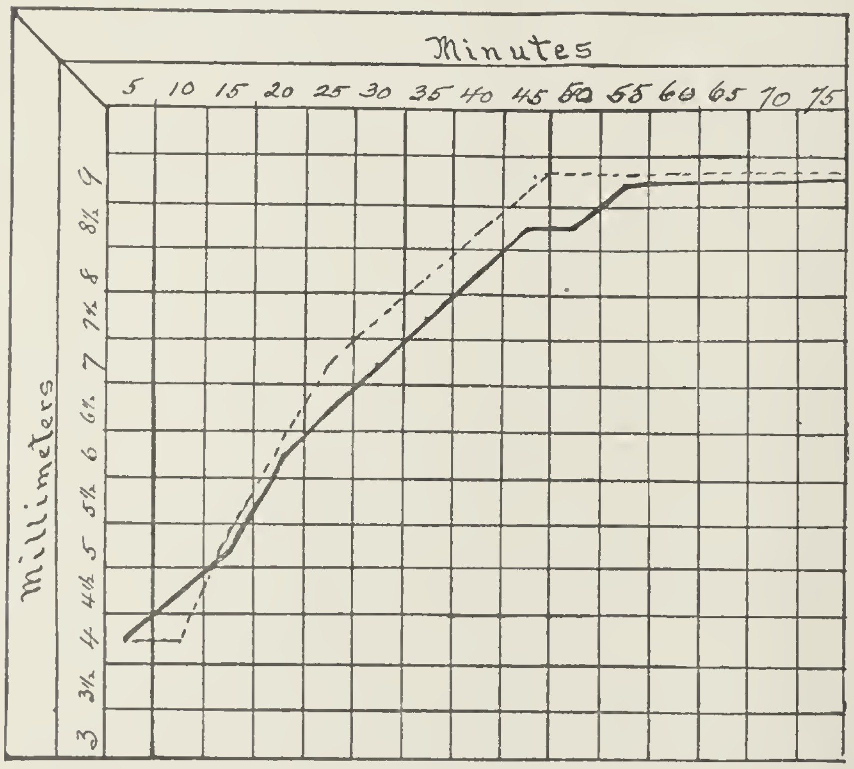

Fig. 2.—Effect on pupil. Scopolamin solid; hyoscin dotted.

PUPILS.

By reference to the figures it will be seen that the average time of beginning action on the pupil was ten minutes for both of the drugs in all of the eyes. Full dilation of the pupil occurred in the 22- and 26-year-old females in 30 minutes with hyoscin and in the 20-year-old male in 45 minutes. This may be attributed to the fact that the sympathetic nervous system is much more active in females than in males. The same difference in pupillary response was observable with the scopolamin. In the two females full pupillary dilation under scopolamin occurred in 40 minutes and in the male in 60 minutes.

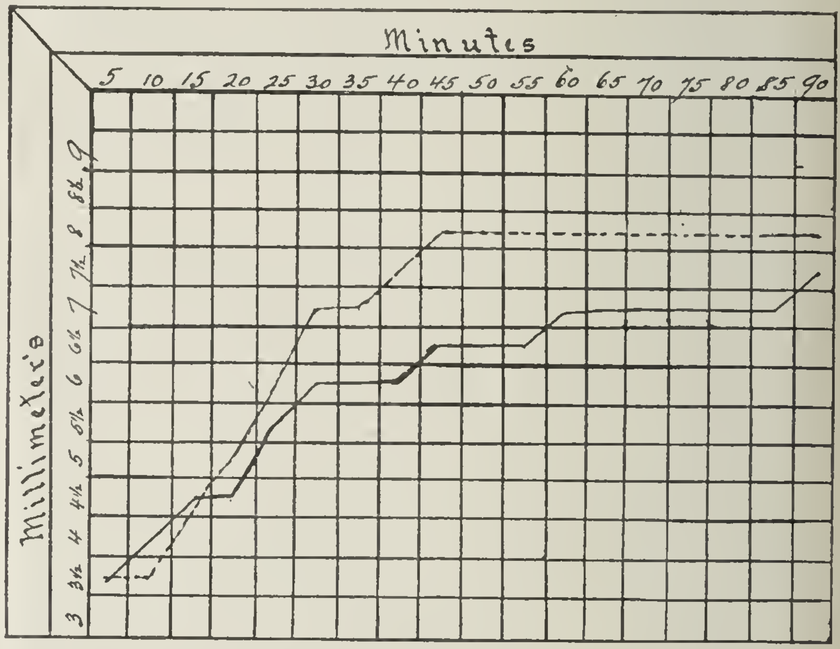

Fig. 3.—Effect on pupil.

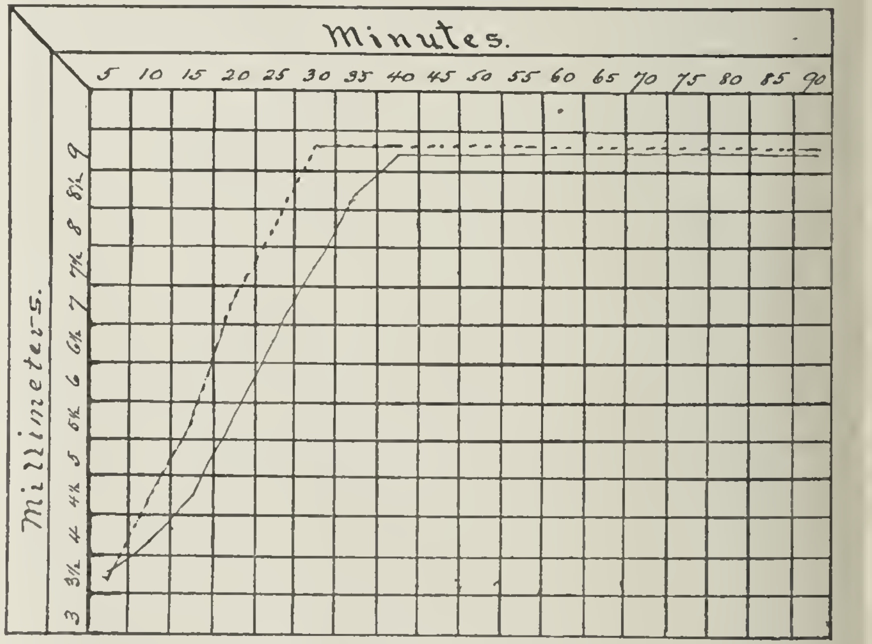

Fig. 4.—Effect on pupil.

The pupils of the 20-year-old male were 0.5 mm. smaller in both eyes at the start.

According to these findings, therefore, hyoscin showed an average time of 35 minutes to produce full pupillary dilation in the three cases, while scopolamin showed an average time of 47 minutes to produce the same result.

ACCOMMODATION.

In Figures 6, 7 and 8 is plotted by curves the effect on the accommodation of each eye of the three cases tested.

The curve indicating the hyoscin effect is shown by the broken line, while a solid line shows the scopolamin effect on the same patient.

In Figure 6 it will be noted that full cycloplegia was established in the right eye by one drop of the 1/10 per cent. hyoscin solution in 50 minutes, while an equal amount of scopolamin salt in the other eye did not bring about full cycloplegia until the expiration of 70 minutes.

In Figure 2 the onset of full cycloplegia also occurred in 60 minutes, while scopolamin in equal dose required 120 minutes to produce the same effect. In Figure 8 hyoscin produced full cycloplegia in 50 minutes and scopolamin in 100 minutes. If to these 3 cases we add the results in Case 1 above alluded to (Fig. 2) we find that:

The average time for onset of full cycloplegia under hyoscin (1/10 per cent. solution) in 4 cases was 59 minutes.

The average time for onset of full cyloplegia under scopolamin (1/10 per cent. solution) in 4 cases was 92 minutes.

So that the relative pharmacodynamic power of hyoscin hydrobromid and scopolamin hydrobromid as used in ordinary office work may be said to be somewhere close to 59:92. Or, to reduce it to the commoner form of statement, hyoscin in these test cases showed itself approximately 50 per cent. more potent than scopolamin in producing cycloplegia for refraction work. So much for the academic phase of the matter which seems to be rather at variance with the claims which chemistry makes for these two drugs.

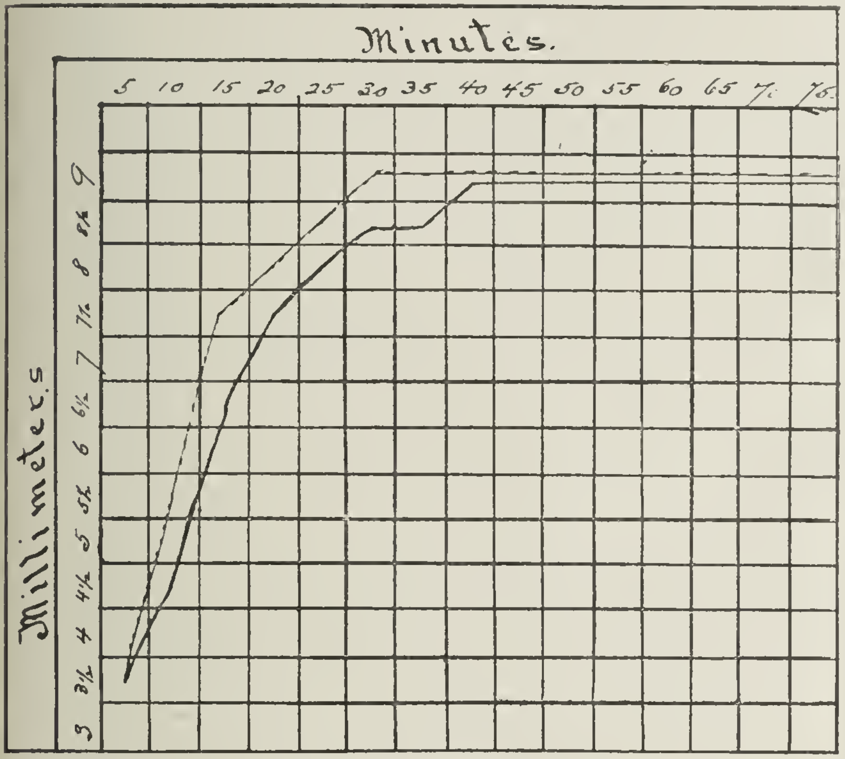

Fig. 5.—Effect on pupil.

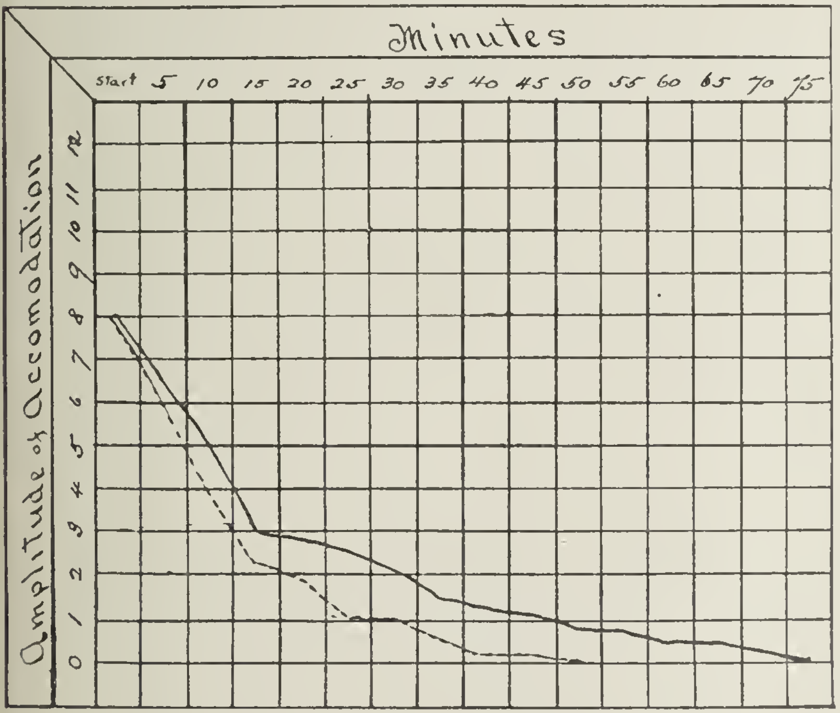

Fig. 6.—Effect on accommodation; Miss M., aged 26.

CHEMICAL CONSIDERATIONS.

Since 1833, when Phillip Geiger announced that, along with Hesse, he had succeeded in obtaining from some domestic poisonous plants the alkaloids atropin, hyoscyamin and daturin, down to the present day there have been not only numerous additions to this alkaloidal family, but there has continued a more or less animated discussion as to the properties of the several principles and the identity or non-identity of a number of them. Among the many alkaloids, acids and bases that have been derived from the Solanaceæ may be mentioned atropin, tropin, atropic acid, tropic acid, hyoscin, hyoscic acid, duboisin, homatropin, oxytropin, scopolamin, daturin, scopolin, oscin and atrosin.

One stands bewildered at the multiplicity and seeming interchangeability of the various bases and salts, and this confusion was not a little confounded when hyoscin hydrobromid was made official in the third edition of the

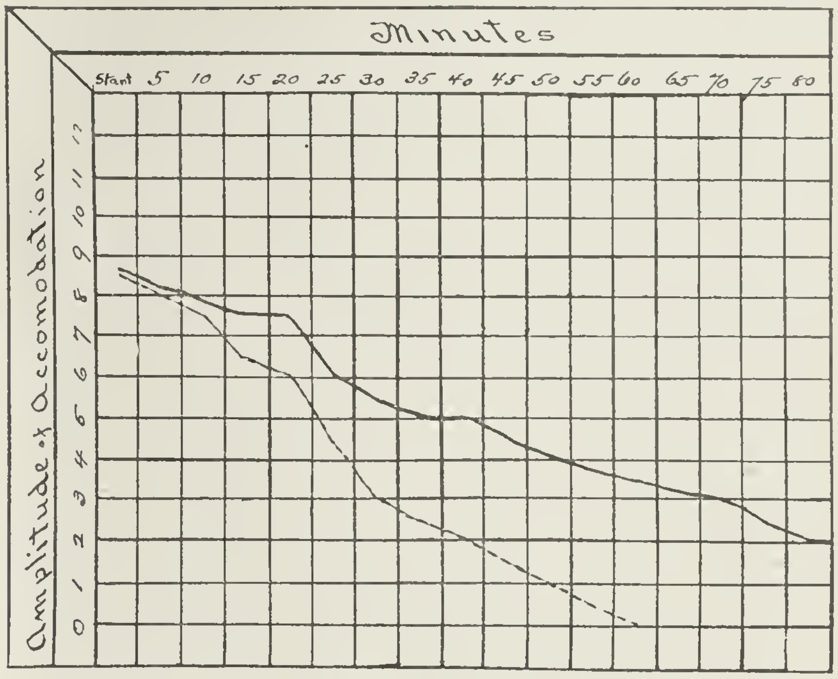

Fig. 7.—Effect on accommodation; Miss C., aged 22.

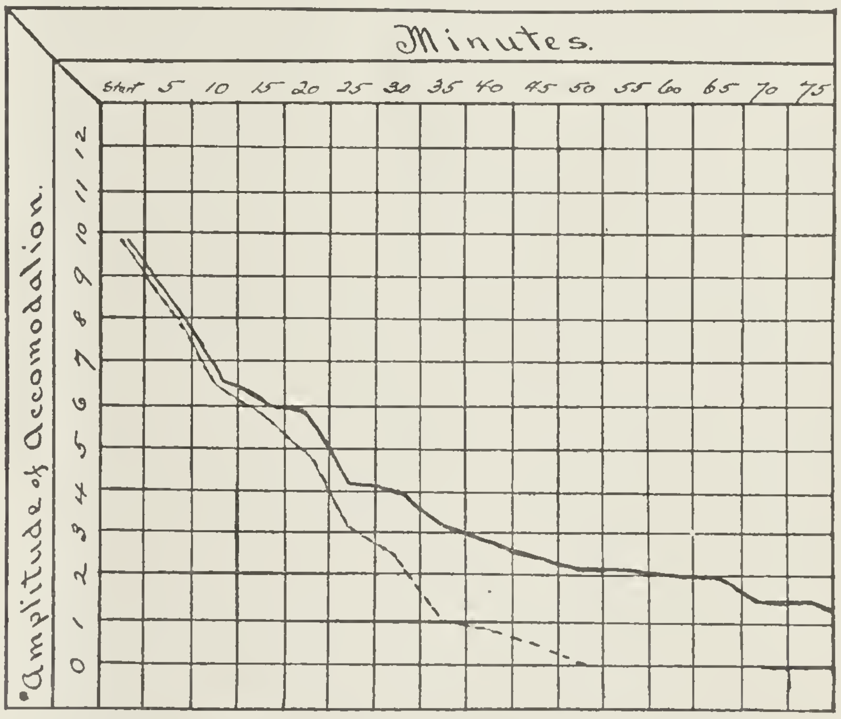

Fig. 8.—Effect on accommodation; W. J., aged 20.

German Pharmacopeia and the same chemical was designated as scopolamin (by the influence of E. Schmidt) in the 1895 supplement to the same.

Pinner[2] makes the following statements concerning the chemistry of this alkaloid family:

1. The different members of the Solanaceæ, namely, atropa, hyoscyamus, datura, mandragora, solanum and anisodus, contain two principal alkaloids, one of the composition of $C_{17}H_{23}NO_3$, the other of the composition $C_{17}H_{21}NO_4$, so that the second may be viewed as an oxidation product of the first.

2. The first mentioned is hyoscyamin, which is easily convertible by alkalies into atropin. While the latter principle may exist as such in small quantities in the above-mentioned species, it is altogether possible that hyoscyamin is the form the alkaloid takes in the living plant, while atropin is the form in which it appears in the dead plant.

3. The second base is hyoscin, or what amounts to the same thing—scopolamin. It would appear that in the presence of alkalies, hyoscin undergoes a change similar to that of hyoscyamin, and then becomes inactive atrosein.

4. Further, hyoscyamin and atropin by separation of a molecule of water, become apo-atropin or atropamin, which is isomeric with belladonnin.

5. Hyoscin is derived principally from the root of scopolia atropoides, and contains in addition to hyoscin, inactive atrosein and traces of hyoscyamin and atropin.

6. Finally, there is present in duboisin, not only hyoscyamin, but also hyoscin and other alkaloids.

The 1900 edition of the U. S. Pharmacopeia affords no help in the attempt to clear up the question. For both hyoscin and scopolamin hydrobromid it gives the formula $HBrC_{17}H_{21}NO_4 + 3(H_2O) = 434.92$.

Fifteen works on materia medica and therapeutics were gone through and every one of them stated in substance that hyoscin and scopolamin hydrobromid were identical of composition and effect.

As Merck's chemicals had been used in the experiments, the firm of Merck & Co. in New York City were then appealed to and they wrote as follows:

> Referring to your favor of the 9th instant, we would say that the formulas for hyoscin hydrobromid and scopolamin hydrobromid are alike as stated in the U. S. Pharmacopeia for 1900. This view of chemical identity seems to be pretty generally accepted now, although ten years ago the question was very unsettled. It occurs to us that the difference in the strength of hyoscin hydrobromid and scopolamin hydrobromid, which you noticed in your experiments, may be due in part to the fact that some makes of scopolamin hydrobromid on the market are of comparatively low specific rotatory power, and it has been held that the higher the specific rotatory power, the greater the physiologic effect of the product. For instance, the specific rotatory power of scopolamin hydrobromid (Merck) is about —20 degrees, whereas that of another make tested only about —6 degrees, and our works report that some brands test as low even as —2 degrees.

As this did not entirely satisfy the conditions under which the experiments were made, Merck & Co. were again written to the effect that the hyoscin and scopolamin salts used in the test were both of their own manufacture and the specific rotatory power of hyoscin hydrobromid was asked for. Merck & Co. again replied, stating this time that scopolamin hydrobromid (Merck) and hyoscin hydrobromid (Merck) were both of a specific rotary power of —20 degrees.

This leaves the matter precisely where it was in the beginning, namely: that with two drugs said to be absolutely identical as to clinical effect, pharmacodyamic power, molecular build and reaction with the polariscope, there should seem to be a more or less uniform difference in potency when tested by the delicate accommodation reaction.[3]

There remains as a possible explanation the parallel fact of chemical identity but pharmacodyamic difference in the effect of caffein and thein [both of the formula $C_8H_{10}N_4O_2(C_2H_4O_2)_2$], also of cocain and stovain, which are said to be chemical isomers and yet exhibit wide difference in their action. The familiar example of the kaleidoscope naturally occurs to one pondering such problems. Although the number of pieces of glass in the instrument never changes, yet how varied the changes in the effect to be had by rotating the instrument. It requires but a slight stretch of the imagination to believe that some such similar principle may be operative among chemical isomers. That is to say that, although they may be of the same total molecular constitution, yet a different arrangement of the various molecules may result in difference of therapeutic effect or biologic reaction, just as one dozen dry or wet batteries produce currents of varying qualities according to the way in which they are connected, a fact utilized by electricians every day.

Unless some such possible explanation as that just offered exists there is no means of explaining the seeming difference in the reaction of the eye to hyoscin and scopolamin hydrobromid.

CLINICAL CONSIDERATIONS.

In the last analysis it is always the clinical phase of such studies that interests us most. Just how and where shall we use the facts resulting from the laboratory investigation; that is to say, the pharmacodynamic and the chemical study of these drugs?

It is probable that there is to-day no subject in ophthalmic science on which there is more diversity of opinion than that of which is the cycloplegic that stands for maximum of effect and minimum of irritation to the eye, minimum inconvenience to the patient and surgeon, and minimum period of incapacity to the patient. This would be opening up the whole question of the various mydriatics and their various methods of use by different workers, which is not my desire. Suffice it to say that semi-occasionally I use homatropin and infrequently I use atropin. In the last six years, however, in something like 2,000 cases of refraction in private work I have used a 1/10 per cent. solution of hyoscin hydrobromate (½ gr. to the oz.), containing cocain also in the strength of 1/5 per cent., and not once have I seen a pronounced toxemia, by which I mean sufficient inconvenience of the patient to make him too uncomfortable to go home. In about one case in fifty there is rather marked flushing of the face, quickening of the pulse and some slight vertigo, not more, however, than I have seen a number of times with homatropin. This was in all probability due to the fact that the patient did not follow the instructions about pressing over the canaliculi five minutes after the drug was instilled. Neglect of this precaution invites toxemia with whatever mydriatic is used. The hyoscin has been used quite as freely in little children as in adults and never have I seen a pronounced general reaction in these little ones. It is my custom to have the patient have the solution instilled once or twice the evening before and twice the morning of the consultation. This is sometimes reinforced by another drop after the patient reaches the office. For office instillation the use of the solution is preceded five minutes by one drop of a 2 per cent. cocain solution, which is always warmed, as are the hyoscin drops also. Two such hyoscin instillations are made half an hour apart, and any time one to two hours after the first instillation the patient may be satisfactorily tested for errors of refraction in the vast majority of cases. A very small percentage (not more than 1 per cent. to 2 per cent.) will thus show that they need atropin. Accommodation sufficient for the purposes of all but the most exacting near work is generally re-established by the end of 48 to 60 hours. That is to say, that if a patient is measured on Saturday he may use his eyes somewhat for near work on Monday and pretty much as he is usually accustomed to on Tuesday.

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[2] Centrbl. f. praktiscne Augenheilkunde, January, 1893.

[3] Incidentally it might be noted that in Merck's price list for October, 1906, under the price given for hyoscin hydrobromid, appears the statement that "Hyoscin (Merck) and its preparations are all obtained from hyoscyamus and not from scopolia."

There are those who like to give their patients a weak eserin solution to hasten the return of accommodation, but except under dire pressure I dislike exceedingly to do this because of my belief that much of the precious therapeutic action of the cycloplegic is thus done away with. Few patients are as busy or pressed for time as they think they are, and if the facts concerning their eyes are rightfully and tactfully put before them there are few who will not abide by their ophthalmic counselor's advice.

It is almost needless to say that I would be delighted to report every eye-strain patient's eyes under atropin because of its twofold action of complete cycloplegia and perfect rest to all the internal ocular structures. But as the tension of life in this year of grace 1907 makes it impossible to realize this ideal the search must be for the next best thing, and that, in my humble estimation, is to be found either in scopolamin hydrobromid in 1/10 per cent. solution, or, as I prefer, hyoscin hydrobromid in 1/10 per cent. solution.

It is always a matter for regret to have to admit that the number of cases submitted to experiment is so small as to leave room for doubt as to the accuracy of the conclusions drawn from the work. The foregoing work is, in a sense, open to this criticism, and yet cases suitable for this kind of experiment do not occur frequently, and even when found such patients are frequently unwilling to submit to the inconvenience of a repeated mydriasis, no matter how valuable the data that might issue therefrom. The claim is, therefore, made that the results herein set forth are entitled to consideration and may be accepted as working results until such time as some other worker by a larger series of cases may be in a position to rise and disprove them.

1212 Spruce Street.

DISCUSSION.

Dr. **Albert E. Bulson, Jr.**, Fort Wayne, Ind., agreed with Dr. Reber that hyoscin is more effective than scopolamin as a cycloplegic. For the last four or five years he has used hyoscin almost exclusively as a cycloplegic and found it more reliable than homatropin and more evanescent than atropin. He did not concur in the statement that patients can use the eyes comfortably within forty-eight hours. The majority of his patients complain that accommodation is so paralyzed for seventy-two hours, and sometimes longer, that reading is an impossibility. Some patients even complain of the effect as late as the fifth day, but even this prolonged action, he said, is an advantage over atropin which generally lasts ten days to two weeks. Children are less susceptible to systemic effects of the drug, and in Dr. Bulson's experience they show toxic symptoms less often and to less extent than adults.

But, Dr. Bulson, said, it is absurd to think that toxic effects will not occasionally occur, notwithstanding the utmost caution. In an experience of several thousand cases in which hyoscin was employed, he has never seen any alarming symptoms, though frequently he noted toxic effects which warranted careful observation of the patient for some hours. For this reason he is opposed to giving the patient a prescription for the drug. If unpleasant effects are to occur he prefers to have the patient in his office under observation, and thus be able to overcome any embarrassing complications which might arise. The strength of the hyoscin solution should never exceed 1 per cent. As a routine practice, Dr. Bulson uses it in the strength of ½ per cent. solution.

Dr. **S. D. Risley**, Philadelphia, said that he was compelled to abandon the use of hyoscin many years ago, because of the severe constitutional effect. Other points which greatly interested him are the peculiar isometric properties of duboisin, homatropin, atropin and sulphate of hyoscyamin. While chemically indentical, they produce very different physiologic results, especially in the duration of the paralysis of accommodation.

There is frequently great difference in the results obtained by different specimens of the same drug, and when discussing the matter with a leading chemist Dr. Risley learned that there are curious differences in the alkaloids of belladonna and hyoscyamus due to different methods of manufacture. If extracted in the presence of an alkali, hyoscyamin becomes atropin. If extracted or placed in solution with too great heat, the physiologic properties are materially altered, and their peculiarity in polarizing light is changed.

Dr. **Charles A. Oliver**, Philadelphia, has had considerable experience in the experimental study of cycloplegics. For certainty of results he has found it necessary to obtain the same form of eye, the same character of subject, a proved variety of drug, the best of test-object, and to do the work under similar conditions. He made each series of experiments at never less than four to six weeks apart. He has no faith in the present test-type methods of experiment. His experiments were done with the needle-point method. Hyoscin was found to be toxic to the extreme. Clinically, Dr. Oliver prefers atropin in public work; using three drops of it in 4 grains to the ounce strength solution the day before and the morning of examination. In private work he employs scopolamin in one-drop dosage, of a one-grain strength, one hour before the examination. Homatropin, he said, is practically useless to bring out very fine degrees, such as ⅛ D.

Dr. **G. H. Price**, Nashville, asked in what strength and with what frequency the homatropin was used.

Dr. **Oliver** replied, two, four, six, eight grains at intervals of five minutes. In some of the cases he found full cycloplegia, but more often ocular irritation to such a degree that proper subjective answers could not be obtained.

Dr. **Allen Greenwood**, Boston, has used hyoscin hydrobromid in ½ grain to the ounce solution, applied four times, and on one occasion a young lady developed acute mania in the waiting-room. Another little girl was maniacal all the way home in the car. Following these two experiences he stopped the use of hyoscin. Dr. Reber's method of using the hyoscin, he thought, would probably obviate such trouble.

Dr. **S. L. Ziegler**, Philadelphia, cited a case in which the druggist used hyoscin in substitution for homatropin, one grain to half a dram. It was instilled seven times within the hour, and the patient was prostrated, as in the case related by Dr. Greenwood. Dr. Ziegler has seen a hypodermic injection of 1/100 of a grain produce ataxic delirium. Nevertheless, he thinks that in the strength used by Dr. Reber it is possible to secure cycloplegia without having such toxic effects manifested.

Dr. **Wendell Reber**, Philadelphia, does not believe that even after homatropin is there total disappearance of cycloplegia for from three to five days. In the case of hyoscin or scopolamin it may run six or seven days. Relative disappearance is a different thing; the patient may be able to work much sooner than that. He never hesitates to order hyoscin in ½ grain to the ounce solution. By remaining below the toxic quantity one will get good cycloplegia without toxemia. Some of the worst cases of toxemia he has ever seen have resulted from atropin. Of course, it must be used with care so as not to get the drug anywhere but in the eye. Dr. Reber considers duboisin to be more toxic than hyoscin as used in everyday work. He uses hyoscin in his private and hospital work, and believes it to be the best cycloplegic.

ACUTE PYELITIS DUE TO ACUTE APPENDICITIS.*

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Associate in Gynecology, Johns Hopkins University.
BALTIMORE.

Urinalysis is our most helpful clinical aid in the diagnosis of obscure abdominal maladies. Among the more significant findings are blood, pus, casts and bacteria in urinary tract disease; evidence of biliary pigment in diseases of the hepatic system; polyuria, increase in the specific gravity, and the presence of sugar in many of the pancreatic disturbances.

In a paper on the diagnosis of renal calculus[1] I emphasized the importance of the urinary examination and pointed out some of the abdominal conditions that must be borne in mind in making a differential diagnosis. Besides the other kidney diseases I mentioned gallstones, appendicitis, intestinal obstruction, pancreas stone colic, Henoch's purpura and angioneurotic edema. In a doubtful case where the diagnosis lies between ureter or kidney stone and appendicitis, or between urinary tract and hepatic tract diseases, the absence of urinary changes is often as positive an aid in diagnosis as is their presence in other conditions.

It is not uncommon to have acute attacks of appendiceal disease begin with a referred pain in the bladder region, and in more rare instances a pelvic peritonitis spreads from the appendix to the bladder walls, causing severe symptoms of cystitis. We occasionally see acute appendicitis accompanied by pus and blood in the urine when the clinical picture is one of septicemia or pyemia. The four cases which I wish to report do not belong to either of these classes, and I have seen no mention of similar cases in the literature. They are of particular significance because with the acute appendiceal attack the symptoms were not altogether clear, and in similar cases a dependence on the urinary findings to the exclusion of other diagnostic aids might end in disaster.

Case 1.—This case was reported in full as Case 5 in the article on "Diagnosis of Renal Calculus," above referred to.

Case 2.—*Patient.*—Mrs. K. M., aged 29, the wife of a physician in Oakland, Cal. I was consulted by this patient on Oct. 9, 1906, when I obtained the following history:

History.—Since her marriage three months previously the patient and her husband had been traveling in Europe. On September 3, five weeks before consulting me, while the patient was in Berlin, she was taken with a frequency of micturition which lasted for eight hours. Then suddenly a severe pain began posteriorly in the right lumbar and flank region and extended forward and down into the pelvis. Within two or three days the temperature rose as high as 103.5 F. There developed a large tender mass in the right kidney region. There was considerable spontaneous pain in the left kidney, but palpation here was negative. Her husband called in consultation a urologist of Berlin, and the question of operating on the right kidney was seriously considered. The temperature remained high for one week and the patient was confined to bed for two weeks. A specimen of urine catheterized from the bladder at this time contained a large amount of pus. She then got better rather suddenly and they proceeded to London. During her illness in Berlin she had a menstrual period at the regular time. The flow was not quite so free as usual. On arrival in London, about one week later, the bleeding began again, and for three weeks, up to the time she consulted me, there had been a more or less constant discharge of blood of chocolate color and offensive odor. While returning to America, the patient had another attack on shipboard. The pain during this second attack was located more in the umbilical region, but it also extended into the right side. The entire abdomen was very sore and the right kidney seemed swollen and tender. She had nausea but no vomiting.

From the history of this patient there was every reason to suppose that her attack was primarily of the kidney, but in taking her history there were certain minor details which made me think of the first patient in this series. The irregularity of menstruation made me suspect tubal pregnancy and think more strongly of appendicitis, as I have so frequently found tubal pregnancy dependent on former appendiceal inflammation.

Examination.—On examination, I found a free discharge of blood from the vagina, the uterus and left pelvic organs seemed normal, the pelvic organs of the right side were not palpated and there was no special tenderness in the right side. Suspecting a possible right tubal pregnancy, I did not persist with deep palpation on this side. The right kidney was easily palpated over its lower half and seemed of normal size and was not especially tender. The left kidney was not palpable. The patient was most tender in both lower quadrants of the abdomen, about where the ureters cross the pelvic brim. On returning from the examining room I told the husband that I suspected the case might possibly be primarily one of appendicitis. He did not conceal his surprise at this diagnosis, and on the patient's return he laughingly told her of the possibilities. She at once reminded him of several sharp attacks of indigestion that she had experienced during their voyage on the way to Europe when he had jokingly threatened to operate on her for appendicitis. On further inquiry I found that she had been treated for an attack of acute indigestion in March, a few months before her marriage. A catheterized specimen of urine centrifugalized and examined at once showed a few red blood corpuscles, no leucocytes, but many epithelial cells, mostly round and oval and mostly degenerated. There were also many epithelial and granular casts.

I sent the patient to the Church Home and predicted that the urine would clear up after a few days in bed, providing the case was one of primary appendicitis. They had come to my office immediately after a four-hour train trip from New York, and I considered that her urinary findings might be the last indication of her recent attack while on board ship. On October 10, after twenty-four hours in bed, the urine was negative. On October 12 the urine was catheterized from the bladder and found to be negative. On October 12 the patient was examined with the cystoscope.

Cystoscopic Examination.—The bladder and both ureteral orifices were normal. The right ureter was catheterized with a 2.5 mm. renal catheter. This passed easily until it reached to about the region of the brim of the pelvis, where it was distinctly obstructed. On slightly forcing it the catheter passed the obstruction with a jump, and the patient exclaimed "Oh!" and said that she had pain in the appendix region. The catheter passed easily to the kidney and forcible injection was made with salt solution to the point of discomfort. Two drams returned, showing a normal-sized pelvis. On withdrawal of this catheter both husband and wife desired to have the possibility of a stone in the ureter excluded by the passage of a wax tip. The same sized catheter prepared with a wax tip passed to the kidney without appreciable obstruction. On looking at the ureteral orifice before passing this catheter it was seen to have a little streak of blood coming from it, probably the result of overcoming the stricture in the appendix region. The wax-tipped catheter returned without scratch marks.

Operation.—On October 15 an appendectomy was performed, together with the removal of a right tubal pregnancy. On examining the patient under ether the uterus and left ovary were found to be normal. On the right side a small soft mass about the size of a normal ovary was found adherent to the pelvic wall far back and high up. An incision was made through the right rectus muscle. On opening the peritoneal cavity a small quantity of free blood was found. Reaching down to the right ovarian region two small round bodies were felt, one of which was adherent to the pelvic wall over the site of the ureter in its course downward from the pelvic brim. This was easily detached and brought into the wound with the other round body, the ovary. The small round soft body before felt with the vaginal palpating finger was found to be a small unruptured tubal pregnancy mass in the isthmus of the tube. This had become attached by its upper aspect to the posterior pelvic wall, probably just over the ureter. The cecum with the appendix was found lying over the pelvic brim. The appendix was long, its proximal 5 cm. being large and containing a large fecal mold. Its next 3 cm. was undergoing obliteration and was firmly bound by dense adhesions to the fatty meso-appendix, and so to the bowels. Its distal 2 cm. was still more contracted and turned back on the main appendix, looking red and congested.

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* Read before the College of Physicians of Pittsburg, Feb. 13, 1908.

[1] The Journal A. M. A., March 24, 1906, 851.

CASE 3.—*Patient.*—Miss L., aged 19, was referred to me on Dec. 9, 1906, by Dr. E. R. Strobel.

History.—She had just returned from a northern trip, and on my visit the patient was objecting to a further confinement in bed, as she was feeling perfectly well except for slight soreness and a "drawn feeling" in the lower right side. She said that while in the Adirondacks she was taken suddenly on November 27, at 8 p. m. with a pain in the bladder. There was a feeling that "something was trying to get out of the bladder." Soon the worst pain settled in the right lumbar region. She had eaten heartily of chicken salad about two hours before her attack and she vomited freely. On the following day there was great pain in the lumbar region and the same heavy feeling "as if something were going to fall" in the bladder. Her local physician made an examination and found the most tenderness in the right flank about half-way between the kidney and appendix regions. He at once sent the patient to Dr. S. E. Maynard of the Mary Fletcher Hospital, Burlington, Vt. Dr. Maynard's letter is such convincing evidence that the case belongs to the class under consideration that I have gained his permission to publish it in full:

"Miss L. came under my care at the Mary Fletcher Hospital about one week ago suffering with severe pain in the right side. The pain had begun two days before this, starting in the region of the appendix. It gradually followed up the course of the ureter and was most pronounced in the region of the right kidney when I first saw her. The symptoms were those of the passage of a renal calculus. The only thing that troubled me was slight tenderness at the base of the appendix which led me to fear at first a possible postcecal abscess. There was, however, no pain on using the psoas muscle. As the case went on, the kidney trouble became apparent. Three per cent. of albumin was present December 2; there was none on December 1. There were blood, pus, hyaline and granular casts with considerable free blood and pus, a few calcium oxalate crystals, but nothing else of any importance. There was a slight leucocytosis, there being 14,800 on December 3; on this date the albumin was down to 1 per cent., all of the points better. December 4, just a trace of albumin, and December 5 albumin absent and the urine practically clear except for a few granular casts. Leucocytosis was now 13,000. There had been a very slight rise of temperature throughout the entire case. The soreness over the base of the appendix continued, the whole side being slightly tender. My idea was, if she intended to remain here, to make a Roentgenogram and endeavor to determine whether there was any stone in the kidney. I felt that a careful observation, particularly with reference to her general condition and appendix, would be in order. Have written you thus fully about her condition as she desires to return before completely recovered."

Examination.—When I examined the patient the lower pole of the right kidney could just be palpated and it was not tender. There was some tenderness over the cecum in the lateral region just above the ilium. There was more tenderness near the sacral promontory about where the ureter crosses the pelvic brim. Palpation here elicited the "drawn feeling" which the patient said was the only remnant of her attack. A voided specimen of urine taken at the time of this visit and centrifugalized showed epithelial cells and leucocytes in moderate numbers; no red blood corpuscles and no casts. The urine was acid, specific gravity 1.017; no albumin. The patient had not had a return of her trouble.

CASE 4.—*Patient.*—Mrs. M. W., age 38, came to my cystoscopy clinic at the Johns Hopkins Hospital Dispensary, April 15, 1907.

History.—She complained of frequency of micturition and a throbbing backache. These symptoms had been present at times for several years, but had been especially marked for the previous two weeks. She had been sleeping on her back and right side. If she turned to the left side during sleep she was awakened with a pain in the back which was so severe she could not get out of bed for some moments. About six months previously she had bloody urine for ten days and passed many small clots At this time the urine contained a material looking like "bread crumbs" At times she could hold the urine ten hours, but at other times she had to pass it every few minutes

Examination.—On examination the patient was seen to be well nourished. The heart and lungs were negative. The right kidney was just palpable and slightly tender. The right ureter could not be outlined through the vagina.

Cystoscopic Examination.—The bladder and left ureteral region were normal. The right ureteral orifice was drawn unusually far to the right and presented a round opening in the center of a reddened area. A wax-tipped bougie was passed to the kidney without difficulty. Urine catheterized from the bladder and the specimen from the right kidney both showed blood and epithelial cells, and the specimen from the bladder contained a few leucocytes. The wax-tip returned without scratch marks and a culture specimen taken on agar directly from the kidney was negative.

A week later the urine catheterized from the bladder was normal. A more careful examination of the appendiceal region showed the presence here of an indefinitely outlined tender mass, and on pushing this toward the left the backache of which the patient had complained could be elicited. On her first dispensary visit she told of having been in the hospital several times, and on looking up the account of her various admissions I was surprised that she could have been subjected to the many examinations and to three operations without having had her appendix examined and removed.

Hospital Records.—The patient, on her first visit, which occurred in September, 1901, had been married sixteen years and had eight children and two miscarriages The last miscarriage of a six weeks' fetus occurred at the beginning of her present illness. In October, 1900, the patient had a fall and jammed her elbow into her right side. Soon severe pain set in and nine days later she miscarried. During the intervening year she had had repeated attacks of pain in the lower right quadrant, accompanied by backache. On palpation there was deep resistance and an indefinite mass cylindrical in shape in the appendix region. The patient was of a nervous temperament and gave an unsatisfactory history, and it was concluded that her pelvic condition was at fault. A cervical amputation and a repair of the outlet was done. During convalescence the patient complained of a great deal of pain in the right flank and in the femoral and thigh regions. Phlebitis was suspected but no swelling of the leg took place. The temperature did not become normal until the fourteenth day, having ranged from 99 to 100.8 F.

Second Hospital Admission: Sept. 9, 1902.—The patient complained of a dull pain in the right side and burning in the lower abdomen. The following note was made: "Ever since the patient left the hospital one year ago she has had sharp sticking pain in the right iliac fossa. This is quite constant and there have been frequent exacerbations of a more marked degree. She also complains of backache on the slightest exertion. At times she feels well enough to do a little housework, and again she is so weak that she stays in bed most of the day." Operation: Suspension of the uterus and freeing of adhesions about the right tube and ovary. No mention was made of examination of the appendix.

Third Admission: Jan. 20, 1903.—The patient entered the hospital about 11 o'clock at night, doubled over with pain, and on going to bed her knees were drawn up. The tongue was coated, pulse 88, and temperature slightly above normal. Leucocyte count, 8,700. The whole abdomen was very sensitive and there was a slight degree of muscle spasm. The patient stated that this attack had begun with a sudden severe pain one week previously, while reaching up to light a gas jet. The diagnosis was recorded as indigestion and hysteria.

Fourth Admission: Sept. 10, 1903.—The patient entered the hospital in a dull and apathetic condition, complaining of pain in the lower abdomen. Her pulse was 120, temperature 100.5 F., leucocytes 7,300. The attack began five weeks before, compelling the patient to go to bed. She stated that since her previous admission she had had several attacks of pain, nausea and constipation. Two days after admission the patient was examined under ether with negative result.

Fifth Admission: March 27, 1905.—She complained of pain in the abdomen and bleeding. Four weeks before, during what seemed to be a normal menstrual period, the patient was taken with severe pain across the lower abdomen and back. The pain was constant and severe for four days, then the flow became more profuse and continued so. The patient had also suffered from frequent and burning micturition. On examination she complained of extreme tenderness in the lower abdomen. She was examined under ether and nothing could be found to account for the bleeding. The uterus was dilated and curetted, the endometrium showing a normal microscopic picture. She was kept in the hospital for five days and discharged as well. The urine showed an abundance of red and white blood corpuscles, but there was no note to indicate whether this was a catheterized specimen.

These four cases are valuable in that they represent a group picture of a condition with which I am certain the profession at large is not familiar. From the fact that four cases should come under observation within three years, I feel that the condition can not be extremely rare. Three years ago when I reported the first case in this series Dr. Edward Ochsner told me that he and his brother had seen two similar cases in their Chicago clinic. On Dec. 19, 1907, I was called to see a patient with Dr. G. G. Rusk. Her symptoms were such as to make us think of the possibility of stone in the right ureter, and a catheterized, centrifugalized specimen of urine showed an occasional red blood corpuscle. I passed a wax-tipped bougie which returned negative and then removed a distinctly diseased appendix which contained three fecal concretions. Her case was not included in this group because the urinary findings were not marked.

Strictly speaking, Case 4 of the above series does not belong in a report on pyelitis, but I have included the report because the urine had enough blood to be "smoky" and contained a few leucocytes, and because of the many times the real diagnosis in her case had been overlooked.

Can we from these cases draw a clinical picture which will be an aid in future diagnoses? I saw none of these patients in the acute attack, but from the histories and the later findings as above reported, at least two features, other than the abnormal urine, suggest themselves as being more or less constant in this class of cases. These are bladder disturbance and the early cessation of the microscopic signs of urinary tract disease.

In Case 1 some of the attacks were accompanied by a pain in the bladder, but a marked feature was the beginning of each attack with a throbbing in the rectum, a not uncommon symptom in ureteral stone. I saw the patient ten days after her last attack and a catheterized specimen of urine was absolutely normal.

In Case 2 the attack of lumbar pain was preceded by frequency of micturition lasting eight hours. The patient had all of the features of a severe pyelitis with her first attack in Berlin five weeks previously, and during her attack on shipboard, about a week before I saw her, the symptoms were similar, but the urine was not examined. The catheterized urine when I saw her after the journey from New York contained blood and many epithelial and granular casts, but after twenty-four hours of rest these pathologic elements had all disappeared.

In Case 3 the patient was taken suddenly with a severe bladder pain and "a feeling that something was trying to get out of the bladder," and during her attack Dr. Maynard found every evidence of a pyelitis. One week later when I saw her a voided specimen, centrifugalized and examined immediately, showed only a few leucocytes and epithelial cells, all of which may have been from the lower tract.

In Case 4 the patient had had bladder symptoms at times for four years, and these were more pronounced when the pain in the lower right side was increased. On her first dispensary visit the urine was "smoky" from its blood content and there were a few leucocytes; one week later it was normal.

The pathology of this condition is perhaps best suggested by the findings in Case 1. The appendix was densely adherent over the pelvic ureter. Inflammation of the appendix under such conditions would naturally lead to pressure on the ureter and inflammation and swelling of its walls. The stenosis thus established would result in acute hydronephrosis, a most favorable condition for infection either by contiguity, through the lymphatics, or by way of the blood stream and the kidney excretion. In Case 2 the operation did not reveal such close relationship between the appendix and the ureter, but the appendix lay over in the pelvis and the tube had become adherent to the ureter, pregnancy probably resulting from this adherent condition. The most suggestive feature of this case was the obstruction to the renal catheter at about the appendix region and the free hemorrhage from the ureter following the overcoming of this obstruction.

Should appendicitis have been diagnosed in these cases in spite of the urinary findings? Case 1 was watched by careful physicians, one of whom was a brother and the other a cousin. We all recognize the misfortune of being a member of a physician's family, but, as a further reason for error in diagnosis, the evidence in her case was highly misleading, the pain in each attack soon shifting to the kidney region and the urine showing marked pathologic changes. With any obscure attack of right-sided abdominal pain beginning as a throbbing in the rectum we should at least keep a suspicious eye on the appendix.

Not only was appendicitis not suspected in Case 2, but the Berlin specialist wrote Dr. M., the husband, a letter, after hearing of the diagnosis and operation, complimenting him on the outcome but refusing to believe the attack to have been other than pyelitis *per se* and unassociated with appendicitis.

The Adirondacks physician considered the patient in Case 3 to have an acute attack of appendicitis, but one day after she reached the Burlington hospital, and the third day of her attack, the urinary findings were such as to make Dr. Maynard extremely uncertain about the diagnosis.

Case 4 would scarcely be considered other than a chronic appendicitis victim with our present day knowledge of the less typical forms of this disease.

The importance of early recognition of the true nature of these cases is obvious. A pyelitis or kidney condition, in itself, is rarely of immediate danger, while the overlooking of an acute fulminating appendicitis because of dependence on the urinary examination might cost the patient's life.

THE OPERATION FOR THROMBUS OF THE SIGMOID SINUS AND INTERNAL JUGULAR VEIN, OF OTITIC ORIGIN.*

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One of the most important sequelæ of middle-ear infections is phlebitis or thrombosis of some of the venous drains of the head, and particularly when such pathologic conditions occur, as they usually do, in the sigmoid bend of the lateral sinus. Disease of this nature is found not only in the sigmoid sinus, but also in the lateral sinus proper, the superior and inferior petrosal sinuses, the cavernous sinus, the jugular bulb, the internal jugular vein and its connections, etc. The sigmoid sinus is, however, its favorite location on account of its vascular connections with the tympanic cavity and adjoining cells and its close contiguity to these frequently infected structures. As the jugular bulb is located directly beneath the tympanic cavity, an unusually high dome to the bulb, or necrosis of the tympanic floor, or congenital dehiscences in the floor, will assist in the conveyance of infection. This will occur through the vessels and lymphatics connecting the tympanic cavity with the bulb, and may produce a primary phlebitis or thrombosis of the bulb, which has not proceeded through the usual channels of the antrum, mastoid cells and lateral sinus. These conditions are usually found in children, develop rapidly, and generally demand immediate operation with excision of the internal jugular vein.

I do not believe that actual intravascular phlebitis and thrombosis of the sinus and vein occurs as frequently as might be supposed from a perusal of much of the available literature of the day, because a fairly large experience in mastoid work for many years has not disclosed this to be the case. Nevertheless, the disease occurs with sufficient frequency to demand the most careful study in order that prompt and skilful action may be taken whenever its existence is actually disclosed.

RISK IN SINUS OPERATIONS.

The surgery of otitic phlebitis and thrombosis has made great progress of late years and many lives have been saved thereby that must otherwise have been inevitably lost. I fear, however, that overenthusiasm along these lines may have led some thoroughly competent and trustworthy observers to overestimate the frequency and importance of the subject and to underestimate the dangers of operative interference. The opening of the sigmoid sinus, for instance (first seriously proposed by Zaufal in 1880), with its possibilities for infection, especially when done through an already infected mastoid cavity (which is, of course, usually the case), is an operative procedure of importance and danger. Yet some surgeons practically advocate its performance for diagnostic purposes where any reasonable suspicion points to an intrasinus involvement. In my opinion the sinus should usually be opened in the face of mastoid disease, either acute or chronic, accompanied by characteristic phlebitic symptoms, such as chills, sweats and wide excursions of temperature and pulse. It should also be done in the presence of a virulent infection, especially of the streptococcus type, a significant differential blood test, etc. Nevertheless, I have seen a number of such cases cured by the removal of necrosed bone, granulations[1] and pus from the sinus neighborhood. I should, therefore, be inclined to wait a few hours after the removal of such débris, before opening the sinus itself, unless the patient's condition and symptoms are reasonably decisive and urgent in character, and unless an inspection of the exposed sinus renders the presence of a thrombus exceedingly probable.

It must have been the experience of most surgeons that phlebitic symptoms frequently and permanently may be relieved by a removal of neighboring necrosis, granulations, pus, etc., which perpetually infect and reinfect the sinus walls. This fact is especially emphasized by Bergman in his writings and can certainly be substantiated by all operators of experience. In this observation lies an earnest warning against too energetic operative procedures, without quite positive indications. It is sometimes the case that septic symptoms following a mastoid operation are due to pneumonia, typhoid, malaria and other coincident conditions which should be duly considered and properly weighed before proceeding to a sinus operation. It should not be forgotten that, while lives may occasionally be sacrificed by proper conservatism, it is probable that more lives would be lost by injudicious and hasty surgery.

The provisional determination to open the sigmoid sinus is usually formed before the mastoid has been operated on, or after an operation has been performed and several days have perhaps elapsed, during which time the condition of the patient has not materially improved. This resolution is, of course, liable to be changed by existing intramastoid conditions, after the mastoid cortex has been removed, at the time of the primary operation. In all cases where sinus symptoms are clearly present, the bony covering should be freely and carefully removed and the soft sinus exposed for inspection, whether the osseous partition is necrosed or not. Should the inspection reveal an apparently healthy sinus, operative procedures may be suspended (unless the patient's condition is too grave), as sharp sinus symptoms are sometimes produced by a beginning absorption or phlebitis. This may originate in an infected mastoid cavity, relief from which is not infrequently noticed after a thorough exposure and cleaning of this space.

After this has been accomplished and the patient carefully watched for some hours or perhaps one, two or three days, and the sinus symptoms remain the same or grow worse, the sinus should be unhesitatingly opened, even if its local appearances are apparently healthy. Much the same procedures should obtain in case necrosis, granulations and pus are found in the sinus region, for such pathologic products continually bathing the soft tissue tend to become absorbed and to produce the characteristic danger signals. Such débris may be carefully removed and the sinus amply inspected. Should it be found of healthy appearance, one may stay operative procedures a little, unless the symptoms are quite urgent. Many patients have recovered and will recover under such conservative management, and this fact points a significant lesson.

THE APPEARANCE OF THE UNCOVERED SINUS.

Of course, the entire subject of opening the sinus hinges on the probable existence or non-existence of a thrombus, and this can not always be easily determined. A discussion of this topic is too prolonged for the present article, and is apart from the specific subject under consideration.[2] As the physical appearance of the uncovered sinus, however, must be observed while operating on a patient suffering with sinus symptoms, this phase of the subject may with propriety be here considered, and it may be said that even a physical examination of the sinus does not always clear up the pathology. The sinus is usually bluish-white in color and easily compressible. Nevertheless, the neighboring necrotic bone, etc., may stain and darken the outer coats of the vessel, without the existence of any intramural clot, or a perfectly normal color may characterize a sinus, in whose interior a thrombus may be found.

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* Read before the Middle Section of the American Laryngological, Rhinological and Otological Society, Indianapolis, Feb. 22, 1908.

[1] The existence of granulations on the soft sinus wall is regarded by many as beneficial, in that it is nature's obstruction to the invasion of micro-organisms, and many surgeons carefully refrain from disturbing them during the course of an operation.

A sinus may be thoroughly compressible and yet contain a parietal clot, where the obstruction is not yet complete, but a solid, resisting sinus is, of course, a reasonably positive sign of an obstructive clot. The emission of pus from the mastoid foramen is a significant symptom, as it may then be assumed that extradural pus is present in the cerebellar fossa, around the sigmoid groove. I am opposed to the insertion of an aspirating needle into the sinus in order to ascertain the fluidity of its contents. If nothing is withdrawn it is safe to assume the presence of a thrombus, but blood may escape in case of a partially organized clot, and if the vessel is healthy the operator may easily regret having punctured and probably infected a normal sinus; if the sinus is to be opened at all, it is much better to make a complete incision rather than a puncture. The stroking and compression test of Whiting can not be commended, for, while it may facilitate the diagnosis, it can easily displace infected thrombotic particles and set them into circulation with disastrous results.

THE PROBLEM OF DIAGNOSIS.

It will thus be seen that making a diagnosis in cases of otitic sinus thrombosis is beset with some difficulties and perplexities. Yet a correct conclusion can usually be reached, especially when a consideration of the general subjective and objective symptoms has been aided by an operative exposure of the sinus itself through the mastoid cavity. Fortunately this (the mastoid operation) is a procedure which should be performed primarily and, therefore, nothing is lost and everything gained when a mastoid operation is advised in a suspected otitic sinus thrombosis, for the cells, etc., may be thoroughly opened and cleaned and the sinus inspected and perhaps opened during one operative procedure.

Should an operation, or at least an inspection of the sigmoid sinus be decided on, in a case of otitic origin, it is only necessary to consider the operative steps in connection with a thorough exposure of the mastoid cavity, for this is at the same time the easiest as well as the best avenue of approach. The mastoid operation should first be completed in all its details, for, in case troublesome hemorrhage occurs, it might be extremely difficult to continue further operative procedures on the bone. In addition, the work on the sinus should be prosecuted under the most aseptic conditions possible, and this can be best accomplished after the mastoid interior has been thoroughly cleaned. As has been previously said, the bony covering of the sinus may be in a necrotic, softened and fistulous condition, surrounded by granulations and bathed with pus.

THE REMOVAL OF GRANULATIONS.

The removal of such pathologic products can be accomplished with comparative ease by curette, chisel, bur or rongeur, extreme care being exercised in all such manipulations to avoid injuring the soft dural covering of the vessel. Some authors advocate the non-removal of granulations, believing them to be Nature's obstruction to the invasion of the sinus interior by microorganisms. However this may be in theory, I believe that such tissue is best thoroughly removed, not only to place the parts in as clean a condition as possible, but also to facilitate a careful examination of the sinus, which can not be satisfactorily accomplished through a granular mass. In most instances I accomplish this work by means of a strong, narrow rongeur, one blade of which is inserted inside and the other outside of the bony sulcus, being careful to avoid pressure on the underlying vessel and only removing small fragments of bone at a time. Objections have been made that the slight pressure on the sinus may induce a fracture of its possibly thrombotic contents, which will be swept into the circulation and induce migratory infection. This objection seems like a refinement of technic and a magnifying of possibilities, for, while such an accident might possibly occur, it is altogether unlikely. It certainly would seem to be a better instrument than the chisel, with its possibilities of bone fracturing and splintering, with perhaps a sinus puncture and an embarrassing hemorrhage.

All the necrosed bone should be removed, no matter how far it extends, either in the direction of the torcular or the bulb, and it is well to remove even some healthy bone in order to insure complete elimination of all necrosis (Fig. 1). The sinus should then be minutely inspected, and if its opening is determined on the operation should be continued after the parts have been thoroughly cleaned and irrigated with antiseptic solution. If it is deemed best to await developments the wound should be cleaned, irrigated and dressed as after other mastoid operations.

In case a primary opening of the sinus is determined on either at the original mastoid operation or at a later date, it should be remembered that an ample exposure is absolutely essential to correct surgical manipulations. The sinus must be exposed, therefore, for at least a short distance above its knee and as far downward in the direction of the jugular bulb as possible. This free exposure may be accomplished by a removal of the necrosed bone alone, where such necrosis is extensive in character, or it may be necessary to remove considerable healthy bone in order to render the sinus easily accessible.

LOCATION OF THE SINUS.

Unless the situation of the sinus is indicated by a fistula, its position is uncertain. In children it is located more superficially and further forward than in adults, and even in the latter its location is by no means fixed. It is usually, however, to be found at a point about one-half an inch behind the posterior bony meatal wall, just back of the antrum, and a thorough mastoid operation will usually disclose its convexed outlines. The sinus should first be exposed by chisel, bur or curette, after which the bone is best removed with a strong, delicate and narrow rongeur, as previously described. The bone should be carefully removed in small pieces and the operative field examined after each bite of the forceps, care being taken not to wound the sinus, either by perforating its covering by a sharp fragment of bone or by rupturing an already softened dura by carelessly pulling away adherent osseous chips. The latter accident may be averted by, from time to time, passing a small spatula between the soft sinus and its bony covering and gently separating the two.

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[2] A tolerably complete analysis of the symptomatology of sinus thrombosis, etc., can be found in my communication in the Chicago Medical Recorder, January, 1906, and in other books and periodicals.

After the sinus has been fully uncovered all débris, etc., should be thoroughly removed and the operative field abundantly flushed with antiseptic. The hands and instruments of the operator should be recleaned and every effort made to prevent sinus infection. In opening the sinus there is danger of a fatal aspiration of air occurring, to prevent which the patient's head should be dropped low and the operative area flooded with sterile water. The sinus should now be opened by a free incision along its length, being careful not to pass through both walls of the sinus into the cranial cavity, an accident which is by no means impossible. If there is a flow of blood, two tight rolls of gauze or cotton held in fixation forceps (which should be previously prepared) should be placed one above and the other below the incision, remembering that brain substance and not bone lies beneath the sinus, and that the amount of pressure should, therefore, be limited (Fig. 2). Such pads may be held by the operator, or by his assistant, or both operator and his assistant may each hold one; they should not be applied, however, until after the sinus has been opened and an opportunity has been given for a burst of hemorrhage to occur and possible thrombotic particles to become expelled. These pads may be lifted alternately and accurate information obtained as to whether the hemorrhage occurs from above or below.

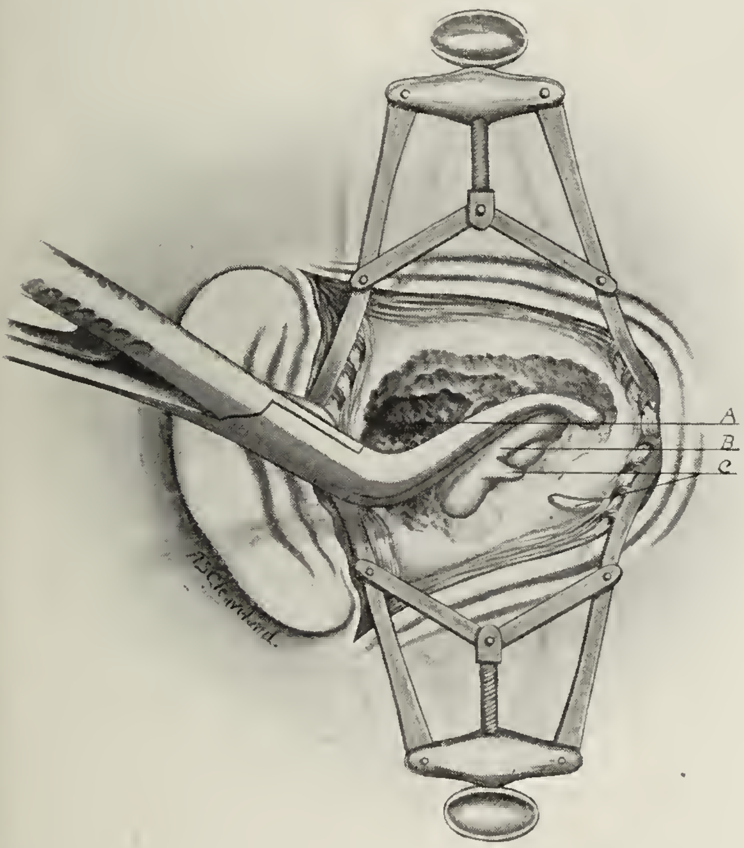

Fig. 1.—Exposing the sinus. A, mastoid antrum; B, sigmoid sinus; C, mastoid emissary vein.

If free hemorrhage occurs from both directions it is proper to assume the absence of a clot, or at least that any existing loose clots have been expelled by the force of the escaping blood. If the hemorrhage is slight or absent from either direction, a clot in that direction is to be assumed. If the vessel is assumed to be healthy, some iodoform gauze, rolled into a cylinder long enough to cover completely the sinus incision, should be firmly placed over the vessel and supplemented by layer after layer of gauze carefully held in place. The other portions of the mastoid cavity should then be packed with gauze and the entire mass of packing held in position by a firmly applied bandage which may usually remain in position for three, four or five days, when it should be carefully soaked off (to prevent hemorrhage) and more packing and a bandage applied.

The danger of hemorrhage is usually past by the time the second or third dressing is done. In case there is hemorrhage from below and not from above, the sinus should be further incised in the direction of the torcular, and more of the bony sulcus removed if necessary, in order that adequate room for further operative procedures should be afforded. In considering thrombi, which extend from the sigmoid sinus back toward the torcular, it should not be forgotten that clots extending in that direction are not usually so infective in character as those spreading in the direction of the bulb. The venous current, of course, naturally flows from the head downward, and, while infectious particles may easily pass down with the blood current, they do not so easily pass upward and backward against the current. It should not be forgotten, however, that blood currents in valveless veins seek the direction of least resistance and may easily become reversed on contact with intravenous obstructions. It is, therefore, quite possibel that, while a thrombus in the immediate vicinity of the antrum may be highly infectious in character, yet as it extends backward toward the torcular it may gradually become perfectly innocent, and be composed of benign accretions of normal blood clots that form a natural and healthy obstruction to the passage of infectious micro-organisms.

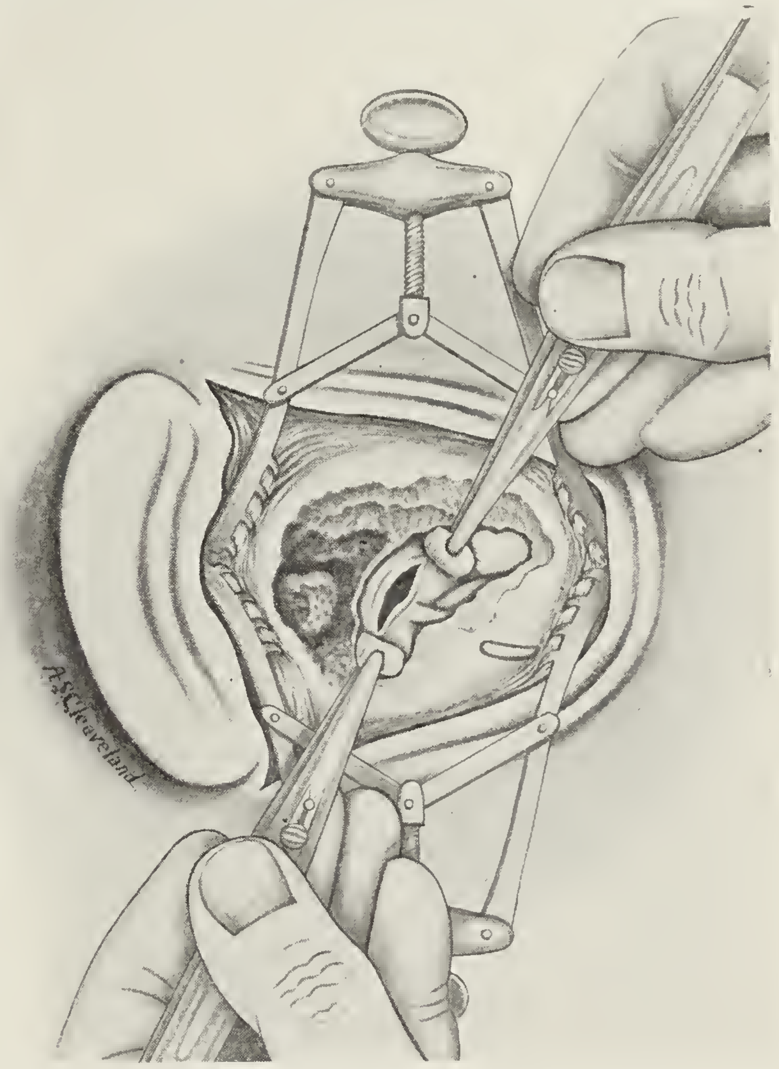

Fig. 2.—Compression of the sinus to arrest hemorrhage, and to ascertain the presence of a thrombus.

TREATMENT OF THE THROMBUS.

It is, therefore, questionable just how much such a thrombus should be disturbed, and some authors strongly advocate leaving it alone. I believe that if the clot is hard and apparently extensive, it should be gently curetted at its visible portion, in order to remove its infectious layers, and then sprinkled and packed with iodoform powder and gauze. In case, however, the clot is small, or soft and unhealthy in its appearance, it should be completely removed by the curette until free hemorrhage occurs (it being remembered that quite free hemorrhage may occur, even with a considerable parietal thrombus, from, for instance, the superior petrosal sinus, though the sigmoid sinus is more or less blocked with thrombotic accretions) even if it becomes necessary to remove more and more of the bony sulcus with a corresponding extension of the sinus incision. A small sized curette should be employed for the removal of thrombi, small enough to allow of intrasinus manipulations, and its spoon may, of course, be carried considerably beyond the limits of the bony opening (Fig. 3).

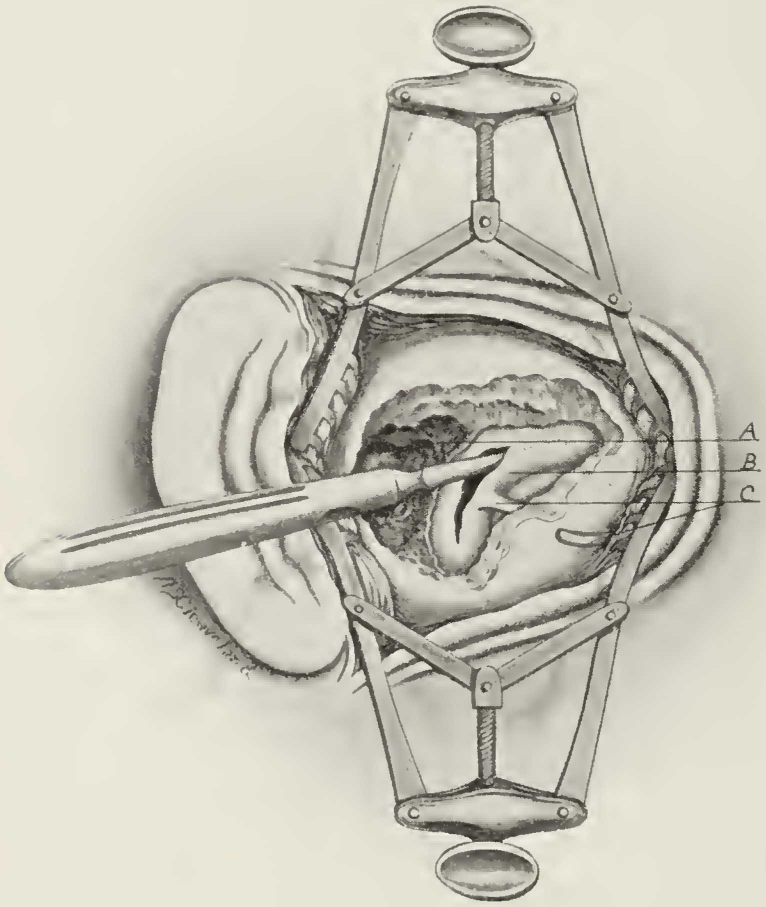

Fig. 3.—Curetting the sinus. A, mastoid autrum; B, sigmoid sinus; C, mastoid emissary vein.

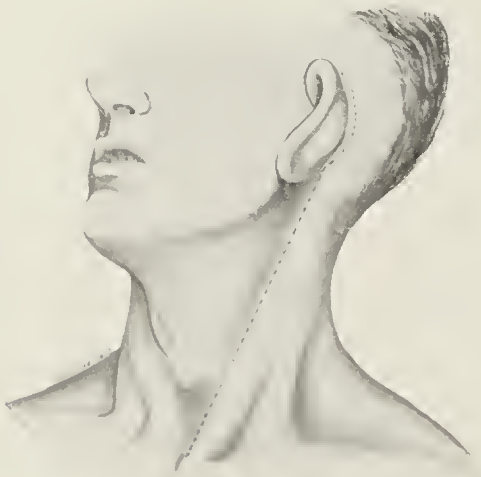

Fig. 4.—Initial incision for exposing internal jugular vein.

It should not be forgotten that a sinus infection of several days' duration may soften the sinus walls to such an extent as to render their perforation by a curette exceedingly easy; curetting should, therefore, be carefully performed, lest brain infection be thus produced. Ease of manipulation may be much facilitated in all sinus curettements by not only incising the sinus, but by excising a large piece of its outer dural wall, and diagnosis and surgical precision will be greatly aided by exposing the intrasinus openings of the mastoid emissary vein and the superior petrosal sinus. The former will be found in the posterior wall of the sinus at a point about on a level with the floor of the ordinary radical mastoid operation when finished. The latter enters the sigmoid sinus from the cavernous sinus at a point about on a level with the roof and posterior wall of the ordinary radical mastoid operation, when completed; in other words, at about the junction of the lateral with the sigmoid sinus, and passes into the sigmoid sinus.

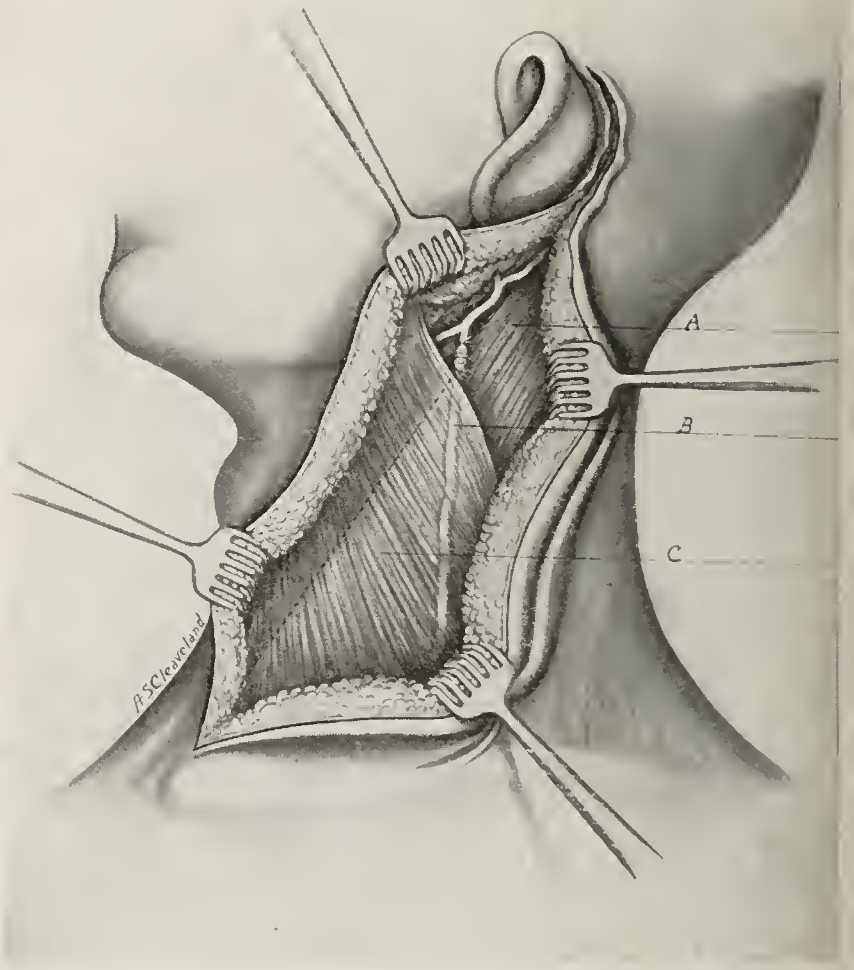

Fig. 5.—Exposure of platysma myoides muscle and external jugular vein. A, sternocleidomastoid muscle; B, external jugular vein; C, platysma myoides muscle.

It will be observed in Figures 4, 5, 7 and 9 that the incision in the neck is continuous with the incision over the mastoid process. This point has been brought out in the pictures because in neck surgery where the internal jugular vein is to be removed, owing to a previous mastoid infection, the incision in the neck should be secondary to and continuous with the incision over the mastoid process.

In endeavoring to get as close to the jugular bulb as possible the surgeon should not press too far forward, as he is liable to injure the facial nerve, as it passes down through the posterior meatal wall on its way to the stylomastoid foramen. Bleeding may easily be stopped by carefully applied gauze rolls. In case free hemorrhage does not proceed from the bulbar direction of the sinus, a very serious condition confronts the operator, for, the blood current of the inferior petrosal sinus entering the anterior portion of the jugular bulb, on its way from the cavernous sinus, constantly playing on the septic end of the thrombus, naturally carries the infectious micro-organisms down into the bulb, internal jugular vein, etc., toward the heart, lungs, liver, etc., thus readily producing sepsis, pyemia, metastatic abscess, etc., which usually result fatally.

It is, therefore, necessary that this end of a thrombus, or a thrombus located in this portion of the sinus, should be as thoroughly removed as possible, in order that the further or general spread of infection may be stopped. This may probably be best accomplished by the curette, which should be gently manipulated until free hemorrhage from below occurs, which may be controlled by the rolls of gauze, bandage, etc., as previously described. It must not be forgotten, however, that it is usually quite impossible to successfully curette the jugular bulb by simply proceeding downward by way of the sinus. The curette can reach practically as far as the bulb and is then stopped by an intervening wall, an abrupt curve, etc., so that if a complete thrombus extends downward as far as the bulb or further, free hemorrhage will not usually be produced by sinus curettement.

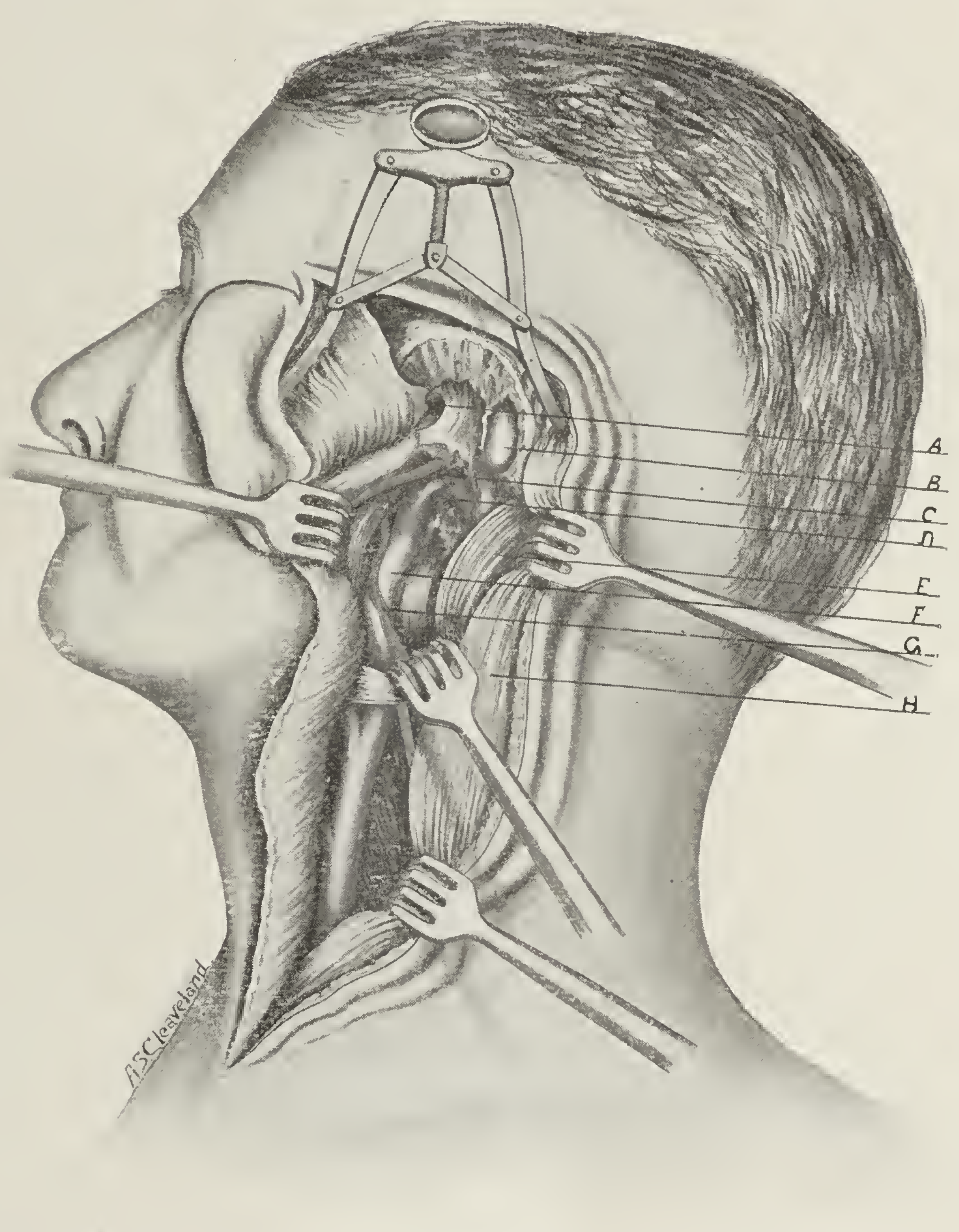

Fig. 6.—Showing the course of the sigmoid sinus, jugular bulb and internal jugular vein. A, external auditory meatus; B, sigmoid sinus; C, facial nerve; D, jugular bulb; E, digastric muscle; F, internal jugular vein; G, spinal accessory nerve; H, sternocleidomastoid muscle.

Under these circumstances the operation of Grunert, Voss, Iwanoff and others has been proposed for the thorough exposure of the bulb. Owing to the complications and great danger of producing facial paralysis, hazardous hemorrhage, etc., however, it has never become popular and it is generally thought better to expose, ligate and partially remove the internal jugular vein and then clean out the bulb. It must not be forgotten that this does not always prevent the spread of infection by other channels, and that the sudden stoppage of the venous circulation may force infective particles backward into the meningeal and cerebral veins. While the internal jugular vein is, of course, the main avenue through which infection spreads from the sigmoid sinus to the heart and other organs, nevertheless, even with this principal channel ligated, infection may proceed through the posterior condylar vein, the occipital sinus and the mastoid emissary vein, all of which communicate indirectly with the subclavian and innominate veins, irrespective of the internal jugular. It will be remembered that the posterior condylar vein passes through the posterior condylar foramen and connects the lowest level of the sigmoid sinus with the deep veins at the back of the neck.

LIGATION OF THE INTERNAL JUGULAR.

Some surgeons invariably operate on the internal jugular before proceeding to open the sinus; others only ligate when free bleeding can not be established from the bulbar end of the sinus; others open and curette the sinus and then wait for a continuance or exaggeration of the symptoms, when the jugular operation is performed. Certainly but few, if any, surgeons would sympathize with the views of Horsley, who only ligates after metastases have occurred, for then it would almost surely be too late. Favorable reports of jugular ligation in sinus thrombosis need not necessarily be attributed to the ligation, as, for instance, Körner reports 43 per cent. of recoveries without ligation. Still, it is probably true that in septic and pyemic cases sinus operations with jugular excision yield better results than when the jugular is not disturbed.

My method of procedure is as follows: The sinus is opened, the head always having been previously lowered, the upper portion is curetted if necessary. If hemorrhage occurs freely from below the operation is finished; if not, the lower end of the sinus is carefully curetted and if free hemorrhage occurs nothing further is done. If free hemorrhage does not occur, pressure pads and a bandage are quickly applied and the jugular is ligated and excised, the bandage then removed, the sinus, bulb, etc., curetted and cleansed and the entire operative field, both in the bone and neck properly dressed and bandaged. The necessity for the operation is greatly emphasized if the cervical tissues just below the mastoid are swollen and painful, and if any hardness and pain can be detected along the course of the vein in the neck, and if general pyemic symptoms are present.

I am convinced that excision of the jugular is not an operation which should be undertaken hastily, as grave circulatory and other disturbances are liable to ensue, and other methods of relief should first be tried, unless the patient's condition is very urgent. The literature furnishes many instances where sudden optic neuritis, edema of the brain, with hemorrhages and softening, thrombosis of other cerebral sinuses, etc., have followed jugular ligation, and it should not be forgotten that a small and insufficient jugular on the other side, totally unable to assume double duty, may be present and precipitate most unfortunate results. As a deduction from these observations Eagleton urges that in cases of sinus thrombosis, with optic neuritis, it should be concluded that the return venous flow is already seriously obstructed and that great caution should be observed in adding to such conditions by ligation.

EXCISION RATHER THAN LIGATION.

In case it is concluded to operate on the jugular vein it is better to excise most of it rather than merely to apply a ligature, as, if the jugular operation is necessary at all its septic or pyemic current should be eliminated as much as possible and its poisonous contents removed. Before operating on the jugular the shoulders should be elevated on a sandbag or something of the kind and the neck and head allowed to drop down, the latter turned away from the field of operation in order to place the neck well on a stretch, so that the anatomy of the parts is well defined and the tissues easier to operate on.

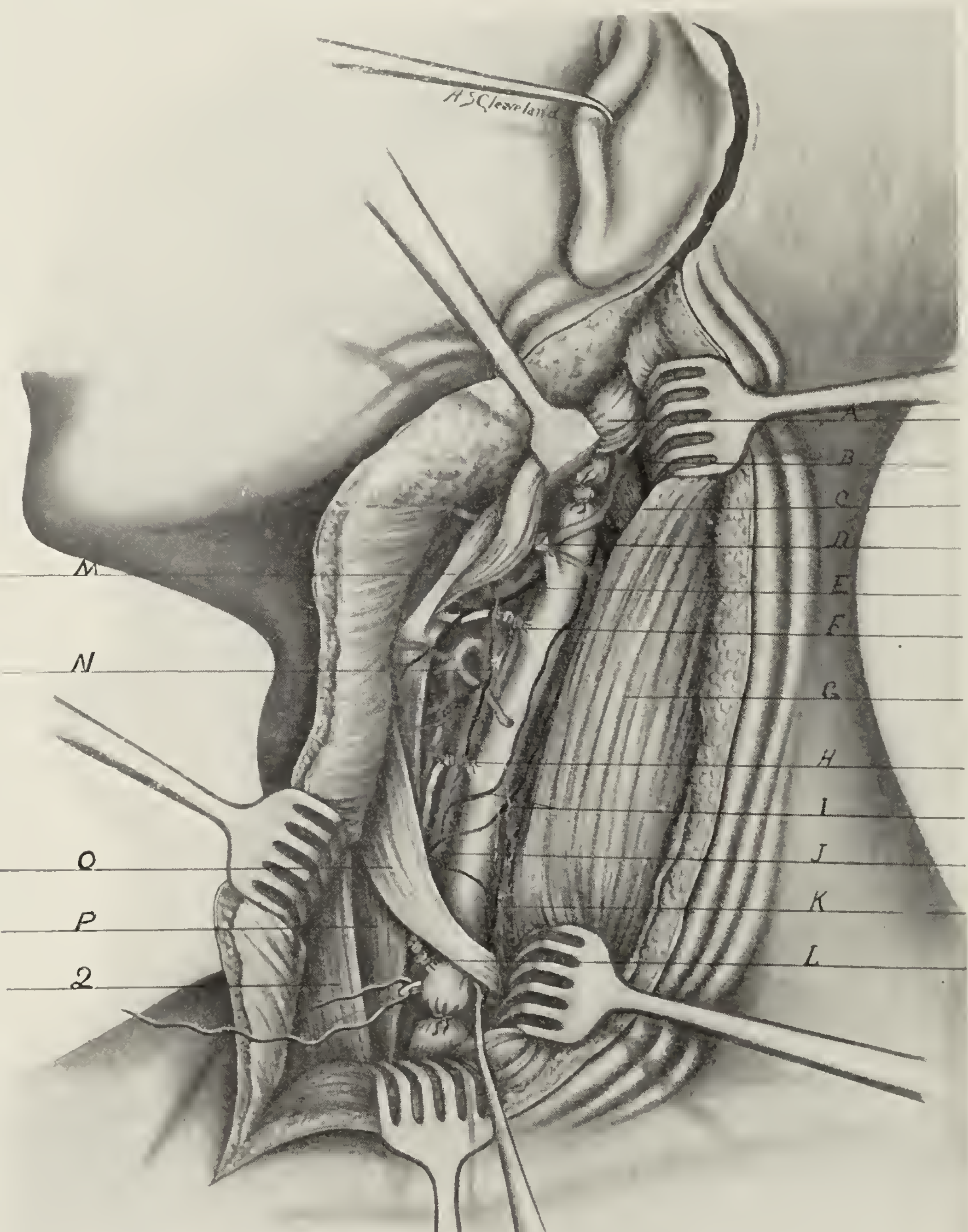

Fig. 7.—Exposure of the internal jugular vein, etc.; the vein is about ready for removal. A, posterior belly of digastric muscle; B, spinal accessory nerve; C, occipital artery; D, facial vein; E, hypoglossal nerve; F, lingual vein; G, sternocleidomastoid muscle; H, superiorthyroid vein; I, communicantes hypoglossi nerves; J, common carotid artery; K, phrenic nerve; L, middle thyroid vein; M, stylohyoid muscle; N, descendens hypoglossi nerve; O, anterior belly of omohyoid muscle; P, sternothyroid muscle; Q, sternohyoid muscle.

If the patient is a male the beard should be shaved and the skin antiseptically cleaned, care being taken not to disturb and break up a possible clot by rough handling. In the case of a male where it is at all suspected that a jugular operation will have to be performed the beard should be shaved before the mastoid operation is commenced. The neck should now be placed on a stretch and the anterior border of the sternocleidomastoid muscle clearly located and an incision (Fig. 4) made along its edge extending from its sternal attachment to the mastoid tip.[3] Bleeding vessels should, of course, be compressed at all stages of the operation so that a clear view of the operative field may always be obtained. The skin and other tissues should be kept stretched apart by blunt retractors. After the skin and superficial fascia have been completely severed the platysma myoides muscle with its oblique fibers can be plainly seen and should be fully exposed and incised along the anterior border of the sternocleidomastoid muscle, which can now be distinctly seen, and which should be fully uncovered by holding back the overlying tissues by retractors (Fig. 5).

The external jugular vein runs down the neck in a line drawn from the angle of the lower maxilla to about the middle of the clavicle and lies between the platysma and the sternocleidomastoid muscle. It crosses the latter muscle at an oblique angle, but does not cross the anterior border of the muscle except at its upper third at the angle of the jaw, where it may be seen, twice ligated, cut between the ligatures and gently retracted from the operative field. If ligation of the internal jugular were the only object to be attained it would not be necessary to touch the external jugular, for the ligature would be applied much lower down, near the cricoid cartilage, but as the intention usually is to excise practically the entire vein, it may be advisable to get the external jugular out of the way. It should be preserved if possible, however, as it performs an important part in caring for the venous blood after the internal jugular is removed.

Retractors should now be placed around the anterior border of the sternocleidomastoid muscle, and the muscle pulled back in order to expose to view the carotid, jugular, etc. This object may be facilitated by tearing and pulling the tissues apart by blunt instruments or the fingers, as care should be exercised that vessels and nerves are, as far as possible, uninjured, a thing difficult to prevent if knives and scissors are employed. The exposure should be made throughout the entire length of the sternocleido muscle from its mastoid to its sternal attachments, for it will be the object of the operation to remove practically all of the vein, and it should, therefore, be completely exposed (Fig. 6).

The deep fascia of the neck will be seen on retracting the sternocleido muscle, and on opening this and throwing it back the common sheath of the jugular, carotid and pneumogastric nerve may be seen. The utmost care should, of course, be taken to avoid wounding these structures, and as far as possible all sharp instruments should be eschewed in performing the delicate dissection. The internal jugular vein, the common carotid artery and the pneumogastric nerve are all encased in a common sheath. At the superior carotid triangle (the usual center of operative procedures) or at a point about midway between the angle of the jaw and the clavicle, the vein lies to the outer side of the artery, with the nerve between and posterior to both (Fig. 8), resembling, as Deaver says, the ramrod to an old-fashioned double-barreled shotgun.

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[3] Crile and others sometimes cut down on the sternocleidomastoid muscle and expose the vein, by separating the muscular fibers.

ANATOMIC RELATIONS.

It should be remembered that while the relative location of these different anatomic constituents differs slightly in various portions of the neck, the vein always lies to the outside of the group and can be distinguished by its bluish-white color, by the fact that it becomes full and prominent on expiration and almost collapsed on inspiration or by pressing on it in the lower portion of the neck, when it will expand with blood (unless thrombosed) and quickly disclose its identity. The common sheath of the vein, artery and nerve should now be opened and also the septum which separates the vein from the artery and nerve, and the vein carefully dissected out, practically throughout its entire extent. The artery is, of course, easy to identify, both from its color and its pulsations, but the nerve may, unless considerable care is taken, easily be raised and ligated with the vein.

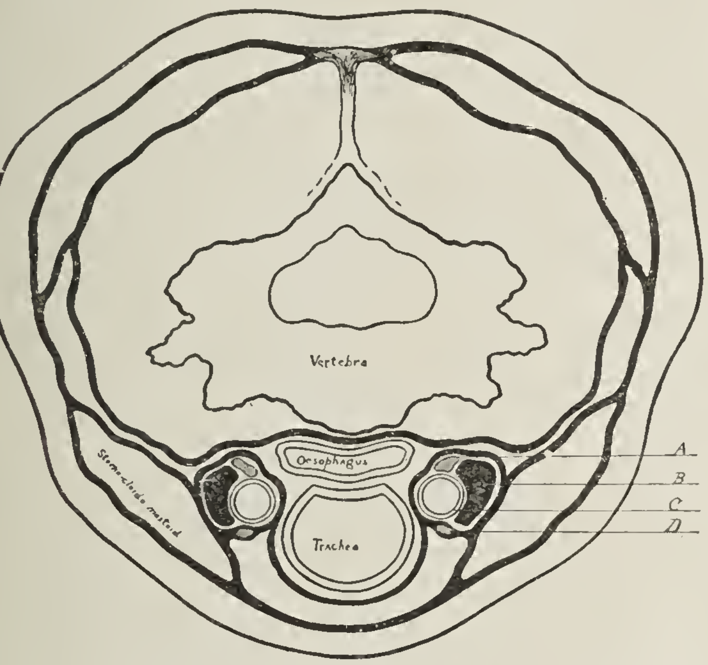

Fig. 8.—Cross section of the neck (after Deaver). A, pneumogastric nerve; B, internal jugular vein; C, common carotid artery; D, descendens hypoglossi nerve.

All enlarged and diseased glands should be removed. After the vein has been thoroughly liberated from its surroundings, the lower ligature should be placed as far down in the neck as possible, and the upper one high up, as close to the mastoid process as possible, using either ten-day chromicized catgut, black silk or Pagenstecher linen, preferably the first, as there is practically no danger nowadays in the use of catgut prepared by modern methods. Two ligatures are applied at each extremity by means of an aneurysm needle and the vein cut between each pair of ligatures, being careful to include nothing but the vein in the ligatures.

In order to check the breaking off and floating of small thrombotic particles toward the heart, etc., which may easily occur from the necessary surgical manipulations of the operation, the lowest ligature should be placed around the internal jugular vein as early as possible and as soon as a low exposure can be made, after which the regular steps of the operation may be proceeded with. This lowest ligature can usually be best applied at a point just below the angle of the omohyoid muscle. The tributary veins should be ligated, and they may be enumerated from below upward as follows (Fig. 7):

The middle thyroid in the lower third of the neck (Fig. 7, L); the superior thyroid (Fig. 7, H), a little higher up; the lingual (Fig. 7, F), a little below the lower jaw; and, lastly, the common branch of the temporal and facial (Fig. 7, D) veins. Sometimes these veins are so small as not to require ligating, with the exception of the common branch of the temporal and facial veins, which always requires careful attention. In removing the internal jugular it should always be severed above the posterior belly of the digastric muscle (Fig. 7, A) and above the common trunk of the facial and temporal veins, but the ligation need not extend more than half or three-quarters of an inch higher than this junction, as no more cervical veins enter the jugular above this point.

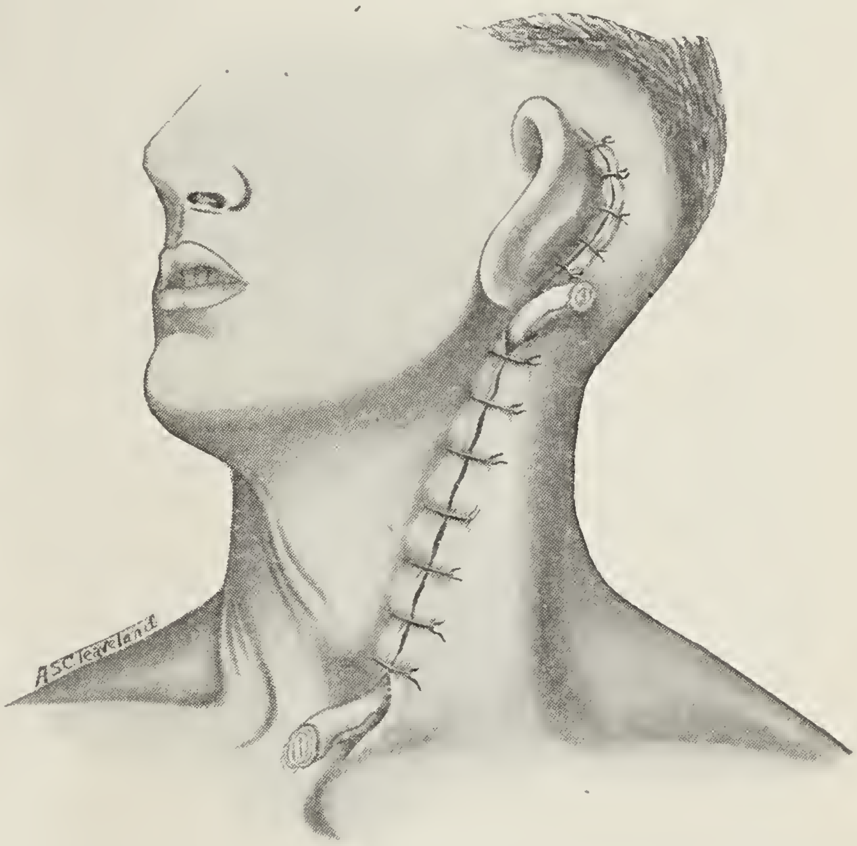

Fig. 9.—Closure of the wound showing scheme of drainage.

All of the veins which may require ligation enter the internal jugular (practically) in its anterior portion which if borne in mind will simplify their finding. After all connections are severed the vein may be removed and the parts thoroughly irrigated and cleaned preparatory to closing the wound, remembering that the operation should be performed with all the speed that is compatible with correctness and safety, as such patients should not be kept under anesthesia any longer than is necessary. Sometimes inflammatory adhesions will so firmly unite the vein to its surroundings that its release will necessitate the expenditure of too much time, to say nothing of the danger of rupturing the carotid artery. Under these circumstances the vein and its tributaries should be split open, cleaned, and the neck wound dressed without permanent sutures.

It is not advisable to undertake to irrigate the sinus and what is left of the jugular, either from below upward or the reverse, as infection can easily pass into the inferior petrosal sinus. It sometimes happens that even after the jugular has been resected the upper ligature removed, and the sinus thrombus removed by curettement, there is no return flow of blood from the bulb, which indicates a thrombus of the inferior petrosal sinus. This is an infrequent complication, as is also a similar condition of the superior petrosal sinus, and should be met by following up the sinus and curetting it. The sinus should be cleaned of all possible thrombotic material by the curette after the jugular ligation, but forced flushing should not be attempted.

It is a good plan after the jugular has been resected to remove the upper jugular ligature and give the inferior petrosal sinus an opportunity to send its blood down through the opened jugular vein, in hopes of flushing away thrombotic débris that might be present. The vein should then be resutured, or, as suggested by A. Knapp, "on the day following the operation thrombosis having occurred in the jugular vein, below the bulb, this vein should be slit up, so that we have access to the bulb from both directions, thus preventing a purulent disintegration of the thrombi in the contributory veins and sinuses." Knapp recommends this procedure, especially in the severest cases.

TREATMENT OF WOUND.

The wound should now be drawn together except at its upper and lower extremities, which should be left open for drainage. The lower opening need only be very small, just large enough to admit of a round rubber or cigarette drain, which should extend inside the wound for perhaps two or three inches, and which should be gradually shortened from day to day until it is withdrawn altogether (Fig. 9). The opening in the upper portion of the wound should be larger and should be either packed with iodoform gauze or drained with a round rubber or cigarette drain to be likewise gradually removed until compact healing occurs. Many surgeons do not suture this large neck wound, but draw the parts together with adhesive strips, feeling that the patient should be given every chance for his life by an open wound and free drainage. This, of course, involves an enormous scar but, nevertheless, is justified in bad cases, and possibly always. The jugular operation having been completed, the surgeon should now return to the sinus, on which work had been temporarily suspended.

The compress should be removed from the bulbar end of the sinus and all possible clot removed by means of a curette, after which narrow iodoform gauze should be gently but firmly packed into the interior of the sinus as far as possible. Pressure should, of course, be retained on the torcular end of the sinus and the entire mastoid wound dressed as usual, endeavoring as much as possible to separate the sinus from the mastoid packings. The neck should be abundantly dressed with gauze and cotton and the mastoid, head and neck enveloped in a voluminous and firm bandage, which it is best not to disturb for at least three days. Ordinary dressings at intervals of two or three days should follow until complete hearing occurs.

TREATMENT OF SHOCK.

Should symptoms of shock occur during the steps of the sinus or jugular operation relief may be obtained by injections of physiologic salt solution into a vein, the breast or abdominal tissues or the bowels. If an intravenous injection is made, from sixteen to eighteen ounces of the solution should be used at a temperature of about 106 F. If the injection is made into the tissues or bowels from one to two pints should be used at a temperature of about 112 F. At all sinus and jugular operations appliances for making these injections should always be ready for instant use. In case the patient is in a very grave condition it is a wise precaution to give an intravenous infusion of physiologic salt solution before beginning operative procedures. Such infusions are also valuable in cases of general infection to counteract and combat the potentiality of migrating microorganisms.

72 Madison Street.

TREATMENT OF CHRONIC TRACHOMA.*

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The original scope of this paper did not include the surgical treatment, but it has been suggested that mention be made of treatment of entropion, and such surgical measures as may be used or endorsed. This makes a broad subject—too broad to be encompassed in a short paper—and for this reason I will confine myself to what seems to me of especial merit. This will leave the subject open for discussion by those who may favor Roentgen-ray treatment, electrolysis, or other lines which may be intentionally omitted, and the omission is not made with the purpose of ignoring other methods, but because of an insufficient amount of actual experience to enable me to express a judgment which may be deemed of value.

It will be presupposed, for the sake of argument, that the disease is contagious, and if so, due to a germ. This is based on personal observation relative to the contagiousness of the disease.

GERMICIDES.

The principal considerations are: First, select a germicide which is effective; second, prepare the infected surface in such a manner that the germicide may act; third, combat corneal complications (pannus and ulcers); fourth, correct the condition of the lids, which may cause relapsing inflammation (entropion, cysts, etc.).

The remedies used are copper sulphate, mercuric oxid, tannic acid, silver nitrate, boric acid, jequirity. In the empyrical use of drugs to combat chronic trachoma, perhaps no remedies have been so extensively used as copper sulphate and silver nitrate, the former in the absence and the latter in the presence of secretion. Of these, copper sulphate deserves special attention. It may seem almost presumptuous to more than mention a remedy, the use of which is so familiar to all. My excuse for so doing is based on the following incident. A former patient came to my office and related his experience, which set me to thinking. In former years I had repeatedly treated him. Each time he would improve, but after returning home, he would relapse, until finally he found an old woman who effected a permanent cure at the cost of a dollar. Inquiry evolved the fact that the medicine used was in a small vial (half ounce), and that he was told to dilute one drop in twenty drops of water, and use it freely in the eyes several times a day. It was blue and thick, like glycerin.

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*Read in the Section on Ophthalmology of the American Medical Association at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

This incident might have been unimportant had not my attention been attracted about the same time to an account of experiments carried on by the United States Department of Agriculture, in the use of copper sulphate as a germicide.[1] The most spectacular experiment, and the one first brought to my notice, was that pertaining to the algæ which produce the green scum on the surface of stagnant water. A bag containing crystals of copper sulphate was hung behind a boat while it was rowed along the margin of a pond. An infinitesimally small amount of the salt was dissolved from the crystals, yet it was enough to kill the algæ.

A great variety of organisms, an idea of which is given by the following list, was made the subject of these experiments.

Bacillus mycoides, Bacillus megatherium, Bacillus mesentericus, Bacillus mesentericus fuscus, Bacillus subtillis, Bacillus prodigiosus, Bacillus liquifaciens phosphorescens, pink yeast, *Bacillus coli,* sulphur yellow bacillus, *Pseudomonas radicola* (soy), *Bacillus sublanatus, Micrococcus radians, Pseudomonas radicicola* (alfalfa), *Bacillus violaceus laurentius, Pseudomonas amethystina, Bacillus caudatus, Bacillus rubrum.*

The exhaustive nature of the research and the manner of exhibiting the results are illustrated by the accompanying table pertaining to *Streptococcus pyogenes.*

EFFECT OF COPPER SULPHATE ON STREPTOCOCCUS PYOGENES.

Hours of Exposure.	Check. Colonies.	1 part copper sulphate to—					
		10,000 parts of water. Colonies.	25,000 parts of water. Colonies.	50,000 parts of water. Colonies.	100,000 parts of water. Colonies.	500,000 parts of water. Colonies.	1,000,000 parts of water. Colonies.
0	180	875	875	300	250	90	180
2	210	0	0	290	180	180	180
6	140	0	0	280	230	240	160
24	35	0	0	390	150	10	20

From the above table, it will be seen that the solution of copper is diluted 1:1,000, 1:10,000, 1:25,000, and so on to 1:1,000,000, as exhibited in the top row. The solutions containing the germs under investigation were exposed for periods ranging from two hours to twenty-four hours, as indicated in the vertical column on the left hand. In this manner it is shown that copper sulphate, in dilution 1:25,000, destroyed every germ in less than two hours. Similarly, *Bacillus coli* was destroyed in dilution 1:1,000,000 in six hours.

Thinking along this line, it occurred to me that the remedy referred to by my country patient was probably nothing more nor less than a solution of copper sulphate in glycerin, and that I was led to wonder whether we had not been mistaken. Regarding the method of using this remedy to get the surest results: In place of the application of the crayon or crystal to the lids by the physician once a day or less often, might it not be better to make a solution and put it in the hands of the patient, and have it used frequently. My former efforts to get a stable solution had not resulted in a success, and it may be that others have had similar experience.

Copper sulphate is so prone to decompose by oxidation that an aqueous solution soon loses its activity. After some experiments I made up a pint of 10 per cent. solution in glycerin, in which the salt was found to dissolve readily, and filled a number of two-dram vials and placed the following label on each: "Dilute one drop in twenty drops of water. Use freely in eyes four times a day. Increase strength; make fresh each time."

One of these bottles was given to each trachoma patient then under treatment, and this was continued during the subsequent months. It was found that it was well to commence with one drop in twenty drops of water, and use it four to six times a day. The patient was told to decrease the water as he found he could tolerate it, or increase it if it proved too irritating. Increased toleration was observed. Some patients would not complain, and rapidly increased to 1:5 or stronger; others complained of irritation lasting some hours. A few complained of a solution of 1:40, but subsequently tolerated it stronger. Some did not tolerate it well, and it was discontinued. In the main, however, it worked well and dozens of patients seem to have been permanently cured by the remedy.

One of the first cases in which I used the remedy in this manner was that of Miss H. The granulations had been squeezed out, and the lids were cicatrized and smooth. Yet she would occasionally develp trachomatous ulcers. These yielded best to the thermo-cautery. She always did well on copper stick, which she learned to use, and when she felt the irritation she would resort to the remedy. On this occasion the ulcer had got a start and was not responding well to treatment. She went home, a distance of fifteen miles, with a vial of 10 per cent. solution of copper sulphate, with directions to use it, and return in two days. She did not return for three weeks. When she came I was surprised. The eyes were wide open, the ulcer healed, and the lids were free from congestion. The remedy proved so grateful to her that she had divided the medicine with neighbors who had trachoma, and they all wanted the prescription, so well had it acted.

I guarded the prescription, preferring to dispense the medicine in order to keep the patient under observation. In this manner I have been able to observe a large number of cases; have inquired of each patient about the result, and their reports with few exceptions, are quite uniform. In only a few cases was there complaint of hazy vision for an hour after treatment.

On the whole, it is my opinion that this is the best home medical treatment that has come to my notice, and it is recommended that it be given a trial, under the belief that the frequent instillation into the eye of a fresh solution, made up from a stable solution in glycerin, is more efficient than the occasional application of the bluestone crystal.

TANNIC ACID AND MERCURY OXID OINTMENT.

Two other favorite remedies in past years have been glycerole of tannin, 4 per cent., and yellow oxid of mercury.

After investigating a score or more of remedies during the lapse of years, a few months' use of each has usually resulted in returning to the use of tannin and mercury oxid ointment, 1½ per cent., which resumes popularity after each new candidate for honors has been found wanting. They have the advantage of being almost universally tolerated. Even now, after dispensing with tannin for a year in favor of the above copper formula, I find myself writing prescriptions for the old friend, and adding some sulphate of copper for a companion.

Similarly, tincture of iodin and phenol may be incorporated with effect, but nothing, in my present frame of mind, equals the old lady's cure for a dollar.

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[1] Bull. 76, Bureau of Plant Industry; Copper as an Algicide; also Bull. 100, The Effect of Copper on Water Bacteria.

SILVER.

In conjunction with the above, a condition is found which indicated the use of silver. Like copper, it is deemed desirable to prescribe the remedy in such form that the patient may use it without harm, or without being discouraged by too much irritation. To meet this, it is usually employed in the office, or used at home in ½ per cent. solution once a day, preferably a short time before retiring.

In the presence of muco-purulent secretion nothing else seems to serve the purpose so well, and the drug is usually ordered in conjunction with one of the other remedies used during the day.

PREPARATION OF THE LIDS TO INCREASE THE EFFICIENCY.

Having selected a drug, of no less importance is the removal of trachomatous material which might prevent the remedy from reaching deeply situated infection. It may be remembered that Mandelstamm of Russia was the first to call attention to the squeezing out of the follicles. This was done by pressing the inverted upper lid against the thumb nail. His article appeared in German, and was presented to the English reader first by Dr. F. C. Hotz. It fell to my lot to first realize the importance of having a special instrument for squeezing out the contents of the follicles. The accompanying cut (Fig. 1) illustrates the first forceps used for this purpose, which is so simple that instrument makers have not succeeded in destroying its usefulness, as is often done by various modifications designed to cheapen them.

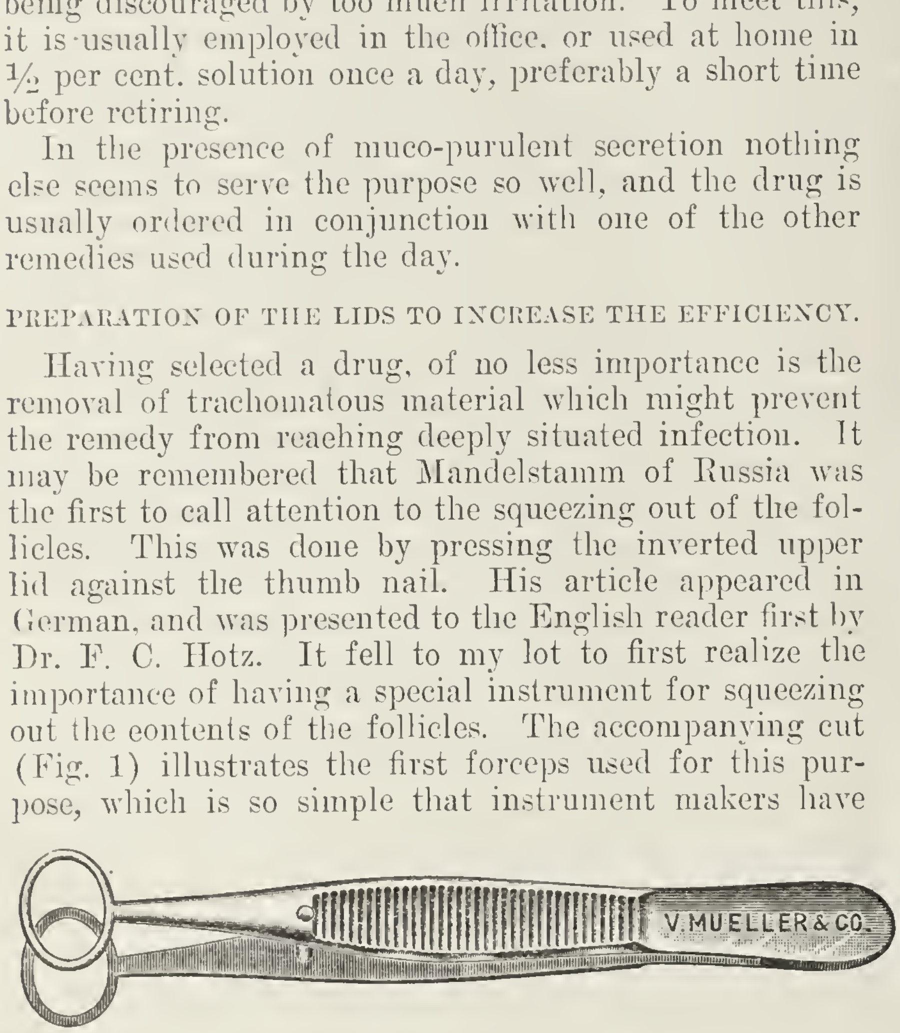

Fig. 1.—Forceps for squeezing out the contents of the follicles.

The instrument of Dr. Herman Knapp, known as the "roller forceps," is too well known to need comment. The great object is to get one blade well back into the retrotarsal fold, and express the trachomatous material. The instrument illustrated above has superior advantages when it is found necessary to reach into the angles, especially about the vicinity of the caruncle. Bleeding bears an important share in creating the immediate benefit that so often attends the operation of squeezing. All agree that thoroughness is the greatest desideratum connected with the removal of trachomatous material.

ANESTHESIA.

It is my usual practice to administer chloroform in conditions of active inflammation, and cocain in those cases presenting no particular irritation at the time. Ethyl chlorid furnishes a good substitute for chloroform, and if properly administered accomplishes the purposes admirably. In using cocain it has been found best to inject it hypodermically under the conjunctiva of the retrotarsal folds. It is advantageous to add 10 per cent. of 1:1,000 adrenalin chlorid solution, which diminishes the bleeding and increases the efficacy of the cocain. In the non-inflammatory types, a roll of cotton may be moistened with a 10 per cent. solution of cocain in 1:15,000 adrenalin, and inserted into the retrotarsal folds. After ten minutes the anesthesia is almost complete.

After squeezing, scarifying and milking out all the trachomatous material, apply a 10 per cent. solution of copper sulphate in glycerin, and scrub with cotton, so as to force it into the tissues. Rinse with water to remove excess, and prevent corneal irritation. A Belgian method which has been popular in the army, has been the rubbing on with the finger of powdered boric acid.

One of the errors of ophthalmologists in handling trachoma has been that of placing too much reliance on the operation, and not following it up with some remedy which would attack the disease after having exposed it.

COMPLICATIONS OF TRACHOMA.

The principal complications of trachoma are ulceration of the cornea and pannus.

Ulceration of the Cornea.—With the consideration of this condition it is pertinent to say a few words concerning the treatment. Ulcers occurring in conjunction with trachoma show little tendency to heal until the trachomatous infection has been brought under control by the germicidal action of the blood, chemical remedies, or actual cautery.

Following this, a healing tendency is usually rapidly established; pannus proceeds and nutrition follows. The favorite cautery in these cases is the Gruening platinum probe, which is heated in the Bunsen flame, and applied to the entire area. When the necrosis is shallow, rapid recovery usually follows, but when the layers of the cornea are destroyed down to the membrane of Descemet, it is usually found necessary to make a paracentesis through the floor of the ulcer, and keep the opening from closing by the repeated applications of a probe until the healing tendency has been established. The establishing of a fistula by cauterizing the margin of a perforating ulcer will often bring about a rapid change from a progressive destruction to rapid reparation.

As an aid to repair iodoform has held first place, but argyrol in 25 per cent. solution every two hours is well tolerated, painless and efficient.

Hypopion, in conjunction with trachoma, is similarly treated. It is the aim to divide the floor of the ulcer and carry the incision into the sound tissue on both sides. The pus escapes with the aqueous humor, and the anterior chamber is emptied twice daily with a probe, when found necessary, until no more pus is formed, after which the opening in the cornea is allowed to heal.

In the case of large superficial ulcers, it is at times found necessary to apply salicylic acid, 10 per cent., in alcohol, to the entire surface. Another remedy which acts admirably, is monochloracetic or trichloracetic acid, in saturated solution. The eschar is scraped off and a second application applied until the entire necrotic material has been removed. Following this, the healing will often proceed rapidly. Great care and judgment must be exercised in handling the above remedies.

In cases of sluggish and obstinate extension of an ulcerated area, I occasionally resort to hot physiologic salt solution, applied with an eye bath. The bath is applied, the head raised and the eye opened. The patient is required to repeat this as hot as can be borne, for fifteen minutes, four to six times a day. In the interval, ice compresses are used to reduce the temperature, and put the remaining microbes, so to speak, in cold storage. Compresses are placed on a piece of ice and changed every three minutes. In many cases it is believed that eyes have been rescued, which would formerly have been thought hopeless. Internal administration of strychnin, manganese and iron are employed to aid in counteracting a sluggish circulation, which is the greatest menace to the integrity of an ulcerating cornea. So soon as pannus is seen at the margin of the corneal ulcer, recovery is in sight.

Much more might be said concerning the treatment of ulcers, but since they may occur in the absence of trachoma, further consideration is unnecessary.

Pannus.—Chronic pannus is one of the most obstinate complications one meets, and it deserves especial consideration. Many of us remember the occasional use of the gonorrheal virus from ophthalmia neonatorum, which was occasionally employed in cases on inveterate pannus from trachoma. As a student, this was impressed on me by the story of Dr. E. Williams of Cincinnati, which was re-told to every class for a number of years. He used to tell of a case that had defied all kinds of treatment, and the patient had become almost blind from pannus crassus. The physician, as a *dernier ressort,* explained to his patient that he had one remedy left, which might destroy the eye, but if it did not, restoration of vision might result.

The ultimatum was accepted. In the wards of the hospital a new-born babe was found to furnish the infection, and a minute quantity of the virus was introduced into the eye. Violent inflammation was set up, ran its course, and ultimate recovery was the result. The grateful patient begged the doctor from time to time to tell him the name of the wonderful remedy, and finally he was made to swear an oath never to divulge it to any living mortal, and after being duly impressed, the fact was imparted to him that the remedy in question was "glandola." The climax of the story came in a letter which eulogized Dr. Williams for his skill, and the knowledge of a remedy unknown to the druggists and doctors of the times, finishing with the doggerel:

"But, however that may be,
I once was blind, and now I see;
'Glandola' did the work for me."

It did not fall to my lot to see this remedy employed, but its use was not extremely rare in the clinics of Europe at an early period.

JEQUIRITY.

The use of gonorrheal virus was discontinued when the discovery of jequirity was announced to the world by the eminent De Wecker of Paris, whose popularity caused a wave of enthusiasm over the new remedy to spread over the world scarcely less rapidly than that of cocain and the Roentgen-ray. Unlike the history of cocain the popularity of jequirity met with a sudden reversal, and an ebb tide of condemnation recoiled with such vigor as to almost sweep the remedy into oblivion.

It may serve a purpose here to relate how a wealthy citizen of Rio de Janeiro suffered from trachoma and pannus; how he made a trip to Paris; how he improved under the copper crystal treatment, and how he relapsed after returning home. A second and a third time he came and returned improved, but not cured. At last, when in despair, he heard of a tribe of Indians in a remote region, who had a remedy. In desperation he made the trip, submitted one eye to the medicine man, who made an infusion of the bean *Abrus precatorius,* moistened a compress, and applied it to the eye. The result was a fulminating inflammation such as is familiar to most of us, but which quickly subsided, with the happiest of results. A similar treatment of the second eye followed, with the same result. An account of this experience was sent to De Wecker, together with a sufficient number of the beans, and observations were commenced. Every phase of trachoma, and in fact every type of conjunctivitis and corneal inflammation was subjected to the remedy. The old chronics who filled the clinic for a daily dose of silver or copper were, in most instances cleared up, so to speak, and ulcers and pannus were seen to yield in a manner and with such promptness as had never been seen before. The first publication from De Wecker on the subject was copied, and in a year the use of jequirity was almost universal. The recommendation was so indiscriminate that but one result could follow. Almost as rapidly as confidence was established, it was shaken by adverse reports. The loss of eyes was reported, and it was soon regarded as too hazardous a remedy to use except as a last resort, and it found its place in the same category as infection from the gonococcus.

The adverse criticism was so definite that one had poor defense in case of a malpractice suit for producing an inflammation of such a type as that which resulted from jequirity. During the following decade the remedy was comparatively little used. Seldom in the history of medicine has such a popular wave of enthusiasm been followed by almost as complete and rapid a discontinuance of the use of the remedy.

Taken in its entirety, the decision both *pro* and *con* was a grave mistake. First, the remedy was rushed before the profession before it was fully tried out. Ulcers of great variety of types were seen to yield under the influence of the drug, and it happened that the cornea did not suffer in the first hundred cases in which it was tried. The want of caution that this produced led to the loss of the eyes in a great many cases in which the primary disease for which it was used lacked sufficient seriousness to justfy taking the risk. Besides, it was found that the infusion in plain water was a good culture medium for a large variety of micro-organisms. In a few days, and before the characteristic membrane was produced, the solution was usually teeming with micro-organisms, which, although usually non-pathogenic, were occasionally a source of infection to the cornea.

In this connection I desire to add my influence to cause the pendulum to swing in the other direction. The introduction of jequirity found me practicing in a community which abounded with neglected trachoma. It was my fortune to use jequirity in infusion of sublimate and boric acid, and during a period of twenty years confidence in the remedy has never been shaken. It was my fortune not to have any serious complications before learning of the contra-indications, and it was also my fortune to commence the use of the remedy in a form much more diluted than originally advocated. For this reason the remedy preserved its popularity in my hands and brought numerous cases of pannused cornea under its influence.

The operation of this remedy may be illustrated by the case of a young woman who was almost totally blind with pannus crassus. So opaque was the pannus that the outlines of the pupil were not discernible. She was carried through three courses of jequirity; the recovery from each of which let in more light, until she could see her way. Transparency increased with the months, until she could read, and eventually no one would have suspected that she had ever been blind from pannus crassus.

Another case which is recalled was that of a young man who had recurrent superficial ulcers and ever-present irritation and pannus for a period of two years, during which time he had been under the care of the most eminent oculist of the west, whom I have ever honored as a eyclopedia of ophthalmic wisdom.

One course of jequirity caused a thrombosis and atrophy of all the vessels and left him with a clear cornea. He has never had a relapse.

From the above it may be easily inferred that I am an advocate of the remedy, and I take this opportunity to endorse it with caution, and at the same time to comment on the manner of its use.

Reference to the literature reveals the fact that it was almost always used in solution of 3 or 4 per cent. and stronger. This strength causes a rapid infiltration of the lids and cornea. The pain is intolerable. Local applications do not relieve it, and morphin is required. The rapid infiltration does more; it endangers the nutrition of the cornea. A superficial sloughing takes place, and general infection following may lead to the results which led to the abandonment of its use.

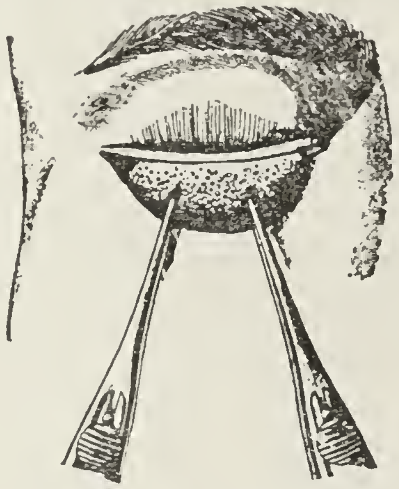

Fig. 2.—Excision of the tarsus, first act. Eversion of the upper lid with forceps (Kuhnt).

At the time of its introduction, and ever since, I have had my patients directly under my personal control, and could see them at once in case of any untoward symptom. This led me to suspend the treatment on the development of severe pain, and the early adoption of the plan of commencing with a very weak infusion, one-fourth of 1 per cent. This is employed twice a day for two days, during which time the tissues stretch to accommodate the infiltration. In case the eye is sensitive to the remedy, a solution of this strength is usually sufficient to produce the desired reaction. In case toleration exists the strength of the solution may be increased to one-half of 1 per cent. The eye soon develops tolerance, and commences to improve before the discontinuance of the use of the remedy. It is desirable to secure a decided membrane covering the surface of the tarsal conjunctiva. It may extend over the retrotarsal fold, in which case care will be necessary to separate the surfaces which lie in contact or adhesion may take place.

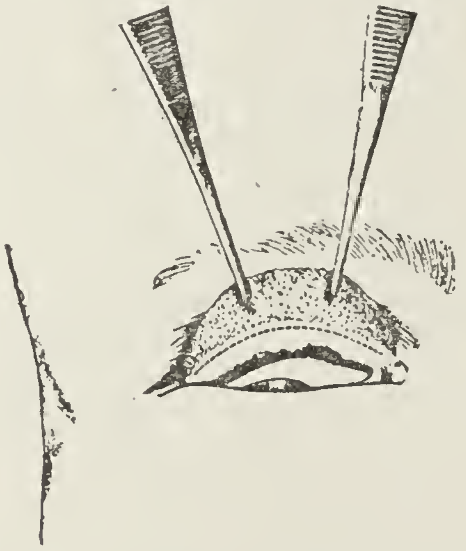

Fig. 3.—Second act. Complete eversion of the inverted upper lid and exposure of the retrotarsal folds. First incision along the dotted line (Kuhnt).

A word concerning the preparation may not be out of place. It will be found very difficult to remove the cortex of the bean, and reduce it to a powder unless one is provided with the proper means. The suggestion is to get a hand pepper grinder, with which many persons grind pepper fresh while at table. The first turn breaks the cortex. The beans are emptied out, the cortex removed, and the kernels replaced in the grinder. They are ground through several times until a moderately fine powder results. Divide into one grain powders. One powder in two drams of a 2 per cent. solution of boric acid will be the initiative dose. It is ready for use in fifteen minutes, and should be made fresh every day.

SURGERY.

In conjunction with the treatment of chronic trachoma, there are two surgical procedures on the lids which should be practiced whenever indicated, viz., entropion and excision of the tarsus.

Entropion.—It would hardly seem necessary to mention entropion, yet there are a few points to which attention might be called with advantage. The operation which I advocate is that of Anagnastakis. This operation was practiced before that of Dr. Hotz. In my earlier operation, an attempt was made to follow the Hotz method, but by degrees I gradually reduced the size of the lower skin flap by making the incision nearer the ciliary border. An incision was made in the margin between the line of the cilial and Meibomian glands. The graft of the lid has been discontinued. The skin of the upper flap is not included in the sutures.

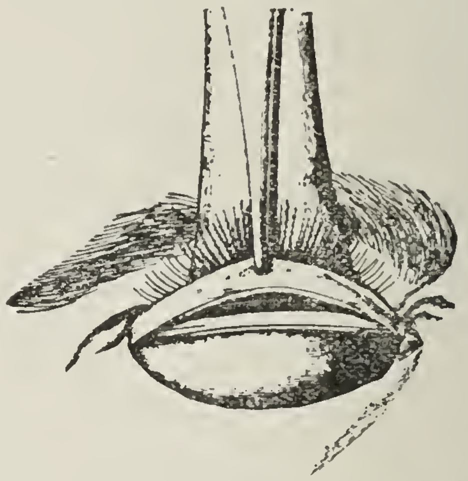

Fig. 4.—First act in the operation for removal of the tarsus without sacrifice of the fairly healthy conjunctiva (Kuhnt).

A canthoplasty is often indicated in case of blepharophimosis. The literature of entropion and its treatment is so replete, and so accessible in the text-books, that more than the above mention seems out of place here.

Excision of the Tarsus.—The consideration of excision of the tarsus, on the contrary, is not so well understood nor practiced, and this opportunity is taken to thank Dr. Kuntz for originating and Dr. Wood for repeatedly calling attention to this operation for finishing up the process in those chronic cases of trachoma in which the lid becomes full of infected cysts, nodules and cicatricial bands, which produce recurrent ulceration.

In these cases, the removal of the tarsus has become classic, and it is hoped that Dr. Wood, who has had considerable experience with this operation will enlighten the Section with his more recent experiences. Attention is also called to an article in the *Ophthalmic Record* on American operators. The indications for the operations which have been virtually agreed on by its advocates are the following:

1. Conditions in which the disease is not amenable to medical or surgical treatment by which the palpebral conjunctiva may be preserved. These include tarsi which show foci of trachomatous infiltration or granular deposits which cause recurrent inflammation or cysts that are not eradicated by curettement or cauterization.

2. Cicatrization which offers an irregular surface with a mucous covering, and the dryness and roughness of which are menaces to the corneal surface.

These conditions have defied all measures, and are ever menaces to the integrity of the cornea. It is this condition which has led operators in the past to excise the retrotarsal fold. The removal of the tarsus, together with the diseased portion of the retrotarsal fold, would seem to limit the excursion of the lid and endanger the supply of the moisture to the eyeball through obliteration of the ducts of the lachrymal glands. This is found not to be the case. In the first place, the limitation of mucous membrane is less objectionable than the presence of diseased membrane. In the second place, it is established knowledge that the lachrymal glands are not required for the supply of ordinary moisture. This is sufficiently supplied from the mucous cells and acinous glands. This fact furnishes the surgical justification for removing the lachrymal glands in cases of epiphora, where it is found impossible to establish satisfactory drainage through the naso-lachrymal duct. The operation of removing the tarsus has been developed by Kuntz, whose cuts illustrating the procedure are so clear as to require little description. The liberty is taken of reproducing them from the paper of Dr. Casey Wood.[2]

First.—The lid is everted and the convex border grasped by two catch forceps (Fig. 2).

Second.—The everted lid is then everted on itself, exposing the retrotarsal fold (Fig. 3).

Third—An incision is made beyond the line of diseased tissue separating the portion of the conjunctiva in which are placed three waxed sutures, or preferably 00 catgut sutures. One suture should be exactly opposite the middle of the margin of the lid; the others at equal distances on either side. An incision is made through the tarsus and parallel to the lid margin, leaving the conjunctiva untouched, which may seem normal or likely to become normal (Fig. 4). The tarsus is then dissected out back to the original incision, as shown.

The cut edges are now united. The original method as published inevitably brings the cornea in contact with the knots. This is avoided by arming each end of each suture with a needle. These are brought through the skin and secured to the outside.

The above is submitted with a consciousness that the paper is open to criticism. The subject is too large for a complete consideration.

It is hoped that my observations on copper sulphate will find verification at the hands of others. If so, the time consumed by the presentation may not be wholly wasted.

DISCUSSION.

Dr. J. C. **Hancock**, Brooklyn, stated that in 1890 or 1891 Dr. Weeks and Dr. Marple performed the first operations known as "grattage" in this country. Now few ophthalmologists do the grattage operation at this late day, but most of the operations done have this as a basis. A short time after its introduction Dr. Hancock performed the grattage operation on about one hundred and twenty-five cases of well-marked trachoma in one institution. While for years before there had been frequent exacerbations of the trachoma of a very acute form resulting in much damage, there has never been such an attack since the operations. Now, he almost invariably scarifies the trachomatous lids with the Jameson trachomatome and squeezes out the ruptured granules with forceps. He follows this with antiseptic applications. He never uses cupric sulphate or allows it to be used in his office or clinic, believing that the results of the use of this caustic are quite as grave as the results of the disease.

Dr. **Herbert Harlan**, Baltimore, said that, while his experience with chronic trachoma is not at all small, with recent trachoma it is very much larger. The Presbyterian Eye, Ear and Throat Hospital is the detention hospital for emigrants coming into Baltimore. There are not many patients with chronic trachoma, because those individuals are shipped back at once to the countries from which they came. A mother with five or six small children may be detained for a short time, to be shipped back if not cured. The severe chronic trachoma can not be cured, but Dr. Harlan has sometimes got patients well enough to pass muster with the Public Health and Marine-Hospital Service. In the chronic cases the patients usually remain a short while and go back to Europe. He has found that the most satisfactory treatment is grattage followed by application of ichthyol and perhaps, rarely by sulphate of copper. He has also had good results with argyrol.

Dr. **Oscar Wilkinson**, Washington, D. C., stated that for the past year he has been using radium and has found it to be of exceptional value. He believes that if there is any place in medicine for the use of this agent it is in the treatment of chronic trachoma. He has been using 1/10 gm. of 20,000 radioactivity. He uses cocain, everts the lids and makes the application to the surface for from five to fifteen minutes, according to the effect desired. Its use is painless and there is no reaction at the time, but some reaction follows within the next few hours. The eye is slightly irritated for twenty-four hours, after which there is decided amelioration for several days. The treatment is applied once or twice a week. Since using it he has used no expression method whatever. He has always found sulphate of copper of benefit in the chronic recurrent cases and has never seen harm from its use.

Dr. **John E. Weeks**, New York, said that he does not think that he has ever seen a case of trachoma that was not chronic. The paper deals with trachoma in the second stage. Trachoma is a chronic conjunctivitis, which presents itself in three stages, the early stage in which the granulations are discrete, the conjunctiva hypertrophic; the second stage, in which the granulations become coalesced, and there is formation of cicatricial tissue; and the third stage, in which there is complete cicatrization. The third stage is not operable, so far as trachoma is concerned. One may then operate for the cicatrization, but not for trachoma, as that condition no longer exists. In Dr. Weeks' opinion, the operative treatment of trachomatous tissue is well dealt with by Dr. Prince, who recommends the use of sulphate of copper in very weak solution in after-treatment. Some years ago, Dr. Weeks made some experiments as to the comparative value of the solutions used in ophthalmic practice, and in the strength of 1 to 5 of the sulphate of copper the staphylococci were not destroyed in five minutes. In the strength advised by Dr. Prince, it is not a germicide against any known pathogenic micro-organism. It is a stimulant, but not a germicide.

Dr. **A. E. Prince**, Springfield, Ill., said that he trusts that what he said regarding the use of copper sulphate will not be attributed to an error of personal enthusiasm. He believes those who object to its use are wrong. Dr. Prince took the reports from the laboratory at Washington, which gave a long list of germs that have been tested with the copper sulphate. They are destroyed by solutions varying in strength from 1/10 per cent. to 1/100,000 per cent. Is it not possible, Dr. Prince asked, that the solution acts on the trachoma germ? He has been pleased with the reports others have made on the use of this method. He has put this remedy into the hands of over a hundred patients and it has invariably benefited them. Dr. Prince declared that he is satisfied, and that when he can use a remedy for years and get good results he considers it a good thing. The bulletins referring to the experiments are accessible. Since he claims no authorship in the experiments, he invites an examination of the above-mentioned reports. This remedy does not cure all cases. It is an adjuvant to other methods. It is safe; it is cheap. Dr. Prince hopes that his judgment may be backed by the experience of the profession.

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[2] Am. Jour. Ophth., July, 1903.

THE OCULAR TYPHOID REACTION.

PRELIMINARY REPORT OF A MODIFICATION OF THE OCULAR TEST OF CHANTEMESSE.*

WALTER W. HAMBURGER, M.D.
CHICAGO.

On July 23, 1907, Professor Chantemesse[1] announced at a meeting of the Academy of Medicine in Paris a new characteristic reaction for the diagnosis of typhoid fever. Two months later[2] he published the results of this diagnostic test applied to 128 patients, together with a brief description of its method of application.

The test consisted of the instillation into the conjunctival sac of one drop of a solution made as follows: Gelatin plates covered with an 18 to 20 hour old culture of virulent typhoid bacilli were washed with 4 to 5 c.c. of sterile water. The suspension thus obtained was heated to 60 C., centrifugated and the supernatant fluid withdrawn. The centrifugated organisms were then dried and triturated. A second suspension of these broken up bacillary bodies was then made and allowed to stand for from two to three days at 60 C. The extract thus obtained after removing the disintegrated and digested rests was precipitated with alcohol, forming a fine coagulum. This was subsequently dried and powdered and dissolved in sterile water in the proportion of 0.02 mg. to a drop.

In a series of 128 cases, 70 cases diagnosed clinically as typhoid fever and giving positive agglutination reactions were tested. From two to three hours after instillation a diffuse redness of the conjunctiva was noted, together with a subjective sensation of warmth in the eye. Later lachrymation and slight exudation appeared in some instances. In from six to ten hours, the reaction had reached its height and persisted through the following day. This Chantemesse calls the "Ophthalmo-typhoid" reaction. All the cases responded positively.

Fifty cases of the series consisted of patients sick or convalescent from various diseases other than typhoid. These did not give a positive agglutination test. On dropping in the solution, most of the eyes suffered a slight reddening and conjunctivitis which disappeared usually in four or five hours. This is spoken of as a negative reaction. The differentiation is based on the variation in intensity and duration of the inflammatory reaction.

Eight cases, tested early in the disease from the fifth to the twenty-first day gave a positive ocular test while the serum reaction was still negative. These all gave positive agglutination tests later in the course of the disease. It is more particularly on the evidence offered by these eight cases that Chantemesse states the particular interest in the ocular reaction lies, in so far that a positive diagnosis of typhoid might be obtained days before the sero-diagnosis appeared. Further, many cases now allowed to go undiagnosed because of the failure of an early agglutination, would be elucidated, thus extending our knowledge of the disease and of the domain of infections caused by the typhoid bacillus.

The observations here recorded were made with the hope of confirming the results of Chantemesse by the use of a typhoid extract prepared in a much simpler way. The solution was prepared by Dr. D. J. Davis as follows: The bacteria were grown for twenty-four hours on plain agar slants. They were then washed from the surface with plain salt solution and an emulsion prepared, which contained 3,000,000,000 bacilli per cubic centimeter. This was placed in the incubator for four days at 37.5 C. At the end of this time the bacteria were removed by prolonged centrifugation and the supernatant almost clear fluid was drawn off and heated to 60 C. for 30 minutes. This fluid was tested and found to be sterile. No bacilli were found in stained smears. The fluid thus prepared was used for the tests, the usual precautions as to cleanliness, care in instillation, etc., being as strictly observed as in the technic of ocular tuberculin manipulations.

TABLE 1.[3]—Twenty-Seven Cases Diagnosed Clinically as Typhoid Fever, Giving Either a Positive Agglutination Test or Blood Culture and Reacting Positively to the Ocular Test.

				Ocular Test.		
Number.	Duration of Disease.	Agglutination.	Blood Culture.	Reaction Present After.	Duration.	Degree.
1.	5 days.	+	0	10 hours.	72 hours.	++
2.	5 days.	+	0	6 hours.	72 hours.	+++
3.	3d week.	+	0	3 hours.	72 hours.	++
4.	3d week.	+	0	18 hours.	48 hours.	+
5.	3d week.	+	0	18 hours.	48 hours.	+
6.	3d week.	+	0	18 hours.	48 hours.	++
7.	4th week.	+	0	18 hours.	48 hours.	+
8.	4th week.	+	0	6 hours.	72 hours.	++
9.	4th week.	+	0	6 hours.	48 hours.	++
10.	5th week.	+	+	18 hours.	48 hours.	++
11.	5th week.	0	+	18 hours.	48 hours.	+
12.	5th week.	0	+	18 hours.	72 hours.	++
13.	5th week.	+	0	18 hours.	48 hours.	+
14.	5th week.	+	0	6 hours.	48 hours.	+
15.	6th week.	+	+	18 hours.	72 hours.	+++
16.	7th week.	+	0	18 hours.	48 hours.	++
17.	7th week.	+	0	18 hours.	48 hours.	++
18.	7th week.	+	0	6 hours.	24 hours.	+
19.	7th week.	+	0	12 hours.	24 hours.	+
20.	7th week.	+	0	12 hours.	24 hours.	+
21.	7th week.	+	+	12 hours.	24 hours.	+
22.	8th week.	+	0	18 hours.	48 hours.	++
23.	8th week.	+	0	18 hours.	48 hours.	+
24.	9th week.	+	0	18 hours.	48 hours.	+
25.	9th week.	+	0	18 hours.	48 hours.	+
26.	9th week.	+	0	18 hours.	48 hours.	+
27.	10th week.	+	0	6 hours.	24 hours.	+

The reaction was tried in a total of forty-eight cases; twenty-seven cases diagnosed clinically as typhoid fever gave a positive agglutination test or blood culture and reacted positively to the ocular test (Table 1); fifteen control patients, suffering clinically from a variety of maladies other than typhoid fever, failed to react; six cases diagnosed clinically as typhoid fever but not presenting either a positive agglutination reaction or a blood culture were likewise tested, resulting in four negative and two positive reactions. (Table 3.)

The positive reactions obtained in the proved up cases presented a number of interesting features. The stage of the disease bore no striking relation to the degree of the reaction except in some instances suggesting a possible increase in intensity during the active process of the infection. In no cases was I able to obtain an ocular reaction prior to the agglutination phenomenon. However, in only two cases was this tried as early as the first week. Further observations may reveal results comparable to the eight cases of Chantemesse.

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* From the clinical laboratories of the Presbyterian Hospital.

[1] A brief report appeared in the Deutsche med. Wochschr., 1907, No. 31, p. 1264.

[2] L'Ophthalmo-diagnostic de la Fièvre typhoide, Deutsche med. Wchschr., 1907, No. 39, p. 1572

[3] Explanation of Tables.—The hours indicate when eye was first observed after instillation; reaction doubtless began earlier. The intensity of reaction has been symbolized in the last column as follows:

+ Diffuse palpebral injection with little, if any discharge.
++ Deep palpebral injection; beginning corneal injection; slight mucopurulent discharge.
+++ Marked palpebral and ocular conjunctivitis with pronounced mucopurulent discharge; slight edema of lids.

TABLE 2.—Fifteen Control Cases. Patients Suffering from Disease Diagnosed Clinically as Other Than Typhoid Fever and Not Reacting Characteristically to the Ocular Test.

		Ocular Test.		
Number.	Clinical Diagnosis.	Reaction Present After hours.	Duration.	Degree.
1.	Acute artic. rheum., organic heart dis.	6	Disappeared completely in 24 hours.	Slight reddening.
2.	Neurosis.	6	Trace remaining in 24 hours.	+
3.	Alcoholic neuritis...	6	Trace remaining in 24 hours.	+
4.	Pleurisy with effusion.	6	Disappeared completely in 24 hours.	Slight reddening.
5.	Organic heart dis...	6	Disappeared completely in 24 hours.	Slight reddening.
6.	Organic heart dis...	6	Disappeared completely in 24 hours.	Slight reddening.
7.	Hour-glass stomach.	6	Disappeared completely in 24 hours.	Slight reddening.
8.	Carc. en curiasse....	0	0	0
9.	Acute art. rheum....	6	Disappeared completely in 24 hours.	Slight reddening.
10.	Alc. gastritis.......	6	Disappeared completely in 24 hours.	+
11.	Tuberculous pleurisy.	12	Disappeared completely in 24 hours.	Slight reddening.
12.	?	0	0	0
13.	Chronic osteomyelitis.	0	0	0
14.	Chronic Bronchitis..	0	0	0
15.	Neurosis	0	0	0

The earliest reaction was evident after an incubation period of three hours. Six cases examined six hours after instillation were all positive.

The average duration of the reaction was from forty-eight to seventy-two hours; the limits ranged from twenty-four to ninety-six hours.

TABLE 3.—Six Cases Diagnosed Clinically as Typhoid Fever, But Not Reacting to the Agglutination Test or for Other Reasons Not Being Included in Table 1.
Doubtful Cases.

Number.	No. of days or weeks of Disease.	Agglutination.	Blood Culture.	Remarks.
1.	4th week.	+	0	Both conjunctivæ inflamed at time of instillation. No difference apparent at end of 18 hours.
2.	6th week.	0	0	Ocular reaction negative. No difference at end of 18 hours.
3.	7th week.	+	0	Ocular reaction questionable. Definite difference in degree of injection may have been present. Doubtful.
4.	4th week.	No test.	0	Slight difference present in 6 hours and persisting 24. Similar to control cases. Reaction (?).
5.	?	No test.	0	Ocular reaction positive. Duration 48 hours.
6.	3d week.	No test.	0	Ocular reaction positive. Duration 48 hours.

A typical reaction may be described as follows: From three to six hours after instillation there appears a diffuse redness of the inner caruncle, plica semilunaris and palpebral conjunctiva. At the end of this period or a little later, a yellow-white, translucent mucopurulent discharge appears and collects at the inner canthus. The morning following the patient frequently complains that his eye "was stuck together when he woke up in the morning," and there are evidences of a dried crusted exudate on the margin of the lids and on the lashes. It is the exception for patients to complain of subjective symptoms other than "watering of the eye," or smarting or soreness. The feeling of a foreign body or a grain of sand which so frequently follows an ocular tuberculin test was not complained of. Likewise the hyperemia of the caruncle was not nearly so prominent as in the tuberculin test. If there is doubt as to the existence of a reaction, I have found that the conjunctiva covering the lower and outer fornix of the tested eye is the point at which the greatest injection occurs and that a comparison with the other eye may decide a doubtful case.

The negative reactions in control cases were examined critically because of the slight reddening obtained in some instances. In a total of fifteen cases five showed no apparent change; seven showed a slight, though definite diffuse redness which disappeared entirely in twenty-four hours; three showed a more pronounced hyperemia, which lasted over twenty-four hours, but which at no time partook of the degree of injection noted in positive cases. The presence of a slight inflammatory reaction in these negative cases has led me to the belief that there exists some irritating principle in the extract as we have prepared it and in the alcoholic precipitate of Chantemesse, which is not specific and which may be eliminated by greater dilution of the active principle or by its removal by physical or chemical means. Work toward this end is now under way.

The six cases classed as doubtful in Table 3 are self-explanatory and are included for the sake of completeness. With the exception of the last case there is no suggestive contradiction. This patient, a woman 25 years old, three days after instillation developed unmistakable evidence of tuberculous meningitis and died forty-eight hours later. Further inquiry revealed a history of typhoid one year previous. It is too early to say whether the ocular reaction was due to persisting bodies from the previous typhoid infection or whether the meningitis was responsible. Here again more extensive observations are needed to decide.

The series is instructive in showing the necessity of careful inspection and analyses of ocular phenomena. Until the exact limitations of ocular-typhoid tests have been ascertained by experience gained through observation of a large number of cases, one should not interpret them as final, but should weigh them carefully in conjunction with other available data.

SUMMARY.

By the instillation into the eyes of typhoid patients of one drop of an extract of the typhoid bacillus, a reactive inflammation has been caused which probably is specific and possibly universal. In diseases other than typhoid, a less intense and shorter reaction occasionally appears which in most cases may easily be differentiated. These results agree closely with those obtained with the alcoholic precipitate of Chantemesse.

Ocular Diagnosis of Tuberculosis in Chronic Tropical Affections.—Treille contributes an article on this subject to the *Caducée*, February 14, emphasizing the importance of detection of tuberculosis in its incipiency in persons affected with chronic tropical affections. He expatiates on the frequency with which tuberculosis becomes superposed on them. Its revelation by the ocular differential test would in many cases explain why the patients fail to recover health, and it would also be the signal for prompt return to a temperate clime. It has been his experience that tuberculosis almost invariably runs an exceptionally rapid and fatal course in the tropics. It is best not to attempt to fight it there but to return home, where it may be arrested in its incipiency by proper treatment.

Special Article

THE MIDWIVES OF CHICAGO,

BEING A REPORT OF A JOINT COMMITTEE OF THE CHICAGO MEDICAL SOCIETY AND HULL HOUSE.

By the Committee on Midwives.
RUDOLPH W. HOLMES, M.D., CHAIRMAN.
Alice Hamilton, M.D. Charles S. Bacon, M.D.
Caroline Hedger, M.D. Herbert M. Stowe, M.D.
CHICAGO.

Introduction by the Committee.

About four years ago the Council of the Chicago Medical Society appointed a Committee on Criminal Abortion whose purpose should be the investigation of the crime of feticide. Very shortly the chief function of the committee became that of aiding public officials in prosecuting those guilty of this crime. Also this committee was able to secure the removal of all criminal advertisements from the local press—partly by moral suasion and partly by securing the cooperation of the postal authorities. In pursuance of its duties the committee gradually became cognizant of the relatively great frequency of the crime of abortion among midwives; at the same time the members of this committee were made to realize the deficiency of these practitioners in learning and ability. Not infrequently the committee found from the evidence presented before the coroner's inquisition and the criminal court that their practice was not confined to the duties limited by law, but that they were, in fact, practicing medicine. As midwives are permitted to care only for women in full time normal labor, the mere fact that they were treating miscarriages and early abortions placed them without the pale of the law.

Last spring, on the motion of the chairman of the Committee on Criminal Abortion, the Council appointed another committee—the Committee on Midwives—which should investigate the midwife class. The work of this committee was made possible by the promise of Hull House to defray all cost which might be incurred in the course of the investigation.

At the outset the members of this committee were fully convinced that midwives now, and probably for years to come, are socially inevitable; at the same time the committee appreciated the fact that the present laws governing midwives are grossly inconsistent with the laws controlling the practice of medicine. In Illinois, as in most states of the Union, the regulations of midwife practice are the same as they were when the state began the control of midwifery. The regulations covering the practice of medicine have advanced fairly consistently with the progress of medical knowledge. The laws governing the practice of midwifery are utterly absurd and inadequate when compared with the requirements of obstetric practice by doctors of medicine.

The state of Illinois makes rules covering the amount of preliminary education of a prospective medical student. It defines the duration of medical study, the number of hours to be devoted in each year, the subjects which must be taught, and in the case of obstetrics requires the candidate for the degree to have had at least three cases.

In contrast to this the prospective midwife is not required to have any preliminary education—in fact, may be illiterate. She is not required to have any correlated instruction in obstetrics before her eligibility is proven, and she may obtain her license without having seen a single confinement case. The law does not concern itself with the status of the midwife school, and as a result the regulations of the State Board of Health do not concern themselves with the qualification of the candidate for a midwife's license—the woman's ingenuity to pass an examination is the criterion. And yet a woman who can neither read nor write in any language can pass a written examination!!!

The committee feels that the time is now ripe for a readjustment of midwife requirements, and that there should be adequate regulations commensurate with the demands of modern obstetric practice.

The committee can not express its appreciation too strongly of the valuable aid given it by Miss F. Elizabeth Crowell. Without her indefatigable labors in supervising the investigation little would have been accomplished. Her able report to the committee covers completely the derelictions of duty, the ignorance and incompetence of the midwife as a class as she exists among us. Likewise we must express our thanks to the Visiting Nurse Association of Chicago for invaluable aid in securing the names and addresses of midwives. Mrs. Rogers, a former member of the staff of the Visiting Nurse Association, who personally visited each and every midwife covered in the report of Miss Crowell, deserves our commendation. Too, we must mention our deep obligation to Professor Henderson, of the University of Chicago, for his repeated counsels during the progress of the investigation.

The Report to the Committee.

MISS F. ELIZABETH CROWELL, NEW YORK.[1]

The investigation was made by Mrs. M. J. Rogers, of the Visiting Nurse Association, who obtained from the midwives information regarding their personal, social and professional status. Later a special detective who had had several years' experience in this particular line of work in New York visited the same midwives for the purpose of obtaining information regarding their criminal practice. The entire city was covered from Edgewater to South Chicago and from the lake to the extreme western limits.

In all 223 midwives were visited, and 21 only, or 9 per cent. of the total number, were correctly registered, so that the results as shown may be considered representative of the entire field of local midwifery practice. Every effort was made to have the investigation complete and to provide for the accurate recording of the information obtained by the investigators. For convenience and to save time, the city was districted, and midwives in each district were visited consecutively, first by the nurse, then by the detective. Printed cards with blank spaces for information obtained under each heading were furnished to the nurse. These cards served two purposes—first, to refresh her memory as to the information desired, so that the same data should be secured from each midwife; second, the opportunity for the immediate recording of the information thus obtained precluded the possibility of the errors which naturally would have arisen had she relied solely on her memory and attempted to record the details of each interview after her return home at night. The detective was furnished with cards bearing the name and address of the midwife previously visited by the nurse. In order to avoid exciting suspicion, the results of the detective's interview with the midwife were jotted down on the back of this card in some neighboring store or conveniently adjoining doorway and afterward this information was transferred to the card originally used by the nurse. In this way each card contains an accurate record of the social, professional and criminal status of every midwife visited. The accompanying tables contain the tabulated results of the investigation as shown by these cards.

In Chicago 47 per cent. of the births reported are returned by midwives. The greater part of these births so reported occur among the Italians, the Slavs and the Germans. An analysis of 1,076 births when the classification was based on the nationality of the mother shows the following results: Among the Italians 86 per cent. were reported by the midwives; among the Austrians, Hungarians, Poles and Bohemians, 74 per cent.; among the Germans, 68 per cent.; among native-born Americans, 35 per cent.; among Russians, 25 per cent. One cause which has contributed toward lowering the amount of midwifery practice among the Russian Jews is the excellent work of the Chicago Lying-in Hospital and Dispensary and of the maternity dispensary of the University of Illinois, which furnish attention to over 2,000 patients annually, the great majority of whom are Jewish. We have found this preponderance of Jewish patients also in connection with the work of the New York Lying-in Hospital and Dispensary.

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[1] Miss Crowell's report on the midwives of New York appeared in Charities and the Commons, Jan. 12, 1907, and was abstracted in The Journal, Feb. 23, 1907, page 712.

It is impossible to arrive at anything like an accurate estimate of the number of midwives practicing in Chicago. Speaking roughly, there are between 500 and 600. This estimate is based on the number given in the last issue of the city directory—466—and the number registered at the office of the county clerk since 1878, namely 1,634. This registry is absolutely valueless for all practical purposes. There is no separate record of licensed midwives, but the registry is an indiscriminate jumble of physicians, osteopaths, midwives, et al. There has never been any attempt to revise the record or to bring it up to date in order to make it a reliable means of reference. Midwives who were 60 years old when they registered in 1878 may still be practicing at the hale old age of 89 for aught to the contrary to be gleaned from the official record. There is no evidence that any one of the 1,634 has changed her name, her place of residence or her plane of existence, supposing her to have been translated to another world, since the day of original entry. Of the 466 names given in the city directory but 346 could be identified in the register, and in the majority of cases they were incorrectly recorded. This does not necessarily mean that the remaining 120 midwives were not licensed and registered, but it does mean that it is impossible to obtain any trace of them from the only source of official information concerning them. Thirty-nine of the 120 were investigated and 26 produced a license and certificate of registration each. The remaining 13 refused to be interviewed. On the whole, allowing a reasonable reduction of the number of registered midwives by death, by old age or by changes in their conditions whereby it was no longer necessary or desirable for certain ones to continue the practice of the profession, I believe that 500 is a conservative estimate of the number of midwives practicing in Chicago to-day.

Over one-half of the number (123 out of 223) were incorrectly registered, and one-fourth (57 out of 223) were impossible to trace. One midwife, a Polish woman, said frankly that she had no license and that she intended to take her examination before the state board in the fall. In the meantime she enjoys a large and flourishing practice. Her home was filthy, and so was her person and clothing. Classified according to nationality it was found that 37 per cent. of the midwives visited were German; 16 per cent. were Poles; 14 per cent. were Bohemians; 5 per cent. were Swedes; 3 per cent. only were Italians, and 13 per cent. were made up of natives of Russia, Austria, Hungary, Norway, United States, France, Denmark, England, Scotland and Belgium; 9 per cent. were unclassified, they having refused to give the nurse any information whatever. (Table 1.)

TABLE 1.—PROFESSIONAL DATA.

Nationality.	Total.	Registration at Health Dept. Correct	Registration at Health Dept. Incorrect	Registration at Health Dept. Not registered.	Length of practice. 1 to 9 years.	Length of practice. 10 to 19 years.	Length of practice. 20 years and over.	Methods of practice. Attend normal cases only. Yes	Methods of practice. Attend normal cases only. No	Methods of practice. Equipment and cleanliness of bag. Good	Methods of practice. Equipment and cleanliness of bag. Fair	Methods of practice. Equipment and cleanliness of bag. Bad	Methods of practice. Equipment and cleanliness of bag. Not seen.	Methods of practice. Equipment and cleanliness of bag. None	Criminal history and practice. Conviction, selling drugs.	Criminal history and practice. Indicted for crim. abor. Trial pending.	Criminal history and practice. Indicted for crim. abor. Not guilty.	Criminal history and practice. Offered to sell drugs.	Criminal history and practice. Agreed to operate.	Criminal history and practice. Receives patients in home.	Criminal history and practice. Suspicious.	Incomplete—information refused.
German	84	7	52	25	14	35	27	62	7	54	6	..	10	1	1	1	1	2	25	10	10	15
Polish	36	6	19	11	19	13	3	31	4	21	9	2	2	1	1	1	..	1	3	2	2	1
Bohemian	31	3	20	8	6	18	7	28	3	22	5	2	2	..	..	..	2	..	3	..	6	..
Swedish	13	1	9	3	3	5	5	12	1	11	..	..	2	..	..	..	..	..	4	1	1	..
Italian	8	..	4	4	4	2	2	5	3	3	2	2	..	1	..	..	..	..	..	..	1	1
Russian Jew	5	1	3	1	1	1	2	3	..	1	1	2	..	..	..	..	..	..	..	..	..	2
Austrian	5	..	5	..	..	2	2	..	2	2	..	..	..	..	..	..	..	..	..	..	..	4
Hungarian	4	1	3	..	..	3	..	3	..	2	..	1	..	..	1	..	..	..	1	1	1	1
Norwegian	4	..	3	1	..	2	2	2	2	3	..	1	..	..	..	..	..	..	1	1	..	..
United States	4	2	1	1	2	1	1	1	2	2	..	1	..	..	..	..	..	..	..	..	..	2
French	2	..	1	1	..	..	2	2	..	1	..	..	1	..	..	..	..	..	1	1	..	..
Danish	2	..	1	1	..	..	2	2	..	2	..	..	..	..	1	..	..	..	1	..	..	..
English	1	..	1	..	..	..	1	1	..	..	..	..	1	..	..	..	..	..	..	1	..	..
Scotch	1	..	1	..	..	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..
Belgian	1	..	..	1	..	..	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..
Unclassified	22	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	10	2	1	..
	223	21	123	57	49	83	57	154	24	126	23	11	18	3	4	2	3	4	49	19	22	26

TABLE 2.—PERSONAL DATA.

Nationality.	Total.	Age. 20 to 34 years.	Age. 35 to 49 years.	Age. 50 years and over.	Length of residence in U. S. 1 to 9 years.	Length of residence in U. S. 10 to 19 years.	Length of residence in U. S. 20 years and over.	Education. General. Able to read and write. English	Education. General. Able to read and write. Nat. lang.	Education. General. Able to read and write. No	Education. General. Speak English. Yes	Education. General. Speak English. No	Education. Professional. diploma, etc. Foreign	Education. Professional. diploma, etc. United States.	Education. Professional. diploma, etc. None	Dependent on practice. Yes	Dependent on practice. No	Condition of home and person. Good	Condition of home and person. Fair	Condition of home and person. Bad	Incomplete—information refused.	Unclassified—information refused.
German	84	5	36	42	3	14	55	46	27	..	78	2	22	46	4	26	44	66	9	3	15	..
Polish	36	9	22	5	5	14	17	6	29	1	26	10	10	25	1	22	14	20	11	5	1	..
Bohemian	31	6	16	9	9	13	9	5	26	..	17	14	17	14	..	10	21	19	10	2	..	..
Swedish	13	2	7	4	..	2	11	9	4	..	13	..	3	10	..	5	8	13	..	..	..	..
Italian	8	4	2	2	2	4	2	1	7	..	5	3	4	4	..	2	5	2	3	3	1	..
Russian Jew	5	..	1	4	..	1	3	1	3	..	5	..	3	1	..	2	3	1	2	2	2	..
Austrian	5	..	4	1	..	1	1	1	1	..	5	..	1	2	..	2	..	2	1	..	4	..
Hungarian	4	1	2	1	1	2	..	..	3	..	4	..	2	1	..	1	2	2	..	2	1	..
Norwegian	4	..	2	2	..	1	3	3	1	..	4	..	1	3	..	1	3	3	..	1	..	..
United States	4	1	1	2	..	..	4	4	..	..	4	..	..	2	1	1	2	3	..	1	2	..
French	2	..	..	2	..	1	1	1	1	..	2	..	2	..	..	..	2	2	..	..	..	..
Danish	2	..	..	2	..	..	2	1	1	..	2	..	1	1	..	1	1	2	..	..	..	..
English	1	1	..	..	..	1	..	1	..	..	1	..	..	1	..	1	..	1	..	..	..	..
Scotch	1	..	1	..	..	..	1	1	..	..	1	..	..	1	..	..	1	1	..	..	..	..
Belgian	1	..	..	1	..	..	1	1	..	..	1	..	1	..	..	..	1	1	..	..	..	..
Unclassified	22	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	22
	223	29	94	77	20	54	110	81	103	1	168	29	67	111	6	74	107	138	36	19	26	22

The small number of Italian midwives appears out of all proportion to the number of births reported among Italian mothers. On inquiry it developed that the practice among the

Italians is largely distributed among midwives of other nationalities. There were not more than 20 Italian midwives in all Chicago.

One-half of the number visited had resided in this country 20 years or more; one-quarter from 10 to 20 years, and [illegible] remaining number from 1 to [illegible]y-four were between 35 and [illegible] years of age; 77 were over 50, and 29 were und[illegible] years.

With regard to their educational qualifications there was practically no illiteracy, only one, a Polish woman, being unable to read or write. Over 50 per cent. could read and write their native languages only; 36 per cent. could read and write English, and 13 per cent. were unable to speak English, the proportion of those unacquainted with English being highest among the Poles, Bohemians and Italians. There were 111 midwives, 50 per cent. of the total number visited, who produced certificates of proficiency from local midwifery schools—(so-called); 67, 30 per cent., held diplomas from foreign schools, and 6, or 2 per cent., were unable to show either certificate or diploma. An ingenious explanation for the lack of a diploma given by one midwife who had previously stated her age as 54 years, was that it had been burned in the Chicago fire of 1871. The sixty-seven who held foreign diplomas may be considered as having been properly trained and as having given evidence of attaining a certain required standard of proficiency before diplomas were granted. The midwifery schools abroad are connected with the universities and a certain educational standard is required of all students entering for the course in midwifery. The instructors are men of the highest standing in the medical profession, so that the theoretical knowledge imparted by them can not be questioned. The practical experience of every student is obtained in the clinics attached to the medical department of the university attended or in the hospitals supported by the government. The length of training is anywhere from six months to two years. The best known schools are those of Naples, Rome, Paris, Berlin, Heidelberg, Prague, Vienna and Stockholm.

The 111 certificates from American schools of midwifery are *prima facie* evidence of but one fact—that the midwife holding such a certificate had the price to pay for it. The same strictures that were applied to the New York schools of midwifery apply with equal force and justice to the Chicago schools. They are veritable diploma mills run for revenue only, usually by some conscienceless physician who receives lucrative returns for a minimum outlay of time and trouble. In the majority of cases, the woman who takes such a course does so in entirely good faith, realizing the necessity for technical knowledge and training and anxious for the necessary practical experience before attempting to practice her chosen profession of midwifery. In all, 25 different styles or forms of American diplomas were exhibited by the various midwives visited. Two were graduates of familiar New York institutions and two claimed St. Louis schools as their alma maters. Many times a local "school" had existed in the back office of some physician, and when he changed his habitat it disappeared from human view; others had gone out of existence and it was impossible to find any trace of them whatever. We succeeded in locating and investigating seven of these so-called schools and colleges of midwifery.

The length of time required to complete the course of study in these schools averages six months; the fees are from $100 to $175. Instructions are given three or four hours each week. In two instances no text-books are required, the physicians in charge claiming that they impart all necessary information by word of mouth. This possibly explains the fact that the Polish woman to whom previous reference has been made as being unable either to read or write, holds a diploma from one of these Chicago schools. When possible, the pupils are afforded opportunities for practical experience, but this is considered by no means necessary. As the state board, which has determined the standard for admission to examination for a midwife's license, requires no practical experience, I see no reason why these instructors of would-be midwives should make any undue effort to obtain or afford opportunities for practical experience to their students. But it does seem inconsist[illegible]nt that it should be deemed necessary for a nurse to spend s[illegible]veral months in an operating room in order to learn the tec[illegible]nic of surgical cleanliness that she may competently assist a physician, while the midwife can become sufficiently [illegible]miliar with the principles and methods of modern asepsis after a few hours of oral instruction to be entrusted with the sole responsibility of the life and future well-being of the parturient woman and her child.

And there is another phase to be considered in regard to the knowledge imparted to the inquiring mind that is seeking instruction in these schools. One physician, whose school seems to be well patronized as evidenced by the number of certificates seen bearing his signature, offered for an additional fee to instruct the supposed candidate privately as to the *modus operandi* of successful abortion work, assuring her that it would bring in large returns, that it was a perfectly safe business and that the midwives who were caught were fools. In this particular instance the school of midwifery seems to have been also a school of crime.

To return to the midwife: It was an agreeable surprise to find on the whole a standard of cleanliness for both the homes and persons of the midwives visted much higher than was found among the New York midwives. No more than 19 were absolutely filthy; 36 were fairly clean, and 138, practically two-thirds of the total number, were clean and their homes nicely kept. One explanation for this is to be found in the different environments of the Chicago midwives. In New York the vast majority of midwives were to be found living in three and four-room tenements, and their standards were comparable with those of the people among whom they live (Table 2). In Chicago nearly all the midwives live in separate houses, with plenty of light and air, and cleanliness is the natural adjunct of their mode of living, not a luxury of attainment. On the North Side, and again on the South Side, where the German midwives were principally found, their living conditions were particularly good. The worst conditions were found among the Poles, Bohemians and Italians from Lake to Twenty-sixth streets.

The majority of midwives visited were not dependent on their practice for a livelihood, the husband or grown children contributing largely to the support of the family. The husbands' occupations were stated variously as laborer, carpenter, barkeeper, baker, cook, boilermaker, tailor, news dealer, teamster, mechanic, machinist, barber, fruit dealer, painter, butcher, laundryman, veterinary surgeon, cabinetmaker, electrician, cigar maker, molder, brewer, blacksmith, clerk, janitor, shoemaker, horse buyer, bricklayer, fireman, tanner, gardener, motorman, valet, policeman, artist, musician, real estate dealer, lawyer and physician. The statement was made by 74 midwives that they were entirely dependent for their support on the income derived from their practice. About three-fourths of the total number visited had been engaged in their practice over 20 years.

Over 10 per cent. of those interviewed expressed an entire willingness to conduct abnormal cases, dilating at length on their ability to perform version, to deliver a breech or transverse presentation, to remove an adherent placenta or to treat a postpartum hemorrhage. All those interviewed, even the dirtiest, claimed that they used antiseptics. One must, however, question the efficacy of the use of an antiseptic by a woman whose person, clothing and bag are filthy beyond description. Filthy bags were found in 11 instances, and the personal uncleanliness of 19 midwives visited has already been noted. Adequate inspection would render the continued existence of such conditions impossible. Such midwives should be considered unfit to practice and their licenses should be revoked.

Coming now to the criminal aspect of the practice of these women, they were found to be practically on a par with their New York sisters. At least one-third should be classified as criminal. The detective succeeded in interviewing all but 15 of the 223. Several attempts were made to see these, but in each instance the woman sought was away from home, and the time allotted for the investigation having expired, the detective was obliged to return to New York without seeing them. It is worthy of note that 14 out of 22 who refused to be interviewed by the nurse are included in the numl[illegible] midwives designated as criminal. Four midwives stated [illegible] they had been convicted of selling drugs; five, accordin[illegible] to the record of the coroner's office, have been indicted for [illegible]iminal abortion, and two at present are out on bond pending trial. It is significant of their confidence in the final outcome of justice (?) or their faith in the impotency of the criminal law, that they continue their illegal work while their cases are pending. In all, 49 midwives agreed to perform an abortion on the special agent who visited them, and 4 offered to sell drugs that would act as abortifacients. One of the 49, a Norwegian, whose husband is a policeman, was quite the filthiest, and according to current report, is leading a dissolute life. And yet to the nurse who had previously visited her she proudly exhibited her license from the state board to practice the noble art of midwifery. Another woman, whose husband was a physician, refused to operate, but introduced the detective to her husband, who offered for $3 to furnish medicine guaranteed to bring on an abortion.

Midwives to the number of 22 were designated as suspicious either because of information against them furnished by neighbors, or because they exhibited in their possession instruments for which they had no legitimate use. A midwife who has in her equipment a speculum, uterine sounds, dilators, curettes and wired gum catheters, is beyond all question or doubt carrying on a criminal practice. Of these women, 19 offered to receive patients in their homes, a direct violation of the health ordinance which prohibits the conducting of a hospital or lying-in institution of three or more beds without first obtaining a license therefor. As a matter of fact there is very little, if any, obstetrical work done in these houses. Reduced to their simplest terms they are abortion shops, pure and simple. The same epithet would apply equally well to some of the licensed lying-in institutions, so-called. A clever evasion of the law is to be seen in the change of front of one of these institutions, whose license was recently revoked after some peculiarly revolting exposures of its methods and practices. The institution in question is now being run as a "boarding house" and its patients are "boarders."

A great criminologist, Lombroso, classifying certain crimes as local on account of their prevalence in certain localities, refers thus to the practice of abortion in the United States, claiming that so common has this custom become in this country that it is no longer regarded as a crime, rather as a perfectly justifiable, even laudable method of limiting the increase in population. And yet the law recognizes the right of the unborn child to life and to property, and endeavors to safeguard these rights by making criminal abortion a felony.

The statement has been made recently that the number of abortions committed in Chicago is increasing yearly. This is probably true, and it is generally conceded that midwives are the chief agents in procuring these abortions. On the other hand, physicians themselves acknowledge and deplore the presence within their ranks of the criminal practitioner, and there is also a class of druggists who lend themselves to this criminal work. There must also be considered those abortionists who are hiding under the guise of some other profession and style themselves variously clairvoyants, fortune tellers, palmists, masseurs, etc. In addition, the fact must not be overlooked that many abortions are self induced. Contrary to the general opinion, applications for this sort of service come not alone from unfortunate or immoral women, but in the majority of instances from otherwise respectable married women influenced thereto either by selfish motives or because the pressure of economic conditions is so great that the possibility of one more mouth to feed becomes a tragedy to be averted at any cost. We have the testimony of many a poor tenement-house mother to support this last assertion.

Leaving aside the moral, ethical and religious questions involved, and considering only the physical evils resulting from this practice of abortion we know that Nature exacts full payment for every interference with her normal processes. When such interference creates a pathologic condition which renders the patient peculiarly liable to infection we have an added danger the seriousness of which can not be overestimated. Unfortunately, actual statistics of disease and death directly or indirectly traceable to unlawful interference with the natural progress of pregnancy by a careless, criminal midwife can never be written.

Another point to be considered while dwelling on this particular phase of midwifery practice is the collusion between certain midwives and physicians whereby the division of responsibility in the criminal practice results in a divison of the spoils. In the case of a disastrous finale, the cloak of an honorable calling is wide enough to cover and hide from suspicion both the criminal physician and the criminal midwife. Many of these criminal midwives have regular physicians on whom they call for assistance when the results of their interference with Nature point to a fatal termination. Sometimes it is a son who has been educated as a physician. The death certificate is signed by the physician in question and the causes of death assigned may range from pneumonia to cardiac failure. Again the combination may operate in another way—the midwife acting as an intermediary or agent and for a consideration steering her applicant to the physician who is willing thus to prostitute his profession.

Another insidious commercial arrangement is found to exist among certain Italian physicians and midwives, which if not criminal in the ordinary acceptation of the word, is, to say the least, most reprehensible in its exploitation of the unsuspecting patient. The repugnance of the Italian mother to the presence of the physician in the lying-in chamber is well nigh insuperable. Only when she is convinced that her life and the life of her child depend on the immediate aid of a physician will she consent to his being called. Accordingly, although it may be a perfectly normal labor, after a certain period of waiting the midwife may announce that there is an unusual complication with which her skill and experience are unable to cope, and demand that she be allowed to call a physician of once. He comes, makes an instrumental delivery; the patient believes that she has been snatched from the very jaws of death; a maximum fee is charged, and again there is a division of the spoils between the physician and the midwife.

In the last analysis, the state which licenses these women is responsible for the results of their practice. The strongest argument in favor of licensing the practice of the midwife, of affording her legal recognition, is that thereby the state has legal control over her action. No midwife should be allowed to conduct any but normal labors. While the process of normal labor is physiologic, it may at any time become pathologic. If evidence of carelessness, of incompetency, of unlawful practice be adduced, not only should she be punished, but her license should be revoked and her practice should not longer be sanctioned by the state.

State certificates authorizing the practice of midwives in the state of Illinois are issued by the State Board of Health under the provisions of the Medical Practice Act in force July 1, 1899. All applicants are required to furnish evidence of good moral character and to pass a satisfactory examination in the following branches: 1. Anatomy of the pelvis and of the generative organs of woman. 2. Physiology of menstruation and conception. 3. The signs of pregnancy. 4. Mechanism of labor. 5. Management of normal labor. 6. Management of abnormal labor. 7. Puerperal hygiene and antisepsis. 8. Special care of mother and infant.

The applicant if desirous of taking the examination in a foreign language must furnish her own interpreter. In this connection, it is said that a number of Polish midwives holding certificates from the state board have obtained them fraudulently. Having insufficient knowledge to enable them to answer the questions of the board, they employed a clever Polish midwife who was able to speak English. She took the examination successfully in each case and obtained the certificate in the name of the applicant who lacked both the knowledge of English and the knowledge of midwifery.

The state board requires no practical experience from candidates for license to practice midwifery. The committee believes this to be a grave error. Under the English midwives act, 1902, one of the requirements for admission to examination is that the candidate shall produce satisfactory evidence that she has attended under supervision and watched the progress of not less than 20 labors and that she has nursed 20 lying-in women during the ten days following labor. In New York, under the new law to regulate and restrain the practice of midwifery, the health department is considering the minimum number of 15 cases to be required of the candidate desiring to practice midwifery.

Having obtained her license, the Illinois midwife is free to practice her chosen profession without let or hindrance. Secure in the fact of her legal right to practice, she may become as lax in her methods as she chooses, and by her carelessness or over-confidence, endanger the lives of hundreds of mothers and their babes. So long as she keeps out of the clutches of the criminal law, the authorities ignore her existence, and yet to the ignorant woman who employs her the fact that the state has licensed her practice is proof conclusive that the midwife is entirely competent to take into her keeping the life and safety of the expectant mother. The state has not settled the problem of the midwife by merely examining and licensing her practice. The most important duty still remains, that of the regulation and inspection of the midwife's practice after she has been turned loose, so to speak, on an ignorant and credulous community.

Conclusions of the Committee.

The Illinois law gives the State Board of Health no authority to inspect or to control midwives. This power should be given to the board by legislative enactment. The committee would submit certain suggestions of provisions that would be desirable to secure a proper regulation of midwife practice in Chicago and in the state of Illinois.

The simple device of issuing short-term licenses, to be renewed at stated intervals, and requiring no additional fees after the first granting of the license, would work no hardship on the midwife and would bring her repeatedly to the notice of the proper authorities, thus enabling them to keep a fairly correct record of her name and address; no easy task in the ever-shifting character of our foreign population.

There should be a local representative of the State Board of Health in Chicago, preferably one who might act in conjunction with the local health department, who should be charged with the responsibility of the conditions of midwifery practice in this city. He should have a sufficient number of assistants or inspectors under his control, to carry out the rules established by the board.

The state board should promulgate rules restricting and regulating the practice of all midwives and the local representative should be charged with the responsibility of enforcing these regulations. Rules for the inspection of midwives, of their records, their equipments, their persons, should also be defined. The work of supervision would be greatly facilitated by securing the cooperation of physicians and hospitals to the end that they would make immediate report, on blanks especially prepared and furnished to them for that purpose, of all infected or improperly conducted cases coming under their observation. These blanks should include space for date, name of physician and hospital reporting the case, name and address of patient, date of confinement and name and address of attending midwife. It would be desirable that the midwife should be immediately suspended from practice pending investigation, nor should she be allowed to resume her practice until her equipment and clothes had been properly disinfected under the supervision of the inspector.

With provision for the efficient control of midwife practice very much would be accomplished in correcting the evils that now exist. The committee is well aware of the difficulty in securing first, enactment of such rules and then their execution. In the end the result must depend largely on the status of the midwives themselves. No permanent reform can be secured with uneducated, untrained and vicious midwives. Hence, the committee is forced to the conclusion that provision should be made for the assumption of the control of midwife education by the State Board of Health. This should embrace the recognition of such schools as comply with a specified standard of requirements for admission, equipment and work, as alone entitled to [illegible]re midwives for examination. Such schools should be un[illegible] the control of the State Board of Health. In instituting [illegible] plan of midwife education the board should also provide f[illegible] repetition courses of from two to four weeks every two or four years, such as are favored by the German and Austrian schools and the German Society for Midwife Reform.

Clinical Notes

LARGE OVARIAN CYST, WITH TORSION OF THE PEDICLE, IN A CHILD.

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A search of the literature shows that this condition is extremely rare. The unusual and peculiar symptoms in this case make it of sufficient interest to report. The history pointed to some obscure bladder trouble.

Patient.—S. B., aged 6, on the night of August 15, was suddenly attacked by pain in the hypogastrium, accompanied by a pressing desire to urinate. She was up constantly during the night trying to empty her bladder. Her mother applied hot fomentations to the meatus urinarius without relief.

Examination.—When seen the following morning the child was in pain and was straining with violent vesical tenesmus. A few drops of normal urine were being constantly expelled. The abdomen was rigid and tender, pulse rapid, and temperature normal. While she was not seriously depressed she presented some slight shock. There was a prominent tumor in the hypogastrium. It occupied the entire pelvis and extended up to the level of the umbilicus. It presented all the physical signs of a distended bladder, except that it was a bit too narrow for its height. There was gut tympany on both sides and above it. It was firmly fixed in position and manipulation intensified the expulsive efforts. Rectal and vaginal examinations were made without positively establishing the diagnosis. The pelvic viscera were so small and so crowded by the cyst that they could not be outlined. All that could be felt was the rounded lower end of the tumor. Catheters were passed into the bladder without result except that they were immediately crowded out by the expulsive efforts which even produced considerable bulging in the perineum. With the exception of chronic enuresis, the child had been in good health till the attack of pain the night before. Her mother always bathed her and had never noticed any prominence of the abdomen. Although it may have no bearing on the case, it may be noted that the patient had always been easily nauseated and would vomit at the sight of her sister eating soft boiled eggs, milk toast, and such articles of diet, which she termed "sloppy." She is a laborer's child and by no means accustomed to delicate or dainty fare.

Operation.—She was prepared without delay and was operated on that afternoon. A large unilocular cyst of the right ovary was found firmly twisted on its pedicle through one complete revolution and a half. The venous circulation was strangulated, with consequent enlargement of the tumor. There were no adhesions.

Description of Growth.—The growth measured 12.5 centimeters in longest diameter, 10.5 centimeters through the center, 34.5 centimeters circumference around the ends, 30 centimeters around the center, and weighed 640 grams. It is now in the Army Medical Museum, Washington, D. C.

Result of Operation.—The patient had an uneventful and rapid recovery. She was up in two weeks and has a perfect result, with almost no scar.

Roentgen Ray in Cancer.—Ennion G. Williams states that much benefit can be expected, even in advanced cases of cancer, by relieving pain, retarding growth and prolonging life. The Roentgen ray, however, is of doubtful value, he asserts, in the treatment of cancers on the mucous membranes, and primary growths of the mammary gland.

EOSINOPHILIA PRODU[illegible]BY POTASSIUM IODID.*

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Eosinophilia, referable to drugs, has been described. von Noorden reports two cases of chlorosis in which there was an eosinophilia of 9 per cent. after the internal administration of camphor. It has been reported as occurring in animals after the inhalation of carbon dioxid. Wood mentions a case in which the eosinophiles reached 14 per cent. in a vesicular eruption brought about by the internal administration of potassium iodid. Boston states that it may follow phosphorus poisoning, and, according to Taylor, after the use of nuclein and pilocarpin. It was noted by us that in patients taking potassium iodid there was a rather high percentage of eosinophiles in the blood.

It occurred to us to try the effect of potassium iodid on the number of eosinophiles normally found in the blood.

METHODS.

In testing the effect of potassium iodid on the blood we selected patients suffering with fractures, contusions, etc. The blood was taken once a day for three days and the eosinophile count for these three days served as a control. In counting the eosinophiles the method of Opie was used. The finger was punctured and a small drop of blood placed on a cover slip, which was at once pressed firmly on a slide. The white cells were counted, including the eosinophiles. The percentage of eosinophiles was then determined. Preparations made in this way will keep for several hours, as the edges of the cover slip become sealed with the dried blood. However, in all our experiments the count was made at once. Generally 200 to 300 white cells were counted. In case there were marked variations in the number of eosinophiles in each 100 white cells counted, four or five hundred were counted.

In some of the experiments a leucocyte count was made. This was done to determine whether potassium iodid has any effect on the number of leucocytes and, therefore, disturbing the relation between the total number of white blood cells and the percentage of eosinophiles. This also showed whether or not we had to do with a leucocytosis at the beginning of the experiments.

The experiments on the dog were made as follows: The ear of the dog was shaved and cleansed and the blood was obtained by pricking a small vein. The preparation was made in the same manner as in the case of the human subject. A definite amount of potassium iodid was given through a stomach tube three times a day.

RESULTS.

Potassium iodid produces a marked increase in the number of eosinophiles. This increase was constant in all the experiments. However, in experiment No 2, after the first two days, there was a decrease even below the control experiment. In experiment No. 5 there was a similar change as in experiment No. 2. This was due, in all probability, to the sudden development of a leucocytosis. This patient developed a cystitis after beginning the administration of potassium iodid. The increase in the number of eosinophiles during the first two days was constant in all the experiments. In the last two columns of the accompanying table are found the results after the patients had not taken the iodid for three days. This shows, again, as a control, and is practically the same as the control counts made the first three days, before the administration of potassium iodid. The results also show that there is no change in the total leucocyte count of the blood. In some experiments there are suggestions of a decrease, and in others of an increase, but not sufficiently constant to permit of any conclusions.

EOSINOPHILIA PRODUCED BY POTASSIUM IODID.

Experiment Number.	Control: average for 3 days. Percentage of Eosinophiles.	Leucocytes.	First day. Grains of KI.	Eosinophile Percentage.	Leucocytes.	Second day. Grains of KI.	Eosinophile Percentage.	Leucocytes.	Third day. Grains of KI.	Eosinophile Percentage.	Leucocytes.	Fourth day. Grains of KI.	Eosinophile Percentage.	Control, 3 days with no KI. Percentage.	Leucocytes.
1.	1.1	....	45	7.5	....	45	6	.....	90	12.5	.....	100	10.	1.	....
2.	4.	....	45	11.	....	45	10.	.....	90	4.	.....	100	1.	3.	....
3.	10.5	....	45	13.5	....	45	14.5	.....	90	12.5	.....	100	16.5	6.5	....
4.	4.5	7,900	45	7.5	6,900	75	8.5	6,200	105	7.5	6,900	...	..	2.	8,500
5.	5.5	7,300	45	8.5	13,800	75	7.	12,600	105	3.5	12,800	...	..	2.5	9,500
6.	1.1	6,800	45	3.	6,000	75	3.	6,500	105	7.	7,200	...	..	3.	6,900
7.	4.	7,100	45	5.5	6,100	75	6.5	7,500	105	5.5	8,000	...	..	1.	7,690
8.	4.8	7,200	105	8.5	7,100	105	8.	7,500	105	7.5	7,900	...	..	3.	7,800
9.	1.3	7,500	105	4.	8,000	105	6.5	8,100	105	7.5	7,800	...	..	1.	6,900
10. Dog.	9.	....	30	16.	....	75	15.	....	75	15.	....	...	..	10.	....

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* From the Snodgrass Laboratory of the City of St. Louis.

Women and Medical Charities in Argentina.—The report of the Sociedad de Beneficencia de la Capital of Buenos Aires for 1907 is a rather notable document, inasmuch as this society, composed of ladies, appears to have general control of a large number of public charitable institutions of that South American city. In fact, it would appear that all the institutions, especially those for women and children, except, of course, the private ones, are under their charge. The enumeration includes the orphan and foundling asylums, male and female, the female side of the national asylum for insane, and one special ophthalmologic hospital and dispensary. In some of these, at least, like the asylum for the insane and the Hospital Rivadivia, the report contains the financial statement as well as the other statistics of movement of population, diseases treated in the different departments, etc., thus showing that the control is apparently more than merely advisory or inspectorial. The total number coming under their care during the year covered by the report numbered over 13,000, and there were remaining at the end of the year in the various institutions 5,616 inmates, of whom 1,922 were males and 3,694 females. The report indicates the existence of a very considerable public spirit and interest in charitable work in the ladies of Buenos Aires and a more than ordinary recognition of the same by the public authorities.

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SATURDAY, APRIL 25, 1908.

SPONTANEOUS GENERATION AGAIN.

In spite of all the scientific demonstrations to the contrary, every now and then one reads articles that suggest the possibility of spontaneous generation of life, and, at least apparently claim its occurrence. Not infrequently, such claims are made even by 'scientists, though rarely by scientists who are trained biologists. As all our sanitation and practically all our modern medicine in its most scientific phases are founded on the thesis that life does not originate spontaneously, and as such articles are prone to produce popular impression to the contrary, the restatement of medical views in this matter occasionally seems necessary. Mr. Percival Lowell, the director of the Lowell Observatory, in one of a series of articles in the *Century Magazine*, insists emphatically that whenever the conditions for the existence of life occur the lower forms of life at least come into existence. "Virtually," he says, "only six so-called elements go to make up the molecule of life. It is the number of its constitutent atoms and the intricacy of their binding together that give it the instability to produce the vital actions. Carbon, hydrogen, oxygen, nitrogen, phosphorus and sulphur are all that are required. If a planet be capable of furnishing these under suitable conditions it seems as inevitable that life will ensue as that the two elements sodium and chlorin will unite to form common salt when the heat and pressure are right."

As we have said, modern medicine is founded on the direct contradiction of such a proposition as this. We are assured that life, even in its lowest forms, never occurs except as a derivative of preceding life. When we find a case of typhoid fever we do not consider for a moment the possibility of certain conditions necessary for the production of a living typhoid germ having been present, but we look for the preceding case of typhoid from which the infectious material came. The same thing is true for all the other infectious diseases. No authority in bacteriology thinks for a moment that any infectious disease originates anew, no matter what favoring conditions for such origination apparently have been present. It is because of this principle of living germs arising only from preceding living germs that we harbor the hope of eradicating infectious disease. We confidently expect that tuberculosis will be reduced in its mortality quite as l[illegible]s, though that disease was as widespread in the middle ages as tuberculosis is now. If there were any question of the origin of these diseases under favoring conditions, except from a previous germ, then we could not legitimately have any such expectation.

Not only is this true in bacteriology, but it constitutes the basic principle of pathology, and is there even more strikingly displayed. Not only does no living thing, however low in the scale, originate except from preceding life, but no portion of any living thing comes into being, except from a living particle of the organism of which it is to form a part. The foundation of cellular pathology, as laid down by Virchow, is that every cell comes from a preceding cell. No germinative power in any fluid in the body, no matter how powerful it may seem or how important, is capable of producing a living cell. Any popularization of science real or supposed that tends to weaken this conviction of the impossibility of the origin of life or of any portion of any living thing except from preceding life strikes directly at the principles by which physicians have brought about the great reduction in disease, and have lessened human suffering and increased the length of life.

Nearly every generation sees a definite attempt made to undermine the force of the fundamental proposition of biology that spontaneous generation does not occur. In spite of the supposed popular knowledge with regard to medicine there is a general impression among nonmedical people that certain low forms of life do originate anew. For this there is not only no evidence, but there is abundant evidence of the contrary. The application of the principles that contradict this false popular impression are the most practically fruitful discoveries in science for the happiness of mankind that have ever been made. It is well then to emphasize them once more so that there may be a more general appreciation of what the basis of bacteriology and pathology really is.

TWO KINDS OF WEALTH.

A few days ago a famous American surgeon told a friend that it was a constant mortification to him that for his life-work he had not chosen business rather than medicine; and yet the annual income of this particular surgeon from practice is perhaps $100,000. Also a few days ago at the testimonial dinner to Robert Koch in New York City, a layman, Andrew Carnegie, who has gathered, who has given away, and who still has left more money than any other one individual, said that he would give all his worldly wealth for the immaterial wealth of many of the physicians there before him. It is distressingly evident that there is a vast difference between the standards of life of these two men. Their judgments seem irreconcilable. The famous surgeon's success and income for one year would more than satisfy many of us impecunious strugglers for a lifetime, and that of Carnegie would give the profession an almost immediate victory over most diseases—a hoped-for victory that is the ideal, the heart of the faith of every worthy physician. Is there no possible reconciliation of the two points of view? What is the truth, and what the falsity of each position, which make them so ludicrously and yet so sadly antagonistic? Why does the surgeon with the income of a prince, but not of a Carnegie, hunger for the millions, while the industrial Crœsus would gladly give all his many millions for the medical man's mind and vocation? If they make the trade, they must soon needs logically trade back again.

The answer to the riddle is really not hard to find. On the surgeon's part, it comes to view at once. He practices medicine for any and every reason but the right one. He values money at more than its worth. Already he has a larger income than he may wisely or beneficently spend; what a mess of it he would consequently make if he had the millions! As all old legends have it, in gambling with the devil, the stakes are Success against Soul. To the sensible, money is of use only in helping to get the few good things which money alone can not buy! The envying surgeon and his like suppose that checks can buy what is unpurchasable. The farce of this sorry company is to buy goods which can not be delivered. They are steering straight for eventual psychic and moral bankruptcy.

Robert Louis Stevenson, seeing the life of the medical man only from without, wrote these memorable words: "The physician is the flower (such as it is) of our civilization; and when that stage of man is done with, and only remembered to be marveled at in history, he will be thought to have shared as little as any in the defects of the period, and most notably exhibited the virtues of the race." Such a tribute to the honor, valor and value of our profession gives those of its members who are faithful a livelier encouraging. In the larger sense it is true, and it is deserved. But every one of us, whether we resist, half yield, or are borne down by the pressing evil, must feel better and stronger by reason of Carnegie's magnificently frank outburst. His money, he confessed, was a poor substitute for the beneficent science of an intelligent and unselfish medical man. The young Carnegie's heart had always been in the work of the physician and humanitarian, but at the time of life when most men embark on their careers of scientific study, the distressing poverty of his family made an immediate start in a commercial career imperative; as he so pathetically put it—"all other thoughts were overwhelmed by the stern resolve to drive the wolf from his parents' door or die in the attempt."

When we think of the intolerable vogue of charlatanry, of the greed of patients, of the dragging weariness of our overwork, of our often pitiless poverty, of our unprovided for families, of the oncoming hopeless old age, we too may at times envy the rewards of those who chose not medicine but the success and fame of the commercial life and with efforts almost superhuman, right or wrong, forge to a first place in the world of finance.

With the most evident sincerity, the most successful and the most unselfish of all millionaires, standing before physicians, says that ours is the preferable lot, the real success, the saner life. What a splendid acknowledgment of the utter failure of the gospel of getting! What a commentary on the old text concerning the gaining of the whole world and the losing of one's own soul! What an illustration of the obvious fact that at least this one speaker has not lost his own soul! Above all, what a benediction on the life and faith of the genuine physician!

THE MIDWIFE.

We had occasion about a year ago to review an admirable piece of research made in the field of public health and morals by F. Elizabeth Crowell,[1] who investigated 500 of the midwives of New York City with special reference to their training, methods, and criminal work. The present number of The Journal[2] contains the report of a similar investigation of the midwives of Chicago, which was carried on last summer under the supervision of Miss Crowell. The report is of great value to the people of Chicago and the city owes a debt of gratitude to the Chicago Medical Society and Hull House, under whose auspices the investigation was made, for presenting clearly and forcibly a situation which calls for instant amelioration. We are told that the Chicago Medical Society was prompted to enter on the investigation because of the evidenec of criminal practices by midwives acquired by its Committee on Criminal Abortion, while Hull House became interested in the question through observing the appalling frequency of deaths in childbirth among the women in certain foreign sections of the city. Both these aspects, the danger to the life of the mother in the hands of an ignorant midwife, and the criminal practice of these women, are taken up in the present report, and the conditions which make the former frequent and the latter easily possible, are clearly set forth.

It will be a surprise to many physicians to find how much obstetric work is done by midwives. Chicago has several large Italian colonies. The Italians are among the most prolific of peoples, and 86 per cent. of their births are reported by midwives. The numbers are only slightly lower in the Slavic colonies.

While many of the midwives visited were intelligent, clean and competent, the investigators found numerous instances of deplorably inadequate training joined to a readiness to assume charge of abnormal cases and to perform abortion. It is needless to lay stress on the danger to the community which such women constitute.

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[1] The Journal, Feb. 23, 1907, p. 712.

[2] Page 1346.

It is gratifying to note that the conditions as to illiteracy and as to filthiness of home and person, are decidedly better in Chicago than they were found to be in New York. As to the actual competency of the midwives, however, Miss Crowell's report does not allow Chicago much cause for congratulation. In New York 40 per cent. of the midwives hold foreign diplomas and are probably well trained in their profession: in Chicago only 30 per cent. hold such diplomas; the others have certificates from private physicians or diplomas from local schools.

The committee finds that the authority of the Illinois State Board of Health over the midwives of Chicago is entirely inadequate. The law of Illinois gives to the State Board of Health no authority of inspection, or power to revoke a license for malpractice, so that its function is practically limited to the holding of examinations and granting of licenses. At the same time it is evident that the Illinois State Board of Health has neither used to the full extent the powers given it by the state nor made any apparent effort to increase these powers. There is no reason why the board should not insist on certain preliminary educational qualifications for candidates for license to practice midwifery. Nor is it easy to understand why it has not long since insisted on these candidates presenting satisfactory proof of practical experience in obstetrics before obtaining their licenses. If the board is not authorized under the present law to make these demands, it would seem to be a matter of little difficulty to obtain an enlargement of its powers. That the board considers its relation to the midwife closed after the granting of the license is clearly seen in the fact that no effort is made even to ascertain the number of midwives practicing at the present time. Miss Crowell found the registry worthless, only 9 per cent. of the midwives visited being correctly registered.

These reforms and others are advocated by the committee at the conclusion of the report. They would undoubtedly go far toward controlling this heretofore outlawed branch of the medical profession. Many will no doubt be startled at the suggestion that the state should assume control of the schools of midwifery yet this is the only logical course to take. The standard of medical training required by the state of Illinois and by most of our states is being raised continually, and it is altogether inconsistent that the standard of training of midwives should make no advance. Since the state must license these women let us at least see to it that the license means something. With state supervision of schools and proper inspection of midwives we might hope to have these obstetricians of our foreign colonies reach as high a level of efficiency here as they are obliged to in Europe.

THE CARROLL-LAZEAR PENSION BILL.

The bill providing a pension of $125 monthly each to the widows of Drs. James Carroll and Jesse W. Lazear has passed the Senate and is now in the hands of the House committee on pensions. It is most gratifying to note the sentiments expressed by members of the Senate in the short debate which took place on this bill. Senator McCumber, in presenting it to the Senate, stated that Congress had already established a precedent in granting a similar pension to the widow of Major Walter Reed and that, as Drs. Carroll and Lazear deserved equal credit for the part they took in the investigation of the cause of yellow fever, justice required that a similar pension be given to their widows. Senator McCreary said: "A man who charges a battery exposes his own life and shows that he is a patriot by fighting for his country. But this great discovery is beneficial to thousands, almost hundreds of thousands of persons and the man or men who exposed their lives for the purpose of bénefiting so many hundreds of thousands of their fellow men, I think, deserve great credit." Senator Gallinger said: "The soldier in his performance of his duty charges the battery and loses his life in doing a patriotic act. These two physicians held commissions in the medical department of the army and their duty ceased when they performed the ordinary duties which are required of surgeons in the army. In performing this added service, making themselves subject to death as the result of these experiments, they went outside and beyond what could reasonably have been demanded of them, and lost their lives as the result."

The bill passed the Senate unanimously and it is hoped that it will be accorded the same treatment in the House. The public, particularly in the southern states, is only beginning to recognize the debt which this country owes to those devoted physicians who, at the risk of their own lives, demonstrated the cause and method of transmission of yellow fever. Viewed solely from a commercial standpoint, the annual saving to the south in quarantine expenses alone will be so great as to make the amount of the pensions granted the widows of these men seem infinitesimal. Viewed from a practical standpoint, their work was of the highest value, while as a gift to humanity it is inestimable. The action of the Senate in thus recognizing the claims which Drs. Carroll and Lazear have on the American people can not fail to receive public approval and approbation.

THE FALLACY OF SECTARIAN BOARDS.

At a hearing before a legislative committee recently held in a neighboring state, the following argument is reported to have been made by one of the advocates of a bill to establish a separate board of examiners for one of the numerous cults at present attempting to invade the field of medical practice: "The regular medical profession has its own board of examiners and we have as much right to a board as physicians have." This statement is repeatedly made before legislative committees as an argument in favor of sectarian boards and, strange to say, it appeals to the average legislator as being a valid and reasonable argument. Only a slight acquaintance with the fundamental principles of the law relating to the control of the practice of medicine is necessary for detecting the fallacy of this argument. The mistake lies in the assumption that a board of medical examiners, because it is composed of legally qualified physicians, is the representative of or the champion of the medical profession. There would be as much reason in assuming that the state supreme court was the special representative of the legal profession. The control and regulation of the practice of medicine, like that of any other calling, comes under the police powers of the state. Boards of medical examiners are created, not for the benefit of the medical profession, but for the purpose of safeguarding the lives and health of the people. These boards, therefore, are specially constituted bodies to which the state has delegated the duty of passing on the qualifications of those who wish to treat human diseases. In the exercise of this function they represent the people of the state and not a portion of them. For each of the innumerable sects and cults to demand a separate board of examiners, as though by some inherent right, is as ridiculous and illogical as it would be for a small body of citizens in some state to appear before the legislature and say, "We do not believe in law, the courts of the state represent the lawyers and we therefore demand the right to establish courts of our own."

MEDICAL NOMENCLATURE.

There are, perhaps, few subjects so worthy of careful consideration, yet regarded with such cavalier indifference, as the value of the names manufactured from time to time by innumerable writers to escape a periphrasis. We are not now referring to a lack of philologic knowledge in the mere ignoring of purely technical rules of word formation, though that is bad enough, forcing into the vocabulary words that make one with a moderate knowledge of the science of language shudder, yet which when they become current coin of speech must be accepted. The artist does not refuse to accept a bank bill because its design is hopelessly devoid of artistic feeling, but it may be permitted him to sigh over and protest against it, and above all to use any influence he may possess to secure greater artistic merit for new bills when they shall be issued. We refer here, however, to the recent introduction of the word colicystitis, meaning, of course, cystitis due to the colon bacillus. Its phonetic resemblance to cholecystitis may render it a source of constant confusion. True, the context, when arrived at, will make clear the meaning, but the less any word, more particularly a technical term, has to depend on the context for the conveyance of the idea, the better. It is somewhat longer, it is true, but surely "*Bacillus coli* cystitis" or "colibacillary cystitis" would pay better in the end, by saving from the retracing of false steps more time than is lost in getting under way.

THE RESEARCH DEFENSE SOCIETY.

This is the name of a society that took its rise in the committee formed in Great Britain by the various scientific and medical societies, on the appointment of the Royal Commission on Experiments on Animals, to ensure the adequate and orderly presentation of evidence as to the value of, and necessity for, such experiments. With the termination of the evidence the original purpose of the committee was accomplished, but it appeared that a very useful function might be fulfilled by the perpetuation of the committee as an independent body with the object of spreading information by means of publications, lectures, etc., among the general public, so that the distorted views hitherto disseminated by the antivivisection societies without opposition, might be counteracted. Accordingly, on January 27, 1908, the Research Defense Society was organized. The list of members up to March 6 was 429, exclusive of the president, the Earl of Cromer, and thirty-three vice-presidents, among whom, in addition to the regius professors of Oxford and Cambridge and other notable physicians and physiologists, are found many distinguished laymen and clergymen. The response that the society has met with is very gratifying, and augurs well for the protection of the rights of biology as an experimental science.

UNDERGRADUATE MEDICAL ASSOCIATION.

In the formation of the Undergraduate Medical Association of the University of Pennsylvania, an account of the first annual meeting of which appears in our correspondence columns this week, the undergraduates of that university have set a pace which should put not only the undergraduates of other universities, but the graduate associations also, on their mettle. Such an undertaking brings the undergraduate element into closer touch with the graduate and professorial element. The character of the papers, also, should lead to the acquisition of breadth of view, thus tending to minimize the evil of the almost inevitable minuteness begotten of working with an eye always on the examination. Yet, that breadth of view, so far from being an impediment to examination success, must prove of distinct advantage to the immediate prospect of the student, by harmonizing and welding knowledge. We can imagine no more potent factor for increasing the real efficiency of medical education than such a society.

Medical News

ALABAMA.

Commencement Exercises.—At the fourteenth annual commencement exercises of the Birmingham Medical College, April 3, a class of twenty was graduated. The address of the evening was given by President C. C. Thach, of the Alabama Polytechnic Institute.

Smallpox.—The number of cases in Montgomery is said to be gradually decreasing. Twelve patients were recently discharged from the Emergency Hospital and three new patients entered the hospital.——During March there were 17 cases in the Madison County Isolation Hospital, Huntsville, and 7 patients remained there at the end of the month.——In one house in Birmingham 13 cases of smallpox were found on March 25.——It is said that at least 50,000 vaccinations have been made within the city limits of Birmingham.

Personal.—Dr. Edward J. Conyngton has been elected health officer of Decatur.——Dr. Harris P. Dawson, Montgomery, has been elected interne at the Charity Hospital, New Orleans.——The following summer staff is announced at the Mobile City Hospital: Surgical—Drs. William McD. Mastin, William T. Henderson and George E. Gavin; assistants, Drs. Douglas G. Campbell, Parker J. Glass and Joseph Schwartz. Medical—Drs. Neal E. Sellers, Ernest S. Feagin, Nicholas A. Madler and

Lee W. Roe. Obstetrical—Dr. Joseph Schwartz. Eye, ear, nose and throat—Drs. Rufus A. and A. E. Wright, Maunenee. Dermatology—Dr. M. Toulmin, Gaines, and county surgeon, Dr. William G. Ward.

CALIFORNIA.

Senior Student Killed.—Selwyn Emmet Graves, a senior student of College of Medicine of the University of Southern California, Los Angeles, was killed recently by a freight train while crossing the Southern Pacific tracks in Los Angeles.

State Medical Board Election.—The following officers of the State Board of Medical Examiners have been elected: President, Dr. J. Park Dougall, Los Angeles; vice-president, Dr. George F. Reinhardt, Berkeley; secretary, Dr. Charles L. Tisdale, Alameda, and treasurer, Ernest Sisson, an osteopath of Oakland.

College Merger.—A final agreement has been reached in the matter of affiliation of Cooper Medical College with Stanford University. The only stipulation insisted on by the authorities of the college was that the study of medicine shall be forever pursued in San Francisco and that all trusts left by Dr. Levi C. Lane are to be fulfilled.

Campaign of Sanitation.—The board of health of San José has directed that 10,000 copies of the report of health conditions made by Dr. William Simpson and adopted by the sanitary board of San Francisco, be printed and circulated throughout the city and that 1,000 copies of the report be printed in Italian and the same number in Portuguese.

Epidemic Diseases.—There are reported to be 36 cases of chickenpox in Ontario and the opening of schools and other places of public gathering has been interdicted.——The grammar school and high school of Redding have been ordered closed on account of the prevalence of diphtheria.——Diphtheria, thus far of mild type, is reported in Yuba and Sutter counties.——Vallejo reports 7 cases of smallpox.

Personal.—Dr. Bradford Woodbridge, Rocklin, has been appointed surgeon of the Southern Pacific Railroad, in charge of the branch hospital at Roseville.——Drs. Frederick W. D'Evelyn and Ernest M. Keys, members of the board of health of Alameda, have resigned.——Dr. Sylvan Haas, Grass Valley, has been appointed pathologist of the Lakeside Hospital, Cleveland, Ohio.——Dr. Edward R. Sill, president of the board of health of Oakland, has resigned and will make a tour of Europe. Dr. Charles A. Dukes has been appointed to fill the vacancy. Dr. Dukes has recently been commissioned major-surgeon of the Fifth Infantry, C. N. G.——Dr. Carl R. Krone and Hon. Henry A. Melvin will deliver a special course of fifteen free lectures on medical laws at the lecture hall of the Oakland College of Medicine and Surgery.——Dr. G. W. Ogden, fifth assistant physician at the Napa State Hospital, has been reinstated.——Dr. J. Emmet Clark has been reinstated as president of the board of health of Alameda.——Dr. Hiram B. Tebbetts has been elected assistant health officer of Los Angeles, vice Dr. Harris Garcelon, resigned.——Dr. and Mrs. Reuben M. Bonar, Santa Rosa, have returned after an extended trip in the East.——Dr. Clifford L. De Vinny, Stockton, is convalescent, after a recent serious operation on the kidney.——Dr. William H. Keck, Santa Cruz, was shot in the neck by an insane patient April 6.——Dr. Arthur C. Smith, Oakland, was operated on for appendicitis March 23.——Dr. Thomas J. Cox, Sacramento, was operated on for appendicitis March 16.

DISTRICT OF COLUMBIA.

Personal.—Dr. Percy G. Smith has been selected by the commissioners to take charge of the new Tuberculosis Hospital of the district, on Brightwood Avenue.——Dr. Lewis Chapero, for some time resident surgeon at the Casualty Hospital, has resigned, and sails for Manila in the U. S. P. H. and M.-H. Service, April 25.

Smallpox.—In the case against Enoch Washington, charged with running an unlicensed bar, the case was continued indefinitely March 29, because nearly all the witnesses had been sent to the Isolation Hospital as smallpox suspects.——On March 30, 11 cases of smallpox were reported, all the patients being negroes.——An inspector in the service of the health department was discovered to have contracted smallpox April 2 and was taken to the Isolation Hospital.

To Amend Drugs and Poison Law.—On account of the increased consumption of cocain and other drugs in the district, the commissioners have forwarded a draft of a bill to amend a section of the drugs and poison law. The amendment provides "that it shall be unlawful for any person other than a registered druggist, physician, dentist or veterinarian while pursuing his respective profession to have in his possession, except as heretofore provided, any substance or preparation of cocain, morphin or laudanum except on a prescription of a physician, and then only when the same is enclosed in a bottle or other package bearing the name of the physician prescribing the same and the name of the person for whom it is prescribed."

FLORIDA.

State Board and Hydrophobia.—The State Board of Health has made arrangements whereby the Pasteur treatment for hydrophobia can be given without sending the patient away from the state for treatment.

State Association Meeting.—At the thirty-fifth annual meeting of the Florida Medical Association, held in Ocala, April 15-17, the following officers were elected: Dr. James F. McKinstrey, Jr., Gainesville, president; Drs. James Dr. Love, Jacksonville, and William H. Powers, Ocala, vice-presidents; Dr. J. D. Fernandez, Jacksonville, secretary-treasurer (reelected); Dr. Charles E. Terry, Jacksonville, librarian (reelected), and Dr. J. Harris Pierpont, Pensacola, delegate to the American Medical Association.

GEORGIA.

Free Antitoxin.—The State Board of Health announces through its secretary, Dr. Henry F. Harris, Atlanta, that on or about March 15, the board will begin the manufacture of diphtheria antitoxin for free distribution to patients throughout the state.

Reorganization of Journal Staff.—The reorganization of the editorial staff of the *Atlanta Journal-Record of Medicine* is as follows: Dr. Edgar G. Ballenger, editor; Dr. Bernard Wolff, supervising editor; Drs. Alexander W. Stirling and John S. Hurt, associate editors, and 13 collaborators.

Dinner to Graduating Class.—The faculty of the Atlanta School of Medicine gave a dinner to the graduating class of the school at the Piedmont Hotel, April 4. The annual commencement exercises were held April 22, when a class of 56 was graduated, and Dr. John C. Olmstead delivered the annual address.

Change in City Physician.—An ordinance has been introduced in the Atlanta city council providing that the force of city physicians shall consist of three, to be elected by the board of health. They are to serve three years and to be paid $2,000 or $2,400 a year, and shall be required to give their entire time and attention to the care of the indigent sick of the city.

ILLINOIS.

Sanitarium Incorporated.—The Resthaven Sanitarium has been incorporated at Elgin by Drs. George F. Washburne, Elgin, and Richard N. Foster, Chicago, with a capital of $35,000.

Society Elections.—At the annual meeting of the East St. Louis Medical Society, April 13, Dr. Ato C. Housh was elected president; Dr. Charles S. Skaggs, vice-president; Dr. Henry A. Cables, secretary, and Drs. Carl A. W. Zimmermann, Henry Hanson and William S. Wiatt were elected censors.

Personal.—Dr. Ralph E. Niedringhaus, Granite City, is seriously ill with typhoid fever at the home of his father-in-law in St. Louis.——Dr. H. R. Marsh, La Hogue, has returned to Alaska as a medical missionary.——Dr. William B. Peck, Freeport, coroner of Stephenson County, has started for Europe, and Dr. Moses M. Baumgartner has been appointed deputy coroner during his absence.

Communicable Diseases.—Dr. Levi J. Rhea, health officer of La Harpe, states that scarlet fever and not smallpox has been prevalent in La Harpe as announced in The Journal of April 18. Since March 30 only one case of scarlet fever has been reported and this gives no cause for alarm. All the cases have been of mild type and the total number does not exceed 35.——Whooping cough is reported to be epidemic in Cortland.——The Oak Street school, Elgin, was closed April 10 on account of smallpox.

Chicago.

Personal.—Dr. and Mrs. Casey A. Wood, who have been making a trip to Egypt, returned April 20.——Dr. and Mrs. Arthur R. Reynolds are expected to return from Europe this week.——Dr. and Mrs William M. Harsha and Dr. and Mrs. Daniel R. Brower have returned from California.

Abortionist Sentenced.—Mrs. Lucy Hagenow, said to be the most notorious abortionist of Chicago, who was brought to justice through the efforts of the legal committee of the Chicago Medical Society headed by Dr Rudolph W. Holmes, was sentenced on April 18 to imprisonment in the penitentiary for 18 years for having caused the death of Anna Horvatich, May 6, 1907, through an illegal operation.

The Week's Mortality.—During the week ended April 18, 627 deaths were reported from all causes, equivalent to an annual mortality of 15.09 per 1,000. Pneumonia caused 106 deaths; consumption, 78; acute intestinal diseases, 46; heart disease and violence (including suicide), each 44; nephritis, 34; cancer, 32; pneumonia, 29; diphtheria and measles, each 7; scarlet fever, 5; typhoid fever, 4, and whooping cough, 3. The deaths from pneumonia and consumption make up nearly 30 per cent. of the total deaths of the week.

The Contagious Disease Situation.—During the week ended April 18, 551 cases of communicable diseases were reported, 58 fewer than for the preceding week. These were distributed as follows: Diphtheria, 49; scarlet fever, 17; measles, 284; chickenpox, 27; typhoid fever, 29; whooping cough, 26; tuberculosis, 59, and minor diseases, 6. As compared with the corresponding period of last year, there were 21 fewer cases of diphtheria, 54 fewer cases of scarlet fever and one less of smallpox. No smallpox cases were found during the week, but 10 patients remained in the Isolation Hospital.

INDIANA.

Illegal Practitioner Fined.—George B. McClellan, an alleged "Indian Doctor," known as "Diamond Dick," an itinerant medicine vendor, was found guilty of practicing medicine without a license at Marion, and fined $25 and costs. He is said to have left for Chicago.

Personal.—Dr. Nelson D. Brayton, on duty at the Ancon Hospital, Panama, visited his parents, Dr. and Mrs. Alembert W. Brayton, Indianapolis, during March and April. Dr. Brayton expects soon to resume practice in Indianapolis.——Dr. Fred W. Terflinger has been made acting medical superintendent of the Northern Indiana Hospital for the Insane, Longcliff, Logansport, vice Dr. Joseph G. Rogers, deceased.——Dr. Edwin O. Harrold has succeeded Dr. Otis W. McQuown as health officer of Marion.——Dr. Warren R. King, Greenfield, has been appointed surgeon of the State Soldiers' Home, Lafayette, vice Samuel R. Cunningham. Dr. George W. Lee, Greenfield, assistant surgeon of the Third Infantry, Ind. N. G., has been made assistant surgeon at the home.——Dr. Sidney J. Vichel, Evansville, who has been seriously ill with angina pectoris, is reported to be improving.

IOWA.

Personal.—Dr. A. L. Wright, Carroll, member of the Board of Trustees of the American Medical Association, who has been seriously ill with appendicitis, has recovered sufficiently to be about.

Prevalent Diseases.—Dubuque seems to have had an unusually large number of cases of acute mastoiditis the past winter.——There are many cases of scarlet fever near Glenwood, all supposed to have originated in the Williams school, which has since been closed.——There is less smallpox and scarlet fever at Spencer and the schools have been reopened. ——For a month cases of spinal meningitis have been appearing at Harlan. There were a number of deaths from this disease last year in this locality.——Smallpox is reported from many points throughout the state. At Iowa City one of the schools has been closed.

MARYLAND.

Smallpox.—There are said to be 7 cases of smallpox among negroes in Montgomery County, near the District of Columbia line.

Personal.—Dr. Henry Barton Jacobs, Baltimore, and Dr. Guy Steele, Cambridge, have been reappointed members of the tuberculosis sanatorium commission.——Dr. Samuel Clagget, Petersville, has been appointed local surgeon for the Baltimore & Ohio Railroad.

Antispitting Bill.—The antispitting bill drafted by the attorney general, after conference with the president of the State Tuberculosis Commission, the health commissioner of Baltimore, the secretary of the State Board of Health and the secretary of the State Tuberculosis Commission, was recently introduced in the senate. The bill prohibits spitting in any public conveyance or public building.

Reduce Hospital Appropriations.—The governor has signed the indigent insane bill, which requires the state to take charge of all indigent insane within our borders in 1911. He has cut out many items in the appropriation bills recently passed, by which he claims to have saved more than $400,000 to the state. The reductions are in the appropriations for buildings and not in those for maintenance of institutions. The Medical and Chirurgical Faculty, which asked for $100,000 for a library building and which was allowed $25,000, received only $12,500. The Eudowood Hospital for Consumptives is allowed $5,000 instead of $10,000 for building, but this reduction will not prevent the institution from getting the $25,000 conditionally offered by Mr. Bloede. The Annapolis Emergency Hospital will receive $25,000, the University Hospital $25,000, the Peninsular General Hospital $7,500, and the Franklin Square Hospital $25,000, or just one-half the amount asked for.

Baltimore.

Epidemic.—An epidemic of German measles has been prevalent in the city. During the week ended March 28, 142 cases and 50 cases of scarlet fever were reported.

Memorial for Dr. Trimble.—A movement has been started to erect a suitable memorial to the late Dr. Isaac Ridgeway Trimble. The committee in charge includes the following physicians: Drs. L. McLane Tiffany, Hiram Woods, Frank Martin, William S. Thayer, Charles O'Donivan, John S. Davis and John Ruhräh.

Herter Lectures.—The fourth course of lectures on the Herter Foundation will be delivered by Prof. Edward A. Schaefer, professor of physiology in the University of Edinburgh, April 27, 28, 29 and 30, at 4:45 p. m., at the Physiological Building, Washington and Monument streets. The general subject will be "The Pituitary Body."

Accidents and Injuries.—During March there were reported in the city 227 accidents, with 21 deaths, as follows: 15 persons were bitten by dogs, 27 were hurt by vehicles and 52 were injured in street-car accidents. Of the 21 deaths, 3 died from burns, 2 from drowning, 2 from accidental poisoning, 4 from gas asphyxiation and 2 from street-car and 2 from steam-car accidents.

Personal.—It is announced that at the annual convocation of Queen's University, Kingston, Ont., the degree of LL.D. will be conferred on Dr. Lewellys F. Barker.——Dr. A. H. Koelker has been appointed assistant in physiologic chemistry at Johns Hopkins University.——Dr. John R. E. Eyster, associate professor of physiology, Johns Hopkins Medical School, has been elected professor of pharmacology and materia medica at the University of Virginia.——Dr. William F. Lockwood, who has been seriously ill with diphtheria, has recovered and will resume practice.——Dr. Roland B. Whitridge will spend the summer in Italy and France.——Dr. John C. Hemmeter of the University of Maryland has been elected an honorary member of the Royal Society of Internal Medicine, Berlin.

NEW JERSEY.

Change in State Society Meeting.—The secretary of the Medical Society of New Jersey announces that the next meeting will be held in Cape May on Thursday, Friday and Saturday, June 18, 19 and 20, instead of June 25, 26 and 27, as previously announced.

Communicable Diseases.—Measles is said to be again epidemic in Edgewater Park.——Typhoid fever is still prevalent in Trenton, where 20 new cases and 5 deaths were reported in the first week of the month.——Measles and chickenpox are said to be prevalent at Woodstown.——Measles is reported to be epidemic in Columbus.

Personal.—Dr. John A. Beek, Gloucester, is reported to be seriously ill with typhoid fever.——Dr. Elisha C. Chew, city physician of Atlantic City, narrowly escaped being run down in his automobile by a Pennsylvania train at a grade crossing, March 28.——Dr. Duncan W. Blake, Gloucester, has announced his retirement from active practice, and has moved to Seaville.

Vital Statistics.—There were reported to the Board of Health 3,268 deaths for the month ended March 15. Of these 392 were due to pneumonia, a decrease of 124 from the previous month; 265 were caused by diseases of the respiratory system, pneumonia and tuberculosis excepted; 344 were from tuberculosis; 402 from diseases of the circulatory system; 407 from diseases of the nervous system; 223 from nephritis; 130 from cancer, and 46 from suicide.

NEW YORK.

Personal.—Dr. Willis G. MacDonald of Albany has been appointed manager of the State Hospital for the Treatment of Incipient Tuberculosis.——Dr. Reuben Ottenberg, New York City, has been awarded the George Blumenthal, Jr., fellowship in pathology at Mount Sinai Hospital for the coming year.——Dr. Lester W. Bellows has succeeded Dr. William W. Carleton as health officer of Waterloo.——Dr. Richard Mills Pierce, Jr., Albany, has been appointed professor of pathology and director of the laboratory of pathology of the University and Bellevue Hospital Medical College, New York City.——Dr. William P. Spratling has returned to his work at the Craig Colony for Epileptics, Sonyea, after spending several months with his family in Bermuda.

For Those Threatened with Insanity.—A ward specially designed for the treatment of those who fear that they are threatened with insanity is being built at the Hudson River State Hospital, and will be opened in a few weeks. It is the plan of the management to accept voluntary applications for treatment. This psychopathic building will have accommodations for about 80 patients. There will also be a free clinic in connection. The treatment of incipient insanity has been successfully tried in Germany and will be attempted at Binghamton State Hospital this year, and the following year will be extended to the state hospitals at Middletown and Utica. The patients will not be regularly committed and there will be no records of insanity to annoy them or their heirs.

New York City.

Measles Epidemic in Brooklyn.—Dr. Reaver R. Maxwell, health officer of Brooklyn, says that there are now more cases of measles among the children of Brooklyn than at any time since the winter of 1898-1899. It is said that at present there are about 3,000 children under quarantine.

Medical College Increases Requirements.—The College of Physicians and Surgeons, Columbia University, New York City, two years from this fall will require new conditions for entrance. Two full years of study in a college or scientific school, or its equivalent, will be asked, and this must include instruction in the elements of physics, inorganic chemistry and biology.

Sewage in New York Bay a Menace.—Dr. Daniel Lewis, former state commissioner of health, says that the sanitary protection of New York is menaced by the dumping of millions of gallons of sewage daily into New York Bay, and the Hudson and East rivers. It is estimated that not less than 505,000,000 gallons of sewage are dumped into the harbor of New York each day. Because of the peculiar currents and tides, the sewage is not carried out to sea and, therefore, is a menace.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended April 11, 570 cases of tuberculosis, with 211 deaths; 368 cases of diphtheria, with 65 deaths; 1,877 cases of measles, with 48 deaths; 985 cases of scarlet fever, with 54 deaths; 23 cases of typhoid fever, with 4 deaths; 12 cases of whooping cough, with one death; 14 cases of cerebrospinal meningitis, with 7 deaths, and 166 cases of varicella, a total of 4,015 cases and 390 deaths.

Crusade for Pure Milk Begun.—The New York milk committee has begun its season's work and its plans embrace work supplementary to the Strauss milk stations, and the education of mothers by nurses, who will divide their time between dispensing milk at the stations and instructing mothers. They will also endeavor to assist mothers in breast-feeding their infants. Last year 17,000 babies under one year of age died, the majority through improper care and feeding. The first of a series of five meetings was held on April 4, at which the "Need of Improving New York's Milk Supply" was discussed. At the meeting on April 11 the subject was tuberculosis and Professor Koch was present.

The Crusade Against Tuberculosis.—The committee on the prevention of tuberculosis of the Charity Organization Society of this city has made a report of the results of twenty months' experience in the treatment of tuberculosis. Last year 8,999 persons died of tuberculosis in the city, and there are to-day scattered through its tenements more than 30,000 tuberculous sick. The report describes the entire scope of the work, the system of tuberculosis dispensaries, the day camp, the home treatment and the results obtained when it was deemed best to send the patients to the country or to sanatoria. The comparative results of the various methods of treatment are as follows: Of 127 patients treated at home 51 per cent. were improved and 49 per cent. were progressive; of 87 patients treated in the day camp 69 per cent. were improved and 31 per cent. were progressive; of 12 cases in which the home and day camp was combined 75 per cent. were improved and 25 per cent. were progressive; of 47 patients treated in sanatoria 83 per cent. were improved and 17 per cent. were progressive, and of 48 patients treated in the country 75 per cent. were improved and 25 per cent. were progressive. The general conclusions are that while home treatment is inevitable in advanced cases, it is a dangerous substitute for isolation in a hospital, and that cure in tenements is most difficult. The day camp has proved a valuable solution of the tuberculosis problem. The establishment of a number of day camps accessible to the various tenement districts is strongly advocated for those who must necessarily remain at home.

OHIO.

Medical Library Organized.—At a meeting of the physicians of Youngstown, April 3, a Medical Library Association was organized and the following directors elected: Drs. Colin R. Clark, Sidney M. McCurdy, Carlos C. Booth, Renwick H. Montgomery and Ida Clarke. The purpose of the club is to subscribe to standard medical publications and to purchase medical books which will be kept in the custody of the public library.

Communicable Diseases.—During the last week in March there were 9 new cases of cerebrospinal meningitis in Cincinnati, with 3 deaths.——Cleveland reports 4 new cases of cerebrospinal meningitis for the week ended April 11.——Smallpox is again reported from Lorain.——Many cases of smallpox are reported at Sherrodsville.——The State Board of Health advocates a modification of quarantine in smallpox, allowing persons who have been exposed to smallpox to be placed in "quarantine of observation," including removal of patient to the hospital, disinfection of his home, and vaccination of other members of the household with liberty, keeping them under the observation of a physician for 15 days after the time of last exposure.——During the first seven days of April, 67 cases of typhoid fever were reported in Columbus.——Influenza is reported to be epidemic in Toledo.——Smallpox is said to have broken out at Mount Union College.——Scarlet fever is reported to be epidemic at Navarre.

Personal.—Dr. Augustus Ravogli, Cincinnati, has been reappointed a member of the State Board of Medical Registration and Examination.——Dr. Harley E. McDonald, Columbus, has been made assistant to the medical director of the Pacific Mutual Life Insurance Company, Los Angeles, Cal.——Dr. William H. Begg, Columbus Grove, has been reappointed a trustee of the Toledo State Hospital.——Dr. Jefferson B. Scearce, dean of the medical profession of Chillicothe, was the guest of honor at a banquet given by the medical profession of southern Ohio, March 16, on the occasion of the fiftieth anniversary of his entrance into practice.——Dr. Charles O. Probst, Columbus, secretary of the State Board of Health, has been appointed a member of the award committee of the International Tuberculosis Congress.——Dr. George V. Ess, Massillon, has been appointed a member of the local board of health.——Drs. B. Frank Barnes and James G. Shirer, Newark, have been appointed surgeons for the Ohio Electric Railway Company.——Dr. Julius H. Jacobson, Toledo, physician of the Lucas County Infirmary, has been given two months' leave of absence and will visit Europe.——Dr. Charles J. Aldrich, Cleveland, is seriously ill with bacteriemia at Lakeside Hospital.——Dr. Johnson W. Gordon, Bowerston, while in Dennison March 31, sustained a compound fracture of the hip.——Dr. Leander D. Stoner, Canton, was operated on for appendicitis April 7.——Dr. Charles E. Sawyer, Marion, announces that he has recovered from his accident and protracted illness and has resumed professional work.——Dr. James E. Torrence, Hamilton, who is in a hospital in Cincinnati, is reported to be improving.——Dr. Frank W. Harmon, superintendent of Longview Hospital for the Insane, Cincinnati, is seriously ill with erysipelas.

Cincinnati.

License Revoked.—By unanimous vote of the State Board of Medical Examiners at its meeting April 7, the license of Dr. F. G. Leslie is said to have been ordered revoked.

Alumni Organized.—On March 31 the alumni of the University of Pennsylvania from Cincinnati and vicinity organized a branch alumni association, electing the following officers: President, Dr. H. Stowe Garlick; vice-president, Mr. Alfred B. Kelley; secretary-treasurer, Dr. Ashton B. Heyl, and directors, Dr. Herman Christman, Frank D. Phinney, Eugene May, and Mr. George A. Dieterle.

Library Divided.—The report made by local physicians that text-books and works of reference for physicians had been moved from the Public Library to the library of the City Hospital is denied by the city librarian, who admits that some medical and other books said to be antiquated have been moved to branch libraries, to make room for more modern literature in the public library.

PENNSYLVANIA.

Tuberculosis Exhibit at Reading.—The tuberculosis exhibit recently held at Reading was visited by 10,000 people. The Berks County Society for the Study and Prevention of Tuberculosis has already several patients under its care.

Scarlet Fever Epidemic.—Scarlet fever is reported to be epidemic in Blakely borough. Thus far over 50 cases have been reported and the schools and churches have been closed. Assistance has been asked from the state health commissioner.

Pennsylvania Society for the Prevention of Tuberculosis.—The annual meeting of the Pennsylvania Society for the Prevention of Tuberculosis was held in Philadelphia April 8, and plans for enlarging the scope and effectiveness of the work of the society were discussed. The sum of $4,595.86 was received through contributions during the year. Of this, $4,318.60 has been spent. An advisory council of 20 prominent citizens will be appointed to help the officers in the work. The following officers were appointed: President, Dr. Charles J. Hatfield; vice-presidents, Drs. James M. Anders, Jacob Solis-Cohen, Seneca Egbert, Lawrence F. Flick, John H. Musser, Alfred Stengel, James Tyson and James C. Wilson, all of Philadelphia; Dr. Samuel G. Dixon, Harrisburg; Dr. J. Wesley Ellenberger, Harrisburg; Dr. Lawrence Litchfield, Pittsburg; Dr. Edgar M. Green, Easton, and Dr. William H. Hartzell, Allentown; secretary, Dr. Ward Brinton, Philadelphia, and directors, Drs. Howard S. Anders, William W. Cadbury, Frank A. Craig, Joseph Clothier, Albert P. Francine, J. Clinton Foltz, C. Lincoln Furbush, Henry R. M. Landis, George W. Norris, William D. Robinson and Joseph P. Walsh, Philadelphia, and Dr. Charles H. Miner, Wilkes-Barre.

Philadelphia.

Personal.—Dr. Henry Leffmann has been appointed by the president of the county medical society, chairman of the board of directors, to succeed Dr. Henry W. Cattell, resigned.——Dr. Charles B. Hirsch was operated on in Jefferson Hospital April 7, for acute mastoiditis.

Medical Treatment at House of Correction.—An effort is on foot to have councils make some radical changes in the methods of treatment now used at the House of Correction. One of the important features is considered the care of alcoholics in that institution. Councils will be asked to have physicians under the direction of the department of health and charities not only treat victims of alcohol scientifically, but also have power to recommend how long an individual shall be confined in the institution.

Dr. McCormack Coming.—Dr. J. N. McCormack, chairman of the Committee on Organization of the American Medical Association, will address the members of the profession of this city on Monday evening, May 11, at the New Century Club hall. The committee in charge is as follows: Drs. James B. Walker, Edward E. Montgomery, John G. Clark, William L. Rodman, Walter L. Pyle, Charles A. E. Codman. Alexander R. Craig, J. Gurney Taylor, Joseph A. Moore and Ernest W. Kelsey, chairman. This committee held its first meeting April 9.

Health Report.—The total number of deaths reported for the week ended April 11 was 534, a decrease of 19 from the previous week and a decrease of 63 from the corresponding week of 1907. The principal causes of death were: Typhoid fever, 15; scarlet fever, 9; diphtheria, 14; consumption, 62; cancer, 23; meningitis, 5; apoplexy, 8; paralysis, 6; heart disease, 60; acute respiratory diseases, 81; enteritis, 15; Bright's disease, 42; congenital debility, 12; puerperal septicemia, 5; premature birth, 14; old age, 7; suicide, 8; accidents, 15, and marasmus, 9. There were 249 cases of contagious diseases reported, with 38 deaths, as compared with 233 cases and 31 deaths reported in the preceding week.

WISCONSIN.

Fire in Hospital.—Fire practically destroyed the Northwestern Hospital, Chippewa Falls, April 1. Thanks to the coolness of the house staff and nurses, no panic resulted and the 30 patients were removed in safety.

Epidemic Diseases.—A second epidemic of scarlet fever is now prevalent in Caledonia.——Smallpox continues to spread in Manitowoc. All the new cases are in the south and southeast of the city.——Four new cases of smallpox have developed in De Pere.

Newspapers to be Prosecuted.—At a meeting of the State Medical Board, April 14, a resolution was adopted instructing the attorney for the board, A. C. Umbreit, to proceed against any newspaper publishing any advertisement which violates the letter or spirit of the law against obscene medical advertising.

Fined for Not Reporting Birth.—Dr. Horace M. Brown, Milwaukee, is said to have been found guilty, April 4, for violation of the vital statistics law, which requires registration of physicians and report of births. He is said to have been sentenced to pay a fine of $20 and costs, but a stay of sixty days was granted. Dr. Brown refused to re-register his name when asked to do so by the health commissioner, saying that he had registered once and that was sufficient. The second count of the charge followed because Dr. Brown was unable to secure the proper blank from the department, as he had not reregistered.

Personal.—Dr. William E. Ground, president of the state medical society, who has been seriously ill in Biloxi, Miss., has so improved that he expects to be able to return to his home and resume practice about May 1.——Dr. William J. Thomson, Portage, has purchased the Reed House and will convert it into a hospital, which will be ready to receive patients about May 1. ——Dr. Gustavus I. Hogue has returned to Milwaukee after a year in Europe.——Dr. William E. Durr, Milwaukee, was operated on at St. Joseph's Hospital, Rochester, Minn., April 6. ——Dr. Daniel B. Collins, Madison, who was operated on recently in a hospital in Chicago, is said to be convalescent.

GENERAL.

Pan-American Medical Congress.—At this congress, to be held in Guatemala, August 5 to 10, the following subjects have been announced for general discussion.

General Medicine: Tropical anemias. The present cause and treatment of cancer.

Surgery: Prostatectomy; Operations for repairing the ureters.

Hygiene and Demography: Should the segregation of lepers be enforced? Demographic distribution of tuberculosis in America.

Mental and Nervous Diseases: Classification of mental diseases. A discussion of dementia præcox.

Internal Medicine: Tropical diseases, the character and causes of which have not yet been determined. Ankylostoma.

Gynecology: Can metritis be considered a predisposing cause of cancer of the uterus? The best means of keeping the uterus in position in case of prolapse.

Military Sanitation: First aid to the injured on the battle field and organization of an advance guard to render assistance. The hygienic equipment of the soldier. The supply of drinking water in ports; its distribution and the best way of preventing its contamination by insects.

FOREIGN.

Brazilian Psychiatrical, Neurological and Medicolegal Society.—A society with this name has recently been organized in Brazil to promote the interests of psychiatry, neurology and medical jurisprudence and to stimulate research in these lines. The active membership is limited. Meetings are held monthly at Rio de Janeiro at the National Hospital for the Insane. The officers of the society at present are Prof. J. Moreira, president, and Prof. A. Peixoto, secretary, with C. Eiras, vice-president, and H. Roxo, assistant secretary.

Mishaps of the Russian National Medical Association.—The annual congress of the Russian Pirogoff Medical Association, the national organization, can not be held this year, as the authorities have refused the usual permit. The February number of the journal issued by the organization was also confiscated recently on account of an article by W. Kanel which failed to pass the censor on account of its revolutionary tendency. The editor of the journal, J. W. Popoff, is also held legally responsible for permitting the publication of the article.

Prize for Best Essay on Sexual Matters for the Young.—*Hygiea* announces that an anonymous contribution has provided funds for two prizes of nearly $400 and $200, respectively, for the best work, written in popular style, to aid in enlightening and educating the young in what they should know in regard to sexual matters. The works must be sent in anonymously and be received by Dr. S. G. Nyblin at Björnlunda, Sweden, before Nov. 1, 1908. As no language is mentioned in the announcement, which is in Swedish, the competing works must presumably be in that tongue.

Increase of Appendicitis in Prussia.—The official statistics show that the number of cases of appendicitis in Prussia is constantly increasing, the figure for 1903 being 8,412; for 1904, 10,793; for 1905, 13,724, and for 1906, 16,781. The mortality has dropped, however, from 9.46 per cent. to 6.68 per cent. during this period. About 25 per cent. of the patients were under 15, and 29 per cent. between 15 and 30. The mortality was considerably higher among the younger patients and in certain classes of society, the army and bureaucracy yielding 11.15 per cent. of the mortality, while these classes contribute only 2.56 per cent. to the general mortality. The sexes were about evenly divided, the slight preponderance being in males.

Condemnation of Quacks at Berlin.—Criminal proceedings were recently instituted against an advertising quack named Bruckhoff, who had several "medical institutes" at different points. It was proved that these institutes were practically harems for his own pleasure, where criminal abortion was practiced freely. He was condemned to 18 months' imprisonment and incarcerated at once to prevent his escape.——The proprietor of "Augenwol," a remedy advertised as a cure for eye affections, lured a youth of 16 to buy seven bottles in turn of this remedy, promising a cure of his severe eye affection. By the end of this time the affection had become incurable and vision is now nearly totally lost. The quack was condemned by the Berlin courts to a fine of $25 or twenty days' imprisonment.

Appeal to Physicians the World Around to Take a Stand Against Alcohol.—An international league of total abstinence medical men was organized at the Eleventh International Anti-Alcohol Congress held at Stockholm last year. The league recently has issued an appeal to physicians in all lands and of all tongues urging their cooperation to deliver the peoples from alcoholism. The appeal states that it is peculiarly incumbent on the medical profession to enlighten the public in regard to the fact that an extraordinarily large part of the evils of which the world complains are due to alcohol, regardless of the kind of liquor in which it is taken. If the reign of liquor drinking continues the results will always be the same as history has shown in the past: demoralization and degeneracy of individuals and peoples. The appeal states further that liquor is not a necessity for any kind of living being: the need for it exists only where an artificial appetite has been created. All normal organisms perform their functions better without alcohol; but it is specially dangerous for young and growing tissues. In order to protect future generations it is necessary to refrain from the use of alcohol, for only by widespread abstinence can alcoholism and its train of evils be reduced to the minimum. After this preamble the appeal urges all physicians to sign a petition entitled: "Appeal from the Physicians of All Countries to governments, rulers, legislators, teachers, clergymen and all who have the welfare of the present and future generations at heart. We, who are members of the medical profession and by our studies peculiarly qualified to recognize and appreciate the nature and the action of alcoholic drinks, to declare it as our settled conviction that these drinks are entirely unnecessary and extremely injurious so that the evils resulting from the drinking of alcoholic beverages should and must be prevented and exterminated. Above all, the young should be educated in every possible way and by example and be protected by legislation, so that they may learn to refrain from alcoholic beverages. This must be done in order to promote and ensure the happiness, welfare and progress of the nations." The appeal is signed by Holitscher of Pirkenhammer, Santesson of Stockholm, Ridge of Enfield, Laitinen of Helsingfors, Olrik of Frederiksvaerd, Stein of Budapest and Vogt of Christiania, and they ask every physician willing to cooperate to send his name and address to the secretary of the league, Dr. Holitscher, Pirkenhammer bei Karlsbad, Bohemia, so that his name can be added to the petition. The appeal is published in German in the *Allg. med. Central.-Ztg.*, March 21.

LONDON LETTER.

(*From Our Regular Correspondent.*)

London, April 4, 1908.

Deaths Under Anesthetics.

This subject was discussed at some length at a recent meeting of the Medicolegal Society. A resolution was forwarded to the General Medical Council and the Privy Council, respectively, stating that in view of the importance of the subject, the society considers that instruction in administration of anesthetics should be among the requirements for professional education. The present state of affairs is antiquated and slipshod. Any person may administer an anesthetic, no matter whether he is qualified or not; and provided he does so to the best of his ability and with no unlawful motive, he is not likely to be punished or blamed if the patient should die as a result.

The Indian Plague Commission.

The Indian government has issued a summary of the work of the plague commission, which may be regarded as the most recent and most authoritative pronouncement on the contagion of the disease. The conclusions are as follows: 1. Pneumonic plague is highly contagious, but it is rare (less than 3 per cent. of all cases) and plays a very small part in the spread of the disease. 2. Bubonic plague in man is entirely dependent on the disease in the rat. 3. The infection is conveyed from rat to rat and from rat to man solely by the rat flea. 4. A case of bubonic plague in man is not in itself infectious. 5. A large majority of cases of plague occur singly in houses. When more than one case occurs in a house the attacks are generally nearly simultaneous. 6. Plague is generally conveyed from place to place by imported rat fleas, which are carried by people on their persons or in baggage. The human agent not infrequently himself escapes infection. 7. Insanitary conditions have no relation to the occurrence of plague, except in so far as they favor infection by rats. 8. The non-epidemic season is bridged over by acute plague in the rat accompanied by a few cases in man.

The Polyclinic.

The ninth annual report of the Medical Graduates College and Polyclinic shows gratifying progress. There are now 679 names on the college register. At the clinics, 1,127 cases of disease, many of them of extreme rarity, have been shown, and the number of physicians at these and at the lectures amounted to 13,862. Four sessions of practical classes, each of six weeks' duration, a vacation course of three weeks in September and two special courses of instruction in opsonins and vaccine therapy were held during the year and attended by 238 practitioners. Several additions have been made during the year to the Hutchinson Museum and the whole collection is now classified and arranged in such a manner as to permit of speedy and easy reference. This collection is unique, and is the life work of Mr. Jonathan Hutchinson, who has presented it to the polyclinic. It consists of portraits of disease, largely dermatologic, which have been collected by Mr. Hutchinson. Most of them are original water-color drawings of Mr. Hutchinson's cases by Mr. Burgess. The most important ones are alcoholic drinks, do declare it as our settled conviction that many are contained in portfolios in cabinets. The Hutchinson Museum may be compared to the celebrated museum of the St. Louis Hospital of Paris, but it differs from the latter in consisting almost entirely of drawings and contains very few wax models. No collection, the work of one man, exists in the world comparable to it; for a parallel one has to go to the collection of John Hunter, but that differed in being physiologic and pathologic. This is almost entirely clinical, and was first exhibited by Mr. Hutchinson in a private building at Great Portland Street, called "The Clinical Museum." Here he held weekly demonstrations of interesting cases, and side by side with the patient showed portraits of the disease. However rare the case sent to him, he could generally match it by one of his portraits. On the foundation of the Polyclinic, which was the result of his initiative and largely the result of his labors, he transferred his collection to it. Here he holds weekly demonstrations, as he did at the Clinical Museum. His museum is worthy of the attention of medical visitors to London. It epitomizes the life work of one of the keenest observers and most philosophic and versatile minds of this or any age.

VIENNA LETTER.

(*From Our Regular Correspondent.*)

Vienna, April 3, 1908.

Farewell Lecture of Professor Chrobak.

With the completion of the gynecologic clinic in the new General Hospital Professor Chrobak, who for the last nineteen years was the director of this department, has resigned, because, as he put it, he felt the necessity of handing over the new premises and new working facilities to younger men. The farewell lecture was given by him in the new building, which at the same time was formally opened. In the large audience present were representatives of the government, the senate of the university, and all the presidents of the medical and gynecologic societies of which the retiring surgeon is honorary or ordinary member. The successor of Chrobak, Professor von Rosthorn, was also present. A number of Chrobak's former assistants and pupils, as well as numerous students, filled the hall. After speeches by the various delegates Chrobak delivered his last official lecture to the students; in it he admonished them that the main principle underlying the work of every physician must be "help and not harm." It was only with difficulty that Chrobak, whose surgical skill and scientific position are alike acknowledged in gynecologic circles, was induced to become lecturer on his own specialty. He has always remained modest and quiet in character. He favored the idea that obstetrics required only the observation of the physiologic laws of Nature; therefore, so long as possible conservatism was the rule at his clinic in the conduct of labor cases. The clinic will be taken over in June by von Rosthorn; meanwhile Privat-docent Peham, who has substituted for Chrobak for some time, will be temporary director. Chrobak retires four years before he reaches the age limit; he is 66 years of age. A bust of Chrobak, made by his daughter, was unveiled after the lecture and was given to the hospital.

Therapeutics

[It is the purpose of this department to outline an up-to-date management of disease, to suggest scientific treatment for diseased conditions, and to present prescriptions that are simple, useful and palatable. Prescriptions are written in both the metric and apothecaries' systems, but the amounts of the ingredients are NOT exact translations of one system into the other, but quantities convenient for pharmacist and physician. It should be understood that solids are weighed in grams or fractions of grams, while liquids are measured in cubic centimeters; that a teaspoon holds five cubic centimeters, i. e., more than a fluid dram, hence a 100 cubic centimeter preparation will contain twenty doses.]

Magnesii Oxidum.

MAGNESIA, CALCINED MAGNESIA, OR LIGHT MAGNESIA.

Magnesium oxid is a light, fine white powder, odorless and practically tasteless. It is insoluble in alcohol and water, but soluble in dilute acids.

It has no local action on the skin other than that of a dusting powder. In the stomach it acts as an antacid, combining and neutralizing any acid that is present, and the resulting combination causes it to act mildly on the bowels as a laxative.

In acidity of the stomach, whether from too much hydrochloric acid or from lactic acid fermentation, it is a valuable antidote, relieving the symptoms of pain, burning, distress and acid eructations almost immediately.

In intestinal indigestion in children, when there is intestinal flatulence and the feces are more or less acid as shown by hyperemia and irritations about the anus, magnesia is good treatment.

Magnesia is a valuable laxative for bottle-fed babies, as it is tasteless and is readily administered in milk. A good preparation for this purpose is the milk of magnesia of the National Formulary.

The laxative action of magnesia may be increased by administering it with a little lemon juice or lemonade.

As magnesia forms insoluble compounds with soluble arsenic and mercury salts, it may be used as an antidote in poisoning from these metals, and is specifically recognized in its antidotal action of arsenic poisoning under the name of Ferri Hydroxidum cum Magnesii Oxido, U. S. P., i. e., the "arsenic antidote." If more active alkalies are not at hand, magnesia may well be used in poisoning with acids.

As a cathartic magnesia is not sufficiently active to warrant its use, the dose required being disagreeably large. As a gentle laxative, given two or three times a day, when there is an abnormal acidity of the stomach, it is certainly of advantage.

The dose of magnesia (magnesii oxidum) while stated to be 2 grams, is too much powder ordinarily to be taken at one dose, and as above stated, if a cathartic is needed, other drugs should be used. As a gentle laxative three times a day, from 0.30 to 0.50 gram (from 5 to 10 grains) is often efficient, and if there is hyperacidity of the stomach, it is better given after meals. A good method of administering magnesia is in milk, or in a little effervescing water, as carbonated water or vichy. Of course, magnesia could be put into wafers or konseals.

MAGNESII OXIDUM PONDEROSUM, U. S. P., heavy magnesium oxid, or heavy magnesia, is a fine white powder, about three and one-half times as heavy as the light magnesia, and differs from the latter in not readily uniting with water to form the hydroxid. It has no therapeutic advantages over the light magnesia.

MAGNESII CARBONAS, U. S. P., magnesium carbonate, is a light, white, insoluble powder, odorless, and almost tasteless, and may be used as an antacid, but has no advantage over the magnesia. It has almost no laxative properties.

MAGMA MAGNESIÆ, N. F., milk of magnesia, is a mixture holding 5 per cent. of magnesium hydroxid in suspension. It is an antacid and mildly laxative. The adult dose is from two to three teaspoonfuls. As above stated, it is a useful addition, as a laxative, to the milk of infants, the dose being whatever is found sufficient to produce mild laxative effects.

Magnesia may be administered as follows:

For gastritis with constipation:

℞.	gm.		
Bismuthi subnitratis	20	or	ʒv
Magnesii oxidi	10		ʒiiss

M. et fac chartulas 20.

Sig.: One powder, three times a day, before meals.

If there is hyperacidity of the stomach:

℞.	gm.		
Bismuthi subgalatis	10		ʒiiss
Magnesii oxidi	6	or	ʒiss
Sodii bicarbonatis	10		ʒiiss

M. et fac chartulas 20.

Sig.: One powder, three times a day, before meals.

Or, if there is much gastric flatulence:

℞.	gm.		
Bismuthi subnitratis	20		ʒv
Magnesii oxidi	5	or	
Carbonis ligni	5		āā, gr. lxxv

M. et fac chartulas 20.

Sig.: One powder three times a day, after meals.

Or:

℞.	gm.		
Sodii bicarbonatis	10	or	ʒiiss
Magnesii oxidi	6		ʒiss

M. et fac konseal. 20.

Sig.: A wafer three times a day, after meals.

As a morning laxative:

℞.	gm.		
Magnesii oxidi	15	or	℥ss

Fac chartulas 10.

Sig.: One powder, in a glass of lemonade, before breakfast.

Postpartum Hemorrhage.

In a series of papers considering this subject in the *New York Medical Journal* for January 25, February 1, and February 8, 1908, the following digest represents the combined opinions of the contributors:

The causes in general may be summed up as: Those which interfere with uterine contractions or cause relaxation of the uterine muscle; lacerations of the parturient canal, and partial or complete retention of the placenta. The management of the condition presents practically nothing new, viz.: Administration of ergot; removal of uterine contents; repairs of lacerations; massage of the uterus; hot intrauterine douches; packing the uterus.

PROPHYLAXIS.

Avoid precipitate labors. Avoid protracted labors. Avoid chloroform in slow labors; chloral (one gram, repeated in an hour if necessary) is preferable. Avoid quinin to stimulate contractions, as some observers think it predisposes to inertia. If there is history of hemophilia, give calcium chlorid for three months prior to delivery. At the onset of labor see that the bladder and rectum are empty, and as soon as the head is born ergot should be given (preferably by the hypodermic syringe), and the fundus massaged to stimulate contractions.

If hemorrhage begins during the period between the birth of the child and the expulsion of the placenta, and without evident relaxation of the uterus, it may be due to a partial separation of the placenta or to the fact that the placenta is separated but still within the uterus.

TREATMENT.

Hemorrhage immediately following the birth of the child may be from the circular artery of the cervix; from a lacerated vagina, or from a lacerated perineum. In such cases, with the use of the speculum and a constant stream of water to wash away the flowing blood, immediate repair of the laceration is usually easy, and correctly placed stitches will stop the hemorrhage.

If the bleeding does not amount to much more than oozing, swabbing with suprarenal solutions may be effective. The styptic salts of iron are attended with too much danger to justify their use except as a last resort.

The Credé method of expulsion of the placenta will usually stop the flow by removing the obstacle, and will stimulate the uterus to contract. Failing thus to remove the placenta, the hand should be introduced into the uterus and the contents removed.

The placenta having been born, if the hemorrhage continues and the uterus is soft and flabby, contraction of that organ is the end aimed at. This is generally accomplished with the hot (110 to 115 F.) intrauterine douche. Before giving this, the physician should make sure that the entire contents of the uterus have been removed, and that organ should be massaged while the douche is in process. For the douche, use hot sterile water or physiologic (about a teaspoonful of salt to a pint of water) saline solution. Solutions of stronger drugs or preparations are apparently of no additional benefit.

Contractions may be started sometimes by the introduction of a piece of ice into the uterus, a pledget of cotton wet in vinegar or a 2 per cent. acetic acid solution.

If the hemorrhage still continues, Bryan, Philadelphia, advises the "bimanual manipulation," usually accomplished "by passing two fingers of the right hand high up into the vagina, along the posterior wall, pressing the lower segment and cervix forward toward the symphysis pubis, at the same time passing the fingers of the left hand deep in between the umbilicus and the uterus so that the hand on the outside, the fundus resting in the palm of his hand, may be pushed downward and forward against the pubes, thus forming a sort of temporary anteflexion."

When these methods fail, the next thing to do is to pack the uterus. The volcella forceps are preferable for this, as there is little danger that the cervix will contract so as not to admit them, and the ordinary uterine dressing forceps are sharp enough at their points to admit an element of danger from the possibility of their being pushed through the fundus. The packing may remain in the uterus for from six to twenty-four hours, and when it is removed another packing should be ready to replace it, if necessary.

Pneumonia.

Dr. W. G. Cain, Epping, N. H., in the *Therapeutic Gazette* for Jan. 15, 1908, relates his experience with guaiacol in the treatment of pneumonia. His success in reducing the temperature and shortening the disease causes him to urge the trial of guaiacol by other clinicians. He has treated fifty consecutive pneumonia patients with guaiacol, and all recovered.

The guaiacol is rubbed into the skin, the abdomen being the place of selection (unless there is pain in the chest, and then it is rubbed into the painful region), and no two applications are made in the same place. The skin is first thoroughly cleansed with soap and water, and then the average adult dose, 20 minims, or about 1.5 c.c., is dropped slowly from a medicine dropper and rubbed in with the end of one finger. Cain says the guaiacol is generally absorbed in from one to two minutes, and cautions against the nurse or physician using other than the tip of the finger to rub it into the patient, as else the operator may absorb considerable of the guaiacol. The agent acts very promptly, he states; in an hour the patient perspires freely, and the temperature, pulse and respiration and color of skin improve. Within six hours the temperature drops from two to four degrees, and all the general symptoms are much improved. He does not repeat the application in less than twelve hours, and in some mild cases the treatment is not repeated at all, the temperature not rising again much above normal. The average number of treatments is about three or four. Cain finds many instances of the disease becoming arrested, physical signs not increasing, and the dulness diminishing, and the sputum, if blood-stained at first, becoming free from blood in a day or two.

Guaiacol moderates the action of the heart, but not unduly so. However, an agent of such potency is not to be trifled with, and Cain recommends that the physician make the applications himself. Very little other medication seems necessary.

Guaiacol.

Guaiacol is a methyl ether of pyrocatechin and is a constituent of creosote, which is a wood tar. Its action on the system is similar to carbolic acid or phenol, but is perhaps even more poisonous. It is, then, a depressant drug, depressing the nervous system and the circulation, and is excreted by the kidneys in combination with sulphuric and glycuronic acids. It is quickly absorbed from the skin, causing a fall of temperature which is really a symptom of its poisonous action, hence the greater the fall of temperature the more severe and intense its action. With this fall of temperature there is often circulatory weakness combined with perspiration. Although when applied to the skin, even in such small quantities as from 10 to 20 drops, the temperature will be reduced, its action has been found so intense in many instances as to cause it not to be much used as an antipyretic.

Pharmacology

THE BROADER AIMS OF THE COUNCIL ON PHARMACY AND CHEMISTRY.

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CLEVELAND, OHIO.

(Continued from page 1280.)

V. THE ATTITUDE OF THE MANUFACTURERS TOWARD THE COUNCIL.

The successful compiling of information about proprietary articles depended largely on the cooperation of the manufacturers. Accordingly, as one of its first actions the Council issued a circular, setting forth its objects, explaining its rules, and calling on the manufacturers for their opinions. This circular elicited a large number of very favorable, and in some cases, enthusiastic replies, of which some were undoubtedly a play to the gallery. Even this preliminary expression of approval by the manufacturer, however, should be given a large measure of credit as it meant a recognition of the principle that the medical profession, through its representatives, was entitled to a voice in the conduct of what had hitherto been regarded as strictly a private business. This involved a real sacrifice, which is the more creditable since the concession was purely voluntary; for the Council had no direct means of enforcing its recognition. With many manufacturers, doubtless, this policy was dictated by enlightened self-interest—the shadow of coming events was so evident that they did not dare to offer opposition. The tone of most of the letters, however, showed that the policy was the expressions of the honest convictions of the writers; that the aims of the Council were identical with those of the higher class of manufacturers, and that this means of cooperation for reforms, for which they themselves had been striving, was gladly welcomed. There could be no more convincing plea for the need of the work which the Council had undertaken, than was contained in these letters.

Giving these men every credit for their good intentions, let us inquire how they have carried them out. Reforms in the abstract, particularly as they affect the other fellow, are very different from concrete instances which strike at one's own pocket-book; especially is this true when one is accustomed to look at life from the "business standpoint."

Naturally the experiences of the Council have been varied. Two firms threatened the Council with legal proceedings if it should dare to publish anything about their product; others confined their attacks to insinuations in the paid advertising pages of medical journals; still others were long on talk and short on performance, endeavoring to cover the real issue under a cloak of meaningless verbiage and technical quibbles. These were the houses which had gained a certain degree of commercial success by abusing the confidence of both the medical and pharmaceutical professions and it could scarcely be expected that such manufacturers should experience spontaneously an entire change of heart, a moral regeneration. Such concerns can only be made to reform by force, if that is thought worth while, or by ostracism. Their defection was expected and did not shake the confidence of the Council in the justice of its cause. It was more than offset by the loyal adherence and support of the majority of the manufacturers.

As a tangible evidence of the interest manufacturers have taken in the work of the Council and of their desire to secure the approval of that body, of 670 proprietary products examined by the Council, 580 were submitted voluntarily by the manufacturers. It is true that only about 45 per cent. of these have been admitted. Some 40 per cent. were refused recognition. Some of the latter are absolutely hopeless; and here, again, the work of the Council has borne fruit, in that a number of manufacturers have voluntarily withdrawn unscientific and otherwise objectionable products from the market as soon as they had properly considered the objections of the Council.

About 15 per cent. of the submissions are held in abeyance. Final action on the majority of these has been postponed pending some modifications of the claims made by the manufacturers; others are awaiting chemical, pharmacologic or other investigation by the Council. Some of these products presented only partial conflict with the rules and it has been most gratifying to witness the desire on the part of some of the manufacturers to remove such conflicts, often at the cost of considerable inconvenience and sacrifice. The admission of many others is merely postponed until the manufacturer can supply certain information and submit more definite evidence for his claims. Here again very interesting differences were observable: A few manufacturers treated all inquiries and suggestions of the Council as personal insults, while a few other firms assumed that they were above mistakes, and that their conflicts with the rules should be made the subject of special exemption. The majority of manufacturers, however, have consistently shown their appreciation of the honest purpose of the Council; of the facts that the Council has grave responsibilities which impose on it often uncongenial tasks, and that the common purpose can be accomplished only by meeting the Council in a fair, open and cooperative spirit. I speak with some feeling when I say that the general courtesy and consideration shown by these manufacturers to the Council, in the often trying situations, will always be among my most pleasant recollections of this service. Differences of opinion have arisen and will arise and some of these I shall take occasion to discuss. The Council is bound to conflict with the commercial element where this element conflicts with scientific progress; the manufacturers, on the other hand, must keep an eye to the dividends.

There are still many commercial policies which do conflict with scientific progress and which the medical profession, and therefore, the Council, must combat. But the attitude of the manufacturers toward the Council makes me believe that the broad and far-sighted business policy which has prompted the erection of commercial research laboratories, will sooner or later extend to these points of conflict. The conviction is justified that the present objectionable practices are a survival choice of the better class of manufacturers; and that they will be abandoned as a healthy sentiment in the medical profession of the days of unscrupulous competition, rather than the will actively condemn them and thus render the better practices commercially possible.

Thus far, certainly, the better class of manufacturers have fully met the expectation of the Council, and have cheerfully borne their share of the burden. The discouragements have come from other and rather unexpected directions. Of course there are some manufacturers—but a saving sense of humor is sometimes a valuable asset!

(*To be continued.*)

Formic Acid and Formates.

The strength and industry of the ant were recognized in ancient times and the idea naturally arose that there must be some substance in the body of this insect which imparted to it its wonderful vigor. The bodies of ants were early employed in medicine both externally and internally.

In 1634 Mouffetus was so enthusiastic as to write: "From a medical point of view there are few diseases that are not cured by ants which seem like the hands of the gods." (*Au point de vue médical il est peu de maladies que ne guérissent pas les fourmis, qui semblent être comme les mains des dieux.*) H. G. Higgins gives a quotation (*Lancet*, Dec. 14, 1907) from the New London Dispensatory of 1676 describing the preparation and properties of "Liquor Formicarum." This was prepared by placing the well-cleaned insects in a bottle, setting this bottle in brown bread and baking in an oven. Its virtues are thus expressed: "Inwardly it causeth magnanimity and cures the Stone; outwardly it helps suffusions of the eyes, cures the itch, and dissipates corns and warts." These preparations had great vogue during the seventeenth and eighteenth centuries, but in the beginning of the nineteenth century they fell into disuse, although the spiritus formicarum continued to be used in Germany as an external application.

When it became known that formic acid was the irritating principle of the ant it became the subject of investigation. Since 1885 H. Schulz, Kowacs, Rabuteau and others have investigated it, but made no particular application of it to therapeutics. It was reserved for Garrigue and Clement within the last few years to revive the ancient superstitions, transferring the wonderful powers from the juice of the ant to its active constituent, formic acid.

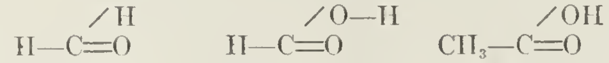
Clement (*Lyon Médical*, 1903 and 1905) claims that formic acid improves nutrition, increases the force of the heart, assists the respiration, and greatly augments muscular force and endurance. He thinks that it is destined to set free the energies of men so as to transform society and cure alcoholism, vice, laziness and other evils. These claims he bases partly on the subjective feeling of exaltation following its use and partly on objective results from trials of muscular strength on the ergograph, before and after taking the remedy.

It is instructive to contrast with this enthusiastic estimate of a common, though little used substance, the meager powers which can be demonstrated by careful scientific investigation. M. C. Fleig reports (*Arch. Internat. de Pharmacodynamie et de Thérapie*, xvii, Nos. 3, 4) a thorough investigation of the action of formic acid, the formates, and formaldehyd. He concludes that sodium formate is toxic in the dose of 4 gm. per kilogram when taken by the mouth (a quantity equal to about eight ounces for an adult man). Formic acid, he asserts, is antiseptic but the formates are not. Formic acid acts like other acids on digestive secretions, but the formates have no effect unless in large doses. Absorption is favored. The acid and its salts in sufficient concentration retard or prevent the coagulation of the blood; formate of calcium is an exception to this statement. According to this observer, the formates have no tonic action on the heart. In doses such as are used in man they exert no appreciable effect on the blood pressure; in larger doses they depress it. In animals, sodium formate produces a dilatation of the vessels of the brain, the liver and the kidney, and a corresponding contraction of the vessels in the extremities. Formic acid does not produce the effect on the respiration claimed by Clement. The formates increase the process of disassimilation. They are diuretic. In large doses they may increase the temperature. The most exact experiments failed to show any tonic action either on voluntary or involuntary muscle fiber or on the peripheral nerves, the spinal cord or the brain.

Fleig criticises the methods and conclusions of Clement. By careful examination of the ergographic tracings presented by Clement he shows that allowance was not made for the rest periods, and hence the figures show that the work done after the ingestion of formic acid was not five times as much as before, but only one and one-half times as great. This increase is due, as Fleig has shown by a number of experiments, not to the ingestion of formates, but to the effect of training. The erroneous conclusions of authors are explained by the phenomena of autosuggestion of which the importance is shown by certain typical observations. In conclusion it may be said that exact methods show no influence of formic acid on the muscles.

WHAT IS FORMIC ACID?

Formic acid is the first of the series of monatomic fatty acids, and has the formula HCOOH. It differs from the other fatty acids in that, besides possessing the characteristic properties of an acid, it also has the properties of an aldehyd; this becomes evident from a comparison of the constitutional formulas of formaldehyd, formic acid and acetic acid.



$$\mathrm{H{-}\overset{/H}{C}{=}O} \qquad \mathrm{H{-}\overset{/O-H}{C}{=}O} \qquad \mathrm{CH_3{-}\overset{/OH}{C}{=}O}$$

Formaldehyd. Formic acid. Acetic acid.

These formulas show that formaldehyd and formic acid both contain the group $\mathrm{-\overset{/H}{C}{=}O}$ which is characteristic of aldehyds. Formic acid and acetic acid both contain the common group $\mathrm{-\overset{/OH}{C}{=}O}$, characteristic of acids. Formic acid, therefore, contains the $\mathrm{-\overset{/H}{C}{=}O}$ group and also the grouping $\mathrm{-\overset{/OH}{C}{=}O}$, and in accordance therewith it may act either as an aldehyd, in that it reduces silver solutions, etc., or as an acid. It reacts with alkalies to form formates, of which sodium formate $HCOONa$ is typical for the alkali metals and calcium formate $(HCOO)_2Ca$ for the metals of the alkaline earths. Formic acid by the agency of bacteria splits up completely into carbon dioxid, CO_2, and hydrogen, H_2. This action may take place in the intestinal tract. It can be oxidized to carbon dioxid and water, and especially in the form of formates this process readily occurs, producing a carbonate of the metal. Thus sodium formate by the addition of one atom of oxygen becomes sodium bicarbonate, $NaHCO_2+O=NaHCO_3$.

Formic acid is neutralized in the intestines and is absorbed mainly as sodium formate, which is partly converted in the system into sodium carbonate and eliminated in the urine. As the acid when administered in a free form neutralizes some of the alkali of the system, thus lowering the alkalinity of the blood, the secretion of an acid urine occurs as a compensatory action on the part of the kidney. When a formate is given instead of the acid it increases the amount of alkali in the system and the urine correspondingly becomes less acid or alkaline. Part of the formate is excreted unchanged.

Testing of Thyroid Preparations.

The extensive use of thyroid preparations necessitates some method of determining their therapeutic value. The U. S. Pharmacopeia gives a qualitative test by which the presence of iodin can be ascertained and this can be made quantitative by slight modifications. It is generally admitted that some compound of iodin is the active ingredient of the gland, but it is still uncertain in what exact organic combination the iodin exists and whether the character of its combination affects its physiologic activity. Still it must be admitted that the estimation of iodin is the best chemical method of valuing thyroid extract that we possess to-day. F. C. Koch, in the "Proceedings of the American Pharmaceutical Association," 1907, page 371, suggests that while this method may be reliable, when it is certain that we are dealing with the unadulterated natural product, it makes insufficient provision for adulteration with other natural or artificial iodoproteins. The Pharmacopeia directs that the cold extract of the gland should be tested for iodin, but this would eliminate only soluble compounds of iodin, while according to Koch a method of distinguishing the natural iodothyreoglobulin from other natural and artificial iodoproteins by chemical means is not known. This author also calls attention to the fact that there is no standard for the iodin content of the thyroid gland because the glands of animals in various parts of the country differ and also the amount of iodin varies with the season, according to his observation, being much greater in winter than in summer.

Physiologic testing of this product has hitherto been crude, although Reid Hunt (*Jour. Biol. Chemistry*, Oct. 1905, p. 33), has proposed a very delicate test by showing that the thyroid preparations render mice less susceptible to acetonitrile poisoning. This test, while it is far more sensitive than any chemical test, needs further study before it can be used quantitatively. It is evident, therefore, that a standard for these preparations is needed, and after its establishment a method of determining whether or not the preparations conform to that standard.

Correspondence

Teaching of Medical Ethics in Medical Schools.

[During the past school year Dr. Joseph D. Bryant has been discussing with his students ethics and morals as they relate to the practice of medicine in a new way. The following is in response to our request that he describe his methods for the benefit of our readers.—Editor.]

New York, April 11, 1908.

To the Editor:—Regarding the best means of strengthening the ethical status of the medical profession, I would say that I am of the opinion that it will be found more logical and finally effective to begin the work for this purpose at the foundation part of the medical practitioner rather than at the station of the completed product. In other words, it seems wiser to me to direct attention to the medical student, the "root" of the product, than to leave the former untouched while hacking at the branches of the latter. In the former course of action the medical student (a physician in embryo), would be moved by the guiding influences of those whom he is anxious to heed, and, too, while in the plastic state of appreciation and receptivity. The wisdom of this course is further emphasized by the fact that rarely is it until after graduation and beginning practice, that young physicians are so placed as to fall under the seductive influences of unwholesome professional examples, or disappointed professional ambitions; either of which too often inhibit proper professional spirit, and thus lay the foundation for devious personal gain, rather than that of honest professional achievement.

Now, for the therapy of the situation. Some time ago it was unanimously decided by the faculty of the University and Bellevue Medical College that the fourth year (graduating) student should be given instruction in the principles of moral philosophy as applied to medicine. And with a unanimity of action that admitted of no doubt, to me was deputed the entire charge of the matter, which accordingly was carried out in the following manner:

During the first half of the term, twice weekly, I conducted a surgical conference for two hours, on walking surgical cases. During the last ten or fifteen minutes of these exercises consideration was given to paragraphs of the "Principles of Medical Ethics" of the American Medical Association, which for the purpose of fixing attention and thought were plainly written on the blackboard. The interest shown by the students in the interpretation of the paragraphs and the questions suggested by them of an ethical character, were sometimes amusing, always instructive, and ever of common advantage. Independent ethical problems were invited and were forthcoming from members of the class in an abundance and of a kind which emphasized in no uncertain manner the profound interest of the students, and the great need of this form of instruction. Thus, all the chief topics of the "Principles of Ethics" were considered and with a degree of thoughtful attention, bespeaking the fact that students themselves, as one would expect, are open-minded and are easily impressed with the importance and need of sound guidance during the stage of their inexperience. In this connection it may be of passing interest to know that a few days ago a learned and distinguished colleague submitted to me for answer an ethical question of so simple and self-evident bearing as to prompt the rather ungracious response on my part, "The students of the fourth-year class would hardly need to ask such a question!" In order that students may early be given opportunity for thought in ethical matters, why not send copies of the "Principles of Medical Ethics" to the third-year class also?

JOSEPH D. BRYANT.

Pennsylvania Undergraduate Society.

PHILADELPHIA, April 18, 1908.

To the Editor:—The Undergraduate Medical Association of the University of Pennsylvania held its first annual meeting April 8, and marked thereby a distinct and epoch-making innovation in the history of medical teaching. Founded on the general lines of the American Medical Association, composed of the members of the medical societies of the university and any other members of the medical department who care to join, the association aims to encourage the spirit of research among its members and to afford the best of them an opportunity to gain an invaluable experience in the preparation and presentation of scientific papers. The day was set apart by the authorities for the purposes of the association. It was divided into three parts: A scientific session in the morning, followed by a luncheon given by the faculty to the members of the fourth-year class and the officers of the association, a scientific session in the afternoon, and a banquet in the evening.

The papers presented were eleven in number and covered the following subjects: "Opsonic Therapy," "Excretory Efficiency of the Kidney," "Visceral Reflexes," "Blood Pressure in Eclampsia," "Psychotherapy," "Intermittent Lameness," "Polioencephalitis Superior," "Endometrium in Mentsruation," "Experimental Colitis," "Etiology of Empyema," and an "Original Method of Lengthening the Long Bones."

These papers were not only thorough reviews of the literature and terse presentations of the present status of the subject, but, with only one or two exceptions, they contained the results of actual clinical and laboratory studies. The absolute scientific value of the papers would compare most favorably with the average work presented at any general medical and surgical meeting—in fact, we fear unfavorably to the latter.

Not only were the papers of a most surprising grade, but the manner of presentation, without a single exception, would put to shame the exhibition too often seen in the congregations of the elders. There were eleven papers, prepared to be presented within the allotted time, and, if by any miscalculation that limit was exceeded in the least, there was a firmness behind the gavel which made it possible for the sessions to begin on time, and close on time, and to finish the entire program!

The scientific session of the afternoon was to have been closed by the orator of the day, Dr. S. Weir Mitchell, with an oration on "The Conduct of the Medical Life." To the regret of all, illness prevented Dr. Mitchell from being present. Mr. Talcott Williams, LL.D., consented to take his place and addressed the association on "The Life of Dr. Mitchell." In an exquisite address Dr. Williams gave the association what was in a sense even more opportune than an address by Dr. Mitchell would have been—an outline of the life of a man who represents better than any other in the history of American medicine the perfect conduct of a wonderful medical life.

The banquet in the evening offered a final surprise. Some 250 men were in attendance, yet every detail had been worked out with a perfection which left no room for those evidences of friction which are occasionally to be noticed.

To the profession at large the first meeting of an undergraduate medical association carries a warning of tremendous significance. When a group of fourth-year students, with hospital examinations, their final university examinations, and state board examinations staring them in the face, can conceive and prepare so well a program of real scientific value, and execute it with such business sense, the older members of the profession, especially those who would teach these young men, must gird up their loins and make haste, lest they be trodden under foot.

T. E. C.

Association News

THE CHICAGO NUMBER.

Special Illustrated Number Containing Data About the Approaching Session.

Next week's JOURNAL (May 2) will be the special number preliminary to the annual session of the American Medical Association, to be held in Chicago, June 2 to 5. This issue will contain matter, with illustrations, relative to Chicago, the programs of the various Sections, a list of hotels and meeting places, an advance announcement of the entertainments, a map covering that part of the city in which the meetings are to be held, and other information of interest to all who expect to attend the annual session.

In our issue for March 28 we gave a list of the chief hotels, with rates. In connection with this list attention was called to the advisability of making hotel reservations as early as possible, and this we again repeat. Dr. L. L. McArthur, 100 State Street, is Chairman of the Hotels Committee.

The Committee on Hotels has made arrangements with H. Bates of the Reliable Renting Company, by which it will be possible to locate in private homes and boarding houses those preferring such accommodations. Letters should be addressed directly to H. Bates, care of the Reliable Renting Company, 171 Washington Street, Chicago. On failure to receive prompt reply notify Dr. McArthur.

Book Notice

THE SEMI-INSANE AND THE SEMI-RESPONSIBLE. By Joseph Grasset, Professor of Clinical Medicine at the University of Montpellier. Authorized American Edition Translated by Smith Ely Jelliffe, M.D., Ph.D., Visiting Neurologist, City Hospital, New York. Cloth. Pp. 415. Price, $2.50. New York: Funk & Wagnalls Co., 1907.

It has always been a matter of more than ordinary interest to attempt to place certain individuals in society who, while not suffering from any definite psychosis, are still sufficiently different from the ordinary run of mankind to attract more than passing attention. Horace evidently knew of such individuals, for in his delightful satires he speaks of the eccentricities of certain of his acquaintances and used, in those early days, the same words that we use to-day—foolish, crazy and cracked—as proper terms to denote their variations from the common herd that trod the Appian Way.

Modern German psychiatry, under the headings of psychopathic inferiority, psychopathic characters, etc., has attempted a classification, but Grasset here proposes, at one bound, to establish a third estate, as it were, the demi-fous, the semi-insane, including those individuals of more or less marked eccentricity, who are not mentally ill, or only so at infrequent intervals, and yet who are not to be counted always as perfectly normal. Were it not for the fact that so many of these individuals are more than ordinarily useful in society, in some of their functions, while antisocial only occasionally, the problem of their care would offer little trouble, but great capacity would seem to carry with it other signs of irregular development, and thus the problem of the genius or man of great talents, who has his less desirable psychopathic traits, becomes an integral part of the proposition.

Grasset realizes that in order to make any advance along medicolegal lines the material must be arbitrarily classed and arranged in such a manner that legal enactment can handle it. This is the reason for his rejecting, for practical purposes, what he designates as the "one block" theory, which regards all mankind as a sliding scale from the most normal to the most abnormal. This is the scientific attitude of most scholars; while the two block theory, that which regards mankind as being divisible into two types, "those that are locked up, and those who do the locking up," is the general classification of the masses, including lawyers and legislators.

Measures founded on the one block theory lead to hopeless confusion, because of the difficulties in drawing the line; those founded on the two block theory lead to abuse, to injustice and to anarchy. Hence his separation of a distinct group, the semi-insane, which he describes in the language of the French psychiatry of Regis.

Granting the utility of Grasset's division, his remedy is simple. The demi-fous should be left alone to work their good in the world, but when by their acts they become antisocial they should be taken care of and treated. They should not be punished unless the character of their acts is such as to plainly indicate their responsibility; they are for the most part irresponsible and need to be treated as sick people.

It would be too much to hope that Grasset would here settle the problem. He makes no claim to do so—he offers a contribution to the discussion for what it is worth—and in our opinion it is worth a great deal, and physicians and lawyers should read it, for in no field of medicine are both professions in need of more enlightenment and of more facts, from which they may form judgments that are worth anything.

The translation has been well done, and English readers are under obligations to Dr. Smith Ely Jelliffe for placing this instructive and valuable work within their reach.

Queries and Minor Notes

Anonymous Communications will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

LAWS CONCERNING THE TEACHING OF HYGIENE—MEDICAL INSPECTION OF SCHOOLS.

Vancouver, B. C.

To the Editor:—I am preparing, for the British Columbia Medical Association, an article on the laws concerning the teaching of hygiene and also one on medical inspection of school children. Would you kindly inform me what recent articles have been published on the subject?

W. D. Brydone Jack.

TEACHING OF HYGIENE.

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Black, M.: The Physician in the Public School, *Colorado Med.*, September, 1907.

Törnell, M. G.: Medical Supervision of Secondary Schools in Sweden, *Med. Press and Circular*, Sept. 25, 1907; abstr. in The Journal, Oct. 26, 1907, p. 1479.

Williams, Linsly R.: A Plea for the Physical Examination of All School Children, The Journal, Nov. 16, 1907.

McMahon, J. P.: Necessity for Annual Systematic Examination of School Children's Eyes, Ears, Noses and Throats by School Teachers, *Wisconsin Med. Jour.*, December, 1907.

CHARGES AGAINST PHYSICIAN BY LAYMAN.

The secretary of a state society sends the following inquiry:

Layman A considers that he has just charges on ethical grounds against physician B. Should the board of censors of the county society, of which physician B is a member, take notice of such charges when brought by layman A and not by a physician either within or without the society?

Answer.—Section 2, Chapter 4, of the Standard By-laws for County Societies, under the heading of "Duties of the Board of Censors," reads:

"The board shall investigate charges preferred against a member, and report its conclusions and recommendations to the society."

Section 7, Chapter 1, reads:

"Charges against a member must be made in writing and be delivered to the secretary, who shall immediately furnish a copy to the accused and to the chairman of the board of censors."

No provision appears in these by-laws as to who may or may not prefer charges. If layman A, who considers that he has a just grievance on ethical grounds against physician B, is a reputable person and has not publicly or dishonorably discussed the grounds of his charges to the detriment of physician B, then it would seem reasonable for the censors of the county society, of which physician B is a member, to grant layman A an opportunity, should he request it, of presenting his charges and the evidence to sustain them before the board of censors, provided, of course, that physician B is properly notified of the charges and is furnished with a copy of them in advance, and that he is given an opportunity to present his side of the case.

OBERMAYER'S REAGENT.

Davenport, Iowa, April 14, 1908.

To the Editor:—Will you kindly give the formula and method of application of Obermayer's reagent?

A. P. Donohoe.

Answer.—Obermayer's reagent consists of a solution of 2 gm. (30 grains) of ferric chlorid in a liter (one quart) of concentrated hydrochloric acid. If dry ferric chlorid is not obtainable a proportionate quantity of the official Liquor Ferri Chloridi (6 c.c. equal approximately 2 gm. of ferric chlorid) can be used.

The test for indican is performed as follows: About 10 c.c. of the urine to be examined is mixed with an equal quantity of Obermayer's reagent and shaken thoroughly; a cubic centimeter of chloroform is then added and the mixture gently agitated by lowering and raising the test tube. If indican, or more correctly indoxyl-potassium sulphate, is present in the urine, the chloroform will be colored blue. Iodids in the urine will give a violet color, but this color disappears on agitating with a solution of sodium thiosulphate.

POLYARTICULAR DEFORMING ARTHRITIS.

Buffalo, N. D., April 13, 1908.

To the Editor:—Please let me know where I can find a good summary of Still's disease—the polyarticular deforming arthritis in children, said to be associated with glandular and splenic enlargement.

S. B. Clark.

Answer.—Recent works on pediatrics contain references to this disease with more or less full descriptions: Still's original description, "A Form of Chronic Joint Disease in Children," appeared in *Medico-Chirurgical Transaction,* vol. lxxx. It is quoted by Rotch, "Pediatrics," fifth edition, p. 1030. The nature of the disease is discussed by D. A. Edsall, *Archives of Pediatrics,* March, 1904, and an abstract of this article appeared in The Journal A. M. A., April 23, 1904. Edsall found indications leading him to believe that at least some cases of the affection were tuberculous. There is little doubt that it is an infectious disease. Another article on this subject by D. A. Edsall and R. S. Lawrence appeared in *American Journal of the Medical Sciences,* December, 1903.

The Public Service

Army Changes.

Memorandum of changes and stations and duties of medical officers, U. S. Army, week ending April 18, 1908:

Carswell, R. L., asst.-surgeon, left Depot of Recruits and Casuals, Angel Island, Cal., on leave of absence for two months.

Wilson, W. H., surgeon, returned to Fort Hamilton, N. Y., from accompanying troops to San Francisco.

LaGarde, L. A., deputy surgeon general, granted leave of absence for two months.

Page, Henry, Schrelner, E. R., Truby, A. E., and Ford, J. H., asst.-surgeons, ordered to report at the Army General Hospital, San Francisco, for examination for promotion.

Ashford, B. K., and Chamberlain, W. P., asst.-surgeons, ordered to report at Army Medical Museum Building, Washington, D. C., for examination for promotion.

Powell, J. L., deputy surgeon general, left Fort Ethan Allen, Vt., on leave of absence for ten days.

DeLoffre, S. M., asst.-surgeon, ordered to report at the expiration of his leave of absence at the Army Medical Museum Building, Washington, D. C., for examination for advancement.

Chamberlain, W. P., asst.-surgeon, granted leave of absence for forty days, with permission to ask extension of twenty days.

Whaley, A. M., asst.-surgeon, ordered to Jackson Barracks, La., for temporary duty; on completion to return to station.

Gunckel, G. I., dental surgeon, left Jackson Barracks, La., for duty at Fort Morgan, Ala.

Voorhies, H. G., dental surgeon, ordered to Fort Meade, S. Dak., for duty for one month; to Fort Washakie, Wyo., for duty for ten days; thence to return to his station, Fort D. A. Russell, Wyo.

Whinnery, J. C., dental surgeon, arrived at Ft. Lawton, Wash., for duty.

Craig, E. J., dental surgeon, left Ft. Robinson, Neb., for duty at Ft. Leavenworth, Kan.

McAlister, J. A., Jr., dental surgeon, left Ft. Sheridan, Ill., on leave of absence for one month.

Ames, J. R., dental surgeon, left Ft. Leavenworth, Kan., for duty for one month at Ft. Riley, Kan.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending April 18, 1908:

Chambers, W., asst.-surgeon, ordered to the naval hospital, Philadelphia.

Woodward, J. S., passed asst.-surgeon, detached from duty at the naval hospital, New York, and ordered to the *Birmingham* when commissioned.

McLean, A. D., passed asst.-surgeon, detached from the Navy Yard, Portsmouth, N. H., and ordered to the *Chester* when commissioned.

Sterne, C. F., asst.-surgeon, ordered to naval hospital, New York.

Dickson, S. H., medical inspector, detached from the Navy Yard, Norfolk, and ordered to the marine barracks, Washington, D. C.

Kite, I. W., surgeon, detached from the *Franklin* and ordered to the Navy Yard, Norfolk, Va.

Langhorne, C. D., surgeon, detached from the marine barracks, Washington, D. C., and ordered to the naval station, Honolulu, H. I., sailing from San Francisco about May 5.

Smith, C. G., passed asst.-surgeon, detached from the naval station, Honolulu, H. I., and ordered home to wait orders.

Shiffert, H. O., passed asst.-surgeon, detached from duty with marine at Camp Elliott, Isthmian Canal Zone, and ordered home to await orders.

Brown, H. L., passed asst.-surgeon, detached from the naval recruiting station, Oklahoma City, Okla., and ordered to the naval station, Cavite, P. I., sailing from San Francisco about May 5.

Leach, P., surgeon, ordered to the *Hancock*

Wheeler, W. M., surgeon, detached from the *Cleveland* and ordered home to await orders.

Ely, C. M, passed asst.-surgeon, detached from the naval recruiting station, Buffalo, N. Y., and ordered to the *Hartford* when commissioned.

McDonell, W. N., passed asst.-surgeon, detached from the *Hancock* and ordered to the naval recruiting station, Buffalo, N. Y.

Haines, B. F., acting asst.-surgeon, resignation accepted to take effect April 15, 1908.

Public Health and Marine-Hospital Service.

List of changes of stations and duties of commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending April 15, 1908:

Mead, F. W., surgeon, granted leave of absence for 10 days from April 12, 1908.

Carrington, P. M., surgeon, granted leave of absence for 4 days from April 8, 1908, under Paragraph 169, Service Regulations.

McIntosh, W. P., surgeon, directed to proceed to Boston, Mass., for special temporary duty, on completion of which to rejoin his station at Portland, Me.

Cobb, J. O., surgeon, relieved from duty at Cairo, Ill., and directed to proceed to Milwaukee, Wis., assuming charge of the service at that port.

Guiteras, G. M., surgeon, directed to proceed to Pascagoula, Miss., for special temporary duty, on completion of which to rejoin his station at Mobile, Ala.

Stimpson, W. G., surgeon, directed to assume temporary charge at Port Townsend Quarantine Station during absence of Passed Assistant Surgeon Oakley, on leave for 1 month from April 15.

Nydegger, J. A., P. A. surgeon, granted leave of absence for 2 days from April 11, 1908, under Paragraph 191, Service Regulations.

Oakley, J. H., P. A. surgeon, granted leave of absence for 1 month from April 15, 1908.

Wickes, H. W., P. A. surgeon, relieved from duty at Stapleton, N. Y., and directed to proceed to New Orleans, reporting to the medical officer in command of the marine hospital for duty and assignment to quarters.

Goldberger, Joseph, P. A., surgeon, granted leave of absence for 7 days from April 9, 1908.

Schereschewsky, J. W., P. A. surgeon, directed to report to the Bureau, Washington, D. C., for special temporary duty, on completion of which to rejoin his station in Baltimore.

Wilson, R. L., P. A. surgeon, relieved from duty at New Orleans and directed to proceed to Cairo, Ill., assuming command of the service at that port.

Jackson, J. M., acting asst.-surgeon, granted leave of absence for 10 days from April 4, 1908.

James, W. F., acting asst.-surgeon, granted leave of absence for 30 days from July 1, 1908.

Rice, W. E., acting asst.-surgeon, granted leave of absence for 14 days from May 1, 1908.

BOARD CONVENED.

A board of medical officers was convened to meet at Seattle, Wash., April 13, 1908, for the physical examination of an alien. Detail for the Board: P. A. Surgeon M. W. Glover, chairman; Assistant Surgeon C. W. Chapin, Acting Assistant Surgeon P. R. Underwood, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended April 17, 1908:

SMALLPOX—UNITED STATES.

Alabama: Huntsville, vicinity, January-April, 50 cases.

California: Los Angeles, March 21-28, 7 cases, 1 death; San Francisco, 15 cases.

District of Columbia: Washington, March 28-April 4, 15 cases.

Georgia: Augusta, March 24-31, 2 cases.

Illinois: Chicago, March 21-April 28, 9 cases; Rock Island, March 21-28, 4 cases; Springfield, March 26-April 2, 5 cases.

Indiana: Elkhart, March 28-April 4, 2 cases; Evansville, March 25-April 4, 1 case; Lafayette, March 30-April 6, 1 case; Marion, March 1-31, 1 case; Muncie, Feb. 29-March 7, 4 cases.

Iowa: Cedar Rapids, March 1-31, 9 cases.

Kansas: Kansas City, March 28-April 4, 6 cases; Topeka, March 21-28, 9 cases.

Kentucky: Lewis County, March 8-April 4, 35 cases.

Louisiana: New Orleans, March 28-April 4, 15 cases (10 imported).

Maine: Limestone, April 3, 1 case (imported).

Michigan: Detroit, March 28-April 4, 1 case; Grand Rapids, 10 cases.

Minnesota: Winona, March 28-April 4, 2 cases.

Montana: Butte, March 17-24, 2 cases.

Nebraska: Nebraska City, March 28-April 4, 6 cases.

New York: Niagara Falls, March 28-April 4, 2 cases.

North Carolina: Charlotte, March 21-April 4, 2 cases.

Ohio: Cincinnati, March 20-April 3, 28 cases; Dayton, March 28-April 4, 1 case; Tippecanoe, Jan. 15-March 14, 33 cases; Toledo, March 21-April 14, 7 cases; Warren, March 28-April 4, 1 case; Zanesville, March 1-31, 1 case.

Tennessee: Nashville, March 28-April 4, 1 case.

Texas: Eagle Pass, March 31, 1 case (imported); Galveston, March 21-April 3, 2 cases; San Antonio, March 28-April 4, 12 cases.

Washington: Spokane, March 21-28, 12 cases; Tacoma, 3 cases.

Wisconsin: La Crosse, March 21-April 4, 8 cases; Manitowoc, March 21-28, 3 cases; Racine, March 28-April 4, 5 cases.

Wyoming: Laramie, March 5-April 4, 15 cases.

SMALLPOX—FOREIGN.

Arabia: Aden, March 2-9, 1 death.

Brazil: Rio de Janeiro, March 18-28, 38 cases, 23 deaths.

Canada: Halifax, March 21-April 4, 2 cases; Hamilton, March 1-31, 3 cases, 1 death.

China: Shanghai, Feb. 16-March 8, 5 cases (foreign) and 23 deaths (native).

Egypt: Cairo, Feb. 29-March 4, 4 cases, 1 death.

Formosa: Feb. 8-March 1, 5 cases, 1 death.

France: Paris, March 14-21, 6 cases.

Great Britain: Edinburgh, March 14-21, 2 cases; Leith, March 14-21, 1 case.

India: Bombay, March 3-10, 42 cases; Calcutta, Feb. 15-22, 9 cases; Madras, Feb. 29-March 6, 1 case.

Italy: General, March 19-26, 17 cases; Catania, March 19-26, 5 cases, 3 deaths.

Japan: Kobe, Feb. 29-March 7, 79 cases, 47 deaths; Nagasaki, Feb. 24-March 15, 3 cases, 1 death; Osaka, Feb. 29-March 7, 292 cases, 100 deaths.

Java: Batavia, Feb. 15-22, 4 cases.

Mexico: Aguas Calientes, March 22-29, 2 deaths; Matamoras, March 28-April 4, 4 cases; City of Mexico, Feb. 15-22, 6 deaths; Vera Cruz, March 14-21, 3 cases.

Russia: Libau, Feb. 14-21, 2 cases; Moscow, Feb. 29-March 14, 56 cases, 24 deaths; Odessa, March 14-21, 3 cases; Riga, March 17-21, 6 cases; St. Petersburg, Feb. 29-March 14, 44 cases, 11 deaths; Warsaw, Jan. 18-Feb. 1, 23 deaths.

Spain: Denia, March 14-21, 6 cases, 1 death; Valencia, March 15-22, 25 cases, 2 deaths.

Straits Settlements: Penang, Feb. 15-22, 1 case.

Turkey: Bagdad, Feb. 15-22, 42 cases, 9 deaths; Constantinople, March 8-15, 3 deaths.

YELLOW FEVER.

Barbados: Bridgtown, vicinity, March 7-11, 2 cases, 1 death.

Brazil: Para, March 7-21, 14 cases, 10 deaths.

Trinidad: Port of Spain, Feb. 29-March 7, 1 case, 1 death.

CHOLERA.

India: Bombay, March 8-10, 2 cases; Calcutta, Feb. 15-22, 112 cases; Madras, Feb. 29-March 6, 7 cases; Rangoon, Feb. 22-29, 3 cases.

PLAGUE.

Brazil: Rio de Janeiro, March 1-8, 2 deaths.

India: General, Feb. 15-22, 6,842 cases, 5,502 deaths; Bombay, March 3-10, 254 deaths; Calcutta, Feb. 15-22, 29 deaths; Rangoon, Feb. 22-29, 50 deaths.

Japan: Osaka, Feb. 29-March 7, 1 case, 1 death.

Medical Economics

LIST OF MEDICAL LIBRARIES.

The following list* of medical libraries, compiled by the Library of the New York Academy of Medicine, includes medical libraries belonging to medical societies, hospitals and medical schools. Important collections of medical books in general libraries are omitted. It is hoped to promote donations, exchanges and correspondence between physicians and medical libraries through the publication of this list. This list is preliminary and naturally incomplete. We shall be glad to receive corrections and additions to be included in a pamphlet for permanent use.

ALBANY—

New York State Medical Library, Albany, N. Y., U. S. A. Miss Ada Bunnell. 18,912.

ANN ARBOR—

Medical Library of the University of Michigan, Ann Arbor, Mich., U. S. A. Mr. Thomas W. Koch. 19,165.

ANTWERP—

Library of the Antwerp Medical Society, Antwerp, Belgium. Dr. Edouard d'Haenans. 3,000.

ATLANTA—

Library of the Atlanta Medical Library Association, Carnegie Library Building, Atlanta, Ga. ,U. S. A. Miss Rankin. 1,200.

BALTIMORE—

Library of the College of Physicians and Surgeons, Calvert and Saratoga Sts., Baltimore, Md., U. S. A. Mr. E. J. Disney. 979.

Johns Hopkins Hospital Library, North Broadway, Baltimore, Md. Miss Minnie Blogg. 8,700.

Johns Hopkins Medical School Library, Monument and Washington Sts., Baltimore, Md. Miss A. N. Gordon. 5,500.

Library of the Maryland Homeopathic Medical Society, 1130 North Mount St., Baltimore, Md. Dr. M. M. Dean. 600.

Library of the Medical Department of the University of Maryland, Baltimore, Md. Dr. Eugene F. Carroll. 7,500.

Library of the Medical and Chirurgical Faculty of Maryland, 847 North Eutaw St., Baltimore, Md. Miss Marcia C. Noyes. 17,103.

BEIRUT—

Medical Library of the Syrian Protestant College, Beirut, Syria. Rev. Harvey Porter. 1,859.

BERLIN—

Library of Kaiser Wilhelm Academy for Military Medical Training, 140 Friedrich St., Berlin, N. W., Germany. Dr. Hiller. 65,000.

Library of the Berlin Medical Society, 24 Ziegel St. (Langenbeck House), Berlin, N., Germany. Dr. Ewald. 30,000.

BIRMINGHAM—

Library of the Birmingham Medical Institute, Edmund St., Birmingham, England. T. G. Johnson. 14,200.

BOSTON—

Boston Medical Library, 8, The Fenway, Boston, Mass., U. S. A. Dr. John W. Farlow. 57,493.

Treadwell Library, Massachusetts General Hospital, Boston, Mass. Dr. James J. Minot. 6,646.

Library of the City Hospital, 878 Harrison Ave., Boston, Mass. Dr. George H. Rowe. 3,499.

Boston University Medical Library, 80 East Concord St., Boston, Mass. Dr. Anna T. Lovering. 5,000.

Library of Tufts College Medical School, 416 Huntington Ave., Boston, Mass. Dr. Robert W. Hastings. 1,800.

Library of Harvard Medical School, Longwood Ave., Boston, Mass. Miss Ida F. Underhill. 13,000.

BOURNEMOUTH—

Library of Bournemouth Medical Society, Old Christchurch Road, Bournemouth, England. Dr. Frank Belben. ———.

BRIGHTON—

Library of the Brighton and Sussex Medico-Chirurgical Society, Brighthelmstone Dispensary, Queen's Road, Brighton, England. Mr. Brill. 4,000.

BRISTOL—

Bristol Medical Library, University College, Bristol, England. Mr. C. King Rudge. 21,000.

BROOKLYN—

Library of the Medical Society of the County of Kings, 1313 Bedford Ave., Brooklyn, N. Y., U. S. A. Mr. Albert T. Huntington. 65,000.

BRUNSWICK—

Library of the Medical School of Maine, Brunswick, Maine, U. S. A. Mr. George T. Little. 4,770.

BRUSSELS—

Library of the Academy of Medicine of Belgium, Academy Building, Brussels, Belgium. Mr. Henry Beckers. 100,000.

BUDAPEST—

Library of the Royal Society of Physicians of Budapest, 21 St. Royal St., Eighth District, Budapest, Hungary. Dr. Rudolphe Temesváry. 20,528.

BUFFALO—

University of Buffalo Medical Library, 24 High St., Buffalo, N. Y., U. S. A. Dr. Irving P. Lyon. 8,000.

BURLINGTON—

Library of the College of Medicine, University of Vermont, Burlington, Vt., U. S. A. 3,000.

CALCUTTA—

Library of the Medical College of Bengal, Colutolah St., Calcutta, India. Rakhal Das Ghose. 50,000.

CANTERBURY—

Library of the East Kent and Canterbury Medical Society, Canterbury, England. Dr. Harold Wacher. 2,000.

CHELTENHAM—

Cheltenham Medical Library, Clarence St. Dr. J. Rupert Collins, 3 Columbia Place, Cheltenham, England. 2,000.

CHICAGO—

Hahnemann Medical College Library, 2817 Cottage Grove Ave., Chicago, Ill., U. S. A. Dr. A. H. Grimmer. 5,000.

The John Crerar Library (Medical Section), 87 Wabash Ave., Chicago, Ill. Mr. Clement W. Andrews. 42,000.

Northwestern University Medical School Library, 2431 Dearborn St., Chicago, Ill. Miss Margaret I. Maloney. 4,780.

Quine Library, College of Physicians and Surgeons, University of Illinois, Congress and Honore Sts., Chicago, Ill. Miss Metta M. Loomis. 12,000.

Library of Rush Medical College, University of Chicago, Chicago, Ill. Miss C. A. MacCauliff. 16,000.

CINCINNATI—

Library of the Academy of Medicine of Cincinnati, 25 East Eighth St., Cincinnati, Ohio, U. S. A. Dr. Arch I. Corson. 3,000.

Cincinnati Hospital Library, Cincinnati, Ohio. Dr. P. S. Conner. 18,000.

CLEVELAND—

Medical Library Association, 2818 Prospect Ave., Cleveland, Ohio, U. S. A. Mrs. S. M. Harding. 14,000.

Homeopathic Medical College Library, 704 Huron Road, Cleveland, Ohio, U. S. A. Dr. S. A. Young. 700.

COLORADO SPRINGS—

El Paso County Medical Society Library, Coburn Library, Colorado Springs, Colorado, U. S. A. Dr. L. S. Brown. 2,800.

DENVER—

Library of the Denver Academy of Medicine, 1434 Glenarm St., Denver, Colo., U. S. A. Dr. F. W. Kenney. 2,500.

DES MOINES—

Library of Drake University College of Medicine, 406 Center St., Des Moines, Iowa, U. S. A. Miss Eleanor Overholt. 450.

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* Libraries are arranged alphabetically by cities. The name of the library is followed, in each case, by the mailing address, the name of the librarian, and the number of volumes in the library.

DUBLIN—

Library of the Royal College of Physicians of Ireland, 6 Kildare St., Dublin, Ireland. Mr. Robert Phelps. 15,000.

Library of the Royal College of Surgeons in Ireland, Stephen's Green, West, Dublin, Ireland. Dr. R. B. McCausland. 30,000.

EDINBURGH—

Library of the Royal College of Physicians of Edinburgh, 9 Queen St., Edinburgh, Scotland. Dr. D. Berry Hart. 80,000.

Library of the Royal College of Surgeons, Edinburgh, Nicholson St., Edinburgh, Scotland. Dr. Alexis Thomson. 15,000.

Library of the Royal Medical Society, Melbourne Place, Edinburgh, Scotland. Mr. A. P. Ormiston. 30,000.

FALL RIVER—

Fall River Medical Society Library, South Main St., Fall River, Mass., U. S. A. Dr. George L. Richards. 500.

FLORENCE—

Medical Library of the Scientific School, 33 Alfani St., Florence, Italy. Luigi Nobile-Lojacono. 30,000.

GALVESTON—

Library of the Medical Department, University of Texas, Galveston, Texas, U. S. A. Miss Addie Hill. 6,683.

GLASGOW—

Library of the College of Physicians and Surgeons of Glasgow, Faculty Hall, 242 St. Vincent St., Glasgow, Scotland. Mr. Alexander Duncan. 50,000.

HANOVER—

Medical Library of Dartmouth College, Hanover, New Hampshire, U. S. A. Mr. M. D. Bisbee. 3,300.

HARTFORD—

Hartford Medical Society Library, Hunt Memorial Building, 38 Prospect St., Hartford, Connecticut, U. S. A. Dr. Walter R. Steiner. 4,000.

HASTINGS—

Library of East Sussex Medico-Chirurgical Society, 16 Silchester Road, Hastings, England. Dr. Hubert Stanley. 3,000.

HAVANA—

Library of the School of Medicine of the National University, General Wood Laboratories, Havana, Cuba. Prof. José A. Valdés Anciano. 4,500.

IOWA CITY—

Medical Library of the State University of Iowa, Iowa City, Iowa, U. S. A. Mr. M. G. Wyer. 1,600.

JACKSONVILLE—

Morgan County Medical Society Library, Public Library Building, Jacksonville, Ill., U. S. A. Dr. Carl E. Black. 2,500.

JERSEY—

Library of The Jersey Medical Society, 37 David Place, St. Helier, Jersey, England. Dr. Charles A. Bois. 350.

KANSAS CITY—

Kansas City Medical Library, Public Library Building, Ninth and Locust Sts., Kansas City, Mo., U. S. A. Dr. C. B. Hardin. ———.

KINGSTON—

Queen's Medical Library, Kingston, Ontario, Canada. Dr. F. Etherington. 1,500.

KYOTO—

Medical Library of the Imperial University, University Compounds, Kyoto, Japan. Prof. Bunjiro Shima. 25,016.

LEEDS—

Library of Leeds and West Riding Medico-Chirurgical Society, Cookridge St., Leeds, England. Mr. John Merriman. 7,500.

LEICESTER—

Library of Leicester Medical Society, 3 Granby St., Leicester, England. Mr. F. S. Herne. 5,000.

LINCOLN—

Library of the Nebraska State Medical Association, University of Nebraska, Lincoln, Neb., U. S. A. Dr. H. Winnett Orr. 2,000.

LIVERPOOL—

Library of Liverpool Medical Institution, Liverpool, England. Mr. William Jones. 12,000.

LONDON—

Library of the British Medical Association, 429 Strand, London, England. Mr. Spencer Honeyman. 20,000.

Library of Charing Cross Hospital Medical School, Chandos St., Charing Cross, London, W. C., England. Mr. John Francis Pink. 5,000.

Library of London Hospital Medical College, Turner St., Mile End, London, England. Mr. Munro Scott. 5,000.

Library of the London School of Medicine for Women, 8 Hunter St., Brunswick Square, London W. C., England. Miss M. B. Douie. 5,000.

Library of the Medical Society of London, 11 Chandos St., Cavendish Square London, W., England. Mr. George Bethell. 25,000.

Library of the Royal College of Physicians of London, Pall Mall East, London, S. W. Dr. J. F. Payne. 25,000.

Library of the Royal College of Surgeons of England, Lincoln's Inn Fields, London, W. C., England. Mr. Victor G. Plarr. 60,000.

Library of the Royal Society of Medicine, 20 Hanover Square, London, W., England. Mr. Charles Richard Hewitt. 70,000.

St. Bartholomew's Hospital College Library, West Smithfield, London, E. C., England. Mr. Alfred H. Coughtrey. 14,000.

St. Thomas's Hospital Library, Lambeth Palace Road, London, England. Mr. George Rendle. 3,000.

Library of University College Hospital, University St., Gower St., London, W. C., England. Mr. F. H. M. Parker. 6,000.

Westminster Hospital Medical School Library, Caxton St., London, S. W., England. Mr. William Fryer. 2,500.

Wills Library, Guy's Hospital, St. Thomas's St., London, S. E., England. Mr. P. Mills. 7,000.

LOS ANGELES—

Barlow Medical Library, 742 Buena Vista St., Los Angeles, Cal., U. S. A. Miss Mary Williams. 10,000.

LOUISVILLE—

Jefferson County Medical Library, Room 515, Atherton Building, Louisville, Ky., U. S. A. Miss Mary A. Rademaker. 2,000.

MADRAS—

Library of Madras Medical College, Park Town, Madras, India. P. C. Swami. 4,895.

MANCHESTER—

Library of the Manchester Medical Society, the University of Manchester, Manchester, England. Mr. Cuthbert E. A. Clayton. 37,310.

MANILA—

Library of the Bureau of Science, 153 Calle Herran, Manila, Philippine Islands. Miss Mary Polk. 25,000.

MELBOURNE—

Medical Library of the University of Melbourne, Melbourne, Australia. Mr. F. Gladish. 6,000.

MILFORD—

Library of the Thurber Medical Association, Milford, Mass., U. S. A. Dr. J. M. French. 200.

MILWAUKEE—

Milwaukee Medical Society Library, Goldsmith Building, Wisconsin St., Milwaukee, Wis., U. S. A. Dr. J. D. Madison. 5,000.

MINNEAPOLIS—

Library of the Medical Department of the University of Minnesota, Minneapolis, Minn., U. S. A. Dr. Thomas G. Lee. 10,000.

Library of the Hennepin County Medical Society, City Hall, Minneapolis, Minn., U. S. A. Mrs. Carrie C. Jones. 5,000.

MONTREAL—

McGill Medical Library, Montreal, Canada. Miss M. R. Charlton. 30,000.

NEWARK—

The Medical Library Association, Public Library Building, Newark, N. J., U. S. A. Mr. John Cotton Dana. 356.

NEW HAVEN—

Library of the New Haven Medical Association, 962 Chapel St., New Haven, Conn., U. S. A. 5,000.

NEW ORLEANS—

Library of the Medical Department of Tulane University, Canal St., between Robertson and Villere Sts., New Orleans, La., U. S. A. Miss Jane Grey Rogers. 4,425.

Orleans Parish Medical Society Library, 141 Elk Place, New Orleans, La., U. S. A. Dr. Homer Dupuy. 8,000.

NEW YORK—

Library of the College of Physicians and Surgeons, 437 West Fifty-ninth St., New York City, U. S. A. (Branch of the Library of Columbia University.) James H. Canfield, Librarian. G. S. Evans, Custodian. 1,400.

Library of the New York Academy of Medicine, 17 West Forty-third St., New York City, U. S. A., Mr. John S. Brownne. 85,000.

Library of the New York Homeopathic Medical College, Sixty-third St. and Ave. A, New York City, U. S. A. Mr. William Gow. 6,500.

Library of the Rockefeller Institute for Medical Research, Sixty-sixth St. and Ave. A, New York City, U. S. A. Miss A. E. Scheidt. 4,120.

NOTTINGHAM—

Library of Nottingham Medico-Chirurgical Society, the Dispensary, Broad St., Nottingham, England. Mrs. Smithhurst. 1,000.

ORANGE—

William Pierson Memorial Library, Free Library Building, cor. Main St. and Essex Ave., Orange, N. J., U. S. A. Dr. Palmer Potter. 2,403.

PARIS—

Library of the Paris Academy of Medicine, 16 Rue Bonaparte, Paris, France. Dr. Laloy. 100,000.

Library of the Faculty of Medicine of Paris, 12 Rue de l'Ecole de Médecine, Paris, France. Dr. Louis Hahn. 175,000.

PHILADELPHIA—

Library of the Alumnæ Association of the Woman's Medical College of Pennsylvania, Philadelphia, Pa., U. S. A. Miss Henrietta Newberger. 1,500.

Library of the College of Physicians, N. E. corner of Thirteenth and Locust Sts., Philadelphia, Pa., U. S. A. Mr. Charles Perry Fisher. 84,423.

Library of the Hahnemann Medical College, Broad St., above Race St., Philadelphia, Pa., U. S. A. Dr. T. L. Bradford. 15,000.

Jefferson Medical College Library, Tenth and Walnut Sts., Philadelphia, Pa., U. S. A. Mr. Charles Frankenberger. 4,000.

Medical Library of the Pennsylvania Hospital, Eighth and Spruce Sts., Philadelphia, Pa., U. S. A. Mr. Milton M. Bergey. 15,000.

PITTSBURG—

Library of the Pittsburg Academy of Medicine, 43 Federal St., Pittsburg, Pa., U. S. A. Miss Williamina Duncan. 4,200.

PLYMOUTH—

Plymouth Medical Society Library, Athenæum Chambers, Plymouth, England. Dr. A. Bertram Soltau. 1,650.

PORTLAND—

The R. B. Wilson Library, Medical Department of the University of Oregon, Twenty-third and Lovejoy Sts., Portland, Ore., U. S. A. Mr. S. M. Kyde. 1,500.

PROVIDENCE—

Library of the Rhode Island Medical Society, Public Library Building, Washington and Greene Sts., Providence, R. I., U. S. A. Dr. George D. Hersey. 22,000.

PUEBLO—

Library of the Pueblo County Medical Society, McClelland Library, Pueblo, Colo., U. S. A. Dr. W. W. Bulette. 2,746.

QUINCY—

Quincy Medical Library Association, Fourth and Main Sts., Quincy, Ill., U. S. A. Dr. E. Zimmermann. 1,256.

READING—

Berks County Medical Society Library, 540 Walnut St., Reading, Pa., U. S. A. Dr. Frank G. Runyon. 850.

RICHMOND—

Library of the Medical College of Virginia, Richmond, Va., U. S. A. Dr. St. George T. Grinnan. 3,000.

ST. LOUIS—

St. Louis Medical Library, 3525 Pine St., St. Louis, Mo., U. S. A. Dr. Frank J. Lutz. 10,560.

ST. PAUL—

Ramsey County Medical Society Library, 260 Lowry Building, St. Paul, Minn., U. S. A. Mrs. W. J. Swartz. 5,500.

ST. PETERSBURG—

Library of the Imperial Academy of Medicine, Hospital Building, St. Petersburg, Russia. Professor Skoricenko. 170,000.

SAN FRANCISCO—

Library of the Hahnemann Medical College, Maple and Sacramento Sts., San Francisco, Cal., U. S. A. Dr. Guy E. Manning. 4,000.

Lane Medical Library, Sacramento and Webster Sts., San Francisco, Cal., U. S. A. Dr. Emmet Rixford. 33,000.

Library of the San Francisco County Medical Society, Polk and Grove Sts., San Francisco, Cal., U. S. A. Dr. August J. Lartigau. 4,000.

SHEFFIELD—

Library of the Sheffield Medico-Chirurgical Society, The University, Sheffield, England. Dr. Duncan Burgess. 3,556.

STOCKHOLM—

Caroline Institute Library, Stockholm, Sweden. Emil Haverman. 40,000.

SYRACUSE—

Library of the College of Medicine, Syracuse University, 309 Orange St., Syracuse, N. Y., U. S. A. Dr. Frank W. Marlow. 7,000.

TERRE HAUTE—

Vigo County Medical Society Library, Public Library Building, Terre Haute, Ind., U. S. A. Miss Sallie C. Hughes. 700.

TOLEDO—

Toledo Medical Library Association, Toledo, Ohio, U. S. A. Dr. C. D. Selby. 1,500.

TOPEKA—

Stormont Medical Library, State House, Topeka, Kansas, U. S. A. Mr. James L. King. 3,283.

TORONTO—

Library of the Academy of Medicine, 9 Queen's Park, Toronto, Ontario, Canada. Miss Mary Watson. 6,000.

TORQUAY—

Library of the Torquay Medical Society, Torbay Hospital, Torquay, England. The House Surgeon. 500.

UPSALA—

Library of the Medical Society at the Royal University, Upsala, Sweden. Gustafadde. 7,000.

VANCOUVER—

Library of the Vancouver Medical Association, Room 22, No. 633 Hastings St., W. Vancouver, B. C. Dr. E. C. Carder. 1,500.

WASHINGTON—

Library of the Surgeon-General's Office, Seventh and B Sts., S. W., Washington, D. C., U. S. A. Dr. Walter D. McCaw. 158,791.

Library of the U. S. Naval Medical School, Twenty-fourth and E Sts., Washington, D. C., U. S. A. Mr. S. W. French. 16,000.

WAVERLEY—

McLean Hospital Medical Library, Waverley, Mass., U. S. A. Miss E. Kathleen Jones. 4,280.

WILKES-BARRE—

Library of the Luzerne County Medical Society, Anthracite Building, Wilkes-Barre, Pa., U. S. A. Dr. Lewis H. Taylor. 4,300.

WINNIPEG—

Library of the College of Physicians and Surgeons of Manitoba, 220 McDermott St., Winnipeg, Manitoba, Canada. Miss O. Stewart. 1,200.

WORCESTER—

Worcester District Medical Library, 18 Elm St., Worcester, Mass., U. S. A. Dr. Merrick Lincoln. 8,926.

YORK, ENG.—

Library of the York Medical Society, 1 Low Ousegate, York, England. Dr. J. Ramsey. 5,000.

YORK, U. S. A.—

Library of the York County Medical Society, Court House, E. Market St., York, Pa., U. S. A. Dr. Israel H. Betz. 3,000.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES.

DR. JOHN H. BLACKBURN, DIRECTOR.
Bowling Green, Ky.

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Eighth Month.

TYPHOID FEVER.

First Weekly Meeting.

Anatomy of Ileum and Cecum.
Physiology of Ileum and Cecum.
Vessels, Nerves and Lymphatics.

Second Weekly Meeting.

Bacteriology.
  Historical Review.
  Methods of Detection.
  Methods of Transmission.

Third Weekly Meeting.

Intestinal Pathology.
General Pathology.

Fourth Weekly Meeting.

Symptomatology.
  Special Symptoms.
  Circulatory System.
Prophylaxis.

Monthly Meeting.

Diagnosis of Typhoid Fever.
Treatment of Typhoid Fever.

First Weekly Meeting.

Anatomy of Ileum and Cecum.

Demonstrate Fresh Specimens.

Ileum: Relations to surface. Mesentery; fixation, diameter. Structure, four coats. Serous coat. Muscular: longtitudinal and circular. Submucous; structure and contents. Mucous membrane, valvulæ conniventes few in number. Villi, structure. Crypts of Lieberkühn. Ileocecal valve; position, structure, relations, size.

Cecum: Location, diameter, types. Peritoneum, mesocecum. Appendices epiploicæ. Muscular layers. "Bands" or ligaments. Sacculi. Submucous coat. Mucous membrane. Crypts of Lieberkühn.

Physiology of Ileum and Cecum.

Digestion of proteids, carbohydrates and fats in small intestine; absorption of these elements. Difference in intestinal contents in duodenum and at ileocecal valve. Peristaltic and rhythmic movements of intestines. Effect of fever on digestion and absorption. Movements of large intestine. Bacterial action in small intestine; in large intestine.

Vessels, Nerves and Lymphatics.

Trace artery to villi, and venous return.

Trace nerve supply from origin to Auerbach's and Meissner's plexuses.

Trace lymph channels, deep and superficial sets, to thoracic duct. Mesenteric glands; number, size, location. Solitary follicles; location, size, structure. Agminated glands; size, location, number, structure.

Medical Education and State Boards of Registration

COMING EXAMINATIONS.

Georgia Homeopathic Board of Medical Examiners, Atlanta, May 4. Secretary, Dr. R. E. Hinman, 153 Whitehall St., Atlanta.

Georgia Regular Board of Medical Examiners, Capitol Building, Atlanta, May 4-5. Secretary, Dr. E. R. Anthony, Griffin.

Missouri State Board of Health, St. Louis and Kansas City, May 4-6. Secretary, Dr. J. A. B. Adcock, Warrensburg.

Louisiana Homeopathic Board of Medical Examiners, New Orleans, May 5. Secretary, Dr. Gayle Aiken, 1102 St. Charles Ave., New Orleans.

Tennessee State Board of Medical Examiners, Memphis, Nashville and Knoxville, May 5. Secretary, Dr. T. J. Happel, Trenton.

Mississippi State Board of Health, State Capitol, Jackson, May 12. Secretary, Dr. J. F. Hunter, Jackson.

Illinois State Board of Health, City Hall, East St. Louis, May 12-14. Secretary, Dr. J. A. Egan, Springfield.

Massachusetts State Board of Registration in Medicine, State House, Boston, May 12-14. Secretary, Dr. Edwin B. Harvey, Room 159, State House, Boston.

North Carolina State Board of Medical Examiners, Winston-Salem, May 19. Secretary, Dr. G. T. Sikes, Grissom.

New York State Board of Medical Examiners, Albany, May 19-22. Chief of Examinations Division, Charles F. Wheelock, Albany.

Louisiana State Board of Medical Examiners, New Orleans, May 21-22. Secretary, Dr. Felix A. Larue, 211 Camp St., New Orleans.

Indiana Board of Medical Registration and Examination, Indianapolis, May 26-28. Secretary, Dr. W. T. Gott, 120 State House, Indianapolis.

Nebraska State Board of Health, State Capitol, Lincoln, May 27-29. Secretary, Dr. E. J. C. Sward, Oakland.

American Medical Training.

The following editorial, under the above title, appeared in the Chicago *Tribune*, April 15, just after the conference of the Council on Medical Education:

"Medical training in the United States is being steadily improved. That was brought out clearly in the annual conference of the American Medical Association. The advances of a decade are notable. The desire for further improvement is evident. The leaders in the profession are anxious to make the medical schools of this country equal with the best in the world.

"These things are full of encouragement. There has been a large amount of criticism of American methods. The short course leading to a degree has been ridiculed. The line between diploma venders and the officials of some schools has been a shadowy one. Doctors have been turned out in large numbers without the fundamental education requisite to success. Some of them have discovered the fact and are now doing well in other lines of activity. Plenty of others, unfortunately, still attempt to practice on their fellow-men.

"The quacks and charlatans will continue to flourish. State regulations will make their operations more and more difficult, but their field is a wide one. There will be honest physicians who will try to succeed despite the handicap of a lack of necessary training. But, more pleasing to contemplate, there will be a larger number of men able to strive for the highest achievements because of the best possible education in American schools.

"The United States is said to have about 48 per cent. of the medical schools of the world. Some of these already rank among the best institutions of their kind. The deficiency noted after comparison with instruction in Europe is in the requirements for premedical study and in the length of time spent in working toward a degree.

"The hopeful feature of the situation is the progress that has been made during the last decade and the general feeling among the leaders of the profession that this advance movement must be continued. If the physicians were satisfied the outlook for medical instruction in the United States would not be encouraging. It is the determination manifested on every hand to go forward that is gratifying.

"There are many problems yet unsettled. Large endowments are needed for their solution. The accomplishments of recent years in connection with various ills of humanity have been marvelous. The aggressive and earnest physicians are optimists who look for still greater achievements in the early future. To train men for the best service to their fellows is a noble work. The improvement in medical instruction already noted is an earnest of what will surely come under the leadership of brilliant members of the profession who intend to leave nothing undone to secure for Americans in America as good training in medicine as can be found anywhere in the world."

Society Proceedings

COMING MEETINGS.

American Medical Association, Chicago, June 2-5.

Arizona Medical Association, Tucson, April 28-29.
Med. Assn. of District of Columbia, Washington, April 28.
Med. and Chir. Faculty of Maryland, Baltimore, April 28-30.
Kansas Medical Society, Iola, May 5-7.
Ohio State Medical Association, Columbus, May 6-8.
American Therapeutic Society, Philadelphia, May 7-9.
American Association of Physicians, Washington, May 12-13.
State Medical Association of Texas, Corpus Christi, May 12.
Utah State Medical Association, Salt Lake, May 12-13.
Louisiana State Medical Society, Alexandria, May 12-14.
Montana State Medical Association, Butte, May 13-14.
Arkansas Medical Society, Little Rock, May 13-15.
New Hampshire Medical Society, Concord, May 14-15.
Oklahoma State Medical Association, Sulphur, May 14-16.
Illinois State Medical Society, Peoria, May 19-21.
Missouri State Medical Association, Springfield, May 19-21.
Nebraska State Medical Association, Lincoln, May 19-21.
North Dakota State Medical Association, Grand Forks, May 20-21.
Iowa State Medical Society, Des Moines, May 20-22.
American Orthopedic Association, Chicago, June 4-6, 1908.

TENNESSEE STATE MEDICAL ASSOCIATION.

Seventy-fifth Annual Meeting, held at Knoxville, April 14-16, 1908.

The President, Dr. A. B. Cooke, Nashville, in the Chair.

The association met in the Circuit Court room of the Court House.

Addresses of welcome were delivered by Hon. John M. Brooks, mayor of Knoxville, on behalf of the city, and by Dr. H. H. McCampbell on behalf of the Knox County Medical Society, which were responded to by Dr. W. D. Haggard, Nashville.

Will Establish a Monthly Journal.

One of the most important items of business transacted by the house of delegates was the decision to establish a monthly medical journal in which to publish the proceedings of the association, the vote being 30 in favor of such an undertaking and 6 against it.

Officers Elected.

The following officers were elected: President, Dr. B. D. Bosworth, Knoxville; vice-president for east Tennessee, Dr. C. T. Carroll, Cleveland; vice-president for middle Tennessee, Dr. J. W. Brandau, Clarksville; vice-president for west Tennessee, Dr. W. T. Blanton, Union City; secretary, Dr. George H. Price, Nashville; treasurer, Dr. W. C. Bilbro, Murfreesboro; delegates to American Medical Association, Dr. S. W. Woodyard, Greenville; alternate, Dr. George R. West, Chattanooga, for 1908; for 1908-9, Dr. S. S. Crockett, Nashville; alternate, Dr. K. S. Howlett, Franklin. Next place of meeting, Nashville; time, April 13-15, 1909.

Medical Organization; Its Purposes and Possibilities.

President Cooke, in selecting this subject for his address, and in quoting from the constitution, said that the purposes of the association are to federate and bring into "one compact organization the entire medical profession of the state of Tennessee and to unite with similar associations in other states to form the American Medical Association, with a view to the extension of medical knowledge and the advancement of medical science, to the elevation of the standard of medical education and to the enactment and enforcement of just medical laws, to the promotion of friendly intercourse among physicians and to the guarding and fostering of their material interests, and to the enlightenment and direction of public opinion in regard to the great problems of state medicine, so that the profession shall become more capable and honorable within itself and more useful to the public in the prevention and cure of disease and in prolonging and adding comfort to life." No more inspiring declaration of principles could be formulated, he said, nor can any fair-minded man refuse to concede their nobility of conception and beneficence of intention.

As to the possibilities of medical organization, the present scheme of reorganization is only six years old, and yet in that short time the advantages which have been realized are so positive and definite that the promise for the future seems bright. To those who believe in the soundness and equity of a representative form of government the plan whereby the county society is made the unit of organization must commend itself as both wise and just. The great underlying purpose of all medical organization is to reach the individual physician, to cause him to realize that he has other responsibilities and duties than those which pertain to his immediate clientele, to broaden his mental vision, to awaken him to the fact that association with his fellows will enable him to mold public opinion and wield an influence in the affairs of men which are not possible in any other way. Systematic effort to reach the individual physician and induce him to affiliate with his local society, and in the possibilities embraced in such affiliation, he finds one of the strongest defenses of the present scheme of organization.

Laceration of the Perineum.

Dr. C. E. Ristine, Knoxville, read a paper on this subject in which he described the basic principle of a new operation for secondary repair of complete perineal laceration.

Ophthalmia Neonatorum as a Sociologic Problem.

Dr. Hilliard Wood, Nashville, referred to the prevalence of ophthalmia neonatorum before the introduction of Credé's prophylaxis and its reduction by the judicious use of a solution of silver. The percentage of blind in the Tennessee School for the Blind from this disease was referred to, and the author emphasized the necessity for a more determined effort to prevent blindness from this cause.

DISCUSSION.

Dr. M. M. Cullom, Nashville, said the method of using solutions of silver was simple, and could be employed by any practitioner, and the use of these silver salts, whether nitrate of silver or the newer salts, should be a routine measure.

Dr. Louis Leroy, Nashville, said when the disease is once established there is infiltration of the deeper layers of the cornea by the gonococcus. When the child is just born, however, there is no infiltration of the corneal tissues. The gonococci are present on the surface, and for that reason nitrate of silver will kill them as effectively as any of the other preparations.

Dr. S. S. Crockett, Nashville, has not been able to determine always when there is purulent infection of the eyes, and while he has been practicing medicine for many years and has done considerable obstetric work, he has never seen a case of ophthalmia neonatorum. He doubts very much whether every practitioner doing obstetric work can be induced to use nitrate of silver in the eyes of every baby that is born. He doubts its practicability.

Dr. Jere L. Crook, Jackson, thinks the members should place themselves on record as favoring, advocating and personally practicing the instillation of a 2 per cent. solution of nitrate of silver as recommended by Credé in every case, going on the principle that every eye is believed to be infected.

Dr. A. F. Richards, Sparta, agreed with Dr. Leroy as to the preference for nitrate of silver solution to the other salts for the reason given by Dr. Leroy.

Dr. Charles P. McNabb, Knoxville, believes that if practitioners would wash the eyelids and eyelashes of babies with sterile water there would be less ophthalmia. A 2 per cent. solution of nitrate of silver does not kill the pyogenic bacteria.

Dr. G. E. Vaughan, Clarksville, spoke of regulating the practice of midwives, saying they were the cause of most of the cases of ophthalmia neonatorum.

Dr. G. M. Burdette, Lenoir City, has not had more than one case of ophthalmia neonatorum in his practice, which has extended over thirty years. The case was treated with nitrate of silver and it took about six weeks to get rid of the infection. He uses sterile water invariably in washing the eyes. He can not support the indiscriminate use of nitrate of silver solution.

Obstruction of the Ureter.

Dr. M. C. McGannon, Nashville, described an interesting case of obstruction of the ureter and an operation which he performed for its relief.

Colic.

Dr. W. J. Breeding, Ravenscroft, in a paper on this subject said, among other things, if the profession would only realize that at least 90 pathologic causes of colic requiring only medical treatment may exist within the abdominal cavity, and that over 100 serious surgical causes may find expression in colic, it would certainly deliberate long before observing symptoms by an early resort to the preparations of opium.

DISCUSSION.

Dr. George R. West, Chattanooga, follows the Wyeth method in treating the stump of the appendix. He mentioned a case in which jaundice occurred several times as the result of a post-cecal abscess due to a long-standing appendicitis in which the appendix was adherent.

Dr. Louis Leroy referred to colics of nervous origin and those associated with hysteria, classed vaguely with the ovarian colics. He also mentioned colics due to the habitual use of morphin.

Dr. Jere L. Crook spoke of the simplicity of the Dawbarn method in treating the stump of the appendix.

Dr. A. G. Kyle resorts to the Dawbarn operation where he has a soft appendix to deal with. The Dawbarn method of dealing with the appendiceal stump is simple.

Dr. M. C. McGannon said that tabes dorsalis produces pain about the abdomen which may be mistaken for gall-bladder trouble or appendicitis. Jaundice as a symptom of appendicitis is very rare. There must be some other condition than appendicitis to produce jaundice.

(*To be continued.*)

Marriages

Reginald D. West, M.D., to Miss Violette La Fleur, at Baltimore, April 9.

Edgar F. Kiser, M.D., Indianapolis, to Miss Cleone Hene of Muncie, Ind., April 14.

Joseph Weinstein, M.D., to Miss Rive Kaplan, both of New York City, April 7.

Robert R. Black, M.D., Mansfield, Ohio, to Miss Harriet Moore, of Ashland, Ohio, April 5.

William Joseph J. Daly, M.D., Boston, to Miss Marguerite Sterling Gallagher, of Chicago, April 21.

William B. Savage, M.D., East Islip, N. Y., to Miss Adele L. Ingersoll, of New York City, April 11.

William H. Vogt, M.D., St. Louis, Mo., to Miss Edna Jeanette Nichols, of New York City, April 8.

Thomas G. Nelan, M.D., East End, Pittsburg, to Miss Ora L. Boyde, of Martin's Ferry, Ohio, March 25.

Nathaniel Curtis Rogers, M.D., Rockford, Ill., to Miss Florence Marie Williams, of Chicago, April 25.

Charles Edward Pearson, M.D., New Brighton, Staten Island, N. Y., to Miss Edith Marks, of Chicago, April 20.

Deaths

Joseph Goodwin Rogers, M.D. Bellevue Hospital Medical College, New York City, 1864; acting assistant surgeon in the Army during the Civil War; professor of materia medica and therapeutics in the Indiana College of Physicians and Surgeons, 1875; superintendent of the Indiana Hospital for Insane, Indianapolis, from 1879 to 1883, when he was placed in charge of the construction of the three additional state hospitals for the insane at Logansport, Richmond and Evansville; Medical Superintendent of the Northern Indiana Hospital, Longcliff, Logansport, from 1888 until his death; author of the Indiana law for the care of insane; a member of the American Association for the Advancement of Science and in 1900 president of the American Medico-Psychological Association; an authority on hospital construction, psychiatry and general medicine, died at "Longcliff," April 11, from uremia, after a long illness, aged 67.

David LaCount, M.D. Rush Medical College, Chicago, 1856; a member of the American Medical Association; assistant surgeon of the Fourteenth Wisconsin Volunteer Infantry during the Civil War; first president of the Marathon County (Wis.) Medical Society; first physician to the Marathon County Insane Asylum; a member of the local board of pension examining surgeons, and local surgeon for the Chicago, Milwaukee & St. Paul and Chicago & Northwestern railways; died at the home of his daughter in Wausau, April 12, from cancer of the sigmoid flexure, after an illness of seven years, aged 79.

Joseph E. Clagett, M.D. Winchester (Va.) Medical College, 1851; a member of the Medical and Chirurgical Faculty of Maryland, and Baltimore Academy of Medicine; professor of materia medica from 1867 to 1873, and of obstetrics from 1873 to 1877 in the Washington University School of Medicine, Baltimore; surgeon in the Confederate service during the Civil War; for more than 40 years surgeon of the Baltimore & Ohio Railroad; died at his home in Baltimore, April 4, from cerebral hemorrhage, after a prolonged illness, aged 77.

Arthur Melvin Lee, M.D. Medical Department, University of Nashville, Tenn., 1878; a member of the Illinois State and Jackson County medical societies; a veteran of the Civil War; surgeon to the Southern Illinois penitentiary, Chester, for three years; a member of the legislature in 1896; and at various times a member of boards of pension examining surgeons; died at his home in Carbondale, April 2, from influenza, after an illness of two months, aged 68.

Samuel J. Rouse, M.D. Pennsylvania Medical College, Gettysburg, 1851; a member of the Medical Society of the State of Pennsylvania and founder of the York County Medical Society; coroner of York County and physician to county poor house for more than 12 years; surgeon of the United States Hospital at York during the Civil War; secretary of the school board for 12 years; died at his home in York, April 8, from pneumonia, aged 78.

Otho Evans, M.D. Western Reserve University Medical College, Cleveland, Ohio, 1856; a member of the American Medical Association; surgeon in the army during the Civil War; president of the First Councilor District Medical Society in 1878; for more than fifteen years president or treasurer of the school board of Franklin, Ohio, died at home in that town, where he had practiced for more than fifty years, April 12, aged 75.

Joseph Bernard Tanner, M.D. University of Southern California College of Medicine, Los Angeles, 1902; a member of the Medical Society of the State of California and Los Angeles Medical Society; for two years assistant superintendent of the Los Angeles County Hospital; assistant police surgeon of Los Angeles, was drowned in the surf while on a fishing trip near Santa Cruz Island, April 1, aged 30.

Charles Selden, M.D. Medical College of Virginia, Richmond, 1861; chief surgeon of the Second Virginia Division in the Confederate service during the Civil War; died at his home in Hampton, Va., "between the hours of 10:30 a. m., April 2, and 8 a. m., April 4, by reason of asphyxiation by gas escaping from the open cock of a gas stove in his bed room, left open with suicidal intent," aged 69.

Edwin Goodman, M.D. Trinity Medical College, Toronto, Ont., 1865; M. C. P. & S. Ont., 1866; surgeon to the Nineteenth Regiment in the Fenian raid; mayor in 1891-1892; chairman of the local board of health for 11 years; honorary president of the Ontario Tuberculosis Society; for 20 years coroner of Lincoln County; died April 9, at his home in St. Catherine's, Ont., aged 74.

Stephen H. Clizbe, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1868; a member of the Michigan State and Branch County medical societies; for several terms president of the Tri-state Medical Association of Michigan, Ohio and Indiana; died at his home in Coldwater, April 7, from diabetes, after a prolonged illness, aged 63.

Alexander Byrd McDowell, M.D. George Washington University, Department of Medicine, Washington, 1891; a member of the American Medical Association; for a time surgeon in the U. S. Marine Corps; died at his home in New York City, April 15, from the effects of incised wounds of the throat, said to have been self-inflicted, with suicidal intent, aged 35.

George Armstrong Linn, M.D. Jefferson Medical College, Philadelphia, 1869; a member of the American Medical Association; one of the oldest practitioners of Washington County, Pa.; a veteran of the Civil War, and one of the founders and a trustee of the Monongahela City Memorial Hospital; died at his home in Monongahela City, April 5, aged 76.

Silas M. Catchings, M.D. Medical Department of the University of Tennessee, Nashville, 1891; of Siwel, Miss.; a member of the Mississippi State Medical Association and Hinds County Medical Society; died at the home of his father in Jackson, Miss., April 6, from cerebral hemorrhage, after an illness of several months, aged 40.

David Kellar, M.D. University of Louisville (Ky.) Medical Department, 1841; chief surgeon of General Buford's brigade and Gen. John Morgan's division, in the Confederate service, during the Civil War, died at the home of his daughter in Lexington, Ky., April 9, from senile debility, after a gradual decline of four months, aged 88.

Joseph Wareham Jay, M.D. Eclectic Medical Institute, Cincinnati; one of the most prominent dentists of Richmond, Ind., and at one time president of the State and Eastern Indiana dental associations; died at his home, Dec. 9, 1907, from debility following mastoid disease, after an illness of five and a half days, aged 82.

Joseph H. Mack, M.D. Eclectic Medical Institute, Cincinnati, 1863; for 50 years a resident of Madison County, Iowa; hospital steward during the Civil War; a member of the Twenty-third Iowa General Assembly; founder of Macksburg; died at his home in that city, March 16, from diabetes, after an illness of several years, aged 70.

George E. Thompson, M.D. Medical School of Harvard University, Boston, 1884; a member of the American Medical Association, American Academy of Medicine, and Boston Society for Medical Improvement; visiting physician to St. Elizabeth's Hospital; died at his home in Boston, April 11, after a short illness, aged 58.

Isaac Howard McKinley, M.D. Hospital College of Medicine, Medical Department, Central University of Kentucky, Louisville, 1879; a member of the American Medical Association and the Kentucky Valley Medical Society; died suddenly in his office in Winchester, Ky., April 14, from angina pectoris, aged 66.

Edward H. Skipwith, M.D. Medical Department of the Tulane University of Louisiana, New Orleans; for fifteen years a practitioner of Las Vegas, N. M., and for ten years at Roswell, N. M., died at El Paso, Texas, January 4, from pneumonia, after an illness of two weeks, aged about 70.

George H. Herbert (Examination, Utah, 1893), a member of the Utah State Medical Association and Sevier County Medical Society; physician of Sevier County and of Richfield for eight years, and registrar of vital statistics; died at his home in Richfield, April 8, after a long illness, aged 61.

Catherine Maloney Kennedy, M.D. Woman's Medical College of Pennsylvania, Philadelphia, 1873; of Springfield, Mass.; a member of the Massachusetts and Hampden District medical societies; died at Mercy Hospital, Springfield, April 10, from rheumatism, after a long illness, aged 63.

Kirby S. Mellinger, M.D. Western Pennsylvania Medical College, Pittsburg, 1904; formerly of New Salem, Pa.; a member of the Medical Society of the State of Pennsylvania and Fayette County Medical Society, died at his home in Perryopolis, April 9, from typhoid fever, aged 33.

Arbaces Cushman, M.D. Jefferson Medical College, Philadelphia, 1869; a member of the American Medical Association and the Æsculapian Society of the Wabash Valley; a veteran of the Civil War; died April 8, at his home in Grayville, Ind., from chronic malaria, aged 68.

William H. Bagwell, M.D. College of Physicians and Surgeons, Baltimore, 1883; a member of the Medical Society of the State of North Carolina and the Pitt County Medical Society; died at his home in Greenville, April 7, after an illness of only a few days, aged 44.

Thomas W. Bothwell, M.D. University of Georgia, Medical Department, Augusta, 1873; a member of the Florida Medical Association and Suwanee County Medical Society; died at his home in Wellborn, April 3, after an illness of two months, aged 45.

George Philip Westland, M.D. New York Homeopathic Medical College and Hospital, New York City, 1868; M. C. P. & S., Ontario, 1869; died at his home in London, Ontario, April 7, from cerebral hemorrhage, after a short illness, aged 72.

William E. Kunkle, M.D. Hahnemann Medical College and Hospital, Philadelphia, 1878; of Newberry, Williamsport, Pa.; died at his home in that city from cerebral hemorrhage, April 5, after an illness of twenty-four hours, aged 70.

Amasa A. Macwithey, M.D. New York University Medical College, New York City, 1843; of Pompton Plains, N. J.; a member of the Medical Society of New Jersey and Morris County Medical Society; died January 6.

William H. Boston (Years of Practice, Ky., 1893); for 40 years a practitioner of Daviess County, Ky.; a veteran of the Civil War; died at his home in Owensboro, April 6, after an illness of about three months, aged 76.

George Bucher Taylor, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1885; died at his home in Towanda, Pa., March 31, from cerebral hemorrhage, after an invalidism of several years, aged 45.

David Dixon Davis, M.D. Jefferson Medical College, Philadelphia, 1889; at one time a soldier in the United States Army; died at his home in Mount Carmel, Pa., April 2, after an illness of one week, aged 42.

Harry Paul Brockett, M.D. Kansas Medical College of Topeka, 1906; of Mayetta, Kan.; died in Christ's Hospital, Topeka, March 30, from peritonitis, following an attack of appendicitis, aged 24.

Charles M. Boone, M.D. National Medical University, Chicago, 1896; of Guernsey, Iowa; died at Mercy Hospital, Cedar Rapids, Iowa, March 26, from erysipelas, after an illness of eight days, aged 43.

Willis B. Wilson (License Ind., 1897), for more than fifty years a practitioner of Rolling Prairie, Ind., and a member of the Laporte County pension examining board, died at his home, April 6, aged 79.

Robert Q. Haggerty, M.D. Indiana Medical College, Indianapolis, 1874; a member of the American Medical Association; died suddenly at his home in Elkhart, Ind., April 8, from heart disease, aged 54.

John A. Young, M.D. Medical College of Virginia, Richmond, 1875; of Denbigh and Menchville, Warrick County, Va., died suddenly at his home in Denbigh, April 10, from acute gastritis, aged 54.

Richard Coughlan, M.D. Faculty of Medicine of Queen's University (Royal College of Physicians and Surgeons), Kingston, Ont., 1881; died at his home in Hastings, Ont., February 29, aged 48.

R. C. Washburn, M.D. University of Louisville, Medical Department, about 1856; died at his home in Greensboro, N. C., Nov. 28, 1907, from gangrene, after an illness of eight days, aged 78.

James H. Stebbins, M.D. American Medical College (Eclectic), Cincinnati, Ohio, 1854; died at his home in Geneva, N. Y., April 8, from heart disease, after an illness of two days, aged 74.

John Wilcox Peaker, M.D. Toronto University Medical Faculty, 1886; died at his home in Toronto, April 5, from rheumatic endocarditis, after an illness of two weeks, aged 43.

Francis M. Daily, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1878, died at his home in Millhousen, Ind., April 6, after an illness of several months, aged 64.

Corydon T. Grover, M.D. Charity Hospital Medical College, Cleveland, 1868; died recently at his home in Orwell, Ohio, and was buried April 1 in Windsor, Ohio.

Benjamin Van Meter, M.D. Long Island College Hospital, Brooklyn, N. Y., 1872; a practitioner of Parsons, Kan., for thirty-four years, died April 10

John B. Laing, M.D. Detroit (Mich.) Medical College, 1870; died at his home in Otisville, Mich., April 6, from nephritis, after a long illness, aged 62.

Warren C. Westlake (License, N. J., 1875); a dentist of Rahway, N. J., died at the Alexian Brothers' Hospital, Elizabeth, N. J., April 7, aged 60.

Arthur B. Cossaart, M.D. New York Homeopathic College and Hospital, New York City, 1869, died at his home in New York City, recently, aged 62.

Hugh P. Lewis, M.D. Castleton (Vt.) Medical College, 1845; a pioneer practitioner of Pike County, Mo.; died at his home in Curryville, March 30.

Elmer M. Packard (License, N. J., 1900), a veteran dentist of Atlantic City, died suddenly April 8, at his home, from pneumonia.

Charles Wilbur Carrier, M.D. Chicago Homeopathic Medical College, 1877; died at his home in Desplaines, Ill., April 16, aged 58.

George Blake Galer, M.D. Rush Medical College, Chicago, 1872; died at his home in Belmond, Iowa, March 20, aged 81.

Francis H. Kelly, M.D. Gross Medical College, Denver, Colo., 1889; died at his home in Chicago, April 9.

Death Abroad.

J. Mierzejewsky, M.D., until 1893 professor of nervous and mental diseases at the University of St. Petersburg, founder and editor of the Russian *Journal for Neuropathology and Psychiatry*, died from a sudden attack of hemiplegia at Paris, aged 69.

Medicolegal

Damages for Loss of Two Fingers.

The Supreme Court of Washington says that in the case of Barclay vs. Puget Sound Lumber Company, in which the plaintiff suffered the loss of the two front fingers on his right hand, the verdict for $5,000 was so far excessive as to lead to the conclusion that it was given under the influence of prejudice. A verdict for one-half that sum, the court thinks, would fully compensate for the injuries suffered.

Rule for Measuring Value of Life.

The Supreme Court of Florida says, in Jacksonville Electric Company vs. Bowden, that, in the nature of things, an exact and uniform rule for measuring the value of the life of a deceased person to designated beneficiaries or to his estate is not practicable if possible. The elements which enter into the value of a life to the estate of a deceased person are so various and contingent that they must be left, under proper instructions from the court, to the determination of the jury, based on proper testimony applicable to the particular case. The jury have no arbitrary discretion; but among other proper elements they may consider evidence as to the age, probable duration of life, habits of industry, means, business, earnings, health, and skill of the deceased, and his reasonable future expectations.

Communications to Physicians in Other States Not Privileged.

The Supreme Court of Colorado holds, in Colorado Springs & Interurban Railway Company vs. Fogelsong, that the statute of Colorado which provides that "a physician or surgeon, duly authorized to practice his profession under the laws of this state, shall not, without the consent of his patient, be examined as to any information acquired in attending the patient, which was necessary to enable him to prescribe or act for the patient," does not apply to physicians practicing outside of Colorado, and not authorized or licensed to practice under the laws of Colorado, and did not in this case render the affidavits or the testimony of certain Missouri physicians incompetent.

Evidence of Non-Experts Equally Competent as That of Experts on Sanity.

The Supreme Court of Idaho holds, in the case of Weber vs. Della Mountain Mining Company, that in a case where the gist of the action is the sanity or competency of a person to transact business at a given time, it is error to exclude the evidence, opinions and statements of witnesses who were acquainted with the alleged insane person for many years, and who were familiar with his actions and conduct, and who saw him at the time of the transaction in question. The evidence of a layman or non-expert witness is equally as competent and admissible as the evidence of an expert witness on the question of the sanity of a person or his incompetency to transact business at any given time or in any given manner. A layman or non-expert witness may be as able and competent as an expert to make clear mental comparisons between the acts and conduct of a man who was at one time sane, sound and competent, and at another time incompetent, or laboring under mental disability or partial or total insanity.

The court says that it is too well settled law to require consideration or discussion here that the competency or incompetency, sanity or insanity, of a person at the time of a given transaction may be proven by laymen or non-expert witnesses with equal certainty, and often greater satisfaction than by experts, and the fact that a witness who has been acquainted with the person and has seen him frequently, and has been familiar with all his transactions, and has had business dealings with him, is himself not an expert on the subject of insanity, and is not versed in the medical science or has had no training or education along those lines, is no reason whatever for excluding his evidence on a question of common, everyday observation. Kelly vs. Perrault, 5 Idaho, 221; heirs of Clark vs. Ellis, 9 Or. 128; in re Christiansen's estate, 17 Utah. 42; People vs. Wreden, 59 Cal. 394; Armstrong vs. State, 30 Fla. 200.

Admissibility of Proof of Health More Than Five Years Before Injury.

The Kansas City Court of Appeals says that in the case of Partello vs. Missouri Pacific Railway Company, an action brought by a husband to recover damages resulting to him from personal injuries sustained by his wife in consequence of the alleged negligence of the defendant, the question was raised whether evidence relating to the condition of health and vigor of the plaintiff's wife which existed more than five years from the date of the injury had a direct or remote bearing on the issue of the extent of the injuries and their result on the wife's health. All of the plaintiff's witnesses depicted her as a woman of untiring energy, joyous spirits, and apparently in perfect health. After her injury she was a helpless invalid, unable to walk even the shortest distance without assistance, and exhibited all the indications of serious nervous disorder.

On the other hand, the defendant introduced a medical expert who testified from an examination made by him shortly after her injury, that he discovered that the wife's womb was greatly enlarged, from some cause which must have antedated her injury, and, further, that it was disclosed that some years before the injury she suffered in childbirth from a severe laceration of the perineum which failed to heal properly, and for which surgeons operated on her while she was in the hospital undergoing treatment for her injuries. This evidence was offered for the purpose of showing that the condition of ill health in which the plaintiff's wife was at the time of the trial was due, not wholly to the injuries received in the collision, but to other causes which preceded that occurrence, and which must have impressed her physical appearance with the marks of ill health.

Facing a controversy of this character, it not only was material, but the court thinks very important, for the plaintiff to show that his wife, even from girlhood to the hour of her injury was robust, vigorous, and to all appearances in perfect health. The court recognizes the fact that in a far shorter period than five years a person's condition of health may be entirely changed; but evidence which tends to show that one is endowed by nature with certain marked physical characteristics such as strength, high spirits and freedom from illness, when accompanied by evidence that such condition has obtained to the time of an injury, has a direct evidentiary bearing on the question of whether or not physical impairment and ill health immediately following was caused by the injury.

Had the defendant offered to show by witnesses that during the period covered by the observation of one of the plaintiff's witnesses that the plaintiff's wife had borne the appearance and acted in the manner of a person in bad health and had followed this up with evidence that such condition continued up to the date of the injury, it was very clear that such evidence would have been admissible on the ground that it would have a strong and direct relation to the real cause of the physical impairment and disorder under which it was conceded she was suffering at the time of the trial.

The facts in question were not remote in an evidentiary sense, and it was proper for the trial judge to receive them in evidence.

Admissibility of Testimony of Physicians Based on Subjective Examinations.

The St. Louis Court of Appeals says that complaint was made, in the personal injury case of Gibler vs. Quincy, Omaha & Kansas City Railroad Company, of a ruling permitting certain physicians to give testimony regarding the condition the plaintiff was in at the time of the trial, based on a subjective examination; that is to say, on the plaintiff's statement of symptoms then existing and the history of the case he gave. The opinion of one physician was given, not only on the information derived from the plaintiff, but on the appearance of pain exhibited by the plaintiff in moving his arm The testimony of the other physician referred to was based on the knowledge of the case acquired in treating it, and also on the examination conducted during the trial. In so far as it was based on the latter, it contained only the statement that the plaintiff would need a long rest and good treatment to recover permanently. In strictness the objection stated was hardly applicable to the testimony of either of the physicians. But if the first witness could form no opinion of the plaintiff's present state without considering the history of the case and prior symptoms as related by the plaintiff, then his opinion was incompetent evidence.

The rule of law involved in the exception to this expert testimony is examined with discrimination and care in that well-tested repository of sound law—1 Greenleaf on Evidence (16th Ed.), section 162. The rule stated in this treatise, and accepted by most courts, if not all, is that a physician may give in evidence his expert opinion of the condition of a patient, founded on his observation or on the patient's statement of present subjective symptoms, or both, and, in giving his opinion, the physician may testify not only of what he observed, but what the patient told him about present symptoms. But admissible statements of symptoms by the patient are those relating to present symptoms and not such as are in the nature of a narrative of his past condition.

In other words, a physician can not repeat in testimony the history of the case given him by the patient during the examination; neither in Missouri can a physician testify to an expert opinion, based on a narrative of what has transpired in the past in the case.

A leading authority on the subject wherein the law is expounded as this court has stated it in Insurance Co. vs. Mosely, 8 Wall. (U. S.) 397. The question was considered, and many decisions reviewed in Hollaway vs. Kansas City, 184 Mo. 19, wherein it was ruled the statements of a litigant to a physician about the litigant's past physical condition were mere hearsay, and the physician could not even consider them in giving his opinion about the party's physical state at the time of the trial. It follows from this authority that no testimony should be received regarding what the plaintiff said to the physicians concerning his past suffering, and neither should an expert opinion be received in evidence, if it is based on a history of the case related by the plaintiff.

It was proper for a physician to state on the witness stand his opinion, based on what the plaintiff said about the pain he felt at the time of examination, and in connection therewith report the plaintiff's statements that he (the plaintiff) suffered pain in moving his arm at the time the examination occurred. What the witness testified was this: "Judging from the pain he (the plaintiff) says he has, I would say the deltoid muscle was injured, probably torn loose, and that the triceps was injured to a certain extent—slightly damaged." According to the above authorities, said testimony was competent.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

April 11.

1 Diabetes and the Food Factor. H. S. Stark, New York.
2 Spontaneous Gangrene of the Foot Due to Endarteritis Obliterans. I. Levin, New York.
3 *Relation of Appendicitis to Gynecologic Pelvic Diseases. S. W. Bandler, New York.
4 Blood Pressure in the Practice of Medicine. W. F. Dutton, Pittsburg, Pa.
5 *Health of Our High School Children. E. Jarrett, New York.
6 Solution of the Lodge and Society Problem on the East Side. J. Weiss, New York.
7 Case of Cut Throat. C. I. Page, Litchfield, Conn.

3. **Appendicitis and Gynecologic Pelvic Disease.**—Bandler summarizes his conclusions as follows: 1. Appendicitis in the form of an inflammation of the mucous membrane does not result from inflammatory diseases originating in the uterus or adnexa. 2. Involvement of the appendix viewed as a peritoneally covered organ may take place as part of a peritonitis, more or less localized or more or less extensive, which has its origin in inflammatory diseases of the adnexa. 3. Severe inflammations of the appendix, in so far as they cause a pelvic peritonitis or in so far as the accumulation of pus is located in the pelvis, naturally involve the uterus and adnexa in adhesions, do not cause pyosalpinx, but may cause tubo-ovarian cysts. 4. A differential diagnosis as to original site of the infection, when the appendix and right adnexa are involved, is often impossible except from the operative clinical standpoint and even then is not always certain. 5. Mild attacks of appendicitis, without the production of well-defined peritonitis, may involve the adnexa without adhesions, but especially by infection of the Graafian follicles, alterations of the stroma and the production of varicocele of the broad ligament. 6. Such alterations in the adnexa generally result from processes extending from the cervix and uterus into the broad ligaments and a definite decision as to the source of the trouble may be often impossible.

5. **Health and Education.**—Jarrett expresses convictions formed as the result of examining yearly from 800 to 1,200 applicants, men and women between 18 and 25 years of age, the finished product of public school training, physical and intellectual. The examination is threefold: the written examination, an intellectual test, the oral examination, a test of the personal equation, and a physical examination. It was found that 7 per cent. were rejected for various conditions of disease that were likely to make them soon a burden on the pay rolls, but the process further caused amazement at the low standard of health among the younger groups of candidates from high schools, normal colleges, and the College of the City of New York. Many cases of anemia, albuminuria and organic heart lesions were found. As the subjects came for physical examination after the prolonged strain of examination, this was attributed to that cause. When the physical examination was changed so as to precede the others, the results gave rise to the following conclusions: 1. A strain of even a few weeks may produce in these young people a temporary derangement. 2. Those with organisms sufficiently strong react immediately on removal of the strain. 3. A small percentage have had the way paved for permanent injury to a vital organ.

Boston Medical and Surgical Journal.

April 9.

8 Significance of Clinical Histories Before and After Operative Demonstration of the Real Lesion. (To be continued). M. H. Richardson, Boston.
9 *Observation Hospital or Wards for Early Cases of Mental Disturbance. L. V. Briggs, Boston.
10 Infantile Pyloric Stenosis with Autopsy Six and One-Half Months After Successful Gastroenterostomy. J. L. Morse and F. T. Murphy, Boston.
11 Case of Congenital Stenosis of the Pylorus. C. W. Townsend, Boston.
12 *Scope of Therapeutic Inoculation. G. P. Sanborn, Boston.

9. **Observation Wards for Mental Disturbance.**—Griggs adduces further evidence in favor of the movement for the establishment of observation hospitals or wards, for early cases of mental disturbance from both old and new sources.

12. **Bacteriotherapy.**—Sanborn has studied Wright's methods carefully, in the capacity of assistant for five months, after a previous course on immunity in the University of Cambridge, where Wright's work was discussed fairly but without much enthusiasm. The results there showed that the possible error might be at any time from 25 to 100 per cent. During his work with Wright, however, he learned of and followed investigations being carried out regarding the reasons for inaccuracy in opsonic determination. These researches will be published in the future from Wright's laboratory. But he asserts that one who is not cognizant of these sources of error can not hope to obtain accurate indices unless he chances to be lucky. There still remain four or five sources of error, which are at present unrecognized, that may lead, even in the hands of those possessed of thorough technic, to inaccuracies varying from 25 to 200 or 300 per cent. He describes the work in Wright's laboratory and his own personal observations in re-

gard to lupus, ulcer and particularly sinuses, tuberculous bone disease, tuberculous adenitis, tuberculosis of joints and tendon sheaths, tuberculous cystitis, tuberculous peritonitis, pulmonary tuberculosis, etc. He emphasizes particularly the necessity of exercising the greatest care to avoid bringing discredit on the work, through the making of serious errors, and quotes Theobald Smith's statement (THE JOURNAL, March 21, 1908, page 934), that "it is easier to arouse the nervousness of the public than to allay it. Whenever practice outruns the laboratory, and, more or less impatient, applies the latter's results to the prevention and cure of the disease, it frequently deals with half truths whose application may be harmful."

New York Medical Journal.

April 11.

13 Case of Pernicious Malaria with Autopsy. G. R. Satterlee, New York.
14 Case of Sarcoma of the Chorioid. A. J. Herzig, New York.
15 *Vivisection from a Student's Standpoint. V. C. Pedersen, New York.
16 *Malaria in Greece. A. Rose, New York.
17 Cammidge Reaction in Pancreatic Disease with Notes of Case. G. A. Friedman, New York.
18 Case of Poisoning with Tansy (Tanacetum). E. J. Stout, Philadelphia.
19 *Comparative Therapeutic Value of the Compounds of Iron. R. E. Van Gieson, Brooklyn, N. Y.
20 Surgical Treatment of Appendicitis. J. E. Cannaday, Wheeling, W. Va.
21 Case of Cerebral Abscess with Masked Symptoms. R. E. Coughlin, Brooklyn, N. Y.

15. **Vivisection.**—Pedersen, in an address by invitation before the National Society of Ohio Women, describes in detail the principles of ten therapeutic measures which have been established as a result of experimentation on animals, and illustrates their application with incidents. He discusses the measures for limiting animal experimentation at present before the legislature.

16. **Malaria in Greece.**—Rose summarizes the report of a syllogos, or association, founded by Dr. Cardamatis with the object of combating malaria in Greece. He describes the measures employed, drainage, destruction of mosquitoes, provision of quinin, and the various measures of public education, by means not only of the medical profession, but also of the public schools, the clergy, the press, the distribution of handbills and public display of notices, and public lectures with stereopticon demonstrations.

19. **Therapeutic Values of Iron Compounds.**—Van Gieson discusses the metabolism of iron in reference to the therapeutic value of the drug and the mode of its administration, particularly in relation to the official preparations versus the "organic" forms. He concludes that a careful study of iron metabolism shows that the official preparations of iron so long useful in the past will increase hemoglobin. The ferrous carbonate; the soluble oxid with sugar; the double salts with the vegetable acids; the solution of the perchlorid given in combination and largely diluted with milk, are the forms most likely to produce good results. Directly conflicting views as to the value of the modern proprietary preparations exist among competent observers. In all iron medication the question of defective metabolism is important. Cases must be individualized and preparatory treatment is essential. Rest in bed, massage, milk diet, unfermented grape juice and static electricity are valuable adjuvants preparatory to or during the administration of the iron compounds.

Lancet-Clinic, Cincinnati.

April 4.

22 Fifty Years of Practice in Cincinnati. W. H. Taylor Cincinnati.
23 *Treatment of Inguinal Hernia in Children. F. B. Walker, Detroit, Mich.
24 *Painful Feet. J. L. Porter, Chicago.
25 *The Uterine Curette: Its Use, Abuse and Dangers. J. F. Baldwin, Columbus.

23. Abstracted in THE JOURNAL, Nov. 2, 1907, page 1553.

24. **Painful Feet.**—Under this heading Porter discusses (1) weak feet, (2) flat feet, (3) rigid feet. In regard to the last he calls particular attention to gonorrheal arthritis of the tarsus, and particularly of the articulations of the os calcis, which he believes to be much more frequent than is commonly suspected. The condition known as "painful heel" is so often the result of gonorrheal infection that such infection should be suspected in every instance.

25. **Uterine Curette.**—Baldwin discusses the dangers of curetting in regard to dilatation, perforation and septic infection, particularly the carrying of gonorrheal infection, which is frequently limited to the cervix, into the interior of the uterus. In tubal trouble the curette will probably do more harm than good. It may check hemorrhage the result of a myoma, but only temporarily, and should not be used unless the reasons for palliation are very pronounced. It may be advantageously used in hemorrhage when tubal disease can be excluded and the hemorrhage is due to fungous endometritis or to retention of placenta or membrane. It should in no case be used without a positive indication or as a routine office procedure. He reports three cases in which its use necessitated surgical intervention to save life, but with the unfortunate result that three young women were deprived of all hope of maternity in the future.

American Journal of Medical Sciences, Philadelphia.

March.

26 *Exophthalmic Goiter and Its Treatment. W. H. Thompson, New York.
27 Adiposis Tuberosa Simplex. J. M. Anders, Philadelphia.
28 *Choice of Operation in Pyloric Stenosis. J. M. T. Finney, Baltimore.
29 Occurrence of Congenital Adhesions in Common Iliac Veins, and their Relation to Thrombosis of the Femoral and Iliac Veins. J. P. McMurrich, Toronto, Can.
30 *Acute Glandular Fever. G. I. Jones, Washington, D. C.
31 *Epidemic Cerebrospinal Meningitis in Hartford, Conn., During 1904-1905, with Special Reference to the Cases Treated at Hartford Hospital. W. R. Steiner, Hartford, Conn., and C. B. Ingraham, Jr., Baltimore.
32 Tumors of the Cauda Equina and Lower Vertebræ. Report of Nine Cases, Seven with Necropsy, Three with Operation. W. G. Spiller, Philadelphia.
33 *Morbid Somnolence. D. Hecht, Chicago.
34 Fatal Case of Pontile Hemorrhage with Autopsy. T. Diller, Pittsburg, Pa.
35 Fatal Case of Chorioepithelioma of the Uterus, with Autopsy. B. M. Anspach, Philadelphia, and H. R. Alburger, Bloomington, Ind.
36 *Specific Immunity and *X*-Ray Therapeutics. A. W. Crane, Kalamazoo, Mich.

26. **Exophthalmic Goiter.**—Thomson describes the manifold symptoms of this disease, and points out that no organic change accompanies any one of them. He concludes that one and the same agent produces all the effects, and that the disease is due to a specific poison that goes wherever the blood goes, and causes no more tissue changes, except indirectly on nutrition, than does opium or aconite. The nature of this poison is wholly unknown. The uncertainties of this disease are due to the fact that we are yet at sea as regards the physiology of the thyroid and its associated structures. Thomson discusses in detail the theories that relate the disease to hypersecretion of the thyroid and to the parathyroids. He says that there can be no doubt of the efficiency of Beebe and Rogers' serum in many cases, though its explanation is another matter. He considers those cases without goiter the most difficult to treat. His own views of the pathology are based on therapeutics. Clinical observations are as good as laboratory experiments, provided that in making them the same care is taken against fallacies in observation and deduction. His final verdict is that proper medical treatment furnishes the best chances for recovery in severe cases. The one condition in which he has little hope is when uncontrollable vomiting and diarrhea have supervened in a patient already very weak. The important items in treatment are rest from muscular and mental exertion and diet, in which entire absence of meat, oysters, clams, lobsters and dark meat game is essential, and only very limited recourse to poultry, eggs (only one a day), and quail or partridge. Vegetarianism is best Milk fermented with yeast or Asiatic ferments, or even peptonized, but never raw, is the all important article of diet. Beans, peas, spinach and asparagus are forbidden. Fruits, except uncooked apples and strawberries, are beneficial. Individual idiosyncrasies must be respected. Medicinally, sodium phosphate, 30 grains (2 gm.) at the beginning of each meal, and a blue pill or other mercurial laxative once a week are recommended; also intestinal antiseptics, such as sodium salicylate or benzoate, of each

10 grains (0.65 gm.) an hour after each meal. At bedtime naphthalene, 3 grains (0.19 gm.) and sodium benzoate, 10 grains (0.65 gm.) in a capsule. After a time phenol bismuth and ammonium benzoate, of each 5 grains (0.32 gm.), two pills an hour after meals, may be substituted.

28. **Pyloric Stenosis.**—Finney considers, first, cases of known or suspected carcinoma The patient's condition will have much to do with the choice of operation when the growth is at all advanced. A rapidly performed gastroenterostomy, done to save time, perhaps with a Murphy button, may be best. In early cancer, a pylorectomy is always the operation of choice. In those cases in which the condition found leads to doubt between early carcinoma and indurated and infiltrated stomach wall around a gastric ulcer, especially in patients past middle life and in whom the ulcers have run a chronic course, pylorectomy is the preferable operation. In benign cases the choice will lie between gastroenterostomy and some other surgical procedure, e. g., pylorectomy, pyloroplasty or gastroduodenostomy. He discusses these operations and announces his preference for pyloroplasty, finding its results better than those of any method of gastroenterostomy he has used. He now uses it altogether, except in gastric cancer, in which his results with Mayo's "no loop" method has been gratifying.

30. **Acute Glandular Fever.**—Jones defines this as an infectious disease developing as a rule without premonitory signs, and characterized by slight redness of the throat, high fever, and swelling and tenderness of the lymph glands of the neck, particularly those behind the sternomastoids. The fever is short, but the glandular condition persists for from ten days to four weeks. He discusses the history, etiology, symptomatology and differential diagnosis, and describes two cases. In a table he shows the comparative differential data between this disease and influenza, leukemia, tuberculous lymphadenitis and typhoid. He expresses the opinion that some cases of typhoid fever of short duration have been nothing other than acute glandular fever, and that this disease should be given a more prominent place among the acute infectious diseases, both among children and adults.

31. **Cerebrospinal Meningitis.**—Steiner and Ingraham report the conditions observed in the epidemic at Hartford, Conn., in 1904-5, in regard to sex and age incidence, months of occurrence, occupation, etiology, mode of onset, morbid anatomy, symptoms, blood examinations, types of fever, prognosis, diagnosis and treatment. Twelve possible examples of contagion occurred and are described. On the other hand, there were a number of families in this epidemic among whom but one case of the disease occurred.

33. **Morbid Somnolence.**—Hecht describes the case of a colored man, 48 years old, who drops off to sleep for half an hour or so every three hours. The sleep is refreshing but light, so that no word spoken in his hearing escapes him. He is easily aroused. The naps come on with almost instantaneousness. There is no drowsiness between the naps, and his awaking is instant and without any confusion or other feeling left behind. There is a history of specific disease at 18. The patient is moderate in all his habits and sexually temperate. Pupils are normal, coordination is normal, also the abdominal viscera, and there is no adenopathy. The reflexes show a contralateral disparity, which Hecht considers probably due to a past spinal lues, though the absence of motor or sensory disturbance scarcely conforms with this view; but they can hardly be regarded as hysterical, and a cerebral lesion seems altogether out of the question. A group of symptoms, plus 0.4 per cent. of albumin, with granular, fatty and epithelial casts in the centrifuged sediment, suggests secondary contracted kidney. The author discusses the literature of narcolepsy.

36. **Specific Immunity and X-Ray.**—Crane reports four cases —the first, one of pustular acne of the face; the second, one of lupus of the face; the third, one of lupus of the nose, and the fourth, one of tuberculous glands in the neck of a 10-year-old boy—in which the treatment was guided by a study of the opsonic index. It appears that the use of the rays at the proper time—just as the positive phase begins to decline—raises the opsonic index. This rise ceases as the infectious agent is eliminated, and occurs apparently only for germs present in the lesion. The charts of opsonic indices during *x*-ray treatments and during opsonic treatments are similar in all essential particulars. The author draws the following conclusions: 1. That all *x*-ray treatments, to be effectual, may require a degree of intensity sufficient to set free in the tissues what is equivalent to an autogenous vaccination. 2. That the duration of the exposure and the extent of the diseased tissue exposed should be so regulated as to induce either a small negative phase or none at all. 3. That the repetition of exposures, as far as possible, should be governed by the duration of the negative and positive phases; and that, in conditions of which the disease-producing agent is as yet undetermined, one should be governed by an analogy with those cases in which opsonic estimations can be made. It follows as a corollary that it is not necessary to expose the whole area in order to bring about complete recovery, and that exposures should not, as a rule, be repeated oftener than twice a week, and probably usually at less frequent intervals, to get the maximum results and to avoid prolonged or incurable negative phases. It is also increasingly necessary to measure *x*-ray dosage. He considers that the advantage of *x*-ray treatments over opsonic therapeutics are as follows: 1. The immunizing substance set free under the influence of the *x*-rays is of necessity autogenous; that is, it is formed from the actual microbic strain which is producing the disease. One has only to read Wright's articles to learn how important it is in opsonic practice to use a vaccine made of the bacteria from the patient rather than from a stock culture. 2. Many of the difficulties and mistakes incident to a bacteriologic diagnosis are eliminated. 3. In cases in which the bacteriologic cause is as yet undetermined, or in which the disease-producing agents are not bacteria, the *x*-rays are nevertheless applicable.

Interstate Medical Journal, St. Louis.

March.

37 Mechanical Problems of the Circulation and Their Solution. J. Eichberg, Cincinnati.
38 *Unusual Positions of the Appendix, with Report of Cases. H. Tuholske, St. Louis.
39 *The Cutaneous Tuberculin Reaction. L. M. Warfield, St. Louis.
40 *History of the House; the Struggle for Fresh Air and Light. G. M. Gould, Philadelphia.

38. **The Appendix.**—Tuholske reports seven cases in which on operation the appendix was found under abnormal circumstances. The first was a case of complete transposition of the viscera. The condition being known prior to operation, the incision was made on the left side and the appendix found as expected. In Case 2, on operation the rectum being discovered on the right side, an incision on the left was made and the appendix removed through it. In Case 3, the appendix was found loose, gangrenous and floating in pus in the cecum, which was opened under the supposition that it was a pus cavity. In Case 4, the tip of the appendix was found attached to the fimbriated extremity of the Fallopian tube, a pus tube, on the left side; the cecum was dragged over almost to the middle line. In Case 5, the appendix was attached to the under surface of the liver. In Case 6, it lay on, and was adherent to, the abdominal aorta, just below the celiac axis. In Case 7 the appendix was found in the normal position, but extended far down into the pelvis. As its tip could not be reached, a larger incision was made, and following the appendix downward, it was found attached to the prostate, where it was lost in a mass of adhesions. A peculiar feature in this last case was that, without any apparent exciting cause, the patient had for months been troubled with repeated seminal emissions. Tuholske thinks that possibly irritation of the prostate, or perhaps of the seminal vesicles, by the inflamed and adherent appendix may have been the cause of the emissions.

39. An abstract of this article was published as a clinical note in The Journal, Feb. 29, 1908, page 686.

40. **The History of the House.**—Gould continues from the last issue the history of the evolution of the house from its earliest phases. The articles are well illustrated.

Journal of the Indiana State Medical Association.

March.

41 *Treatment of Tuberculous Glands and Goiter with the Roentgen Ray. A. M. Cole, Indianapolis.
42 Diseased Conditions Caused by Mouth Breathing, and Their Prevention. G. W. Spohn, Elkhart.
43 *Prophylaxis the Essential Function of the Tonsil. B. H. Orndoff, Chicago.
44 Practical Notes from a General Practitioner of Medicine. G. Rowland, Covington.

41. **Tuberculous Glands.**—Cole concludes that tuberculous glands are amenable to Roentgen-ray treatment, as are also a large percentage of simple goiters and some cases of exophthalmic goiter, symptomatically at any rate. The technic of the treatment is exceedingly important. No unfavorable effects have been reported in this class of cases.

43. **The Tonsil.**—Orndoff considers that the tonsil has for its function the early establishment of immunity to bacterial toxins. Its location is the most suitable point for the certain collection of specimens of every kind of micro-organism entering the oronasal cavity. When the bacteria have been in the crypts long enough to elaborate a sufficient vaccine, which is transported by the lymph current through the system, an immunity not associated with a toxemia has been induced for that form of bacterium. This organism is then annihilated by bacteriologic substances brought by the returning lymph current and is removed from the system.

Therapeutic Gazette, Detroit.

March.

45 *Treatment of Pneumonia. M. H. Fussell, Philadelphia.
46 Radium Therapy. J. B. Shober, Philadelphia.
47 Iodalbin—An Organic Iodin as a Therapeutic Agent. L. W. Bremerman, New York.
48 *Relation Between Stauungs-Hyperemia and Opsonic Index. J. C. Hollister, Chicago.
49 Case of Tuberculous Arthritis of the Knee Apparently Much Aggravated by Bier's Congestion. J. J. A. Van Kaathoven, Philadelphia.
50 Hyperemia Treatment of Acute and Chronic Surgical Affections. M. Brooks, Philadelphia.

45. **Pneumonia.**—Fussell says that so far there is no specific treatment for pneumonia. He has used quinin in massive doses, a method lately revived by Galbraith, but with no greater success than symptomatic treatment. Veratrum viride has been found wanting. The basis of all treatment is rest, fresh air, a good nurse, and watchfulness on the part of the physician. His symptomatic treatment consists of hot applications, and occasionally a hypodermic of morphin for the chill. Pain is combated by cold or heat or dry cups, occasionally morphin may be necessary. For hacking cough he gives codein sulphate, 1/8 grain (0.008 gm.), in solution or pill, every two or three hours. Sweet cough mixtures should not be used, or with much bronchitic expectoration a mixture of ammonium chlorid and ammonium carbonate. Mistura glycyrrhizæ composita is useful. Fresh air renders the employment of remedies less necessary. There should be no mechanical restraint; delirious patients require a special attendant. Thirty grains (1.95 gm.) of ammonium bromid are efficient in securing rest. Stimulation of any kind is frequently unnecessary, but if needed should be given in good and sufficient doses. When the blood pressure begins to fall, the heart to dilate, and the patient to become cyanotic, is the time for stimulation. The heart should be examined daily, stimulation being resorted to with failing pressure. Nitroglycerin is not a heart stimulant, but it may be used when blood pressure is high, to dilate peripheral vessels. When large doses of digitalis are called for they are more efficacious if given in conjunction with nitroglycerin. Fussell gives whisky as a routine measure in the case of drunkards or continuous drinkers. For fever over 105 F. cold baths give excellent results. Never use the coal-tar antipyretics. Fresh, unbreathed air, with laxatives and food, are most important. The bowels should be moved daily with salts or calomel in divided doses; high enemata of salt solution are most efficacious. The mouth and teeth should be kept clean. Milk, in the form of junket, plain or peptonized, is usually well borne and certainly sufficient food. Albumin water and beef juice may be given. Fussell avoids poultices, home made or in the form of pastes. The relief of pain can be more efficaciously effected by cold or hot-water coils, cups or cold compresses. Blood letting has its place. For nephritis he recommends the following mixture:

℞.	gm. or c.c.		
Potassii bromidi			
Potassii citratis	āā 8	or	ʒii
Succus limonis	15		fl℥ss
Syrupi, q. s.	90		fl℥iii

Sig.: Two teaspoonfuls in water every two or three hours.

48. **Constriction Hyperemia and Opsonic Index.**—Hollister says that if one ascertain the opsonic index of fluids obtained from chronically infected tissue areas it will be found that this index in the large majority of cases is below that of the patient's general circulation. After the use of a Bier *Stauung* apparatus one will find the local index to have been raised toward, or quite to, that of the general circulation. This is probably one reason for the beneficial results following the use of such apparatus. He discusses the value of the hyperemia as (1) a pain-quieting agent, (2) a bacterial destroyer, (3) a resorbent, (4) a dissolvent, (5) a nutrient, and describes some experiments under the second classification on which the opening statement of the article is based.

Journal of the Arkansas Medical Society, Little Rock.

February.

51 What We, as Physicians, Can Do to Control and Eliminate Pulmonary Consumption. C. M. Lutterloch, Jonesboro.
52 *Acquired Syphilis. W. E. Hughes, Pocahontas.
53 Pneumonia with Report of Cases. C. A. Archer, De Queen.
54 Adhesions Following Abdominal Operations. O. Gray, Little Rock.
55 Treatment of Coughs. E. H. Winkler, De Witt.

52. **Syphilis.**—Hughes discusses the diagnosis and treatment of syphilis and urges the enactment of a law by Congress making compulsory castration for every male syphilitic, and ovariotomy for every female syphilitic. He would endorse a law prohibiting the landing of syphilitics in the United States.

Alabama Medical Journal, Birmingham.

February.

56 Gastric Ulcer. L. G. McCollum, Birmingham.
57 General Management of Pneumonia Cases, with Study of Fresh Air Treatment. K. Bradford, Birmingham.
58 Circulation of Intestinal Tract. B. Robinson, Chicago.
59 Laminectomy for Fracture of Tenth Dorsal Vertebra—Recovery. J. M. Mason, Birmingham.
60 Plea for Conservatism in Treatment of Tuberculous Knee. W. T. Berry, Birmingham.
61 Intramuscular Injection of Mercury. A. F. Toole, Birmingham.

March.

62 Pathology and Etiology of Polyps and Carcinoma of the Rectum. C. E. Dowman, Jr., Birmingham.
63 Treatment of Polypi, Ulcers and Cancers of the Rectum. G. A. Hogan, Birmingham.
64 *Ligature Operation for Hemorrhoids. E. M. Robinson, Birmingham.
65 Etiology, Pathology and Treatment of Diseased Tonsils and Adenoids. B. D. Sibley, Birmingham.
66 Common Functional Disorders of the Urinary Tract. H. Levy, Birmingham.
67 Hereditary Syphilis. O. P. Board, Birmingham.
68 Two Therapeutic Indications for Iodalbin. W. Lenncker, Chicago.

64. **Hemorrhoids.**—Robinson describes the ligature operation used by him. With a small, sharp knife an incision 1/16 of an inch deep at the junction of skin and mucous membrane is carried entirely around the anal orifice outside of the tumor. The bleeding is slight. A section of the tumor is grasped between two sets of two pairs each of artery forceps, the sets including between them only so much of the tumor as can be securely tied with a double transfixed ligature. A medium-sized, half-curved needle, carrying a strong 12-inch silk or linen ligature, both ends being the same length, is introduced into the circular incision, carried to the base of the tumor, and brought out at its most internal part, care being taken to avoid including any of the sphincter fibers. The portion of the tumor included between each pair of forceps is next cut well down to the point. The ligature is cut from the needle and the double ligature crossed and tied on either side, including the nearest forceps of each set and that part of the tumor included between them. The section thus tied off is cut as near the ligature as is safe. The process is repeated until the whole tumor has been ligated in sections. The author has never had any complications follow an operation performed in this way.

Pennsylvania Medical Journal, Athens.

March.

69 Duty of the State to the Physician and of the Physician to the State. T. G. Simonton, Pittsburg.
70 *Points in Treatment of Suppurative Appendicitis. E. LaPlace, Philadelphia.
71 Importance of Early Evacuation of Pus in Acute Otitis Media. L. S. Somers, Philadelphia.
72 *What Can a Secretary Do to Get New Members? J. J. Coffman, Scotland.
73 Relation of the Secretary to the Society and to the Profession. A. F. Myers, Blooming Glen.
74 *The Young Men of the Society; How to Interest Them. H. C. Frontz, Huntingdon.
75 *The Lazy Secretary and His Baneful Effect on the Society. E. U. Buckman, Wilkesbarre.

70. Abstracted in The Journal, Nov. 9, 1907, page 1625.

72, 74 and 75. Abstracted in The Journal, Nov. 16, 1907, page 1706.

Buffalo Medical Journal.

April.

76 Significance and Treatment of Uterine Hemorrhage. W. E. Fitch, New York.
77 *Urgency of Early Diagnosis of Cancer of the Stomach. A. McPhedran, Toronto, Ont.
78 Case of Dibothriocephalus Latus' Infection. C. O. Boswell, Rochester, N. Y.

77. This article was published in "International Clinics," Vol. IV.

Carolina Medical Journal, Charlotte.

March.

79 Treatment of Epilepsy. J. A. Hodges, Richmond.
80 Case of Imperforate Hymen. H. A. Royster, Raleigh, N. C.
81 An Attempted Explanation of Sudden Death Subsequent to Injections of Antitoxin. J. F. Patterson, New Bern, N. C.
82 Acute Bronchitis, Its Drug Therapeutics. W. C. Abbott, Chicago.

St. Paul Medical Journal.

March.

83 Why Should Hospitals Neglect the Care of Chronic Curable Disease in Out-Patients? R. C. Cabot, Boston.
84 Abdominal Blood Supply. B. Robinson, Chicago.
85 Tubal Pregnancy with Especial Reference to Diagnosis. F. J. Savage, St. Paul.
86 The Counter Prescriber. E. J. Abbott, St. Paul.
87 Municipal Sanitation. W. A. Evans, Chicago.

Archives of Otology, New York.

February.

88 The Occipital Bone in Otology and Rhinology. E. de W. Wales.
89 Headache Caused by Pathologic Conditions of the Nose and Its Accessory Sinuses. G. H. Cocks and J. E. MacKenty, New York.
90 Value of the Leucocyte Count in the Diagnosis of Acute Inflammatory Disease. F. E. Sondern, New York.
91 Value of Bacteriologic Investigations in Otology with Special Reference to Blood Cultures. E. Libman, New York.
92 Case of Mastoiditis in an Infant. J. F. McCaw, Watertown, N. Y.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London.

March 28.

1 *Pathology of Acid Intoxication. F. A. Bainbridge.
2 *Tuberculosis of the Kidney and Malignant Disease of the Cecum. C. J. Symonds.
3 *Opsonins with Special Regard to Lupus Vulgaris. A. Reyn and R. Kjer-Petersen.
4* Modern Methods of Treating Infective Conditions of the Throat. M. Young.
5 *Acquired Diverticula of the Sigmoid Flexure, Especially in Relation to Secondary Pathologic Processes and Their Clinical Symptoms. (Concluded.) W. H. M. Telling.
6 Case of Diaphragmatic Hernia. H. O. Williams.
7 Case of Meralgia Paræsthetica Successfully Treated with the Constant Current. E. R. Morton.
8 Perforation of the Esophagus by a Rabbit Bone; Septic Inflammation of the Mediastinum; Ulceration into the Aorta; Death from Hemorrhage. R. L. Knaggs.
9 Method of Preparing "New Tuberculin" (Tuberculin T. R.); A Correction. W. G. Ruppel.

1. **Acid Intoxication.**—Bainbridge, in the Arris and Gale lecture, discusses acidosis rather as a phase of metabolism than as a separate pathologic entity. The ammonia excretion may be fallacious, and an implicit belief in the value of the ammonia quotient is not free from danger. He asserts that lactic acid is never the cause of acid intoxication in man; its appearance in the urine is either the result of excessive production by the muscles or secondary to the failure of the liver to convert ammonia into urea; it is not due to deficient oxidation of lactic acid by the liver. As regards the acetone bodies, admitting that they are derived from fat and that in starvation the consumption of fat is increased, the inconstancy of the results obtained on a diet of fat indicates that the tissues of a healthy man can deal with large quantities of fat, and that it may not be safe to assume that the acidosis of starvation is the direct result of the excessive consumption of fat. In starvation, acidosis may occur, not because the consumption of fat is excessive, but because carbohydrate is absent; and the addition of carbohydrate may abolish acidosis, as it does in starvation by the administration of small amounts, not only by supplying energy to the body, but also by modifying the metabolism of the cells. When one considers the large amount of proteid often consumed by diabetics, it seems possible that the intake of proteids yielding much leucin may appreciably influence the degree of acidosis; experiments from this standpoint might indicate which proteids are most suitable in diabetes. He says that too much stress has been laid on the analogy between diabetic coma and experimental acid intoxication. In the latter condition there is a continuous drain on the alkalies and alkaline earths of the body, since the formation of ammonia is insufficient to combine with all the acid excreted. It seems extremely probable that the lack of some or all of the bases may primarily disturb the course of metabolism, independently of the alkalinity of the tissues; and after all the alkalinity of the tissues does not depend solely on their inorganic constituents since the proteins apparently can act either as weak acids or as bases. On this view, even the diminished alkalinity of the blood in coma may be interpreted as due to a final effort of the tissues to satisfy their need for base. It does not suffice to supply the body with sodium carbonate, and the value of the treatment of diabetes with alkali might be much greater if all the bases required by the body were administered to these patients. An accurate knowledge of the amount and character of the bases present in diabetic tissue would also be of great value. The severe toxic symptoms which occasionally follow anesthesia can be explained only by assuming that the anesthetic remains in combination with certain tissues, since doses of anesthetics which are too small to induce anesthesia will produce, if frequently repeated, similar metabolic disturbances in animals. A plentiful supply of carbohydrate, not only in postanesthetic intoxication, but also as a routine preventive measure before operation, appears to be the rational treatment.

2. **Tuberculosis of the Kidney.**—Symonds, in his second Lettsomian lecture, concludes that early nephrectomy is indicated as soon as the destructive process has been localized, and this may be on the first visit of a patient who has retained his weight and working power up to that moment. The best guide to nephrectomy in the absence of a renal tumor or profuse pyuria is the cystoscope, and his experience teaches that when the orifice of the ureter shows characteristic changes renal disease is beyond recovery and the sooner the organ is removed the better.

3. **Opsonins.**—Reyn and Kjer-Petersen report experimental work undertaken to ascertain if it were possible by tuberculin therapy, guided by opsonic estimations, to produce such an effect on patients suffering from lupus, that the disease would either disappear or be relieved, light or *x*-rays being also sometimes used in the treatment. The investigations have led to no practical results.

4. **No Value in Gargling.**—Young reports experiments from which he concludes that gargling has no advantage, and has serious disadvantages, for throat disinfection. Spraying is little better. Swabbing and douching are the only reliable methods. He considers medication by antiseptic lozenges an ideal line of treatment.

5. **Diverticula of the Sigmoid.**—Telling concludes his article from the last issue with a consideration of the clinical aspects. The great majority of patients present themselves to the clinician with one of the four following conditions: 1, Inflammatory trouble, more or less acute, in the left lower abdomen; 2, intestinal obstruction; 3, perforative peritonitis; 4, vesicocolic fistula. He concludes that: Vesicosigmoid fistula, due to

acquired diverticula of the bowel, is a definite pathologic condition of some frequency; the facts adduced hold out a much greater prospect of relief by surgical interference; an operation may be merely palliative, or preliminary to more radical measures; and in either case left colotomy will be the most probable procedure, or a radical operation may be undertaken in the first instance.

British Medical Journal, London.

March 28.

10 *New Ideas on Fractures of Importance to the Medical Profession and to the Public in Connection with Their Responsibilities and Possible Legal Liabilities. Lucas-Championnière.
11 *Arthrodesis and Tendon Transplantation. R. Jones.
12 *The Most Ancient Splints. G. E. Smith.
13 The Postmortem Staining of Bone Produced by the Antemortem Shedding of Blood. F. W. Jones.
14 Examination of the Bodies of One Hundred Men Executed in Nubia in Roman Times. Id.
15 *Case of Excision of the Body of the Scapula. R. P. Rowlands.
16 Punch Fractures. H. Burrows.
17 Calmette's Ocular Reaction. H. E. R. Stephens.
18 Id. H. de C. Woodcock.
19 *Id. H. C. Lecky.
20 Case of Vomiting in Pregnancy. J. A. Kendall.

10. **Fractures.**—Lucas-Championnière discusses fractures from the points of view both of the public as to the requisites of adequate treatment, and of the liability of the practitioner to actions for malpractice based on the public's supposition of its competence to form a judgment in cases of fracture. This lay opinion is increased of late by the tendency to semi-enlighten the public on medical matters generally, and more particularly by nursing, ambulance and first-aid classes, and still more as a consequence of radiography. To combat this evil, people must be made to understand the difficulties involved in the study of fractures. They must be taught that radiographs have to be interpreted; that the reduction of fractures is not an absolute rule, and is often not indispensable; that absolute rest is not the necessary test of every sound treatment for fractures; that a fracture is not a simple lesion, but includes complications owing to displacement, and to rupture of tendons and muscles; and that there is no mathematical solution for the repair of fractures. It is always difficult to put the public on its guard against the rooted belief that it knows and can understand everything relating to medicine; but in the case of fractures the surgeon must be especially on his guard, because nothing will uproot the conviction of the public that it can understand every secret in connection with the treatment and repair of bones. His paper has for its text the English action at law of Southern versus Lynn Thomas and Skrime, in which the defendants have been mulcted in damages and heavy costs as a consequence of a series of false ideas entertained by the judge and jury regarding fractures, and especially of two beliefs—that for every fracture there is a routine mathematical treatment whose effects are referable to a known immutable law, and that it is right to blame a medical man for not having rendered implicit obedience to the absolute laws laid down for the treatment of fractures.

11. **Arthrodesis and Tendon Transplantation.**—Jones concludes that arthrodesis, properly performed, is a valuable means at the surgeon's disposal, and that failures which have been reported are generally due to neglect of fundamental principles: (a) The operation should not be performed on children under 8. (b) It should not be performed until the surgeon is satisfied that the muscles are paralyzed beyond hope. (c) The preliminary preparation of the foot by wrench and tenotome must correct all deformity. (c) The operation should be so planned that at its completion the bones lie in apposition to the foot, which should be placed in an over-corrected position. This is effected by exsection of skin flaps, by the shortening of lengthened tendons and by the removal of graduated wedges of bone. (e) The wedge should never be taken from the tibia, lest the tibial epiphysis be injured. Splints should be applied and retained until union is complete, and appliances should be worn until the surgeon has evidence that the ankle can bear body weight without fear of yielding. He regards the following as indications for tendon transplantation: (a) To fortify a weakened group of muscles; (b) to supplant a completely paralyzed muscle or group of muscles; (c) to obstruct an overacting spastic group; (d) to deviate tendon action when perverted—as in transference of the tendo Achillis to the outer side of the os calcis in congenital clubfoot to prevent inversion of the ankle; (e) as a help in partial arthrodesis. In tendon transplantation the following points must be insisted on: 1. The overcorrection of deformity as a preliminary act. 2. The removal of skin flaps to secure the uninterrupted continuity of the overcorrection. 3. The direct and not angular deflection of the tendon. 4. The free tunneling in the one plane through the soft tissues. 5. The firm suturing into periosteum or bony groove. 6. The careful choice, tension and nursing of the transplanted tendon. 7. The maintenance of a hypercorrected position until voluntary power is assured to the tendon. 8. The deflection of body weight during walking from the reinforcing tendon. In addition to these, it may be well sometimes to shorten all the paralyzed tendons and prevent the overaction of their opponents by tenotomy. In all cases of arthrodesis and tendon transplantation he employs the tourniquet and insists on scrupulous asepsis, particularly insisting on the absolute necessity of not talking.

12. **Ancient Splints.**—Smith describes with illustrations two sets of splints more than 4.500 years old. They are the only known splints applied to living patients earlier than the Christian era. They were taken from mummies.

15. **Excision of Scapula.**—Rowlands concludes as follows: 1. In suitable cases excision of the body of the scapula with preservation of the processes and glenoid socket, is a much better operation than excision of the whole bone, because it leaves a limb far more perfect from the functional and the artistic points of view. 2. The operation is especially suitable for innocent growths, which fortunately and frequently leave the processes and the shoulder joint unaffected. 3. It may be adopted in preference to complete excision of the scapula for some small and for some slow growing malignant growths, without increasing the immediate risk of death, and probably without increasing the danger of either local or general recurrence. 4. Occasionally it may be suitable for inflammatory diseases of the scapula when the shoulder joint is unaffected. 5. It is wise to tie the three main vessels as early as possible in the operation, and this can be done easily through a suitably arranged posterior T-shaped incision. 6. The success of the operation largely depends on careful asepsis, the sewing of some divided muscles together, and the early adoption of systematic active and passive movements of the shoulder.

19. **Ocular Tuberculin Reaction.**—Lecky has collected all the published statistics of this reaction up to the middle of January, 1908, with the following result: Of the 491 cases of definite tuberculosis, 463 (94.3 per cent.) gave a positive reaction. Of 610 cases of people not giving any evidence at all of tuberculosis, 563 (92.3 per cent.) showed a negative result. There are two other classes in which the reaction is being tried—namely, those possibly tuberculous and those probably tuberculous, but the figures under these headings are necessarily of little use at present in estimating the value of the test.

Medical Press and Circular, London.

March 18.

21 *Sudden Death. R. Saundby.
22 Deaths Under Anesthetics. F. J. Waldo.
23 Case of Twin Abortion with Double Placenta Prævia and a Remarkable Condition of Cervix. R. J. Kinkead.
24 *The Natural Cure of Cancer. W. S. Handley.
25 Arteriosclerosis and Physicotherapy. J. A. Riviere.

March 25.

26 *Value of Laboratory Methods in the Diagnosis of Typhoid Fever. L. Blum.
27 Relation of Pathology to Mechanics and Chemistry. W. R. Macdermott.
28 Diverticula of the Ileum Resulting from Tuberculosis and Accessory Pancreas. A. Thomson.
29 Inoculations of Bacterial Suspension. L. C. P. Ritchie.

21. **Sudden Death.**—Saundby discusses sudden death as it occurs in the course of acute disease, of chronic disease, and in apparent health. The principal acute diseases in which it occurs are diphtheria and, less rarely, typhoid fever and pneumonia. Of chronic diseases, in either cancer or chronic phthisis, embolism or syncope may cause instant death. Sudden death

may also occur in heart disease, particularly in aortic incompetence—Saundby has seen a patient with mitral stenosis lying quietly in bed in the ward suddenly attacked by acute edema of the lungs, death ensuing in a few minutes. It may also occur in rupture of an aneurism, in phlebitis, in rupture of varicose submucous, esophageal veins in hepatic cirrhosis, in intestinal obstruction from old incarcerated hernias, in rupture of the spleen, in chronic Bright's disease, through apoplexy epileptiform attacks, in fatal dyspnea, in acute edema of the larynx or lungs. Diabetes, Graves' disease, disease of the middle ear, acromegaly, bulbar paralysis and various forms of insanity may all be responsible for sudden death. In apparent health, sudden death may occur from obstruction of the larynx by food, etc., ruptured tubal pregnancy, disseminated tuberculosis of both lungs without symptoms, and particularly ruptured varicose esophageal veins, of which the author cites several examples.

24. **Cure of Cancer.**—Handley, in the Hunterian lecture, says that the growth of cancer occurs by a process of tendril-like spreading along the lymphatic vessels, which process he calls permeation. He discusses the recorded cases of spontaneous cure of cancer and refers to the condition known as atrophic scirrhus, as indicating that the complete natural cure of cancer is not entirely exceptional. The lymphatic vessels along the course of which the cancer deposit has progressed, become gradually converted into fibrous cords devoid of cancer cells. In large masses the tendency is to degenerate from center to circumference, the cancer mass at the center becoming converted into a fibrous mass without cancer elements. The process of repair begins at the center and spreads outward, but rarely overtakes the growing edge of perilymphatic infiltration. Many cancer remedies, he says, have acquired a reputation on the strength of this natural process, which has been misinterpreted and its results attributed to the remedy. One of the consequences of this natural mode of cure in cancer is the destruction of the lymphatic cells, with consequent obstruction to the lymph flow and painful swelling, such as not infrequently occurs in the arm in cancer of the breast. He has devised a method of relieving this pain by means of drainage through strands of buried silk, which carry away the excess of fluid by capillary attraction.

26. **Laboratory Methods in Typhoid Fever.**—Blum declares that hemoculture is the procedure of election, the only one which can be regarded as absolutely conclusive of typhoid infection. The diazo reaction appears to be useful only in so far that its presence may suggest the possibility of typhoid fever. When careful clinical observation pleads in favor of typhoid fever the negative results of laboratory methods are not *per se* a reason for discarding the diagnosis of typhoid.

Clinical Journal, London.

March 25.

30 Pneumonia in Childhood. T. R. C. Whipham.
31 *Invalidism in Women Due to Chronic Appendicitis. W. S. Handley.
32 Chronic Intestinal Obstruction. H. L. Barnard.

31. **Chronic Appendicitis in Women.**—Handley points out that in a certain proportion of cases of invalidism with dysmenorrhea and chronic pain, but no striking objective signs, the condition is due to chronic appendicitis, and may be cured by appendectomy, if not by appropriate medical treatment. This condition has masqueraded under various names with its actual cause unrecognized. The physical sign on which the diagnosis of chronic appendicitis must mainly rest in doubtful cases is an indolent but intermittent swelling of the right ovary up to double its normal size. This has hitherto labeled the case a gynecologic one.

Practitioner, London.

March.

33 *The Aortic Incompetence of Later Life. Sir J. F. H. Broadbent.
34 *Appendicitis. E. S. Bishop.
35 Valvular Disease of the Heart. R. Crawfurd.
36 Simple Nasal Obstruction. W. S. Syme.
37 The So Called Adenomata of the Palate. T. P. Legg.
38 Rupture of the Genital Canal During Labor. H. T. Hicks.
39 Ophthalmia Neonatorum. (Concluded.) S. Mayou.
40 *New Method of Intestinal Anastomosis Suitable for Cases of Gangrenous Intussusception. A. Edmunds.
41 *Future Lines of Treatment: Their Effects on the Profession. W. J. Tyson.
42 Diseases of the Blood and Blood-forming Organs. H. B. Shaw.
43 Recent Work on Gout. A. W. Sikes.
44 Case of Retroperitoneal Endothelioma Simulating Malignant Disease of the Pancreas. A. W. Falconer.
45 Open Method of Ether Administration Combined with Chloroform. H. R. Phillips.

33. **Aortic Incompetence.**—Broadbent describes the degenerative lesions of the aorta which may affect the aortic valves as follows: 1, Senile degenerative change; 2, high arterial tension or constant undue strain as from circulating poisons—heredity is an important predisposing factor here; 3, severe intermittent strain on the valves from frequent and violent fluctuations in blood pressure, such as occur in certain arduous occupations; 4, syphilitic aortitis; 5, rupture of the valve. He discusses the physical signs, symptoms and course of the disease, and its prognosis and treatment. He says that there is some difference of opinion as to the blood pressure in aortic regurgitation, which probably arises from not differentiating between cases in which the incompetence is the result of degenerative change, and those in young subjects, in which it is the result of acute endocarditis. In the former the blood pressure is, as a rule, comparatively high; in the latter the converse. In treatment mercurial purgatives, mild diuretics and, above all, a purin-free diet, are necessary in the presence of dyspnea, delirium, restlessness and other uremic symptoms; vasodilators of hypodermics of morphin are of value when anginoid symptoms are present. The use of digitalis is debatable; it is rarely called for in degenerative change. When compensation has completely broken down, the work being thrown back on the right ventricle, digitalis may sometimes prove of service. It should not be employed, even in young adults, still less in later life, in aortic incompetence unless mitral symptoms are present in addition.

34. **Appendicitis.**—Bishop protests against the exaggerated notions as to the universally extreme danger and treacherousness of appendicitis, viz., that when once abdominal pain, localized in the right lower quadrant, vomiting and fever occur, the patient's only salvation lies in the removal of the appendix, for that at any moment and in every case gangrene or perforation may occur. Those who hold this view are too ready to generalize. Gangrene and acute perforation do not die down; when once started they go on to a finish, so that if there is a history of two or three previous slight attacks, gangrene of the appendix may be ruled out, and if perforation occurs it will be in a cavity walled off by adhesions more secure than the most scientific gauze packing could construct. He divides cases of appendicitis into two classes. When many previous attacks render adhesions probable, with the likelihood of tedious and careful dissection, a time for operation should be chosen at which the patient's condition will admit of careful and thorough work. This is not during an attack. After an attack the germs are less virulent, the opsonic index rises, the resisting power is increased. Should perforation take place in such a case it will be into a cavity already well shut off by adhesions; whereas by operating during an attack this natural protection may be disturbed by the surgeon at a time when the virulence of the micro-organisms is highest and the patient's development of antitoxins and opsonins at its lowest. In cases with no history the position is reversed. Here, Bishop thinks that operation, if only to insure thorough drainage at the earliest possible moment is the only wise course. It is not likely that adhesions will be found. The mortality from appendectomy during the quiescent period in expert hands is *nil.* In the same hands during an acute period it is anything from 25 to 75 per cent. He concludes therefore, that in patients with a history of previous attacks we may contemplate with serenity fever, pain and vomiting, which in primary cases should at once demand operation. We may thus defer dangerous and difficult interference to a period at which it can be performed with safety.

40. **Intussusception.**—Edmunds describes an operation, the essential principle of which is to reduce the intussusception as much as possible to a point where the bowel is gangrenous and further attempt must lead to rupture. The whole of the gangrenous and ruptured portion is then withdrawn out of the

wound and a cloth is packed over the wound surface to keep back other coils of intestine. The mesentery is then so ligated close to its attachment to the bowel as to cut off the blood supply, not only of the portion actually gangrenous, but of a small extent of healthy bowel on each side. The whole of this loop of bowel, including a little healthy portion at each end, is removed, and after the contents have escaped the two ends are brought up into the wound and so apposed that surfaces opposite to the mesenteric attachment are in contact. These surfaces are then clamped by special forceps (for which at a pinch a pair of tongue forceps may be substituted) so that a sloughing communication is ultimately established between them. In the meantime a Paul's tube is attached to the proximal end, or, if necessary, to both ends, of the intestine, which, by a few stitches inserted between the skin of the bowel wall are fixed so as to shut off the peritoneal cavity and hold the forceps and intestine in position. The tubes may be removed when they loosen, but the forceps must be left in position for about a week. The subsequent treatment is that of a colotomy, but after a few days the patient will pass feces by rectum. The author suggests that this method may prove serviceable in strangulated hernia containing a loop of gangrenous small intestine. It could be performed in the home without skilled assistance, leaving the patient with his intestinal canal restored in its continuity, and without a permanent artificial anus from the small intestine.

41. **The Future of the Profession.**—Tyson discusses the changes that have taken place in matters medical during the past thirty years in reference to anesthetics, the treatment of consumption, therapeutics, the dominance of the pharmacist over the physician, the ease with which the public can obtain every kind of drug for every kind of trouble, the treatment of cancer and of gastric ulcer. The milk question leads him to hygiene and preventive medicine, which, he says, will gradually become the largest part of the work of the profession. The various inroads on sources of professional income make it necessary that fewer but better qualified men should be admitted to the profession, and that there shall be more and more state supported men in all branches of the profession. Honorary appointments to public institutions will be replaced by paid ones, and cooperative measures, as in other businesses and professions, will inevitably come about. With greater enlightenment quackery will die a natural death. Medicine will no longer be looked on as the art of curing diseases, but as a science of preventing such of them as can not be altogether abolished, and then the physician will take his proper place as the most important functionary in an enlightened state.

Indian Medical Gazette, Calcutta.

March.

46 *Phagocytosis in Blackwater Fever. S. R. Christophers and C. Bentley.
47 Vaccine Treatment of Colicystitis. J. W. Cornwall.
48 Occurrence of Epidemic Dropsy in Comilla Jail. S. Anderson.
49 *Blood Pressures as a Guide in Transfusion for Cholera. L. Rogers and J. W. D. Megaw.
50 Fleas and Disinfectants. M. W. Blyth.

46. **Phagocytosis of Red Blood Cells in Blackwater Fever.**—Christophers and Bentley describe the microscopic appearances of splenic blood obtained by puncture in the early stage of blackwater fever. They found considerable red blood cell phagocytosis, in many instances the red blood cells containing their full hemoglobin, so that they were not cells that had been partially disintegrated prior to engulfment. The engulfing cells were of two kinds, large and small, and in both were seen blood corpuscles in three stages: 1, absolutely normal; 2, partly decolorized in the center; 3, vacuolated, the normal red blood cells being most common in the phagocytes. The most careful examination failed to reveal within any of the engulfed cells either malarial parasites or any other appearance of parasitic invasion. The authors believe that the disease can not be attributed to a special parasite, but must be regarded as a result of malarial infection. The authors' view is that at some period in malarial immunization specific poisons to the red cells are liberated, causing the extensive destruction of these elements, which is the essential feature of the disease.

49. **Blood Pressure in Cholera.**—Rogers and Megaw do not consider the raising of the blood pressure as the one and only end in the treatment of cholera, but call attention to the value of estimating it as a guide to the frequency and quantity of salt solution to be injected. The restoration of the circulation thus brought about not only affords great relief to the patients, but will aid in the elimination of the toxins through the kidneys, and possibly also through the bowel.

Dublin Journal of Medical Science.

March.

51 *Prognosis and Treatment of Nephritis. J. M. Finny.
52 Pathology of Nephritis. H. C. Earl.
53 Manifestations of Congenital Syphilis in the Nervous System. A. E. Wynne.

51. **Nephritis.**—Finny discusses the treatment of acute and chronic nephritis. When local depletion, leeching, cupping and mustard or capsicum plasters are not active enough, in a case of acute hemorrhagic nephritis, he recommends venesection to the extent of 15 or 20 ounces, when the function of the kidneys is totally or greatly arrested and the evidences of uremia are pressing. It is not applicable in the nephritis of acute fevers. Finny also disapproves of flushing the kidneys, which will fail, as diuretic medicines fail, in acute cases with oliguria, but when, by acting on the bowels and skin, to the exclusion of all diuretics, the kidney functions begin to be restored, then flushing the kidneys may be employed with advantage.

Journal of Tropical Medicine and Hygiene, London.

March 16.

54 Kala-Azar in the Royal Navy. P. W. Bassett-Smith.
55 Case of Kala-Azar: Recovery. Sir P. Manson.
56 Phenomenal Abundance of Parasites in the Peripheral Circulation in Fatal Case of Pernicious Anemia. J. Cropper.

Presse Médicale, Paris.

March 18, XVI, No. 23, pp. 177-184.

57 Case of Sporotrichosis of Mucosa of Mouth and Throat with Autopsy. (Sporotrichose de la muqueuse bucco-pharyngée.) M. Letulle.

March 21, No. 24, pp. 185-192.

58 Anaphylaxis. C. Richet.

March 25, No. 25, pp. 193-200.

59 Management of Compound Fractures. (Conduite à tenir en présence d'une fracture compliquée.) P. Hardouin.
60 Dissociation and Antagonism of Cutaneous and Tendon Reflexes. Noica.

Semaine Médicale, Paris.

March 18, XXVIII, No. 12, pp. 133-144.

61 Systematic Drainage in Prophylaxis of Postoperative Phlebitis. F. Moty.
62 Mishaps of Stovain Spinal Anesthesia. (Les méfaits de la rachistovainisation.)

March 25, No. 13, pp. 145-156.

63 *Peripheral Rheumatismal Arteritis. M. Roch and R. Burnand

63. **Peripheral Arteritis in Acute Articular Rheumatism.**—Roch and Burnand present evidence to sustain their assumption that the endocardium is by no means the only part of the vascular system affected by the infectious process in acute articular rheumatism. This fact has been brought out especially in several Paris theses which they review in detail, summarizing some of the cases of arteritis reported. The process in the arteries seems to be transient, as a rule, but it may leave a predisposition to arteriosclerosis later. The rheumatic arteritis frequently passes unperceived, but there is little doubt that acute articular rheumatism should be classed among the causative factors of arteriosclerosis.

Berliner klinische Wochenschrift.

March 2, XLV, No. 9, pp. 441-484.

64 Skeleton Showing Location of Heart Valves. (Ein nach Form zusammengesetztes Thorax-Skelett zur Demonstration der Lage der Ebenen der Herzklappen.) H. Virchow.
65 Specimen Showing Aneurism of the Ascending Aorta in Position. (Ein in situ fixiertes Aneurysma der Aorta ascendens.) Id.
66 Traumatic Appendicitis. A. Ebner.
67 *Gummatous Affection of Both Caudate Nuclei. Campbell.
68 Differential Cutaneous Reaction in Glanders in Man. (Anwendung der von Pirquetsche Methode zur Diagnostik der Rotzkrankheit beim Menschen.) H. Martel.
69 Myeloid Leukemia. H. Lehndorff and E. Zak.
70 Development of Balneology in Recent Years. Frankenhauser.

March 9, No. 10, pp. 485-528.

71 *What Is the Cause of Death? (Was ist Todesursache?) J. Orth.
72 Serum Diagnosis of Syphilis. Fleischmann

73 Action of Sodium Oleate in the Wassermann Serum Reaction in Syphilis. (Wirkung des oleinsauren Natrons bei der W.'schen Reaktion auf Syphilis.) H. Sachs and K. Altmann.
74 Variations in the Skeleton of the Foot. (Varietäten des menschlichen Fussskeletts.) W. Bocker.
75 *Hyperemia in Treatment of Internal Affections and Diseases. (Hyperämie in der Therapie innerer Krankheiten.) A. Lewandowski.

March 16, No. 11, pp. 529-580.

76 Indications for Radical Operation in Inflammation of the Nasal Accessory Cavities. (Indikation zur Radikaloperation bei entzündlichen Erkrankungen der Nebenhöhlen der Nase.) A. Küttner.
77 Operation in Acute Hemorrhage in the Pancreas. F. Brewitt.
78 The A-Wave of the Phlebogram. (A-Welle des Phlebograms.) D. Pletnew.
79 Postoperative Roentgen Treatment of Carcinoma. (Nachbehandlung operierter Carcinome mit homogener Bestrahlung.) M. Krüger and F. Dessauer.
80 Infectious Origin of Chronic Pancreatitis and Diabetes. F. Hirschfeld.
81 Pepsin Secretion in Healthy and Sick Infants. (Pepsinsekretion des gesunden und kranken Säuglings.) J. Rosenstern.
82 Differential Ocular and Cutaneous Reactions to Tuberculin in Animals. H. Wildbolz. Id. in Children. R. Bing.
83 Therapeutic Application of Radium Emanations. F. Nagelschmidt.
84 Puerperal Fever. E. Runge.

March 23, No. 12, pp. 581-632.

85 Surgery of Lower Section of Esophagus. (Chirurgie des unteren Oesophagusabschnitts.) O. Hildebrand.
86 *Diagnosis and Treatment of Puerperal Fever. J. Veit.
87 *Gastric Disturbances in Masturbators. (Magenstörungen bei Masturbanten.) C. Hirsch.
88 Decline in Mortality of Tuberculosis and Its Causes. (Abnahme der Tuberkulosesterblichkeit und ihre Ursachen.) B. Fränkel.
89 Surgery of Chronic Obstipation. W. Arbuthnot Lane.
90 *Treatment of Tumors of Bladder. (Wie soll sich der Arzt gegenüber Blasentumoren verhalten?) C. Posner.

67. **Gummatous Affection of Both Caudate Nuclei.**—Campbell reports the case of a young man who suddenly developed psychic disturbances, apathetic dementia, never maniacal nor showing evidences of hallucination, but with all spontaneous movements reduced to the minimum. The pulse was small, the heart sounds weak and the hands and feet were cold and cyanotic; the rectal temperature was constantly subnormal. In walking he staggered to the right or left, and in bed he lay on his back with his head bent down on his breast and the thighs drawn up, but this attitude could be passively corrected. Several gummatous nodules were found in the caudate nuclei. The features of this case confirm the assumption that a higher motor center is located in the caudate nucleus, whose destruction does not entail paralysis, but disturbance in the more complicated movements. The reflexes remained normal, and the pain sensation was unimpaired. The patient died in three months after the first symptoms.

71. **Certifying the Cause of Death.**—Orth emphasizes the necessity for bearing in mind the purpose for which the medical death certificate is desired, whether scientific, statistical or medicolegal. In a case of diphtheria, for example, the scientific question may be whether death was due to suffocation or heart paralysis, while for the vital statistics this is of no consequence. When it is a question as to whether or not the child died from neglect to perform tracheotomy, it is important to state the findings in the air passages, to determine whether tracheotomy in any event or at the given time would have prevented the fatal outcome. He dwells on the importance of a negative certificate when it is for legal purposes. The certificate should aim to give the authorities solid ground to stand on, so far as possible, especially the assurance whether death was spontaneous or due to an injury. When death is due to a sequence of causes the first link in the chain is generally the main point for the mortality statistics. It is important further, he says, for the certificate to be controlled and corrected by autopsy findings, and he urges more universal resort to autopsy. The legislation for accident insurance in Germany has conferred great practical importance on the medical death certificate. Each one is a separate problem and a serious task, Orth adds, requiring strict individualization. He comments sadly on the frequency with which the victim's physician ascribes the death to accident while the insurance company's medical officer as invariably rejects the accident as the causal factor. This unconscious bias for and against is human, he remarks, and thereby pardonable, but the tendency should be energetically combated.

75. **Induced Hyperemia in Internal Medicine.**—Lewandowski has been inducing therapeutic hyperemia in treatment of a number of non-surgical, non-inflammatory affections by application of local hot baths. This is simpler, cheaper and within the reach of all, and the effects seem to him fully as good as treatment with superheated air, if not better. He prefers bath tubs adapted for the part to be treated, for foot, arm, forehead, etc., but almost any basin or dish can be used, or hot sand or other substances. The heat should be about 42 or 43 C. (108 F.), gradually increased to the maximum of 50 C. (122 F.), and kept at this point by adding hot water. A local hot bath is free from danger and can be repeated several times a day if desired; the general sweating that follows is an important factor in the result. The local pain is reduced, the bacteria in the parts are attenuated, while the processes of dissolution, absorption and nutrition are promoted by the acute local hyperemia. The local hot baths also have a powerful action on the general circulation and are thus important in general treatment. He relates favorable experiences with them in affections of the heart, lungs, skin, digestive apparatus, vasomotor and trophic nerves, and in metabolic affections, anemia, obesity, gout and diabetes. His experience with internal affections confirms Bier's assertions in regard to the value of induced hyperemia; but he lays more stress on the benefits of rapidly induced hyperemia, "acute hyperemia" as he calls it, in distinction from Bier's technic which induces a more chronic hyperemia. In heart disease at any stage he uses hot hand and foot baths, alternating once a day or oftener, as needed. In the obese he aims to induce sweating, but in the lean he avoids this. In angina pectoris local arm baths relieve the pain, regulate the blood pressure and frequently arrest the attack. In lung affections respiratory exercises are the main thing, but hot local baths constitute a valuable adjuvant. Application of a hot-water bag or hot sponge to the larynx and trachea will arrest the spasm in whooping cough. These hot local baths are useful in cutaneous affections, especially eczema. Addition of camomile tea to the water enhances the soothing action. In old refractory cases it may be necessary to irritate the eczematous process sufficiently to change a chronic into an acute stage which then heals. It is possible, he adds, that tar owes its healing power to its ability to induce hyperemia. Besides eczema, psoriasis and acne are benefited by these baths. Hot local baths for the brow, besides hot foot and arm baths, render good service in migraine. It has been his experience that 75 per cent. of his male and 90 per cent. of his female patients suffer from cold hands and feet. Systematic, brief, frequently repeated, local hot baths remedy this condition, as also sweating of hands and feet. Affections of the digestive tract are also favorably influenced by induced hyperemia. Rinsing out the mouth with hot water has a favorable action on various affections of the mucosa; addition of camomile tea or starch to the hot water will render it less irritating. Hot drinks and hot external applications are beneficial also in gastritis, achylia, and even in simple loss of appetite. He orders such patients to take from 8 to 10 teaspoonfuls of hot water ten minutes before eating. Hot water sipped and drunk at short intervals is also effectual, he asserts, in treatment of gallstone affections, in the "uric-acid diathesis," and in gravel or stones in the kidneys. By this means, he declares, it is possible to rinse out the body with surprisingly large amounts of hot water in the course of the twenty-four hours. Hot enemas act well in intestinal catarrh, diarrhea, tuberculous abdominal processes, and especially catarrh of the sigmoid flexure; he uses a pint of a moderately thick, hot solution of starch once or twice a day. In obesity the local hot baths are best applied as sitz baths; in gout, hot water is sipped to keep up a constant hot rinsing through of the system. Diabetics, especially obese diabetics, are also benefited by local hot baths.

86. **Diagnosis and Treatment of Puerperal Fever.**—Veit regards the hemolytic streptococcus as the causal agent in the majority of cases of puerperal fever. When this germ is found in the lochia he abstains from all local measures, as every new wound is pregnant with evil possibilities. The blood is examined, and if the same germ is found in the blood the

prognosis is grave. Intravenous saline infusion is indicated at once, with the most energetic measures to increase the resisting powers. If the fever is the result of putrefactive processes and the hemolytic streptococcus is not found, measures to stimulate the uterine contractions are in order. If this does not promptly produce the desired effect, the most energetic local treatment is demanded. In puerperal pyemia, with the streptococcus in the blood, any operation is a serious matter.

87. **Stomach Disturbances in Masturbators.**—Hirsch calls attention to a group of cases in which the symptoms suggested gastric ulcer, but the course of the affection and the absence of effect of the usual measures differentiated the condition finally as a special form of nervous dyspepsia. The patients were generally young students or high-school boys. Several were convinced that they had some spinal cord affection; medical students frequently described their attacks as resembling in every respect the gastric crises of tabes. Milk or sodium bicarbonate relieved some, while others obtained more relief from pressure on the stomach region. The attack occurs sometimes spontaneously or after eating, and the pain in the stomach region radiates upward and toward the back. The stomach is sensitive to pressure, but not enlarged, and there are no signs of motor or secretory insufficiency In a typical case described rest and ulcer diet brought no relief, and aggravation followed a several weeks' course of treatment in a sanatorium for the assumed ulcer. The physician then told the young man that he knew he was practicing masturbation, and talked with him seriously on the subject, with the result that the stomach trouble vanished permanently.

90. **Bladder Tumors.**—The first point is an absolutely certain diagnosis, differentiating the bladder tumor from stones, tuberculous or other ulcers and kidney affections The bladder tumor once differentiated, intravesical treatment with proper instruments and experience is scarcely hazardous and is often successful in case of benign pedunculated tumors, not too large. The knife should be used only, Posner declares, when hemorrhages, disturbances in urination, rapid growth, infection or stones render it necessary to submit the patient to the risk of a serious operation with protracted after-treatment.

Deutsche medizinische Wochenschrift, Berlin.

March 12, XXXIV, No. 11, pp. 449-488.

91 *Treatment of Rachitis. F. Siegert.
92 Castor Oil in Treatment of Acute Appendicitis. T. Rosenheim.
93 *Chilling as a Cause of Illness. (Abkühlung als Krankheitsursache.) W. Siegel.
94 Etiology of Idiopathic Scoliosis in the Adolescent. M. Böhm.
95 Treatment of Stumps. (Behandlung der Gliederstumpfe.) H. H. Hirsch.

March 19, No. 12, pp. 489-536.

96 Origin of Urobilin in Intestines and Passage of Urobilin from Mother to Fetus. (Zur Urobilinfrage.) W. Hildebrandt.
97 *Headache and Its Treatment by Massage. (Kopfschmerz und seine Massagebehandlung nach Cornelius.) Worbs.
98 Aggravation of Tuberculosis by Trauma. (Verschlimmerung der Tuberkulose durch Unfälle.) L. Feilchenfeld.
99 Ossifying Myositis in the Brachialis Anticus After Luxation of the Elbow; Diagnosis and Treatment. P. Frangenheim.
100 Principles for Treatment of Inflammatory Affections of Adnexa. (Gesichtspunkte für die Behandlung entzündlicher Adnexerkrankungen.) W. Hannes.
101 *Acute Postoperative Dilatation of the Stomach and Its Connection with Arteriomesenteric Occlusion of Duodenum. (Postoperative Magendilatation.) F. Thomä.
102 *Differential Serum Reaction in Syphilis. (Die Wassermann-A. Neisser-Brucksche Reaktion bei Syphilis. C. Bruck and M. Stern. Commenced in No. 10.
103 *Eczematous Ocular Affections. (Bekämpfung der ekzematosen Augenkrankheiten.) H. Noll.
104 Disturbances in Economy of Albumin in Infantile Organism. (Störungen des Eiweisshaushaltes im Säuglingsorganismus.) P. Selter.
105 *Simplified Technic for Blood Count. (Neue Methode der Blutkörperchenzählung.) M. Loewenberg.

91. **Treatment of Rachitis.**—Siegert affirms that overfeeding, especially with fat, and the resulting excessive increase in weight, are able to induce rachitis in a child, even when kept up only for a few weeks, and invariably do so when prolonged. Excessive sweating of the head, rapid ammoniacal fermentation of the very abundant urine, and frequent obstipation are the precursors of rickets. The slightest sign of the latter should banish fat from the diet. He discards the bottle for the child in its second year, thinking that too much milk is bad for the healthy child and extremely injurious to the rachitic. He would also discard eggs, which he calls an expensive and unreliable food, peculiarly rich in bacteria. Eggs frequently cause disturbances in older children and are superfluous for children under 3. He advocates little if any meat, not more than a cup of milk a day, eggs only as used in preparation of other dishes, but vegetables and fruit in abundance, without much sugar, whole-wheat bread and more jam than butter with light and air, warmth and sunshine. The clothing must be very light, as the child sweats readily and needs to be able to throw off the heat generated in excess. Instead of dressing the child in woolen, he should have the lightest under and outer clothing, with a hard bed and flat pillow. In case of extreme craniotabes the back of the head can rest in a cushioned ring. The excessive sweating predisposes the skin to cutaneous affections, and they should be warded off by light massage, and aromatic and saline baths. In case of a tendency to convulsions or spasm of the glottis a calomel purge and regulation of the diet generally suffice. Very severe convulsions may require chloroform; in violent spasm of the glottis pouring cold water on the back of the neck and artificial respiration are indicated, with phosphorus for several months. The combination of phosphorus and cod liver or olive oil is invaluable in prophylaxis of this spasmophilia and should be supplemented by iron. There is so much lime in milk, cabbage, cauliflower, spinach and oranges that it is very rarely that a child needs more, and in case of developed spasmophilia some regard it as contraindicated.

93. **Chilling as a Cause of Illness.**—Siegel here relates experiments on animals which show that the presence of bacteria plus the action of cold is not always followed by development of illness. On the other hand, the action of cold—without cooperation of bacteria—is able under certain conditions to induce the development of acute parenchymatous nephritis. Chilling the feet induces by reflex action constriction of the vessels in the kidneys, and the reflex anemia thus induced is liable to persist indefinitely for a time, entailing disturbances in the circulation and in the nutrition of the cells, and degeneration of the functioning elements, with inflammation as the final outcome. The decaying cells or the abnormal metabolic products produced by degenerating cells may likewise induce an inflammatory process. The dogs in his experiments invariably developed bilateral parenchymatous nephritis even when only one foot had been chilled through in ice water. In most of his experiments the hind legs of the animals to the knee were placed in water at 4 C. (39 F.). He also found signs of mild nephritis in twelve dogs brought to him for his experiments at a time when the ground was covered with melting snow. The presence of bacteria is thus not indispensable for an acute kidney affection after being chilled.

97. **Headache and Its Treatment by Massage.**—Worbs has been applying to headache Cornelius' principle that nervous pains can be cured by massage of certain points where moderate pressure is experienced as pain. He calls them "the nerve points" and ascribes the pain to compression of the nerve at these points by proliferation of connective tissue. Systematic massage breaks up these minute adhesions and releases the nerve. The painful points with headache are at the free margin of the trapezius, the sternocleido muscle, especially at its origin and insertion and in the center, the temporal muscle, the orbital and occipito-frontal muscles. Other points may be found painful on pressure, but they occur less regularly than the above. Sometimes the massaging finger could detect at these points a strip of induration or general rigidity. The nerve trunks did not seem to be diseased and the glands in the neck were not enlarged. He massages the painful point with a single finger, with perpendicular, rotary movements. In healthy persons this massage never elicited any pain except that of the boring finger, but in persons with recurring or chronic headache massage of the predisposed parts in the muscles of the head or neck or along the course of the nerves caused considerable pain. The headache in such cases is mostly a continuous oppression throughout the head or only at the back, with characteristics of neurasthenic headache, or the pain was more neuralgic or of the migraine type. Massage of the

painful points removes the cause and cures the headache permanently. The disadvantages of the treatment are the frequently quite severe pain it induces, the violent local reaction observed in some cases, and the tedious and time-consuming massage. He has thus treated forty patients, giving massage between fifteen and twenty minutes. Improvement was manifest in every instance, and in eighteen patients examined recently the cure has persisted to date, more than a year in some. Weeks may be required to complete the course in some patients. Some returned for the massage at the first symptoms of recurrence of the headache and the attack could always be aborted in this way.

101. **Acute Postoperative Dilatation of the Stomach.**—This complication of an operation frequently entails mesenteric occlusion of the duodenum by the mesentery as it is pushed down into the small pelvis by the enlarged stomach. This stretches the root of the mesentery until it compresses the duodenum at its junction with the jejunum. Uncontrollable vomiting follows, the vomitus being mostly bile, without admixture of fecal matters. The epigastrium bulges, the intestinal functioning is arrested more or less completely and the patient grows weak. The simple but effective treatment is merely rinsing out the stomach, stopping all feeding by the mouth, and, if further measures are necessary, placing the patient in the ventral decubitus position. Albrecht in a recent study of the same subject ascribes the dilatation to the duodenal occlusion as the primary affection. In a recent case Thomä found the stomach abnormally dilated when he opened the abdomen, the intestines crowded far down. Occlusion did not develop, however, as peristalsis was stimulated and scarcely anything was allowed by the mouth while the patient was not allowed to lie on his back.

102. **Differential Serum Diagnosis of Syphilis.**—This communication from the syphilis research commission in Java reports that 81.5 per cent. of 378 patients with certain syphilis gave a positive reaction, while none of 157 persons free from syphilis showed a trace of the reaction. The findings while the patients were taking mercurial treatment are also tabulated, all the results confirming the specific nature of the reaction and its importance for the study of syphilis. The findings also have apparently established the close connection between tabes and paralysis and syphilis.

103. **Eczematous Eye Affections.**—Noll states that thousands of eyes are essentially injured every year and some become blind, from eczematous affections neglected or incorrectly treated. He found that one out of every nine patients at the Würzburg eye clinic during 1906 had some eczematous affection of the eyes, that is, 626 out of 5,817 patients with some ocular affection. In a number of these cases the condition was serious when first seen, the eye affection having been neglected or mistreated with raw veal, cow dung or something of the kind. He gives an outline for a circular calling attention to the danger of "sore eyes," emphasizing the necessity for consulting a physician at once and the danger of neglect, and warning people not to wipe the eyes with the hands or to apply a bandage.

105. **Blood Count Without Apparatus Except Microscope.**—Loewenberg dilutes the blood 1 to 400, takes up a drop on a round object glass and presses a cover-glass on it. He examines it through the microscope and counts the number of corpuscles in the field. As two circles are proportional to each other according to the squares of their radii, he computes the total number of corpuscles on the object glass by this formula. The radius of his microscopic field is 0.5 mm. and of his object glass 10 mm.; the object glass field thus represents 2,500 of the microscope fields, and if 25 corpuscles are counted in one field it is easy to compute the number in a cubic centimeter. If, for example, 5 c.mm. of blood diluted to 400 were used, then 2,500 multiplied by 400 and divided by 5, and then multiplied by the number of corpuscles observed in the microscope field, would give the correct number of corpuscles in a single cubic millimeter. The dilution to 400 is made by mixing 10 c.mm. of blood with 4 c.c. of a 3 per cent. salt solution.

Deutsche Zeitschrift für Chirurgie, Leipsic.

February, XCII, Nos. 1-3, pp. 1-261.

106 Abdominal Firearm Wounds and Their Treatment. (Bauchschüsse im Frieden und ihre Behandlung.) A. Hagentorn.
107 Imperfect Development of Bone or Early Osteomalacia as Basis for Idiopathic Fragility of the Bones. (Osteogenesis imperfecta oder frühe Osteomalacie als Grundlage der idiopathischen Osteopsathyrosis?) Axhausen.
108 Syphilitic Dactylitis. O. Creite.
109 Thrombosis in Superior Mesenteric Vein Cured by Operation. T. Haagn.
110 *Antitoxin Treatment of Traumatic Tetanus. (Wundstarrkrampf.) Brandenstein.
111 Extracapsular Radical Resection of Tuberculous Elbow Joint. (Resektion des tuberkulösen Ellenbogengelenks.) W. Lossen.
112 Anatomy of Madelung's Deformity of the Hand. Franke.
113 Case of Primary Actinomycosis of the Kidney. (Primäre Nierenaktinomykose.) Kunith.
114 *Catgut Treated as Fresh Intestine with Iodin or Silver Before It Is Twisted. (Katgut, steril vom Schlachttier, als frischer Darm vor dem Drehen mit Jod oder Silber behandelt.) F. Kuhn and M. Rössler.
115 Faulty Overcorrection Under Steinmann's Nail Extension. (Ueberkorrektur bei Nagelextension.) Wilms.

110. **Antitoxin Treatment of Tetanus.**—Brandenstein reports 24 cases of traumatic tetanus and 2 of local tetanus with a mortality of 82.3 per cent. Antitetanus serum was used in 20 cases and 4 of the patients recovered while all the patients died in the group of 6 without serum treatment. Every case with incubation of less than eight days terminated fatally. The amount and virulence of the toxin produced soon after the injury and early anchored to the cells, evidently determine the outcome of the case. The toxin produced later can be neutralized by antitoxin, but it is powerless to act on that already fastened on the cells. Amputation of the part does not affect the toxin already anchored to the cells. The only means at our command to prevent the toxin from becoming fastened on the cells is by prophylactic use of the antitetanus serum, and this has given promising results in experimental research and in the clinic. A prophylactic injection of serum at the time of the traumatism has generally rendered the course of tetanus later very much milder and lengthened the period of incubation. In Poehhammer's case he injected the serum fourteen hours after the injury; two weeks later signs of local tetanus were observed, with general symptoms three weeks later and death after twenty-nine days. The interval of fourteen hours in this case was too long. Dönitz has shown that for a prophylactic injection in an animal the dose effectual after four minutes has to be six times as large after an interval of eight minutes, twelve times as large after fifteen minutes, and twenty-four times as large after an hour. These facts and others cited emphasize the importance of injecting the antitoxin at the earliest possible moment after the injury. They also teach that the amount to be injected must be increased in proportion to the time that has elapsed. The longer the interval since the traumatism the larger the amount of antitoxin needed to neutralize the toxin circulating in the blood. Terrier and Mercadé have reported a case in which tetanus developed eighty-seven days after a compound fracture of the upper arm. The disease ran a protracted course and the patient recovered. Antitetanus serum had been injected as a prophylactic measure soon after the injury, and they ascribe to its action the unusually long incubation and mild course. If they had injected a larger dose the tetanus might possibly have been warded off altogether. In the Berlin hospital where Brandenstein is assistant, prophylactic injections on these principles are now made in all cases of wounds soiled with garden or street dirt or horse manure, or made by splinters, bullets or by freezing. In most cases the injuries were from being run over by vehicles. Tetanus has never developed in any of these cases after a prophylactic injection. In conclusion he reiterates that—judging from his experience—after tetanus is once declared, injection of antitoxin is entirely useless, but that prophylactic injections are as necessary as the tardy injections are futile.

114. **Sterile Production of Catgut from Animal to Suture.**—The importance of avoiding contamination of the animal's intestines from which catgut is to be made has impelled Kuhn and Rössler to devise means to produce a catgut that is as nearly aseptic as possible. Their efforts in this line have been previously mentioned in these columns. They here report tests of the catgut thus prepared introduced in the eye or ear of a rab-

bit or into the human skin, with comparative tests with catgut of other makes. They also report results of comparative tests of absorbability and strength. They state that the conclusions of the whole research are in favor of their technic.

Jahrbuch für Kinderheilkunde, Berlin.

March, LXVII, No. 3, pp. 261-382.

116 *Metabolism in Myxedema. (Stoffwechsel bei Myxödem.) E. Benjamin and A. von Reuss.
117 Catalysis of Human Milk. (Katalyse der Frauenmilch.) F. von Torday and A. von Torday.
118 Bacteriologic Research in a Case of Noma. E. Hellesen.
119 *Treatment of Prolapse of Rectum in Children by Injection of "Paraffin Splints." (Behandlung des kindlichen Mastdarmprolapses durch Längsversteifung des Rectum.) N. A. Kephallinos.

116. **Metabolism in Myxedema.**—The tabulated findings in the various cases described show that in myxedema there is a pronounced tendency to retention of nitrogen and also, perhaps, of phosphorus.

119. **Paraffin Splints in Prolapse of the Rectum in Children.**—Kephallinos reduces the prolapse and then injects paraffin on each side, drawing out the needle as the paraffin is injected so that a long strip of the paraffin is left in the tissues, forming as it solidifies two straight sticks or splints in the pararectal tissue. This holds the walls stiff and obviates all tendency to prolapse. The paraffin is injected under ether. The needle is introduced about 1 cm. outward and backward from the rectum and it is pushed upward in the pararectal tissue as high as possible, or the paraffin can be injected at two or three points on each side of the rectum. This forms solid rods supporting the rectal walls. The child is kept in bed two days and then discharged. He has thus treated thirty-two patients and states that the results have been satisfactory in every instance. In one case, however, about a year later, the wall became abraded and scraps of paraffin worked their way through and were voided in the stools, but the dense growth of connective tissue around the paraffin has rendered the wall permanently unyielding so there has been no recurrence of the prolapse or other disturbance. There was recurrence in one case in which a single injection had been made; the paraffin splint had evidently bent at a weak point. The first cases date from 1903, and the patients have all been re-examined since.

Medizinische Klinik, Berlin.

March 22, IV, No. 12, pp. 391-432.

120 *Treatment of Surgical Tuberculosis in Children. A. Tietze.
121 *The Leucocytes in Typhoid. K. Himmelheber.
122 *Cutaneous Reaction to Tuberculin and Intravenous Tuberculin Treatment. (Die von Pirquetsche Hautreaktion und die intravenöse Tuberkulinbehandlung.) F. Mendel.
123 Literature of 1907 on Military Medical Matters. (Literatur des Militarsanitätswesens, 1907.) G. Körting.
124 Artificial Radium Emanation. (Künstliche Radiumemanation.) Reidel
125 *Relations Between Joint Affections and the Menopause. (Beziehungen von Gelenkkrankheiten zur klimakterischen Lebensepoche.) F. Neumann.
126 Four Hundred Gallstone Cases, 1906. F. Fink (Karlsbad).
127 Catalysis in Its Relations to Medicine. (Katalyse in ihren Beziehungen zur Medizin.) H. Schade.

120. **Surgical Tuberculosis in Children.**—Tietze describes experiences and presents other arguments to confirm the immense importance of general treatment for surgical tuberculosis in children.

121. **Changes in Leucocytes in Typhoid.**—Himmelheber ascribes great differential importance to the discovery of abnormally small numbers of leucocytes in a dubious febrile affection, as speaking strongly in favor of typhoid. If the numbers of leucocytes are approximately normal, either because the disease has passed its early stage or on account of complications, the preponderance of mononuclears at the expense of the neutrophiles is further evidence of typhoid. The diagnosis seems certain when there is a complete reversal of normal proportions between these two forms of leucocytes. Lymphocytosis and eosinophilia are an index of past typhoid.

122. **Intravenous Tuberculin Treatment and Differential Cutaneous Reaction.**—Mendel thinks that the intravenous technic is peculiarly adapted for tuberculin treatment of tuberculosis. It is no more dangerous in respect to local or general injury, he states, than by subcutaneous injection, while it has the advantages of painless application, accuracy in dosage and reliability of action. He dilutes the tuberculin with salt solution or a preparation of arsenic and injects a tenth of a milligram to begin with. All the tuberculin gets into the circulation by this means, while by the subcutaneous route part is lost in the tissues, thus rendering the effectual dosage extremely unreliable and the variability in the absorption enhances the misleading effect. Delayed reaction, protracted fever and signs of cumulative action are all avoided by the intravenous route, he claims.

125. **Relations Between Joint Affections and the Menopause.**—Neumann states that he has never encountered Heberden's nodules in any women before the climacteric period; in many cases they are the only external manifestation of the "change of life;" in others they are accompanied by joint affections. He has also observed that certain joint affections in women develop during the menopause or immediately afterward. It is remarkable how few joint affections in women of this age have any traumatic factor, which is the rule in chronic joint affections in men. Local lipomatosis was a frequent accompaniment of the joint affections in the women, especially of the knee or ankle. The thigh sometimes attains a circumference of half a yard or more while the legs are not extraordinarily fat. The semitendinosus and semimembranosus muscles were sometimes transformed into actual cylinders projecting above the environment and painful on pressure. The knee and ankle may also be swollen. The joints may develop arborescent lipoma and Heberden nodules or enlargement of the finger joints may be observed. He has observed the development of these joint affections in unmistakable connection with the menopause in forty-seven cases, and also in six cases in which the menopause was brought on by the removal of the ovaries. He comments on the absence of literature on the subject of the joint affections of the menopause while the nervous phenomena have been so exhaustively studied, including coccygodynia which he regards as the typical climacteric phenomenon. The practical results of his experience and research emphasize the causal treatment of the joint affections in women during or after the menopause by administration of ovarian extract to supply the missing internal secretion of the ovaries. He is convinced that it is a powerful adjuvant to the ordinary measures, the benefit observed in his patients confirming the necessity for supplying or substituting the internal secretion of the missing or degenerating ovaries in these cases. In respect to application of heat to the affected joints he has found that measures which raise the temperature of the body for a considerable time produce the best effects, improving the general health and nutrition.

Monatsschrift für Geburtshülfe und Gynäkologie, Berlin.

March, XXVII, No. 3, pp. 297-414.

128 *Decapsulation of Kidneys in Treatment of Eclampsia. W. T. Wiemer.
129 *Primary Carcinoma of Fallopian Tube. E. Kehrer.
130 *Case of Death After Steam Cauterization of Uterus. (Todesfall nach Atmokausis.) H. Cramer.
131 Formalin in Disinfection of the Hands. (Formicin, ein neues Händedesinfiziens.) H. Futh and Meyerstein.

128. **Decapsulation of Kidneys in Treatment of Eclampsia.**—In the case reported, a previously healthy woman who had had slight edema of the legs during the last two months of pregnancy, developed symptoms of impending eclampsia seventeen hours after delivery, although diuresis had been apparently normal. After three seizures the patient became unconscious and the seizures recurred with increasing frequency unmodified by symptomatic measures. After decapsulation of both kidneys the seizures stopped at once and consciousness returned after profound coma for five hours. Before the operation the urine showed 12 per thousand albumin, but soon afterward only 1.5 per thousand. The findings in one kidney indicated acute nephritis; the capsule was readily detached and the kidney tissue gushed out when the capsule was incised, showing that there was unusually high pressure in the parenchyma. After the operation large amounts of urine were excreted, the flow through the wounds hindering their healing.

129. **Primary Carcinoma of Fallopian Tube.**—Kehrer reports a case which he states is the eightieth on record of primary carcinoma in a tube. The patient was a woman of 57 who had

suffered during the last three months from pains in the abdomen and stomach with considerable bloody purulent vaginal discharge. Pain occurs early with these tubal carcinomas, evidently from peritonitic adhesions and tension of the walls of the tube. The pain is frequently spasmodic and subsides completely at times, while with uterine cancer the pain is more stationary. The pain may radiate into the sacrum, thighs, back or stomach. The healthy aspect of the patients, even with advanced tubal carcinoma, the rapid growth of the tumor, and the absence of fever may help to differentiate tubal cancer early. Tubal carcinoma displays a tendency to spread by two routes of lymphatics, to the upper and inguinal lumbar glands and the external iliac, hypogastric and sacral glands. When puncture through the vaginal wall reveals a reddish-brown fluid, cancer is probable; crumbling cancer masses can sometimes be detected in the puncture fluid. In the eighty cases on record a permanent cure was obtained in only five cases; extensive ablation is imperative. In the case reported the pelvic connective tissue formed a cancerous plate which it was impossible to remove. In shape, size, location, consistency and adhesions, tubal carcinoma does not differ from pyosalpinx. Tubal carcinoma is exceptionally malignant, probably owing to the thinness of the walls and the dual mode of spreading into the lymphatics. Even the high retroperitoneal and supraclavicular glands become early involved. The growth is at first papillary and becomes alveolar later, as a rule.

130. **Steam Cauterization of the Uterus.**—Cramer has applied this measure in 78 cases since 1900 and Fuchs in 150. He applies the steam for one minute or for a minute and a half, at a temperature of 110 C. (230 F.). The patients must be kept under supervision for several weeks, as there is liable to be considerable discharge and disturbance when the eschar is thrown off. He reports here a case of fatal septic infection of the necrotic masses, the first symptoms observed three days after the operation. Possibly prompt vaginal hysterectomy on the fourth or fifth day might have led to recovery, as in septic abortion, but this was not done until the ninth day, when it came too late. The pulse at 100 and the subsidence of the temperature the sixth, seventh and eighth days masked the severity of the infection. The patient was a consumptive with three living children, a ten weeks' pregnancy having been terminated by abortion, followed by recurring uterine hemorrhages. After curetting, the uterus was cauterized with steam. The patient succumbed to ascending septic infection of the necrotic tissues which it is impossible, he says, to protect against secondary ascending infection. He never applied this technic until convinced by bimanual examination that there were no signs of an inflammatory affection of the adnexa or perimetrium or adhesions. In the case described every precaution for asepsis, rubber gloves, etc., had been scrupulously observed throughout the entire case.

Münchener medizinische Wochenschrift.

March 17, LV, No. 11, pp. 545-600.

132 The Fluid in the Conjunctival Sac. (Flüssigkeitshaushalt im gesunden und im kranken Bindehautsack.) O. Schirmer.
133 Decay of Blood Plates, Coagulation of Blood and Coagulation of Muscles. (Blutplättchenzerfall, Blutgerinnung und Muskelgerinnung.) K. Burker.
134 Stethoscope to Measure Subjective Strength of the Heart Tones. (Stethoskop zur Messung der subjektiven Stärke der Herzklänge.) H. Bock.
135 *Treatment of Eclampsia. Osterloh.
136 Harmlessness and Superiority of the Tuberculin Salve Reaction Over the Ocular Reaction. (Vergleichende Untersuchungen mit der Konjunktivalreaktion nach Wolff-Eisner und der Salbenreaktion nach Moro.) H. Heinemann.
137 Relations Between Infantile Mortality, Infant Feeding and Capacity for Military Service. (Beziehungen zwischen Säuglingssterblichkeit, Säuglingsernährung und Militartauglichkeit.) M. Hahn.
138 Viability of New-born Infants with Very Large Inoperable Umbilical Hernias. (Lebensfähigkeit Neugeborener bei sehr grossen inoperablen Nabelschnurbrüchen.) Durlacher.
139 *Instantaneous Roentgen Pictures with Exposures from a Distance. (Roentgenmomentaufnahmen mit den bisher gebräuchlichen Apparaten.) F. M. Groedel and C. Horn.
140 Electricity of the Skin. (Hautelektrizität.) E. Harnack.
141 Fulguration According to Keating Hart. B. Wiesner.
142 Research on Opsonins. (Opsoninuntersuchungen.) H. Much.

135. **Treatment of Eclampsia.**—Osterloh here reviews his thirty-five years' experience in the treatment of eclampsia and emphasizes the change brought about by the new conception of the fetal and placental origin of the eclampsia toxin. He warns that instrumental or rubber bag dilatation must be done with as great regard for asepsis as a major operation. He has seen excellent results from venesection followed by infusion of large amounts of salt solution. In 40 cases he injected subcutaneously as much as 3,500 c.c. in twenty-four hours. Venesection is, of course, contraindicated when the patient is very anemic, with small rapid pulse with low waves; its widest field is with full, hard pulse, more or less cyanosis and incipient pulmonary edema. Application of heat to stimulate kidney functioning is best done with the electric light box placed under the bedclothes for from twenty to twenty-five minutes, using four lamps each of 32-candle power. If this measure is contraindicated he applies a pack to the entire body. He would not hesitate to propose decapsulation of the kidney in very threatening cases, but otherwise would avoid it. Even after subsidence of the eclamptic seizures the patient may succumb to heart failure or pulmonary edema, and consequently she should be constantly supervised and stimulants given as needed, keeping the mouth and throat free from mucus and blood, with artificial respiration, cold slapping and frictions, especially of the heart region, and massage of the heart—all frequently repeated. He has never used oxygen in treatment, but intends to give it a trial in future cases as Stroganoff has reported good results from its use. The prognosis must be guarded, as a psychosis frequently develops subsequent to eclampsia, or albuminuria may persist, even when the patient appears entirely well.

139. **Instantaneous Skiagrams Taken from a Distance of Over Six Feet.**—Groedel and an engineer, C. Horn, give an extraordinarily distinct skiagram of the thorax taken with an instantaneous exposure from a distance of 6½ feet. The ordinary apparatus is used, the special features being merely extra care in respect to perfection of the isolation (inductor) and constancy of the vacuum, with a high primary charge.

Wiener klinische Wochenschrift.

March 19, XXI, No. 12, pp. 379-414.

143 Behavior of Human Skin in Respect to Various Bacterial Toxins. (Verhalten der menschlichen Haut gegen verschiedene bakterielle Giftstoffe.) R. Entz.
144 *Puncture Reaction After Injection of Tuberculin. (Wert der Stichreaktion nach Tuberkulininjektion.) F. Hamburger.
145 Differential Serum Reaction in Syphilis According to Porges-Meier and Klausner Technics. (Wert der Serumreaktion bei Syphilis.) W. Fritz and O. Kren.

144. **The Puncture Reaction to Tuberculin.**—Epstein as long ago as 1891 called attention to the more or less intense redness and swelling observed at the point where a subcutaneous injection of tuberculin has been made. Escherich confirmed his statements and called it the puncture reaction, and Spengler has also spoken of it as a specific reaction. Hamburger mentions these facts and expresses amazement that no one hitherto has paid any attention to this reaction as having diagnostic significance, and yet, he adds, it is the most delicate, the most sensitive and the most harmless of all the differential reactions that have recently attracted attention. The injection of 1 mg. or less of old tuberculin causes in the tuberculous a distinct and specific reaction at the point of injection, persisting through four or five days and positive in many cases in which the other differential reactions are negative or dubious. His experience with 200 children showed that the puncture reaction was positive in 28 out of 33 between the ages of 11 and 14. Comparison of the findings with those of the other tuberculin tests and with autopsy findings confirmed the reliability of the puncture reaction.

Archivio per le Scienze Mediche, Turin.

XXXI, No. 5, pp. 413-476.

146 Relations Between Menstruation and Commencement of Pregnancy. (Rapporti esistenti fra la mestruazione ed il principio della gravidanza.) R. Fusari.
147 Encapsulated Oxyurides in the Peritoneal Cavity. F. Strada.
148 Ligation of Bile Duct and Regenerative Processes in the Liver. (Legatura del condotto coledoco e processi rigenerativi del fegato.) A. Fabris.
149 Experimental Research on Behavior of Plasma Cell During Healing of Wounds Subjected to Stasis Hyperemia. (Plasma cellula nella guarigione delle ferite sottoposte all' iperemia di Bier.) E. Grimani.
150 Nature of Negri Bodies and Corpuscles Between Them. (Corpi di Negri.) G. Volpino.

No. 6, pp. 477-539.

151 *Study of the Thyroid Gland and Its Adnexa. (Ghiandola tireoide e suoi annessi.) S. Verson.
152 *Histologic Study of Osteomalacia. (Osteomalacia umana.) G. Baggio.
153 *Hematogenic Tuberculosis. A. Donati.

151. **Research on the Thyroid Gland.**—This monograph issues from Golgi's and Fusari's institutes and is accompanied by four colored plates. It discusses the structure of the thyroid gland and describes peculiar findings noted at autopsies, the presence of epithelial cells in the blood vessels of a thyroid gland, of cartilaginous tissue and branchiogenic epithelium in the normal thyroid, growth of parathyroid gland to the thymus, and outgrowths of the thyroid observed in fetuses.

152. **Histologic Research on Osteomalacia.**—The four osteomalacic skeletons studied by Baggio were so soft that artificial decalcification was not required. The findings are shown in a colored plate and an attempt is made to explain the mechanism of the process as the work of the bone cell.

153. **Hematogenic Tuberculosis.**—Donati reports experiments on rabbits and guinea-pigs injected in the carotid artery with a filtered six-day culture of tubercle bacilli grown on a mixture of beef serum, water and glycerin by Vasilescu's technic. The few bacilli left in the fluid did not invariably induce general infection in the rabbits, but tuberculous lesions developed in the lungs invariably and often exclusively. The tuberculous process did not locate primarily in the lymph nodes except when there was a miliary process. In guinea-pigs the lungs did not show so great a tendency to localization of the process as the spleen and lymph nodes. He explains this as due to the greater resisting powers of the rabbit; the few germs circulating through these and other vital organs in the rabbit were promptly destroyed while in the guinea-pig conditions were favorable there for their localization.

Gazzetta degli Ospedali, Milan.

March 8, XXIX, No. 29, pp. 297-312.

154 *Sodium Nitrite and Amyl Nitrite in Hemoptysis and in Other Forms of Hemorrhage. (Ancora sull'azione del nitrito di sodio e del nitrito di amile in certi tipi di emottisi . . . e in altre forme di emorragia.) A. Campani.
155 Hematic Cysts of the Spleen. (Cisti ematiche della milza.) F. de Marchis.
156 *Suprarenal Treatment in Gastrointestinal Affections and Neurasthenia. A. Bussi.

March 15, No. 32, pp. 329-344.

157 Physiologic Action of Isomeric Camphor. (Canfore isomere.) A. G. Pari.
158 Tendinitis and Peritendinitis. L. Paglieri.
159 *Malarial Hemoglobinuria. (Emoglobinurie malariche spontanee, chiniche e miste.) F. Solimena.

154. **Sodium Nitrite and Amyl Nitrite in Hemorrhage.**—Campani thinks that hemoptysis is the result of a combination of unusual irritability on the part of the blood vessels and increased blood pressure. The conditions are approximately the same as in the menstrual molimen—temporary vascular erethism and hypertension. Both these factors can be controlled by drugs which reduce the erethism and blood pressure, and among these sodium and amyl nitrite—which have been found so useful in the analogous disturbances of arteriosclerosis—take the lead. He found that the two nitrites have about the same action, but amyl nitrite acts almost instantaneously, while sodium nitrite, by the mouth, does not make its effect felt for 15 or 20 minutes, but it is more prolonged, lasting for nearly four hours. The drug, he thinks, acts on the entire vascular system, but with special force on the largest arteries; in consequence of which the blood accumulates in them, draining the periphery to a certain extent. This explains the accentuation of the second aortic and pulmonary sounds noted in tests on himself, the carotid pulsation and the comparative anemia at the periphery. Soulier was able to excise pieces of lung tissue in rabbits, after inhalation of amyl nitrite, without the loss of a drop of blood. It seems probable that the nitrites might also act effectually on certain other forms of peripheral hemorrhage, epistaxis, erosions in the stomach, etc., but Campani has had no experience in this line. If the hemoptysis occurs in consequence of rupture of a large vessel in the lungs no benefit need be expected from the nitrites. The pulse is small and weak in these colliquative cases, and the conditions directly contraindicate such energetic medication. Ice to the chest may be useful in these cases, inducing vasoconstriction in the lungs, as also sucking scraps of ice to subdue reflex irritation to cough, opiates, the patient sitting rather than reclining and refraining from speaking. He does not approve of ergot; the effect was bad in the few cases in which he has employed it. The patients with strong and tense pulse treated with the nitrites all displayed prompt benefit, even without opiates. He has had no experience with ipecac, although Dieulafoy recommends it to reduce the vascular erethism and hypertension. The influence of certain seasons was marked in some of his forty patients. One patient had bloody sputum only in January, March, May and September, recurring in these months year after year for more than twenty years It was always preceded by certain symptoms, suggesting a hemorrhagic aura. This patient's lungs are thickened and more or less sclerous throughout. Similar cases of seasonal recurrence have recently been published by Jansen and others, and Campani thinks that if we watch our own physiologic processes we will find certain modifications recurring according to certain seasonal or meteorologic laws, periods of feeling well being followed by periods of listlessness and pallor without apparent cause.

156. **Suprarenal Treatment as a Tonic and Regulator.**—Bussi reports 96 cases of gastrointestinal atony, 14 of neurasthenia with depression connected with obstipation, and 13 cases of dilatation of the stomach, in all of which he administered in addition to the usual measures an extract of the medullary substance of the suprarenals, with excellent results, during the last two or three years.

159. **Hemoglobinuria.**—Solimena gives the details of twelve cases of malarial hemoglobinuria. The age of the patients ranged from 5 to 67 years; some had taken quinin, with or without phenacetin, and others had taken no drugs for some time. They prove, he thinks, the existence of three types of hemoglobinuria, the spontaneous, the quinin type and the mixed type. Four of his patients belonged to the first group, and the hemoglobinuria was promptly cured by quinin. Five were of the quinin type; the hemoglobinuria came on two or three hours after ingestion of the drug and subsided about twenty-four hours after its suspension. In one case an entire family manifested an idiosyncrasy to quinin. Two patients presented the mixed form. The hemoglobinuria developed soon after a small dose of quinin and was evidently started by the quinin, but was maintained by other factors; the intensification of the symptoms on its suspension and their subsidence on resumption of the quinin justifying this assumption. In the quinin intoxication all the symptoms are more accentuated, while in the spontaneous form they persist longer. The spontaneous type subsides in two or three days, the mixed type lasts for three or four days, and the jaundice for the same period, while the duration of the hemoglobinuric nephritis can not be foretold; it proved fatal in one of the cases cited.

Policlinico, Rome.

March, XV, Medical Section, No. 3, pp. 97-144.

160 *Familial Optic Nerve Disease. Fortunati and G. Mingazzini.
161 Cystic Tumor in Third Ventricle Originating in the Choroid Membrane. A. Calonzi.
162 *Case of Typical Volitional Pathologic Synkinesis of the Hands. M. Volpe.

March 15, Practical Section, No. 11, pp. 325-356.

163 *Splenic Anemia. Cirrhosis of the Liver of Splenic Origin. G. Rummo.
164 Case of Idiopathic Progressive Atrophy of the Muscles. A. Accornero.

160. **Familial Optic Nerve Disease.**—This study of optic neuritis occurring in two brothers and in a brother and a sister in another family is the conjoint work of the professors of ophthalmology and neuropathology at Rome. The cases reported confirm the preponderance of males and the prevalence of the affection in the children of a family without evidence of a hereditary tendency. The onset of the affection has been observed at various ages, ranging from the fifth to the sixty-seventh year, but the twentieth year is the most frequent date for development of symptoms. As a rule, the different members of the family become affected at about the same age,

and the form observed is the same for the different members of the family. No appreciable influence from alcohol, etc., in the parents could be detected in these cases. In one of the families the bilateral chronic retrobulbar neuritis in one brother reduced the vision permanently to 1/30: in the other brother vision of 1/40 gradually improved under alternating subcutaneous injections of pilocarpin and strychnin, with iodid internally, hydrotherapy and rest, until vision became 1/3. In the second family both members improved materially under the above measures and application of the galvanic current to the eyes.

162. **Synkinesis of the Hands.**—The patient was a woman of 28 and since infancy she had been unable to use one hand without making the same movements with the other hand. Volpe remarks that this is the tenth case on record of this condition in persons free from hemiplegia or similar affections He ascribes it—for reasons which he details—to injury of the cortex during the third and fourth months of intrauterine existence.

163. **Splenic Origin of Cirrhosis of the Liver.**—The symptomatology of pure splenic anemia is classified and tabulated, also the signs of the pre-ascitic stage of atrophic cirrhosis of the liver with enlargement of the spleen and anemia—Banti's disease. These are: 1, progressive increase or reduction in size of the spleen and change in its consistency; 2, the veins become more conspicuous, especially in the upper part of the abdomen; 3, symptoms of insufficiency on the part of the liver: defective bile production allowing urobilinuria, uroerythrinuria, bilirubinuria, cholemia and clay-colored stools; defective transformation of urea, causing hypoazoturia; defective sugar metabolism, causing alimentary glycosuria and levulosuria; defective antitoxic action, increasing the urotoxic coefficient, and defective elimination of methylene blue. Besides these fundamental signs there are the following accessory signs: 1, a tendency to hemorrhages; 2, pain in the liver region; 3, gastrointestinal disturbances, dyspepsia, loss of appetite, meteorism, attacks of diarrhea or obstinate constipation, pain in the intestines and hemorrhoids; 4, edema in the legs. In addition to this atrophic venous cirrhosis Rummo distinguishes the variety with venous hypertrophy and that with bilious hypertrophy and a combination of these different types. He also calls attention to the hematic variety of cryptogenic splenic anemia in adults presenting very nearly a pernicious or a leukemic type. The cirrhosis-inducing form of splenomegaly due to malaria may occur with venous atrophy or venous hypertrophy or, exceptionally, with biliary or mixed cirrhosis.

Nordiskt Medicinskt Arkiv, Stockholm.

February, XL, Internal Medicine Section, No. 3.

165 *Occurrence and Importance of Gastric Hypersecretion in Absence of Motor Insufficiency. (Vorkommen und Bedeutung der Hypersekretion bei Abwesenheit von motorischer Insuffizienz.) S. A. Pfannenstill. Commenced in No. 2.

166 *Occurrence of Tumors in People of Greenland. (Vorkommen von Geschwülsten bei der Bevölkerung in Grönland.) G. Meldorf.

165. **Hypersecretion in Absence of Motor Insufficiency.**—Pfannenstill's report of extensive research on the secretory functioning of the stomach with normal motor conditions states that examination of a number of healthy persons gave no findings confirmatory of the possibility of physiologic hypersecretion. Among 58 cases of various digestive disturbances with normal motor functioning (ulcer, cancer, dilatation of the stomach and ptosis), he found constant hypersecretion in 31 per cent., intermittent hypersecretion in 31 per cent., and no tendency to hypersecretion in 38 per cent. Not one of the cases with hypersecretion presented the Reichmann-Riegel symptom-complex. In presumptively differentiated chronic gastritis, 83 per cent. of the patients showed constant hypersecretion while it was noted in only 17 per cent. of the patients with a gastroneuritis. This suggests, he thinks, that hypersecretion is in most cases a symptom of chronic (irritative) gastritis. When this latter combination is once established the secretion remains excessive in amount and complete restitution is scarcely probable. If stenosis of the pylorus follows, then the syndrome of Reichmann's disease is liable to be observed, but he has had no personal experience with such a case. Constant hypersecretion may occur with hyperacidity or normal acidity, but was never encountered in his cases with subacidity or anacidity. His experience further confirms the fact that gastric ulcers do not inevitably entail motor insufficiency.

166. **Tumors in Greenlanders.**—Meldorf has been examining the official reports of six district physicians besides his own, all referring to practice in Greenland. Among the 15,000 patients less than 1 per cent. had tumors, and only a few of these were malignant. The list includes one sarcoma of the left femur, adenosarcoma of the neck, cancer of the parotid gland, of the cheek, one case of uterine cancer, 5 cases of epithelioma of the face, 2 of cancer of the esophagus, 4 of the breast, 2 of cancer of the pylorus, 3 of cancer of the liver and one each of cancer of the rectum and abdomen, and several of cancer of the testicles; the latter may include a few cases of tuberculous orchitis.

Norsk Magazin for Lægevidenskaben, Christiania.

March, LXIX, No. 3, pp. 181-292.

167 *Permanent Slow Pulse with Apoplectiform or Epileptiform Attacks and Heart Block. (Om Stokes-Adams' sygdom og "Heart Block" hos mennesket.) P. F. Holst.

168 *Attempt to Explain Etiology of Rachitis on New Basis. (Rakitens etiologi.) B. Ebbell.

169 Technic for Operative Treatment of Glaucoma by Slitting the Iris. (Iridencleisis antiglaucomatosa.) S. Holth.

167. **Stokes-Adams Syndrome.**—Holst describes five cases and explains that the Stokes-Adams condition is not a special affection but merely a combination of symptoms with the one constant phenomenon of heart block, and that the pathogenesis and etiology may differ for each case.

168. **Etiology of Rachitis.**—Ebbell's attention was attracted to the question why rachitis is comparatively so rare in the tropics. Study of its geographical distribution shows that it increases in frequency the greater the distance from the equator, irrespective of race, etc. He concludes that its frequency in lands without much sunshine, the influence of the seasons, the curative effect of country air, the rarity of rachitis at higher altitudes, with other facts observed, suggest that rachitis is the result of lack of light. This assumption is confirmed by some experiments with rachitis in animals and malformations in plants grown in the dark. Ebbell, therefore, asks whether it may not be possible that lack of light is an essential factor in the production of rachitis. The ultraviolet rays are particularly important, he thinks, from this point of view, and he calls attention to the fact that window glass arrests the passage of most of these rays so that children kept much in the house are deprived of the ultraviolet rays in particular.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

The Bacteriology of Diphtheria. By F. Loeffler, M.D., LL.D., Arthur Newsholme, M.D., F.R.C.P., F. B. Mallory, M.A., M.D., G. S. Graham-Smith, M.A., M.D., D.P.H., George Dean, M.D., William H. Park, M.D., Charles F. Boldnan, M.D. Edited by G. H. F. Nuttall, M.D., Ph.D., Sc.D., F.R.S., Quick Professor of Biology in the University of Cambridge, and G. S. Graham-Smith, M.A., M.D., University Lecturer in Hygiene, Cambridge. Cloth. Pp. 718. Price, $7.50. New York: G. P. Putnam's Sons, 1908.

Cancer. By Skene Keith, M.D., F.R.C.S. Ed. Author of "Introduction of the Treatment of Disease by Galvanism," "Electricity in the Treatment of Uterine Tumors," "Gynecological Operations," and George E. Keith, M.B., C.M., Author of "Text-Book of Abdominal Surgery" with Mr. Skene Keith. Pp. 155. Cloth. Price, $1.25. New York: The Macmillan Co., 1908.

A Manual of Diseases of Children. By John Ruhräh, M.D., Clinical Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Second Edition, Thoroughly Revised. Pp. 423, with illustrations. Flexible Leather. Price, $2.00. Philadelphia: W. B. Saunders Co., 1908.

An Aid to Materia Medica. By Robert H. M. Dawbarn, M.D., Professor of Surgery and of Surgical Anatomy, New York Polyclinic Medical School. Fourth Edition. Revised and Enlarged by Eden V. Delphey, M.D. Pp. 338. Cloth. Price, $1.75. New York: Macmillan Co., 1908.

Fortieth Annual Report of Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases. Pp. 70. Paper.

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Address

CHEMICAL PROBLEMS IN HOSPITAL PRACTICE.*

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I.

This subject is not a purely scientific one. I shall have something to say about problems, more specifically about biochemical problems related to medicine; but a discussion of "Chemical Problems in Hospital Practice" necessarily also implies a consideration of the conditions which obtain or which might obtain for biochemical research in hospitals.

The first question asked in connection with any scientific problem naturally is, Is it a practical one? Is it a problem which offers a reasonable prospect of yielding tangible positive or negative results? Clearly, the experience and judgment with which the free and unhampered investigator answers this preliminary question determines, in no small degree, his success in research. In no other branch of experimental science does keen discrimination in this respect meet with greater rewards than in biologic chemistry, and in no other science probably is the lack of this discrimination more frequently encountered.

It is not difficult to find reasons which would seem adequately to account for this condition. Biologic chemistry is full of the most important, fundamental, and alluring problems. Many of these are at the same time important problems of agriculture, bacteriology, pathology, physiology or medicine, and most of them are easy to see and understand, at least in hazy outlines. The inevitable consequence is that from all these departments men of every shade of experience and training have been drifting into biologic chemistry and are working on biochemical problems. But the tools, the methods which are indispensable alike for an adequate understanding of the details of the problems and for effective work on those details, are integral parts of a science, the main facts and principles of which can be mastered only by years of diligent study. It is a plain fact that without a reasonable proficiency in the use of the tools the workmanship must be poor. Some questions in biologic chemistry can be and, of course, are being settled by the help of comparatively simple technic and by men of very limited chemical knowledge and experience. But the larger problems, the systematic working of the important fields of biochemical research, call, almost without exception, for all the ingenuity, resourcefulness and critical judgment of the trained chemist.

Biologic chemistry is now in practice a recognized independent branch of experimental science. It is pre-eminently a field for research, pre-eminently a field for which a large body of men should be specifically trained, yet it is one into which most of the present workers have drifted by chance after their student years proper were over. There is now in this country an extraordinary demand for proficient physiological chemists, yet only one university has made effective provision for meeting this demand. The universities are still turning out doctors of philosophy in chemistry who also know considerable physics and geology, but none or practically none who are familiar with any branch of biology. And the medical schools are still graduating only physicians. They doubtless believe heartily in the importance of the medical sciences, but they are only just beginning to understand that the development of those sciences demands suitably trained specialists, specialists who can not grow up in sufficient numbers on the basis of personal initiative alone.

I am not prepared to say that this condition is peculiar to biologic chemistry; it may exist in other sciences as well, and if so may be chiefly a reminder of the fact that it was only yesterday when we had no universities, no schools for the development of specialists in any science whatever. The fact that our first physiologic chemist is still in his early fifties certainly indicates that these are pioneer days in biologic chemistry. This may explain but does not alter the fact that we have as yet no machinery for the development of biologic chemists, and therefore have no reason to expect that the demand for such chemists can be met.

It may be thought that this condition, though unfortunate, can not have much to do with the subject of this paper. It is unfortunate and, moreover, it has a great deal to do with that subject.

Whether a given scientific problem is practical or not, whether it is workable or not, depends not only on the character of the problem itself, but also on where the work is to be done and who is to do it. It is useless to dream that chemical problems can be solved in hospitals unless the hospitals have men and equipment for work on those problems. Those familiar with the present conditions of supply and demand in biologic chemistry know that men are not now to be had. During the past two or three years almost every biologic chemist in this country has had the opportunity of making a change. And there is no waiting list. The hospitals have, however, cut no appreciable figure in the creation of this condition. At present they have neither men nor equipment for chemical research. They have not even begun to make any effective demand for such work. Notwithstanding the present popularity of biochemical research, notwithstanding the general confession of belief in its importance, it still remains to be seen whether hospital staffs really want it.

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* Lecture delivered before the Harvey Society, New York, Feb. 22, 1908.

Yet the time will surely come when the medical profession will recognize in practice, as it already does in theory, that the large city hospitals should also be centers for biochemical research. The destructive and regenerative processes at all times to be found in large general hospitals constitute one of the most important fields for unceasing biochemical investigation, and into this field should be called the most able men to be found anywhere. Extensive investigations in this region are as important for the advancement of physiology as for the advancement of pathologic chemistry and medicine, for in disease, as in health, physiologic processes play an important rôle. Indeed, the most direct and important aim of biochemical investigations must be the advancement of our ability to differentiate between the physiologic and the pathologic, and this can be done only when the investigator is as alert for new points or false teachings in the domain of the physiologic as in that of the pathologic.

It is a mistake to think that clinical men in the hospitals can either do or direct such chemical work. They have the most valuable material for biochemical investigations in their possession. Out of the abundance of such material they have made occasionally in the past, and in the future they will occasionally make, observations which can be worked up into distinct contributions to pathologic and physiologic chemistry. But without adequate provision for the thorough sifting and critical investigation of the observations of the clinicians, most of their impressions must remain hopeless mixtures of the correct, the probable and the impossible. The chemical work on hospital problems must be done by officers on the ground, by men who are in a position to know the available material, and who have the necessary aid of nurses, assistants and hospital funds; but they must also be men who work on the problems with their hands as well as with their heads.

For no matter how well a given piece of work is planned, no matter how clear and plausible the theory of it may appear, the investigator needs to be critical, skeptical and alert at every stage of the work.

The finest discoveries, the most valuable hints obtainable from a given investigation, are often enough of the most unexpected kind, and often come at the most unforeseen times to him who is really steeped in the work. But steeped in the work a supervisor never is, least of all a clinical supervisor, and rarely is the man who works at a supervisor's problems.

No supervisors or directors are needed for the work. Independence is a necessary prerequisite for originality in research, and the lack of it in so many American laboratories outside of the universities must, in part, be held responsible for much poor research and for the continuous employment in research positions of men who never have done and who never can do independent work. Not only does the successful research chemist not need a director; he should not be called on to become one. Provide a well equipped hospital laboratory, even, if necessarily, a small one, some current literature, and one or two assistants. Then give the worker the freedom which he should have earned in order to get the position, and the maximum service for the advancement of biologic chemistry will be easily and readily obtained.

II.

Given these ideal conditions for work, what are the problems which the hospital chemist might be expected to take up?

This is a fair question, yet it is a question which no one man should try to answer in full. There should be no difference of opinion on this point, for when a really practical problem is once clearly and correctly formulated, a most important step toward its solution has already been taken. Each chemist will have his own problems and would be likely to use those problems as a starting point at least; and no one, certainly no one else, can foretell where they would lead or where they would connect with the problems of the clinicians.

I shall confine myself to the field of metabolism. So far as I can see there is no more urgent, no more promising line of investigation on hospital material at the present time.

The problems of metabolism have so frequently been the subject of popular lectures that I can hope to tell you little that is new or that you have not heard before. Still every worker in the field has his own point of view and his own ideas of the relative importance of the different problems and of how they should be attacked.

The dominant idea in the field of metabolism for more than a generation past may be characterized by two words—nitrogen equilibrium. The conception of nitrogen equilibrium has been the illuminating center from which practically all the metabolism work of the past has originated and to which it has almost invariably returned. It is not to be denied that much excellent work has been done under the inspiration of this conception. I would not minimize the importance of the principle, nor count as useless the premature and, as we now know, unsuccessful efforts of the past thirty years to make it the guide and foundation of dietetics; nor do I fail to see that valuable work is still to be done on the basis of this principle. Nevertheless, it is my belief that in the metabolism work of the future we will do well to step out, in a measure at least, from under the influence of the principle of nitrogen equilibrium.

It is no longer to be questioned that protein metabolism in the animal body can be subdivided into tissue metabolism and the metabolism of inert food protein. This dual conception of protein metabolism is, in my opinion, no less important than the principle of nitrogen equilibrium, nor is the essence of it altogether new. From the experimental standpoint, these two conceptions have, however, been mutually exclusive, and so long as all the competent investigators persisted in making nitrogen-equilibrium experiments they could learn nothing of the tissue metabolism. The metabolism studies of the past have been essentially studies of the katabolism of the food protein. The metabolism work of the immediate future, as I see it, should first and foremost be directed toward a study of the katabolic processes which are less dependent on the daily supply of food protein.

Whatever our attitude may be toward the question as to what constitutes the necessary or the most advantageous consumption of protein for different classes of normal persons, the one fact which, to my mind, stands out clear and full of promise is that for limited periods, for periods as long as those of many acute diseases, and for experimental purposes, the question of nitrogen equilibrium can safely be left out of consideration. This one fact has done away with the necessity for indiscriminately stuffing patients with the precursors of urea and uric acid. It has opened the way for greatly enlarged possibilities of feeding the sick for therapeutic purposes, and it should remove the deadening influence which the monotonous condition of nitrogen equilibrium has for a long time exerted on experimental metabolism investigation.

The metabolism work which is now called for must largely be done on hospital patients. Every class of clinical material to be found in general hospitals must be searched thoroughly and standardized as to its tissue metabolism and without regard to the chemical records of the past, for those records represent a different point of view, and they were obtained under unsuitable conditions and by means of inadequate analytical methods. It is not necessary, I think, to be an unreasoning enthusiast or to entertain illusions in order to believe in this work. Some of it, a great deal of it perhaps, may yield nothing of direct value to clinicians, but that which has no value to them is exactly the material which can be used from the physiologic standpoint. This line of work is still in its infancy, and from the standpoint of physiologic chemistry, as well as from that of pathologic chemistry, we need large numbers of exact and detailed metabolism experiments, performed expressly for the purpose of throwing light on tissue metabolism.

I venture to predict that we shall learn more concerning the abnormal or subnormal metabolism of the sick on the basis of kreatinin and kreatin determinations alone than could be learned in another thirty years by means of the nitrogen determinations of the past. Exact quantitative work is, however, the only kind that is not worse than useless. It is only a waste of time to work on any patient from whom exact twenty-four-hour quantities of urine can not be obtained. The height, weight, muscular development, even the sex of the person, is of importance in the study of tissue metabolism. The diet may be anything that may seem desirable, except meat products, provided that sufficient control experiments are made. The ideal diets for experimental purposes are, however, those which contain sufficient fuel value and minimum quantities of nitrogen.

While this line of work now seems as definite and clear cut as it is promising, it would, in my judgment, be an error to plan anything grand or "American" for its execution. The factory plan, almost always out of place in research, is certainly out of place here. We have only made a beginning in the study of tissue metabolism, and to get the real value out of the work we must avoid the routine and the mechanical, and must constantly be on the alert for the errors or the unknown gaps in the present conception of tissue metabolism. We do not yet know to what extent urea, uric acid, and the so-called neutral sulphur, and undetermined nitrogen, play a part in this metabolism, and every worker in the field should work leisurely enough and critically enough so that every new point of attack, every new clue to a more complete understanding of the subject will be utilized to the full extent of its possibilities. We need a large number of independent workers in this field.

Every kind of well-defined clinical material calls for renewed investigation from the standpoint of the dual protein metabolism. It is impossible to tell beforehand where the most important findings will be discovered. It is practically certain, however, that the field of the common acute fevers will yield important results. The enormously accelerated protein katabolism in fever, and the peculiar proportions of the different waste products obtained in the urine from fever patients makes as valuable material for constructive theoretic work on metabolism as I know of. A beginning has already been made on the investigation of this material. There are now, I think, at least three papers from as many different laboratories in process of preparation on the metabolism of typhoid fever. And from what I know of the results obtained, it seems safe to say that they will call forth many additional ones. This work has, I think, a direct bearing on hospital practice, for it should show why some diets ought to be better than others for this class of patients.

It will probably take years of patient research to learn what we ought to be able to learn from fever urines alone. As yet no one has gone beyond the comparatively simple scheme of analysis which I proposed some years ago, and that scheme is not adequate for fever urines. The neutral sulphur and undetermined nitrogen so abundant in these urines should receive far more attention than they have yet received. I suspect that in these fractions are hidden products which do not belong together.

The extensive elimination of kreatin in fevers is another problem the solution of which may be of far-reaching importance, both from a medical and from a biochemical standpoint. From a biologic standpoint I believe that kreatin and kreatinin are fundamentally different products, and I am inclined to regard the appearance of considerable quantities of kreatin in the urine as a distinctly pathologic phenomenon. Whether this assumption will in the end turn out to be true or false is immaterial. Important is only the fact that in kreatin we have one of the most interesting and best-known substances with which the biologic chemist has to deal, yet we do not now know whether it is primarily a waste product or a food. Yesterday it was a normal waste product, to-day we have no reason for saying so, to-morrow we shall certainly know.

It is conceivable that the investigation of this question may at last furnish what the nitrogen-equilibrium work has failed to give, a theoretic foundation for a practical doctrine of normal protein consumption. If kreatin should turn out to be a food we have at once an explanation of the dietetic value of meat extracts, as well as a reason why meat might be regarded as having an especial and peculiar value as a protein food. In the kreatin elimination we should then also have an index to the maximum amount of meat products which can be advantageously consumed. We might then reasonably assume that meats are exceedingly important food products, but that the maximum consumption of meat normally should fall short of yielding kreatin in the urine. The more other protein material is consumed, the less meat it would take to reach this maximum value. In diseases like fevers, which yield large quantities of kreatin in the urine, all meat products should then be excluded.

It is scarcely necessary to add that I advance this point of view only as a tentative working hypothesis and only because I think it will demand the kind of metabolism work which is now urgently needed.

For the next few years the conception of a dual protein katabolism should be and, I think, will be threshed out on the basis of work on fever patients and on normal persons, with the help of an occasional investigation on such suggestive conditions as pregnancy, convalescence, progressive paralysis, gigantism and dwarfism. This will clear the ground and incidentally should sharpen our wits and our tools for work on the more difficult chronic diseases, such as rheumatism and gout, and the chemically more complicated diseases, such as nephritis, atrophy of the liver and diabetes.

The specific problems in diabetes loom up so large and important as to be in themselves worth the lifetime of any chemist having exceptional opportunity to work on them. No generally acceptable explanation for the inability of the diabetic organism to utilize sugars has as yet been advanced, and so long as this is the case such a concrete and well defined problem demands renewed critical or constructive work. The same holds true for the acid intoxication theory advanced on the basis of so-called diabetic coma. So long as this definite and withal plausible theory can not command general acceptance, it should be regarded only as a standing challenge for more work by anyone to whom any special opportunity for work on it may happen to come.

Some of the more superficial observations and conclusions included in the accepted teachings concerning diabetes seem to me to be decidedly open to suspicion. The supposedly characteristic fruity odor emanating from the breath of diabetic persons has, I believe, nothing to do with the traces of acetone which the respired air of these patients contains. I have very nearly satisfied myself that that odor, in most cases at least, is due to nothing else than delicate whiffs of the stomach contents.

The peculiar sweetish odor occasionally encountered in diabetic urines which is also believed to be due to acetone is entirely different from the so-called acetone breath. As yet, I have not the slightest idea what this odor is due to, but in this case I am positive that acetone has nothing whatever to do with it.

The qualitative chemical tests for acetone in urine as usually carried out may likewise be regarded as pure fiction, for I have never yet seen a fresh diabetic urine the acetone concentration of which was sufficient to give a positive test with the nitro-prussid reaction.

I would not imply that such errors in the teachings on diabetes tend to invalidate the more important teachings based on the sugar, the ammonia, and on diacetic and oxybutyric acid. The purpose of this paper is, however, to point out fields for biochemical research in hospitals, and I regard the whole subject of diabetes, and especially the acid intoxication theory, as a most fruitful field for purely chemical work. I have already on a previous occasion[1] indicated what that theory would seem to call for from the therapeutic standpoint, and I repeat now that the sodic carbonate treatment as practiced must be regarded as a crude and unsuitable application and test of that theory.

It would be going outside the scope of this address to enter on detailed discussions of the numerous relatively isolated problems to be found in the field of metabolism. Small specific problems usually yield the quickest returns and not infrequently good ones. Every chemist knows this and is only too glad to take up the chance observations or suggestions which constitute the starting point for such investigations. Experienced clinicians usually have problems of such a nature to offer. I have endeavored rather to advance a point of view and to indicate broadly the kind of work which it calls for and the kind of material which must be worked up from that point of view.

The goal of the future in the field of metabolism is detailed knowledge of what takes place in the different organs. There are seemingly unlimited possibilities for several generations of work on the specific metabolism of specific organs and its effects on the general metabolism. The final explanations of and remedies for diseases, if they are to be attained at all, will be reached on the basis of such refined metabolism investigations. For the present we need, however, first of all, to learn the more obvious and general laws that govern the animal metabolism. From the standpoint of medicine we must surely fiurst so learn to know the waste products that we shall be able to say with greater certainty than has yet been possible whether a urine is or is not abnormal. This, I believe, can be done on the basis of the tissue metabolism just so soon as the necessary standards for comparison have been worked out.

We need, however, an abundance of reliable statistical material. The normal tissue metabolism from infancy to old age must be standardized carefully by the help of suitable and easily duplicated test diets. I think we shall then find not only that severely sick hospital patients show a deficient or abnormal tissue metabolism, but also that those who are merely weak and debilitated, and who need "building up" will reveal that fact to the chemical test. By those same chemical tests we shall then also know whether a given treatment has produced a general and fundamental improvement or whether it has merely removed some of the symptoms. So far as I now can see, there is no reason why we should not be able to determine with all desired certainty to what extent it is possible to influence the tissue metabolism by drugs, by diets and by different modes of living. The very stability of the tissue metabolism (as indicated by the constancy of the kreatinin elimination) against nearly all fleeting changes of diets and conditions would seem to me to constitute the surest guarantee that this line of work will, at all events, not yield a series of illusions. If well done, it should add a new chapter to the science of metabolism and of medicine.

Original Articles

THE SCIENTIFIC AND PRACTICAL VALUE OF HOSPITAL INTERNESHIP.*

BY THE LATE
NICHOLAS SENN, M.D.
CHICAGO.

Of the three learned professions, medicine, law and theology, medicine is pre-eminently the one which requires the most careful preparation for practice, because the physician the moment he enters on his lifework has to deal with human life, the most sacred thing on earth. The shortcomings and mistakes of the inexperienced lawyer and preacher do not weigh as heavily in the balance of human woes as the errors of judgment of the young practitioner who enters his profession without adequate, thorough, careful preparation. The former can very often be rectified by subsequent efforts in the right direction, the latter are only too often beyond the reach of human aid.

In law and theology a profound book knowledge goes far in preparing the way to successful practice; the physician must not only be in possession of this, but he must be taught how to apply his knowledge under the most varying conditions presented by disease and injuries if he is to become a safe practitioner from the very beginning of his professional career. In medicine theory must become subordinate to practice if students are to be made safe and successful practitioners.

Before universities were founded, hospitals built and text-books written, the old masters of our profession gathered a few pupils around them, inculcated the knowledge they possessed into them by informal conversational discourses, and taught them clinical medicine with the material which came in their professional services. At that time clinical instruction overshadowed theoretical teaching. During the early period of the university age the reverse was the case. It is said that Hueter lectured for eighteen years on surgery in the University of Göttingen, without performing a single operation. With the awakening of scientific medicine during the last century and the building of modern hospitals, clinical teaching and laboratory work have largely taken the place of didactic lectures.

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[1] The Journal A. M. A., 1907, xlix, 128.

* The last paper prepared by Dr. Senn; read for him at the annual meeting of the Cook County Hospital Alumni Association, February 2, 1908.

THE INTERNE IS THE STUDENT.

The hospital interne has the advantage over his colleagues from the very beginning. The competitive examination which secures for him his position is best calculated to stimulate him during his student days to extraordinary diligence and perseverance to gain the coveted appointment. Internes appointed by competitive examination always represent the studious, ambitious element of the class. They are usually men of high and noble aspirations. intent on making records for themselves during their professional careers; men with pronounced taste for the scientific side of medicine, men intent on enriching and ennobling the profession of their choice, men who have decided to become physicians for the good they can do rather than for the money they expect to earn.

This ambition to become a hospital interne usually takes root early in the mind of the student and exercises an influence for good throughout his college career. He starts out with a notable object in view, and governs himself accordingly. Having received the coveted prize by much self-denial and close application to his studies, he has already reaped one great satisfaction in life.

COLLEGE INSTRUCTION ALONE IS INSUFFICIENT.

There is no medical school in this or any other country which can give its students the amount of clinical instruction and training necessary to prepare them adequately for their profession. It is the hospital interne who graduates at the head of his class, and wins the prize in a trying competitive examination, who makes up this defect of his medical education. It will not be long after he has entered the hospital before he will realize more keenly than any time before that learning obtained by observation and experience far exceeds that gotten by precept.

The young doctor never feels more competent to battle with disease and treat emergencies than on the day of his graduation, but if he is the right sort of a man the first few cases coming under his own individual care will satisfy him of how little he knows and how true it is that "experience is the best teacher, only the school-fees are heavy."

This trying time the hospital interne spends under the guidance and instruction of the members of the attending staff, usually men of wide experience and high standing in the profession. The value of such a postgraduate clinical course from a scientific and practical standpoint can not be overestimated, as it always opens the way to a successful professional career, provided the opportunities offered are utilized to best advantage during and after the interneship. In these days of excellent text-books it is the hospital and the laboratory rather than the lecture-room which furnish the best means of obtaining a scientific as well as practical medical education. The postgraduate course of the hospital interne consists almost exclusively of these two modern methods of teaching medicine. It is during this part of his training that the interne awakens to the fact that "theories are very thin and unsubstantial; experience only is tangible." Before he leaves the institution he has learned the meaning of the maxim that "one thorn of experience is worth a whole wilderness of warning."

Every modern hospital has a well-equipped laboratory. It is here that the young physician spends much of his time in verifying or correcting the clinical diagnosis of the cases under his immediate observation. The microscope, test tube, culture medium, Roentgen-ray, electric test, and other modern diagnostic resources, are pressed into service to unravel the mystery and determine its anatomic location, and in many instances its exact pathology *in vivo.*

The American medical student does not see enough postmortem examinations, and such opportunities are but seldom offered in private practice. The morgue is a wonderful place in which to study the infinite changes wrought by disease, and to locate the broken link which severed the chain of life. It is in the silent deadhouse that the interne often clears up what was a mystery during life. It is in the deadhouse that he finishes the clinical history of his fatal cases and seeks for and analyzes the causes of death, and how they were created by disease. It is the truths evolved and the stern facts learned in the laboratory that so often awaken and sharpen in the interne his desire for original research work and lay the foundation for a useful literary career.

Thousands of the most prominent lights in our profession owe their success in life to their experience as hospital internes. It is very natural that this should be so. In the first place, only graduates of more than average ability and aptitude receive such appointments. In the second place, they live in an exclusively medical atmosphere during their service of eighteen months or longer, constantly in touch with the members of the attending staff who, by precept and example, unconsciously feed the flickering light of emulation. A review of modern medical literature will show that some of the very best contributions were made by physicians during their interneship days, and, therefore, shadowed their subsequnet scientific and literary careers.

RESPONSIBILITIES DEVELOP CHARACTER.

Amphitheater clinical instruction of students is something entirely different from the clinical training of an interne. For the most part the student is a passive hearer and onlooker, while the interne shares, at least in part, the responsibilities of the attending physician and surgeon in the diagnosis and treatment of the cases in their service. On him devolves the important duty of writing a concise, clear clinical history of every case, which serves as a basis for a systematic examination, and eventually a correct diagnosis. This part of his training is well calculated to make him a careful observer and to engender a taste for literary work. Daily he receives the benefits of the ripe experience and good judgment of the members of the attending staff, especially of the one under whom he has the privilege to serve. He is given an opportunity to examine every case, make his own diagnosis, and under the supervision of his attendant conduct the treatment.

In surgical operations he assists and in doing so cooperates with the operator, following with an interest begotten by a sense of responsibility every detail of the procedure. The after-treatment rests largely in his hands. It is the interne who must be on the lookout for complications, and to remedy them in time or notify his chief. Manual dexterity, so essential to the surgeon, can be acquired only by careful observation and long practice. The opportunities for developing the faculty of observation are unlimited during the service of an interne, and it is this essential qualification of the physician that he tries to cultivate. The daily opportunities for educating the special senses by observation and examination of patients results in the acquisition of a diagnostic acumen which can be attained only by an extensive and long clinical experience. The keen eye, the discerning ear, the *tactus eruditus*, the manual dexterity in operating and dressing of wounds, the proper application of splints and other mechanical appliances are the precious fruits and rich rewards of interneship.

As the interne penetrates deeper and deeper into the real work of his profession he becomes imbued more and more with the all-important fact that in his, as in any other profession, "practice is the best master," and he soon awakens to a consciousness that with all the splendid opportunities which surround him he is becoming deeply indebted to his profession. He is soon made to see the shortcomings of pure science in the practice of medicine and the great importance of practical training. He is not slow in detecting where our science and art are defective, and soon appreciates that "it is better to create than to be learned."

THE VALUE OF ASSOCIATIONS.

One of the most valuable practical advantages of an interneship is the association of his colleagues. A noble spirit of rivalry reigns in the little circle, a healthy stimulus for hard honest work. Books and medical journals are read and their contents discussed. Cases and operations are made the subject of conversation at table and during hours of leisure, and this way each interne receives, to a certain extent, the benefits of the entire service, and such intercourse is the best possible preparation for their future work in medical societies. It is conducive to the development of the gift of debate and a wholesome spirit of criticism. Internes are attracted by medical societies, and often enrich the meetings by the presentation of cases and pathologic specimens, thus filling in many gaps in the program with valuable material. In this way the interne becomes at the very threshold a contributor to medical literature and learns the value of postgraduate education through the medium of medical societies.

The many acquaintances he makes among physicians and the public during his service are most helpful to him when the time comes for him to decide on the location of his future field of practice. This is a very important step in the life of every young physician. Many men of more than average ability have been unsuccessful, not because they were not well prepared and did not make hard efforts, but because they made mistakes in the choice of their locations. The interne owing to his superior qualifications in the practical work, is sought by communities, corporations, hospitals, medical colleges, the Army, Navy and Marine-Hospital Service, and very often steps from the hospital at once into a lucrative practice. In other instances his wide acquaintance with physicians not only in the city in which he has served, but all over the country, is most helpful to him in his selection of a congenial location, with the necessary opportunities of establishing a growing practice, as opportunities make men as well as men opportunities.

The greatest value of an interneship consists, however, in the practical training received. A year and a half in a large, well-equipped hospital, and under the tuition and supervision of a competent staff, is more than equivalent to ten years of active practice. Knowledge begets confidence, while the doubting, faltering, hesitating physician is always a failure. On the other hand, confidence, decision and courage based on knowledge and experience command respect and confidence. It is the confidence in his ability as a diagnostician and his knowledge of and faith in appropriate treatment which makes our internes successful physicians, and their competency in the science and art of surgery safe and successful operators.

At the end of his term of service the interne is fully impressed with the fact that "the road to learning by precept is long, by example short and effectual," and he leaves the institution with a sense of confidence based on the scientific and practical knowledge he has acquired since the day of his graduation.

It is the interne who, during his postgraduate pupilage, has adhered most rigidly to the rules laid lown by Platen and has made the best use of his time and opportunities, that will leave the hospital best prepared to battle with disease and to assume the responsibilities imposed on the surgeon.

"Bemerke, höre, schweige, urteile wenig, frage viel."

TUBERCULIN IN PULMONARY TUBERCULOSIS.

WITH PARTICULAR REFERENCE TO THE ADMINISTRATION AND DOSAGE OF DENYS' TUBERCULIN.*

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It is now generally accepted that in tuberculin we possess a most valuable remedy in the treatment of tuberculosis. Koch's tuberculin, introduced in 1890, as a cure for tuberculosis, proved not to be such. Tuberculin was then given in large doses. Violent, dangerous, in some cases fatal reactions were produced; the curative effects were not seen. Error in the conception of the action desired of tuberculin led to misconception as to the proper mode of administration. Reactions were sought; cases were not properly selected; all were subjected to the new remedy. As a result, tuberculin came to be almost universally condemned.

This revulsion of feeling lasted for some years, but about 1898 interest in tuberculin was revived. Infinitesimal doses were given, and an attempt was made to render reactions of minimal occurrence instead of considering them the great desideratum.

In my opinion one of the dangers of tuberculin therapy lies in the fact that patients and physicians place too much trust in tuberculin and slight other elements of treatment. It is natural that the patient should do this, but the physician should insist that the hygienic treatment be carried out faithfully and conscientiously.

The use of tuberculin is based on the principles of artificial immunization. Any poison in the body has the power of stimulating the system to the production of antibodies. It is with the idea of obtaining an overproduction of antibodies and a consequent insusceptibility to the disease that use is made of tuberculin. The organism can be immunized by injecting more poison into it, thus forcing it to the increased production of antibodies (active immunization), or we can obtain the antibodies by injecting the blood serum of a previously immunized animal into the infected individual (passive immunization). In the case of an acute disease, running a rapid course, passive immunization should be employed in order to obtain the highest degree of immunity in the shortest time possible. If the disease is characterized by chronicity, active immunization should be employed in order to obtain the more lasting resistance to the poison. Consequently, in tuberculosis active immunization should be produced.

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* Read before the Tri-State Medical Society of Virginia and the Carolinas, Charlotte, N. C., Feb. 18, 1908

To establish an active immunity it is absolutely necessary that the toxins work with regularly progressive intensity on those groups of cells which manufacture antitoxin. Slight or stationary stimulations are not productive of immunity. It appears from the researches of Roux and von Behring that many small increasing stimulations are of more value than one large stimulation, the aggregate amount of stimulation being the same in both cases, and Trudeau states that "infinitesimal doses, methodically increased, which produce only slight stimulation of the defensive resources of the organism, result in a well-marked toxin immunity, as shown by increased toleration to large doses of toxin, while larger doses or too rapid an increase may bring about hypersusceptibility and an aggravation of all the symptoms of the disease."

VARIETIES OF TUBERCULIN.

Koch's original tuberculin consists of 5 per cent. glycerin bouillon no which human tubercle bacilli has been grown, evaporated by heat to one-tenth of its volume and filtered through a porcelain filter. Deny's tuberculin or bouillon filtrate consists of the bouillon or broth on which human tubercle bacilli of known virulence have been grown, filtered through porcelain and not exposed to heat. It contains, in addition to the toxins manufactured by the living tubercle bacilli, only those soluble proteins which come from the dead tubercle bacilli into the culture fluid. Denys' tuberculin possesses the advantage over Koch's original tuberculin in not having been exposed to heat, so that the chance of the toxins and proteins being affected by thermal influences is eliminated.

Koch's other products, tuberculin new and tuberculin new bacillen emulsion, contain the pulverized bodies of crushed virulent tubercle bacilli, much weakened in virulence by repeated dryings and not capable of reproducing tuberculosis.

From what is known of artificial immunity it would appear that Koch's original tuberculin and Denys' tuberculin would confer the greatest amount of antitoxic immunity; bacillen emulsion would excel in the production of an antibacterial immunity.

DESIRABILITY OF ESTABLISHING ANTITOXIC IMMUNITY.

Tuberculosis is both a bacillary and a toxic disease. The presence of living tubercle bacilli, irrespective of their toxins, does harm to the patient, but also, and we believe to a far greater extent, are the tuberculo-toxins baneful in their influence. While the bacilli are mainly responsible for the local conditions in the lungs, the toxins are the cause of the emaciation, the loss of strength, the febrile temperature, the rapid heart action, the night sweats; in short, the constitutional manifestations. The origin of this toxemia of tuberculosis can be accounted for only by the assumption that the toxins and soluble proteins manufactured at the site of bacillary invasion are taken into the blood and lymph streams and carried to all parts of the body. By establishing an antitoxic immunity we neutralize the toxin circulating in the blood.

Any direct attack on the bacilli is out of the question. Tuberculin, however, in any form, sets up a hyperemia in the tuberculous and peri-tuberculous tissues, and also excites a localized leucocytosis. Hyperemia is one of the best means at our command with which to combat infection, and leucocytes are considered the principal porters of both elements, amboceptor and complement, of those substances in the blood whose function it is to bring micro-organisms into solution, the bacteriolysins. With the advent of leucocytosis, it may be assumed that phagocytosis sets in, another of Nature's methods of defense against infection. Furthermore, it has always seemed to me that the marked primary increase and subsequent diminution in cough and sputum in many patients being treated with Koch's original tuberculin, or with Denys' tuberculin, was an excellent proof that a local as well as a general beneficial effect was being exercised. Consequently, we see that by establishing an antitoxic immunity we neutralize the tuberculo-toxins, and we also wage war on the bacilli themselves.

Denys' tuberculin appears to be best suited for the production of an antitoxic immunity. Containing, as it does, the soluble toxins and proteins of the tubercle bacillus, not subjected to heat, it would seem to be the most logical tuberculin to use. Furthermore, toxins dissolved in the culture fluid are known to lose their virulence, they become attenuated and are known as toxoids, that is, toxins having lost their virulence but still retaining their combining power with antitoxin. While losing their virulence, however, they do not lose their immunizing power. By injection of toxins thus modified we obtain a considerable increase in the anchorage of specific toxin, but at the same time (while we do not essentially increase the poison production) we obtain a marked increase in the production of antibodies. This occurrence, regularly repeated, must, by the combination of toxin and antitoxin, eventually bring about freedom to the body from the harmful agent.

INDICATIONS.

Tuberculin may be employed in:

1. All incipient cases, cases of closed tuberculosis in which ulceration has not taken place and bacilli are not to be demonstrated in the sputum.
2. Uncomplicated non-febrile, first and second-stage cases.
3. Fibroid cases not running a febrile temperature.
4. Febrile cases in which the temperature does not drop under treatment by rest, and where fever is due to the tuberculo-toxin alone and not to mixed infection. In such cases tuberculin should be administered with the greatest caution, in the most infinitesimal doses, with long intervals between successive doses.
5. Advanced, third stage cases. Tuberculin can here occasionally be used, not as a curative agent, but to aid in relieving distressing symptoms. It will often relieve the tight, harassing cough that is so exhausting, render expectoration easier, do away with thoracic pain, and help to make the patient more comfortable. In such cases its administration should be most guarded and the dosage very minute.

CONTRAINDICATIONS.

1. Greatly emaciated or greatly weakened individuals. The general body strength must first be raised by rest and proper diet before such patients will be able to supply those defensive forces which tuberculin stimulates to action.

2. Third stage cases with mixed infection. Those cases constitute the most absolute contraindications to the use of tuberculosis. In them a hypersusceptibility is easily excited, violent reactions are prone to occur, a general aggravation of the symptoms may set in, and great harm result.

3. Hemorrhage: Hemoptysis occurring during the administration of tuberculin is a signal not for the permanent withdrawal of the drug, but for its cessation at once and until some time after subsidence of all hemorrhagic symptoms.

4. Heart disease: A contraindication only if it is feared that owing to possibility of reactions compensation may be lost.

5. Marked increase in pulse frequency, beginning and persisting during administration of tuberculin.

6. Marked loss of weight, beginning and persisting during the administration of tuberculin.

7. Complications: Diabetes, nephritis, hepatic cirrhosis, hysteria, neurasthenia, epilepsy.

The patient about to take tuberculin should be impressed with the necessity of conscientiously carrying out the physician's orders. Before treatment is begun the physician should acquaint himself with the course of the patient's temperature, a two-hour record being most satisfactory, the temperature being taken preferably on the odd hours to avoid the 2 p. m. temperature coming immediately after a hearty meal, which may, in some individuals, be responsible for a temporary rise of as much as four-fifths of a degree. This preliminary record should be kept at least three days, from four days to a week is better. At the conclusion of the preliminary observation injections can be begun if advisable. They are given preferably in the morning, between 9 and 12 o'clock; injections given in the evening are open to the objection that very mild reactions may set in and pass off during the night, and are thus overlooked. The injection being given in the morning, the patient should be instructed to take very little exercise for the rest of the day (if any be allowed). By very little exercise I mean one-third of a mile, at a slow walk, as a maximum, and, in general, patients taking tuberculin should be allowed less exercise than others. The temperature should be taken every two hours for the rest of the day, the thermometer being left in the mouth five minutes if the weather is warm, ten if cold. In very cold weather it is best for the patient to go into a warm room and remain there ten minutes before taking his temperature.

Two hour temperature records on the day of injection are the best. Occasionally a three hour record may be kept; a four hour record is useless, for mild reactions may come and go in the four hour interval. Except on the day of injection, a three hour record will suffice. A temperature of 100 F. is the minimum reactionary temperature, unless there is headache and general malaise, with a temperature of, let us say, 99.8 degrees, when a reaction can be assumed.

REACTIONS.

We may define a reaction as that clinically demonstrable symptom-complex exhibited by a patient as a result of too large a dose of tuberculin. Reactions are of all grades; many are so mild as to be overlooked; some have been so severe as to result fatally. Reactions may be divided into three classes: (a) Cutaneous, (b) local or focal, (c) general or systemic.

Too little stress has been laid on the cutaneous and local reactions, the physician generally contenting himself to wait for the onset of a systemic reaction before allowing his dosage to be modified. Reactions are the most important objective phenomena in connection with tuberculin administration, for they serve as the one infallible guide for the regulation of dosage.

CUTANEOUS REACTION.

The cutaneous reaction is seen but seldom. It consists in the appearance at and about the site of injection of a red, tense, slightly edematous, tender, painful swelling, in size usually not over the diameter of a silver dollar. There is no sense of fluctuation. The swelling makes its appearance in from three to ten hours after the injection, lasts a variable time—two days to a week —disappearing gradually. It may be confounded with a hypodermic abscess, but shows no tendency to suppurate, and disappears far sooner than does the other. It has been my good fortune to witness three such reactions, two in the same patient. In each case the mouth temperature failed to reach 99 F. and there were no subjective signs of systemic disturbance.

LOCAL OR FOCAL REACTION.

The local or focal reaction is of far more frequent occurrence and can very often be demonstrated at the height of a systemic reaction, when, of course, its presence from the practical standpoint of dosage loses weight. It consists in an increase in the physical signs in the lungs and occasionally in the appearance of physical signs where formerly none existed. Cough and expectoration become more abundant. These changes are due (1) to hyperemia about the focal process, caused by the administration of tuberculin; (2) to increased bronchial secretion; (3) to increased local leucocytosis.

As I have said, this form of reaction is very frequently found in common with the systemic reaction, but twice within the past two months I have observed its presence in two patients, in one of whom the temperature did not reach 98.6 F., in the other the maximum being 99.4 F.; in neither case was there any subjective discomfort. In one patient, with slight infiltration of the right apex anteriorly and posteriorly, producing tubular expiration and a few subcrepitant râles, slight dulness above the clavicle anteriorly, and in the supraspinous fossa posteriorly, was demonstrable, and the râles were far more moist than they had been at the time of previous examination, ten days before. In the other patient, with very slight involvement of the right apex posteriorly, many moist râles and slight bronchovesicular breathing were noted, previous physical signs having consisted in a few subcrepitant râles. In both cases increased cough and expectoration were noticed within twelve hours after injection of tuberculin, and it was this fact that caused me to examine the chest again, the examination in each case being made within twenty-four hours of the time of injection. The cough and expectoration lessened within a week, and the physical signs were perceptibly receding at the end of that time. Focal reactions, when moderate, are not undesirable; they rid the system of pus and septic material, and we have no better expectorant than tuberculin.

SYSTEMIC REACTION.

The systemic reaction is well known and classical. In from six to thirty hours (the latter being rare) after injection of tuberculin, the temperature rises to anywhere between 100 F. and 106 F. The patient may not complain of any subjective symptoms, but usually there is discomfort, chilliness amounting at times to a definite rigor, headache, nausea, at times vomiting, pains in limbs and body, general malaise, and increase at times in cough and sputum if a focal reaction co-exist. These symptoms are usually proportionate in severity to the height of the temperature. The temperature drops in from two to ten hours (depending on the severity of the reaction) and save for a feeling of weakness, all symptoms except cough and sputum have subsided and the patient is himself again in twenty-four hours in the majority of cases. Sometimes, however, a systemic reaction appears late, thirty hours after injection, and fever persists for two or three days, gradually dropping to normal.

The desirability of reactions has long been a mooted point, but now they are considered to be distinctly undesirable. At the time of his discovery of tuberculin Koch believed that the organism should be subjected to many powerful reactions in order to produce focal necrosis and the elimination of both tubercle tissue and tubercle bacilli. This idea is not practicable and does not now hold good theoretically. It has been abandoned entirely, but many still cling to the idea that occasional reactions are beneficial; morally they may be, but physically they are not. A moderate hyperemia, with serous exudation in the peri-tuberculous tissue, unquestionably has a good curative influence, but this can occur without a systemic reaction appearing, and it is the universal verdict that marked constitutional symptoms are bad.

OBJECT OF TUBERCULIN.

Tuberculin has as its object not so much the effect on tubercle tissue and bacilli as the protection of healthy tissue against the bacilli and tuberculo-toxins. To attain this end, reactions are unnecessary. Were reactions necessary, then the greater the reaction the greater the immunity, but, as a matter of fact, we not only see that we can acquire immunity without reactions, but also that we can get many and repeated reactions without immunity. Moreover, reactions favor the production of hypersusceptibility. To quote Trudeau:[1] "By hypersusceptibility we do not mean the usual susceptibility to an increased dose which shows itself by an ordinary reaction, but an exaggerated and growing sensitiveness to the toxin which follows a reaction without any previous warning. For instance, a patient having reacted in the usual way to 1 mg., and all the symptoms of the reaction having disappeared and the temperature become normal for two days, an injection of 0.5 mg. is followed by a marked, even a more marked disturbance than the one produced by a 1 mg. dose; another interval of rest being given, and the dose reduced to 0.1 mg., another strong fever reaction manifests itself, and this continued and sometimes increasing susceptibility of the organism to a decreasing dose of toxin constitutes tuberculin hypersusceptibility."

If this condition occurs it is not necessary to discontinue tuberculin permanently. All injections should be stopped until the temperature has been normal for ten days, then a dose of 1/100 of that causing the beginning hypersusceptibility should be given, and the subsequent increase in dosage should be more rapid than before; in fact, more caution is needed. Of course, if marked hypersusceptibility recurs two or three times the case is not a suitable one and tuberculin will have to be abandoned.

ADMINISTRATION OF DENYS' TUBERCULIN.

Diluting the Tuberculin.—As a diluting fluid physiologic salt solution is used, to which 0.5 per cent. carbolic acid has been added to prevent decomposition. A pipette of small caliber, containing 1 c.c. and accurately graduated to tenths of a cubic centimeter, is used. This is sterilized and filled with 1 c.c. of pure bouillon filtrate,[2] which is then emptied into a sterile bottle. Then, using the same pipette or one exactly similar, 9 c.c. of the diluting fluid are added. This makes a 10 per cent. solution, each cubic centimeter of which contains 100 mg. of tuberculin. Proceeding in like manner, we make from this 10 per cent. solution a 1 per cent. solution, each cubic centimeter of which contains 10 mg. of tuberculin, and in similar fashion we proceed to the weaker solutions.

The solutions should be kept in a cool place, in the dark or in brown bottles, and the weaker ones (0.1 per cent. and under) should be renewed after four weeks. All turbid solutions are worthless and should be discarded.

Eight solutions are used, each one-tenth the strength of the next higher. No. 1 contains 1/10,000 mg. per c.c. and is for febrile cases only; No. 2 contains 1/1,000 mg. per c.c.; No. 3 contains 1/100 mg. per c.c.; No. 4 contains 1/10 mg. per c.c.; No. 5 contains 1 mg. per c.c.; No. 6 contains 10 mg. per c.c.; No. 7 contains 100 mg. per c.c.; No. 8 is pure tuberculin.

A syringe is used holding exactly 1 c.c. and carefully graduated to tenths of a cubic centimeter. Injections (if no reactions occur) are given twice a week. With a febrile patient solution No. 1 is used, and intervals between injections should be four or five days. With a non-febrile patient solution No. 2 is employed, containing 1/1,000 mg. per c.c. and an initial dose of 1/10,000 mg. is given. In other words, as the syringe contains 1 c.c., we give one-tenth of a syringeful of solution No. 2. Increase is made at first by 1/10,000 mg., consequently at the subsequent dose we give two-tenths of a syringeful, then three-tenths, then four-tenths, and so on, till we have given 9/10,000 mg. or nine-tenths of a syringeful.

We then change to solution No. 3, ten times stronger than No. 2, containing 1/100 mg. per c.c. Beginning with 1/1,000 mg., or one-tenth of a syringeful, increase is made by one-tenth of a syringeful, but we must remember that while with solution No. 2 we were increasing our dosage by 1/10,000, we are now increasing by 1/1,000 mg. When we have reached 9/1,000, or nine-tenths of a syringeful of solution No. 3, we use solution No. 4, containing 1/10 mg. per c.c., and proceed as before, bearing in mind that now we are increasing each dose by 1/100 mg. When solution No. 6 is reached the interval between doses should be lengthened to five days, increase still being made by one-tenth of a syringeful of the solution used. When the patient is receiving 100 mg. six days should elapse between doses, when 400 mg. are reached, from ten days to two weeks. The maximal dose is 1,000 mg., or 1 c.c.

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[1] Tuberculin immunization in the treatment of pulmonary tuberculosis. Am. Jour. Med. Sc., June, 1907.

[2] Denys, J.: Le Bouillon Filtré du Bacille de la Tuberculose dans le traitement de la Tuberculose humaine.

of pure tuberculin. This dose may, if reached, be repeated a few times, but, as a rule, tuberculin should then be dispensed with for a time. If no reactions occur the course will consume about a year. Reactions will, of course, greatly lengthen the time; in the majority of cases the maximal dose is never attained.

This is the method of dosage employed by Denys.. Naturally the dosage must be suited to each individual case, and in giving such an outline we are, of necessity, forced to generalize. Each physician will learn by experience what tuberculin will do in his own hands and will modify his dosage accordingly. Some patients will withstand rapidly increasing doses, others will have to be dealt with most cautiously.

It is found that patients react most frequently at the second or third dose of a new solution. This is not strange, for with each new solution employed the increase in dosage becomes ten times that of the preceding solution. Consequently, when proceeding to a new solution, it may be well to increase by 5 centigrams instead of by 1 decigram of the solution, for two or three doses, to avoid possible reaction.

With the occurrence of a systemic reaction no further dose should be given until the temperature has returned to normal and has remained so for two days. If cutaneous or focal reactions occur it is well to repeat the offending dose once before proceeding to an increase. After a systemic reaction the offending dose should not be repeated, but a smaller one substituted. Thus if a patient reacts to 1 mg. the subsequent dose should be 1/5 mg., then 0.5 mg., then 1 mg., the interval between doses remaining the same as before the reaction.

If a second reaction occurs before the dose causing the first reaction is reached or surpassed, tuberculin should be stopped until the temperature has been normal for four days, then a still smaller dose should be given. Thus, if 1 mg. causes a second reaction, the next succeeding dose should be 0.1 mg. and progression upward should be made by 0.1 mg. to a dose. If reaction again occurs before the primarily offending dose is reached, tuberculin hypersusceptibility is probably setting in and should be dealt with as stated above.

Schnöller,[3] of Davos, advocates the administration of Denys' tuberculin in a slightly different manner. He employs two methods, the conservative and the radical. His conservative method is indicated in: (1) all extensive lesions, (2) patients with slight resisting power, (3) patients with much emaciation, (4) patients with mouth temperature over 99.4 F., (5) patients with inverse temperature, (6) patients with hemoptysis, (7) children, (8) pregnancy.

He advises in these cases the administration of solution No. 2 daily, of Nos. 3 and 4 every other day, of Nos. 5 and 6 twice a week; thus, even in his conservative method, his contention is for more rapid dosage with weaker solutions than are suggested by Denys. I have made a practice of giving solutions Nos. 2 and 3 every other day, if no reactions appear, beginning biweekly injections with No. 4, and have not seen any bad results from this procedure.

Schnöller uses the radical method with patients in good physical condition and manifesting strong tolerance in order to establish an active immunity as rapidly as possible. His radical method consists simply in starting with solution No. 4 and following out practically the same schedule of dosage as that outlined by Denys. I have had no experience with this method.

The time necessary for a course of tuberculin can not be estimated in advance, but in every case the patient should be told that it must be administered for several months to be of benefit. We again quote Denys: "The two most important factors in obtaining results are the length of time over which the treatment is extended and the dose of toxin the patient can be made to tolerate. . . . Not much permanent good can be expected from a short treatment extending over a few months, especially if the highest dose reached at the end of that time be a fraction of a milligram. On the other hand, when full doses have been reached they should not be continued indefinitely for fear of exhausting the patient's power to respond, by the formation of antibodies, to the stimulus of the injection of toxin."

RESULTS.

Patients tolerating increasing doses are not so prone to the exacerbations and relapses exhibited by those not so treated. More permanent cures have resulted when tuberculin has been used than where it has been omitted; many patients running a slow but steadily downhill course, in spite of open-air treatment, improve and get well under tuberculin. Tuberculin has a favorable effect on the chronic toxemia of tuberculosis, which disappears under its use to an astonishing degree. Cough and sputum frequently cease, or persist greatly lessened in amount.[4]

CONCLUSIONS.

1. Tuberculin is the most valuable adjuvant to fresh air, rest, good food, we possess in the treatment of pulmonary tuberculosis.
2. Denys' tuberculin appears to be best suited to establish an active antitoxic immunity, the type of immunity capable of doing the greatest good.
3. Tuberculin is indicated in many types of cases, and in the hands of a competent administrator will do no harm.
4. Reactions are often overlooked; they are not to be desired, and when frequent or violent are distinctly harmful to the patient.
5. The dosage should at first be infinitesimal; increase should be very gradual; the word "haste" has no place in tuberculin therapy.
6. Time and tolerance bring success in the treatment by means of tuberculin.
7. Tuberculin should never be used save in conjunction with strict hygienic and dietetic measures.

33 Haywood Street.

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[3] Theoretisches und Praktisches Über Immunisierung gegen Tuberkulose nebst Statistik von 211 mit Denys' schem tuberculin behandelten Lungenkranken

[4] See also: Brown, L.: The Treatment of Tuberculosis. Osler's Mod. Medicine, vol. iii; Bandelier and Roepke: Lehrbuch der Spezifischen Diagnostik und Therapie der Tuberkulose.

Business Methods.—Physicians have the reputation for being very poor business men. It seems almost axiomatic that the physician who succeeds away beyond the rank and file must have in addition to other attainments a keen business mind. The little motto so often seen in the offices of large business firms "Do it now" should be religiously observed by the physician in prompt response to calls, prompt case records, charges, statements and collections. There is no business man who should avoid neglect so strictly as the physician. Someone has said jocosely—it is a transient business; certainly there are many transients. Nothing suceeds like success and the $50,000 a year man has the confidence of the thousands who have only heard of his success.—*Leucocyte.*

THE RELATIONSHIP BETWEEN THE SPINAL CORD, THE SYMPATHETIC SYSTEM, AND THERAPEUTIC MEASURES.*

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In 1834 there was published a book by William and Daniel Griffin, brothers—one a physician of Edinburgh, the other a surgeon of London—in which they say: "We should like to learn why pressure on a particular vertebra increases, or excites, the disease about which we are consulted, why it at one time excites headache, or croup, or sickness of the stomach;" and so on; and again, "Why in some instances any of these complaints may be called up at will by touching a corresponding point of the spinal chain?" "Why that point should always be sore to the touch in such attacks, . . . " and so on.

These observers analyzed 148 cases of various disorders and grouped them according to regions of spinal tenderness, and the complaints arranged themselves in groups as the following table† shows:

Cases.	Prominent Symptoms.
Twenty-eight cases of cervical tenderness, 8 men; 8 married, 12 unmarried.	Headache, nausea or vomiting, face-ache, fits of insensibility, affections of the upper extremities. In 2 cases only, pain of stomach; in 5, nausea and vomiting.
Forty-six cases of cervical and dorsal tenderness, 7, 15 married, 24 unmarried.	In addition to the foregoing symptoms, pain of stomach and sides, pyrosis, palpitation, oppression. In 34 cases, pain of stomach. In 10 cases, nausea or vomiting.
Twenty-three cases of dorsal tenderness. 4, 0 - - - 6 married, 16 unmarried.	Pain in stomach and sides, cough, oppression, fits of syncope, hiccough, eructations. In one case only, nausea and vomiting. In almost all, pain of stomach.
Fifteen cases of dorsal and lumbar; 1 man; 11 married, 3 unmarried.	Pain in abdomen, loins, hips, lower extremities, dysury, ischury in addition to the symptoms attendant on tenderness of the dorsal. In 1 case only, nausea.
Thirteen cases of lumbar tenderness.	Pains in lower part of abdomen, dysury, ischury, pains in testes or lower extremities, or disposition to paralysis. In 1 case only, spasms of stomach and retching.
Twenty-three cases, all of the spine; 4, 0 - - - 4 married, 15 unmarried.	Combines the symptoms of all the foregoing cases.
Five cases; no tenderness of spine.	Cases resembling the foregoing.

These early writers thought that a goodly number of disorders originated in irritation in the region of the cord, as do certain writers of to-day. They state, moreover, that acute inflammations were not evidenced in the back, but disorders, such as fevers, etc., showed symptoms of tenderness, and noted in cases of metastases a corresponding migration in spinal tenderness. The book is so interesting that one is tempted to write more about facts and inferences, etc., and to speak of their remedies of blisters and leeches applied over the tender areas, along with their results, but this would become too lengthy, so the reader is referred to the book.

Shortly after this Marshall Hall (1841) published his work establishing the status of a spinal reflex, thus opening the way for an understanding of why there is pain in the vertebræ, referred to by the Griffin brothers, and physiologic and anatomic research has accumulated from that time to this. Methods of therapy since 1834 have fluctuated from the pole to the antipodes, leaving leeches and blisters in the background, and have included massage, hydrotherapy, electricity, mechanotherapy, osteopathy, Christian Science, and what not. Many of the therapeutic methods have accomplished excellent results.

It is the purpose of this paper to bring together enough evidence to show that the many procedures of external therapy have been based on the principle of the spinal reflex demonstrated first by Hall, and evidence of which was clinically shown by the Griffin brothers, and that the diseased part, when it is not in a quiescent stage, shows itself reflexly by means of tenderness in the para-vertebral tissues.

Dana, in his clinical study of neuralgias, in 1888, divided the surface of the body into sensory areas in which were associated pains from various organs. He noted the sensory nerves which originated in these areas and correlated them with the sympathetic ganglia supplying these regions.

Head, in 1893, demonstrated still more accurately the cutaneous areas and maximal points of pain related to the viscera and their corresponding spinal segments. The accompanying figures show his results. It can be observed that the tender areas noted by both investigators agree substantially with the regions of the tender vertebræ recorded by the Griffin brothers seventy-three years ago.

Henrik Kellgren, in Sweden, in the early days of his practice observed that inflamed or irritative conditions of various internal organs, etc., are in most cases accompanied by tenderness in various spinal nerves, which is especially marked over the sites of the communicating cords to the sympathetic ganglia; moreover, it has been established clinically that friction over tender areas can lessen the morbid conditions of the parts specified.

P. H. Ling (1834) noted tenderness in heart affections when frictions were practiced over the fourth or fifth dorsal nerves of the left side.

The Swedish gymnasts have established areas of tenderness for various organs, over which they apply frictions, vibrations and massage. These do not in every case correspond to the tender skin areas of referred pain, as determined by Head, but they do not vary any more than observations by different individuals are apt to. In many cases the tenderness can only be elicited by deep pressure, not merely by touching the skin. The Swedish school regards the amelioration which takes place in morbid conditions of various organs, consequent on nerve manipulations, as being possibly analogous to that occurring in the case of muscles, stimulation of the sensory nerves over the muscles causing increased growth and activity. They also consider that a vasomotor element may be present. They find in morbid conditions of the stomach, in many cases, tenderness of the sixth, seventh and eighth dorsal nerves on the left side; friction on these nerves may cause eructations. In morbid conditions of the pylorus the same nerves on the right side are often involved. A book by Edgar F. Cryax, p. 164 "Kellgren's Manual of Treatment," gives in specific detail the parts regarded by the gymnasts as being related reflexly with internal organs.

Lauder Brunton* has graphically described the action of a mustard plaster. The efficacy of blisters is well known. They act as an irritant, and hence cause dilation of the peripheral vessels and contraction of the deeper channels. Manual movements and massage reflexly produce the same phenomena.

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* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

* From the Department of Neurology in the Unversity of Pennsylvania.

† This table is taken from the original publication, and the figures are copied as given.

* Principles of Pharmacology.

It has long been known physiologically—that repeated light, mechanical pressure to the skin calls into activity the vasoconstrictors, and that steady pressure evokes vasodilation. Likewise, hydrotherapists have shown that long continued applications of cold, and brief applications of heat, produce sedative effects or dilation of vessels, while prolonged heat or brief exposure to cold produce exciting effects or contraction of surface vessels. It requires but the interpretation of a number of hydrotherapeutic and electrotherapeutic cases to demonstrate that there is a marked parallelism between the effects of hydriatic applications and the effects produced by electricity, if applied with scientific precision.

The researches of Brown-Séquard, Charcot, Winternitz, Benjamin Barac, Fleming, Simon Baruch, Chapman and other hydriatists have established a distinct relationships between the following named external and internal regions, respectively:

1. Scalp and skin covering neck, upper part of back and face, with the brain. 2. The precordial region, with the heart. 3. The skin covering the chest, with the lungs. 4. The middle dorsal region and epigastric region, with the stomach. 5. The lower third of the sternum and lumbar region, with the kidneys. 6. The skin overlying the liver and spleen, with these organs. 7. The umbilical region, with the intestines. 8. The epigastric, the lower lumbar and sacral regions, inner surface of thighs and the feet, with the uterus and ovaries.

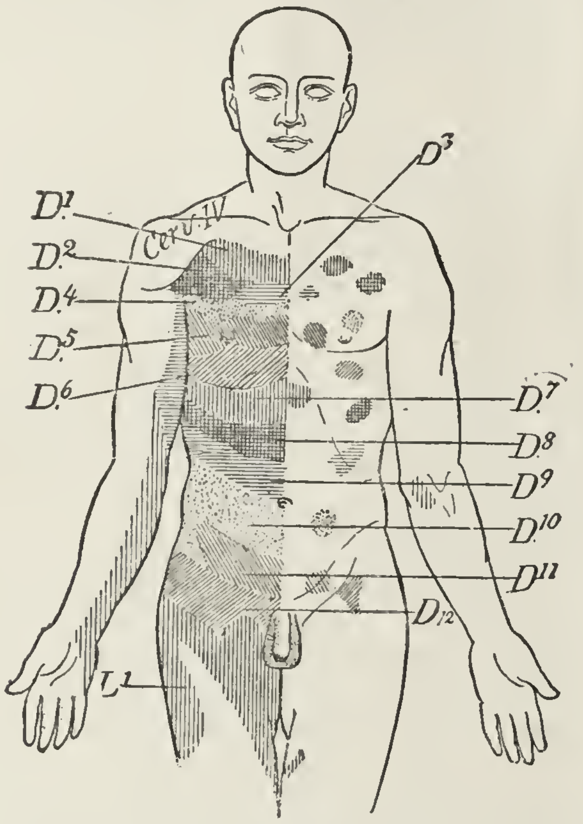

Fig. 1.—Anterior cutaneous areas and maximal points of pain related to the cord segments (Head).

In general, the skin overlying an organ is reflexly associated with it, which is the reason why applications of electricity over an organ usually influence it, and not altogether because the current is passed through the organ. When these areas are studied comparatively, it is noted that they are practically the same as those regions pointed out as showing reflex pain, which would suggest a nervous path from the organ to the skin and from the skin to the organ, the terminations of which are in the same visceral and cutaneous fields.

Clinically, the evidence is conclusive that we get reflex pain in disease from the heart in the precordial region. Head has demonstrated pain in areas marked 1, 2, 3 dorsal, in his diagram, which include the precordial region, all of which is embraced in the sensory distribution of the 1, 2, 3 and 4 dorsal segments, and which is the area described by Brown-Séquard and the above mentioned investigators as reflexly affecting the heart.

I am aware that the statements I shall make in this paper may require some amendment, but the main outlines will be found to be true. The skin areas of dorsal segments 1, 2, 3 and 4, which include the precordial region and encircle the body at the level of dorsal vertebræ 1 to 4, as shown by Thornburn, Sherrington and others (these would include Head's areas) would be in direct relation to the accelerators of the heart, which are located in the first, second, third and fourth segments of the cord.[1] It is well known that prolonged application of ice to the heart area inhibits active accelerations, whereas short applications accelerate.

Inhibitory fibers to the heart come by way of the vagus from the spinal accessory nucleus. They constitute an outflow of the autonomic system, as this nucleus is in close relationship with the autonomic system described by Langley and shown embryologically by Streeter. They unite with fibers from the inferior sympathetic ganglion to form the cardiac plexus (also autonomic fibers). Inhibition is obtained by stimulation of the vagus, and also by prolonged applications of cold over accelerators in dorsal segments 1, 2, 3 and 4, as shown by brief applications of ice to the heart region hastening the movement, while prolonged cold to the same region produces inhibition. Reflex inhibition of the heart is familiar to every laboratory worker who has seen slowing of the heart by stimulation of the central end of sensory nerves.

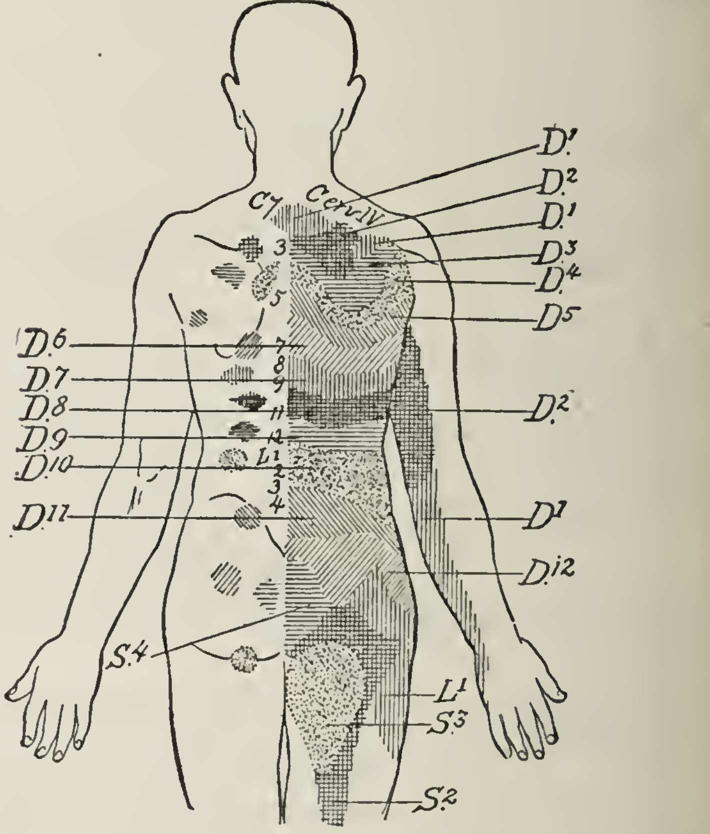

Fig. 2.—Posterior cutaneous areas and maximal points of pain related to the cord segments. Relation of cutaneous areas to viscera according to Head. 1—3 D. heart; 1—5 D, lungs; 6—12 D. stomach and intestines; 1—4 S, bladder; 10 D—4 S, genitalia.

Howell says: "Few subjects in physiology are of more practical importance than that of vasomotor regulation; it plays such a large and constant part in the normal activity of the various organs." The impetus to study vasomotor phenomena was given by Claude Bernard when he discovered that by cutting the sympathetics in the neck of a rabbit, the blood vessels in the ear on the corresponding side became very much dilated, and that stimulation of the peripheral end caused the ear to become blanched. Streeter's (Johnstone, "Anatomy of Vertebrates") drawing of nerves in a six weeks' embryo shows the close relationship the spinal accessory and vagus bear to the sympathetic system and to the spinal system. While the vagus distribution spreads over a good deal of visceral territory, yet facts from anatomy in lower vertebrates would indicate that the viscero-sensory tract was spinal.

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[1] Howell's Text book of Physiology, 1906, p. 531.

In fishes and other lower vertebrates there exist visceral afferent fibers taking impulses from the viscera to the central nervous system. The visceral afferent fibers form a component part of each of the dorsal nerves of the trunk and head, with the exception in most vertebrates of the trigeminus and ophthalmic profundus nerve. In the trunk the fibers have their ganglion cells in the spinal ganglia and pass by way of the white rami communicantes through one of the ganglia of the sympathetic nerves to certain of the organs of the viscera.[2]

In the spinal cord these fibers have their central endings in a part of the gray matter lying at the base of the dorsal horn, known as Clarke's column, and perhaps with other cells which lie near the median plane dorsal to the central canal. This column of cells and its central relations have recently been proved to be the central ending of sympathetic sensory fibers in certain organisms. The cells in Clarke's column pass lateralward to the surface of the cord, and thence cephalward, forming the direct cerebellar tract (column of Flechsig) which enters the cerebellum, ending in the vermis. This fact suggests the possibility that the cerebellum is useful in coordination of visceral function.

In lower vertebrates the efferent viscero-motor fibers go directly to the smooth muscles, glands, etc. In higher forms the sympathetic system is interposed. The visceral efferent nuclei in the cord occupy a position dorsal to the ventral horn, between it and the visceral afferent column. In human anatomy this has recently been emphasized by Alexander Bruce.[3] The fibers from these cells pass, some out of the dorsal root and some out of the ventral root of the cord, depending on the height in the developmental scale of the animal.

Tracts from higher brain centers bring impulses to both somatic and visceral motor nuclei, but much remains to be done to explain the mechanisms by which somatic and visceral activities are correlated. Collaterals from afferent visceral fibers directly to the visceral efferent nuclei are probably present in mammals. The short viscero-motor connections form a two-linked chain between the viscero-sensory and viscero-motor apparatus. It is reasonable to assume that in fishes tracts from the cerebellum, or mesencephalic nuclei, bring impulses to the visceral motor nuclei, especially for the coordination of somatic and visceral muscles in the act of seizing food. This is in accord with the conception that the cerebellum exercises a coordinating action on the viscera.

Reasoning by analogy from lower mammals and work on human anatomy by Langley, Onuf, Gaskell and others, it seems proper to describe the anatomy as has been done above, and noting that in each segment of the cord we may have a viscero-sensory ending, a visceromotor center, connecting collaterals to each other and cephalward; also from this same segment are sympathetic fibers and sensory fibers from the skin. We can locate these segments by changes in sensation, as did Head, or by cutting roots, as did Sherrington. Each segment may be affected by altered conditions in the viscero-sensory tract. The tonus of the segment is altered perhaps, consequently the afferent sensory fiber from the skin is hypertonic and a sensation of pain is felt. By applying heat or cold or other stimuli to the segment of skin whose endings are in a segment in which arise viscero-motor, vasomotor or other activities, we can reflexly affect the organ supplied by these tracts.

That this can be done has been shown by the researches of Brown-Séquard and others already mentioned, chiefly through the vasomotors. The change may be observed by heat and cold, impact of water, hand pressure, steady or alternated, electricity, mechanical stimulation or other means, yet the underlying principle remains the same.

In the digestive tract the vasomotor centers for small intestine and stomach have been located in the cord in dorsal segments 6 to 12.

Dana's areas of reflex neuralgia for stomach come in the region of the skin segments supplied by fibers from cord segments holding vasomotors to the stomach

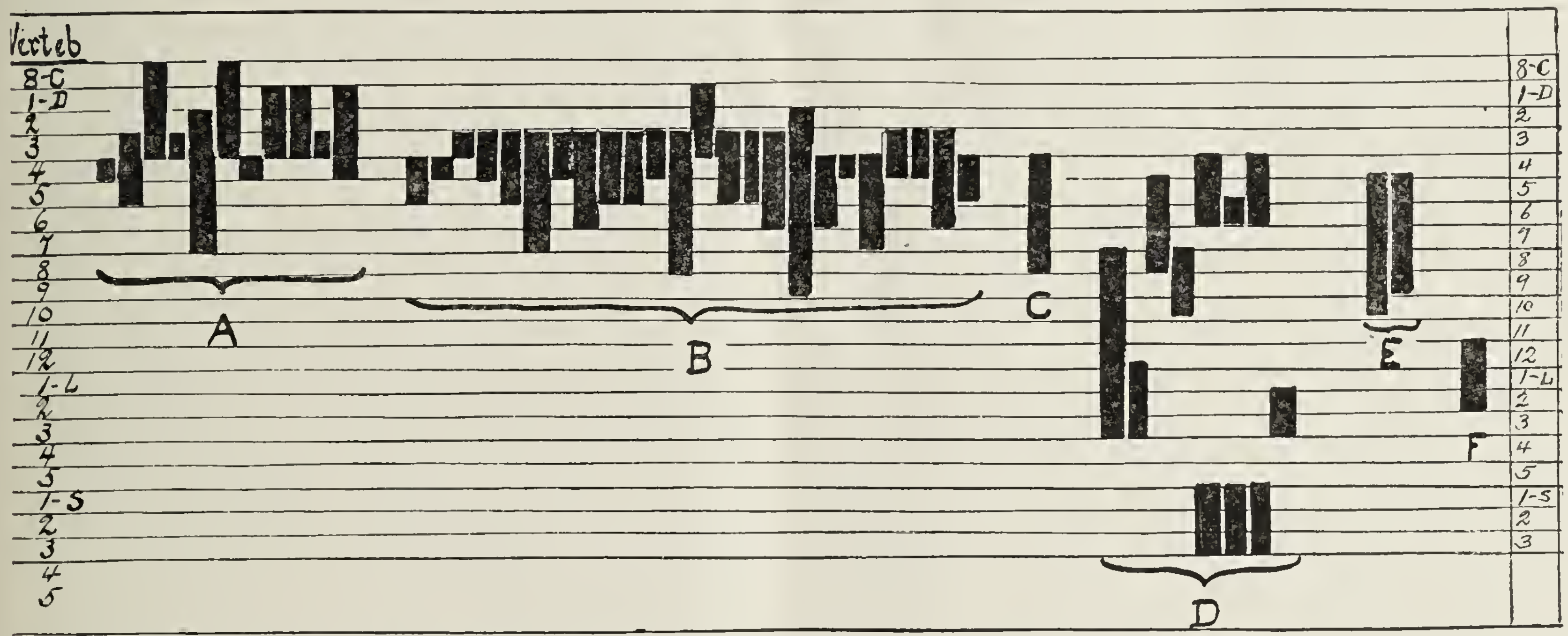

Fig. 3.—Diagram showing tender points over vertebræ in diseases (A) of the heart; (B) of the lungs; (C) in injury of stomach; (D) in typhoid; (E) dysentery, and (F) helminthiasis. Eachvertical black bar represents one case.

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[2] Johnstone's Anatomy of Vertebrates.

[3] Alex. Bruce: Rev. Neurol. and Psychiat., 1907, 1.

and small intestine. We find in the stomach and intestines, according to the skin areas of reflexed pain, that the segments involved are the sixth to ninth dorsal inclusive.

My own observations in cases of affection of the heart would indicate that when the heart is not in a state of compensation or is not in a quiescent condition, tenderness is found in one or more of the first four dorsal vertebræ and often exhibited in the contiguous erector spinæ muscles when firm pressure is exerted over these parts; in addition there may be tenderness in the skin, in any part of the skin distribution of these segments of the cord, as shown by Head.

In ten cases where the heart was markedly distended, firm pressure over the spinous processes provoked a feeling sometimes of acute pain, sometimes of tenderness. The sensations, as shown in Figure 3, A, were mostly confined to the first four vertebræ and the contiguous erector spinæ muscles. When vertebræ below the fourth showed pain there were other factors entering into the case, such as marked dyspnea and constipation or other diseased condition.

In twenty-nine cases of tuberculosis of the lungs twenty-five of them showed well demarcated tenderness in vertebræ ranging from three to six inclusive. Where there were marked digestive derangements the tenderness was continued down the spine to the ninth dorsal vertebræ. Conditions of asthma and pneumonia showed tenderness in the same vertebral regions as did tubercular cases (Fig. 3, B).

Those abdominal conditions which I examined gave evidence of tenderness on pressure from the fourth dorsal vertebræ down as far as the second lumbar, and in some cases there was tenderness over the sacrum, especially in the distribution of the twelfth segment (Fig. 3, C D E F). These areas correspond quite accurately with the vasomotor centers for the digestive tract. The cases were of diseases in the digestive tract, gastritis, typhoid fever, dysentery, etc. This same fact is true of the observations on heart affections, that the vertebral tenderness corresponded with the spinal vasomotor centers. It is also true of the pulmonary conditions that the spinal tenderness was in the same region as the location of the origin of sympathetic fibers going to the inferior cervical ganglia, which is in close relation to the lungs and heart. This ganglion receives fibers from the upper six dorsal segments. In the cord from the sixth dorsal to the second lumbar are the vasomotor cells for the digestive viscera. While they arise as high as the sixth they do not go to the celiac ganglia until they descend in the cord to the level of the eighth thoracic segment and then emerge in the splanchnic nerves.

However, putting aside the peripheral anatomy, we find clinically that our combined areas of tenderness, first thoracic to the second lumbar, correspond with the location in the cord of the column of Clarke and the intermedio-lateral column of cells. Onuf, Collins and others, and lately Alexander Bruce, have called attention to these columns of cells as being the spinal centers of vasomotor phenomena. The intermedio-lateral tract in the lower vertebrates sends fibers out of the cord in both the ventral and dorsal roots. These fibers enter the sympathetic system and form an efferent track. They may be excito-glandular, pilo-motor or vasomotor. Between the column of Clarke and the intermediolateral tract we have collateral fibers. Hence, in a segment of the cord, we have an afferent viscero-sensory ending and an efferent sympathetic nucleus, with collaterals connecting them. In this same segment we also have sensory nerve endings from the skin.

Dogiel and Onuf found that the axis cylinder processes of certain cells of sympathetic ganglia terminate in a spinal ganglion around cells of a spinal type, thus establishing the existence of a sensory sympathetic nerve element. Kölliker, on the other hand, claims that there are no specific sympathetic sensory fibers, but that the visceral sensory fibers are the peripheral branches of the T dividing fibers of the spinal ganglion cells. Onuf and Collins have shown that apparently both views are incorrect if adhered to exclusively.

A reconciliation of these contradictory observations can be made if the view is taken that the sympathetic sensory fiber ends in Clarke's column, but that during its passage through the spinal ganglion it gives off collaterals. Such a collateral connection would enable us to localize visceral sensory impressions on the skin surface. Hence, irritation of the visceral sensory nerves will coexcite the neurones for the skin, and the superficial tenderness will locate the visceral disorder. Or it may be, as pointed out by Donaldson, that the peripheral branch of a sensory nerve splits, and that a portion of the same neurone may end both in an organ and in the skin, in which case visceral irritation would so alter the condition of the cell that the skin portion, when touched, would give a sensation of pain.

However that may be, the observations cited in this paper would seem to indicate that the combined vertebral tenderness would coincide with the position of Clarke's column and the intermedio-lateral column, and that the spinal tenderness noted in pathologic conditions of the heart, lungs and digestive tract would coincide with the location of the vasomotor centers in the cord.

By applying heat or cold, or other stimuli to the segment of skin whose endings are in a segment in which arise viscero-motor, vasomotor or other activities, we can reflexly affect the organ supplied by these tracts. That this can be done has been shown by Brown-Séquard, and others already mentioned, chiefly through the vasomotor system.

Recently Meltzer and Auer[4] made an important observation showing the possibilities of visceral changes taking place as a result of peripheral agencies. They have shown that cecal peristalsis of the rabbit is inhibited by dissecting the skin over the abdomen. This is reflex inhibition, for it does not occur if the spinal cord is previously destroyed. On the other hand, previous destruction of the cord does not prevent the direct inhibition of peristalsis observed when the abdomen is opened. These observations are in accord with others in demonstrating what can be done to viscera through reflex action from the skin.

Bayliss and Starling[5] conclude from investigations on animals that the nervous motor mechanism of the small intestine is by way of the vagus nerve, and that inhibitory action is conducted by the splanchnics. They affirm that in the large intestine nervous impulses can arise from the local nerve plexuses, and that the sympathetic supply, by way of the splanchnics, has an inhibitory action, and that the pelvic visceral nerve is motor to both coats. There are, apparently, in the cord centers, vasomotor and motor and inhibitory fibers, all of which it may be possible to affect by impulses going

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[4] Proceedings of Society for Experimental Biology and Medicines, 1906.

[5] Jour. of Physiology, vol. xxvi, 1900, 1901.

from the skin into the segments of the cord containing these centers.

Professor Lennander, of Upsala,[6] states that the pain of intestinal conditions does not emanate from the organ itself, but from the base of the mesentery and from the parietal peritoneum, which is well supplied with sensory nerves. This being so, the reflex pain area in the skin might in all cases not be the correct area to affect in order to cause a change in the visceral area diseased.

Cannon and Murphy, working in the Harvard Physiologic laboratory, point out the fact that inhibition of the intestines, when of central origin, is caused by impulses coming by way of the splanchnic nerves. Hence, any agent that will check the inhibitory impulses from the cord to the intestinal canal will permit the canal to resume its normal functioning, and we might also expect that any agent that would stimulate the inhibitory influences emerging from the cord would counteract an overactive peristalsis.

I am of the opinion that by therapy, thermal or manual, applied to these areas of skin whose sensory nerves end in that segment of the cord whence also originate vasomotor and viscero-motor fibers to the organs, we can produce a change in the functional status of those organs. The application of these physical forms of therapy must be made more and more accurately to get the best effect. In lung affections, manipulations or cold applications should be made over the fourth, fifth and sixth segments and not include the region of the first, second and third, because these last are more closely connected with the heart, and we should avoid producing the same effect on the heart, as we do not wish this effect to complicate that of the lung condition. This same principle is true of abdominal affections. If an ice bag is placed in contact with the whole length of the spine the same effect on the heart and lungs is produced as that which is desired on the intestines, and the whole process is negative, whereas if limited anteriorly to the sixth segment the effect is localized on the abdominal viscera.

If we wish to create a dilatation of the abdominal vessels we do not want also a dilatation of the thoracic vessels, else the abdominal viscera are not flooded with blood, as desired, because the thoracic organs are dilated by the same stimuli. This also occurs if the application overlaps the thoracic segments.

This accuracy of application to specific segments is the underlying principle of the successful carrying out of a number of different forms of physical therapy. An ice bag applied to the spine from the sixth vertebra on down will influence diarrhea; if applied above the sixth vertebra the heart and lung vessels are also affected, and a large part of the effect is lost. If a warm application is made over the first to the sixth thoracic vertebræ the combined applications then work together by contracting thoracic vessels and dilating the abdominal, which is just the effect desired. Electrical applications should be given, using similar principles.

This is true of massage to the back; a relaxing effect can be given from the sixth vertebra on down, and a quick contracting effect from the first to the sixth. By this means the abdomen is flooded with blood under a good pressure and certain conditions are cured.

DISCUSSION.

DR. WILLIAM BENHAM SNOW, New York City, confirmed what Dr. Ludlum said. The relation of the points of spinal tenderness to visceral troubles has been demonstrated in the use of mechanical vibration in the diagnosis and treatment of various conditions. The application of static electricity also, when employing the static-induced or wave-currents, which produce deep or superficial tissue contraction or vibration of the regions to which they are applied, are likewise effective in local inflammatory conditions. Furthermore, the treatment of conditions employing the methods for either inhibitory or stimulating effects, and to which Dr. Ludlum referred, are demonstrated to so influence the parts as to either cure disease or relieve conditions to an extent that has been a revelation to those who have investigated the subject. No physical examination will in the future be considered complete either of nervous diseases or in any other pathologic condition without a proper scientific examination of the spine, in the manner described, because of the relationship of these centers to the various organs of the body and of their effects on peripheral conditions, because of the significance of these local points of tenderness. After employing mechanical measures for more than eight years in the treatment of these conditions, Dr. Snow is satisfied that they are of great value.

DR. CHARLES K. MILLS, Philadelphia, was reminded of some of the anatomic investigations of Gaskill and some of the clinico-pathologic observations of Ross, which bear out the principles Dr. Ludlum enunciated—the old one, for instance, of the relation of duodenal ulcer to the irritation or sensory condition of the skin overlying it. It is most likely, he said, that the view of Donaldson, that the splitting nerve fiber sends one portion to the viscus and one to the skin overlying it, is correct. This view gives an explanation of the reason why certain local measures are efficient in deep-seated disease.

DR. MORTON PRINCE, Boston, Mass., called Dr. Ludlum's attention to a paper published some twenty years ago by Dr. Alexander Harkins, of Ireland. The author stated that as a result of an examination of a large number of cases, normal and abnormal, he had found tenderness over the fourth or fifth dorsal vertebra in every case whether normal or abnormal. He laid great weight on the therapeutic results obtained by blistering over these vertebræ. The statement seemed a very extravagant one, but Dr. Prince was sufficiently attracted by the paper to make a series of examinations of the spines of all the patients in the medical wards of the hospital, going from bed to bed indiscriminately. He found tenderness in some part of the spine in a very large percentage of the cases. It was also true that in the majority of the cases when tenderness existed it was over the fourth or fifth dorsal vertebra. The next most frequent point was somewhere near the twelfth dorsal vertebra. At any rate, he found this localized tenderness in the great majority of cases without regard to the character of the disease. It was particularly true in regard to cases suffering from debilitating diseases and neurasthenic conditions. This localization is so common that frequently Dr. Prince has surprised patients complaining of spinal tenderness by placing his finger on the spot without further guidance. These facts have to be taken into consideration when drawing conclusions as to the significance of any special tender points in spinal cases. These facts have a bearing on the interpretation of spinal tenderness as a diagnostic sign in spinal disease.

DR. S. D. LUDLUM, Philadelphia, stated that the tenderness produced by vasomotor disturbance is in the fourth or fifth dorsal vertebra, and yet down as far as the digestive tract, if there is tenderness anywhere, it would be very apt to be in the fourth dorsal vertebra. He did not quite understand how a normal person could have this tenderness. He has found it only in persons suffering from some condition.

DR. MORTON PRINCE, in explanation, stated that he had examined every case in the general medical words, indiscriminately, including only persons suffering from debilitating diseases, neurasthenia, etc., and not normal individuals.

An Inoffensive Light.—A convenient night light for a sick room in a country house in which there is neither gas nor electricity may be invented by hanging a lantern from a hook screwed into the bottom of an upper window sash on the outside.—*Nurses' Jour. of Pac. Coast*

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[6] THE JOURNAL A. M. A., Sept. 7, 1907.

THE TREATMENT OF PLACENTA PRÆVIA.

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It might occur to one on first thought that, in respect to treatment, the cases of placenta prævia could profitably be divided into two great classes—the complete and the incomplete. The mortality statistics bear out this thought in a measure, for in a series of 1,300 cases the mortality in the complete variety was 13.4 per cent., while in the incomplete variety it was but 4.3 per cent. In actual practice, however, such a general division is not practicable. In most cases the exact relation that the placenta will bear to the dilated cervix can be determined only after the cervix is well dilated in the process of delivery. The nice grouping of cases that we see in statistics is made after treatment, not before. Of course, there are certain cases which, from the examination, can be definitely set down as placenta prævia centralis or placenta prævia lateralis, but these are exceptional. In the majority of cases, all that can be positively determined by the examination is that the patient has decided uterine bleeding and that the placenta is in the lower part of the uterus. Having determined these two facts, the physician knows that the patient is in a serious condition and that at any hour of the day or night she may have a profuse hemorrhage that may prove fatal. Occasionally, a patient with well-marked placenta prævia goes through pregnancy and labor with little or no bleeding. But this fact should not be allowed to blind us to the imminent danger in those cases in which the hemorrhagic tendency has already manifested itself. Whatever the exact location of the placenta, the fact that it is in the lower uterine segment and that decided bleeding has already taken place, means that the patient is in as great, if not greater, danger than if she were carrying an extrauterine pregnancy.

THE RULE OF TREATMENT.

The only safe rule of treatment in placenta prævia with decided hemorrhage, is promptly to empty the uterus as a life-saving measure.

This is the general rule, with few exceptions. Now arises the question: Why would it not be better to wait until the fetus is viable, or if viable, until it is nearer term? To every one this suggestion comes as a great temptation, and, as the records show, it has cost the lives of many women. Physicians feel that they must strive to save the fetus whenever it can be done without sacrificing the life of the mother. Another fact, however, just as true and just as imperative, is that the life of the mother must receive the first consideration, and must never be unduly jeopardized to save the uncertain life of the fetus. The life of the mother is of far more value, to the home and to the community, than that of the fetus. Even the life of a healthy infant, which has survived the vicissitudes of birth and is in normal independent existence, does not compare in economic value with that of the adult woman.

With the fetus *in utero* in a case of placenta prævia, the chance of ultimate survival is very poor. In a large proportion of the patients left to themselves, labor comes on prematurely and, if the patient survives the bleeding, she is delivered of a weak, asphyxiated infant which has small chance of living very long. Holmes[1] calls attention to the fact that in Read's series of 569 cases of placenta prævia, 65.6 per cent. were premature births; and in Müller's series of 595 infants in placenta prævia cases, 55.3 per cent. were premature. A concensus of other series of cases indicates that only about 40 per cent. of the patients go to term. In those who do go to term, some of the children perish during labor, owing to the hemorrhage, while of the children successfully delivered, many are so weakened by previous hemorrhage on the part of the mother, that their chance of living is much below that of the normal infant.

This holds true even in patients who have been subjected to Cesarean section. In 25 cases of Cesarean section for this condition, 16 children were delivered alive, but 7 of these died before two weeks old—giving a fetal and infantile mortality of 64 per cent.

EXCEPTIONS TO THE RULE.

There are certain exceptional cases of placenta prævia in which it may be advisable to follow a waiting plan of treatment. These are cases in which the hemorrhage is only slight, the placenta evidently being located far to one side, the patient well advanced in pregnancy and the desire for a child so strong that the husband and wife are willing to take considerable risk. But in such cases the waiting must be a *prepared* waiting, i. e., facilities must be at hand for prompt delivery in case a serious hemorrhage should occur.

TEMPORARY PACKING.

Having decided that the uterus should be promptly emptied, in order to save the patient's life if possible, then comes the question as to whether or not to put in temporary packing, until proper arrangements can be made for the serious operation of delivery.

The value and effectiveness of a tamponade in these cases lies in firm compression of the bleeding area between the packing and the presenting part of the fetus or a firm bag of waters. If the presenting part of the fetus is very high or is so movable that it recedes on slight pressure and the amniotic sac is lax, a packing, pushing up from below, is likely to do more harm than good. As there is no counter-pressure, the pressure from below can not stop the bleeding and, in pushing up the cervix, may cause further detachment of the placenta and thus increase the bleeding. Again, a firm packing may start up labor pains and thus cause further placental separation and hemorrhage before the physician is ready to deliver. The cases in which temporary packing is used should, therefore, be selected with care. As a rule, if the hemorrhage is only slight or moderate, it is better not to disturb the parts until ready for delivery —in the meantime the patient should be kept recumbent and with the hips elevated to diminish the blood pressure at the placental site. If the hemorrhage is very severe it is advisable to pack firmly even if there is no resistant fetal part to make counter-pressure, as the firm tamponade may possibly stop or at least check it somewhat.

In those exceptional cases of slight bleeding in which it may be desired to carry the pregnancy further along, packing should on no account be used, as it is likely to start uterine contractions at once.

In packing, the Sim's posture will usually be found best. The gauze should be wrung out of some antiseptic solution, for gauze which has been wet and then squeezed as dry as possible packs more firmly and is much more effective in checking hemorrhage than is dry gauze. If sufficient gauze is not at hand, a long strip of sterile absorbent cotton may be twisted slightly, squeezed out of the antiseptic solution and packed into the cervix and vagina like a strip of gauze.

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* Presented at the inaugural meeting of the Obstetric Section of the St. Louis Medical Society, Jan. 28, 1908.

[1] The Journal, May 20, 1905.

Strict asepsis is imperative. If there is any carelessness in this respect the patient who survives the hemorrhage may die later of sepsis. The hemorrhagic feature in these cases is so striking that other dangerous symptoms are sometimes lost sight of. A considerable proportion of the deaths are due not to hemorrhage, but to sepsis, for which the conditions are particularly favorable, because of the abnormal condition of the cervix, due to its being the placental site, and because of the profound anemia and resulting debility. Consequently, extra care should be taken to prevent infection, and yet it is in just these cases that infection more often occurs, because the serious bleeding is likely to lead to a hurried examination with only imperfect disinfection of the external genitals and of the examining hand. Again, the difficulty of accurate diagnosis may lead to repeated examinations by different physicians.

In Strassmann's series of 231 cases of placenta prævia. there were 22 deaths, 9 of which were due to sepsis. In Braun's analysis of 9 deaths from placenta prævia, he found that 5 of the patients died from sepsis.

DELIVERY.

Delivery is a serious procedure in most of these cases and is accompanied with the danger of sudden fatal hemorrhage. Consequently, the physician should take care to provide the required assistants, instruments and materials to meet emergencies that may arise. Two assistants are advisable—one to attend to the anesthetic and the other to assist the operator and attend to the intravenous administration of saline solution if necessary. If the patient is near a hospital she should be moved there. If the bleeding is not severe, or has been checked by firm packing, the removal to the hospital with the patient perfectly quiet on a stretcher is less dangerous than an attempted delivery, with its possible serious emergencies, at the home.

WHAT PARTICULAR METHOD OF DELIVERY PER VAGINAM SHOULD BE CHOSEN?

In the delivery in such a case, three points are to be kept in mind: 1, The dilation of the cervix must be gradual because of the danger of serious laceration; 2, there must be compression of the bleeding area during this gradual dilatation, to prevent dangerous hemorrhage; 3, that method of delivery is to be chosen which gives the best chance of saving the fetus, provided it does not unduly jeopardize the mother. The cervix should be dilated sufficiently to admit two fingers for more accurate examination. In many cases, particularly in multiparæ, this slight dilatation may be accomplished with the fingers, while in other cases a dilator will be needed. This procedure enables us to decide whether the case is one that will probably require only minor assistance in the process of delivery, or one that requires radical interference at once because of imminent danger to the mother.

SPONTANEOUS DELIVERY WITH ONLY MINOR ASSISTANCE.

In this class are those cases in which the patient is near the end of gestation and the bleeding has been only slight and in which the examination through the partially dilated cervix shows that the placenta is to one side (marginal or lateral), and that the head of the child presents normally.

In such a case, simple rupture of the membranes will permit the head to come down against the cervix—thus compressing the bleeding area and at the same time increasing the labor pains. After rupture of the membranes, the patient should be closely watched for bleeding, and the compression of the lower uterine segment by the head may be augmented by pressure on the uterus from above. If strong pains come on and no serious bleeding occurs, the labor may be allowed to progress naturally to its termination, care being taken to prevent hemorrhage in the third stage and afterward.

If progress is slow, or if there is considerable bleeding, a Voorhees bag (improved Champetier de Ribes bag) is introduced and filled with antiseptic solution sufficiently to compress the bleeding area and to produce fairly good dilatation of the cervix as it is gradually expelled. A two or three pound weight is attached to the bag and hung over the foot of the bed. This continuous pressure, besides compressing the bleeding tissue, stimulates the uterus to contraction and also aids in the gradual dilatation of the cervix. If no suitable dilating bag is at hand, a firm tamponade of the cervix and vagina will aid materially in stimulating uterine contraction and in softening and dilating the cervix. In a patient in whom good pains with not much bleeding are present and the head is pressed well down, the packing or bag may be applied without rupture of the membranes. In a primpara in whom the cervix is long and resistant, the firm packing is very effective in softening the cervix and aiding dilatation. The patient must be closely watched, however, for evidences of concealed hemorrhage

After the cervix is dilated, if the head does not advance, though well applied to the inlet, forceps may be used to deliver it; but extreme care must be used in these cases because of the danger of serious injury to the lower uterine segment, by the forceps directly or by a too rapid extraction of the head through the friable and imperfectly dilated cervix. Sometimes in a breech presentation the child may be successfully delivered by this natural process with minor aids, but not so often as in a head presentation.

RADICAL INTERFERENCE BECAUSE OF IMMINENT DANGER TO THE MOTHER.

In this class are the cases in which there has been considerable hemorrhage and more is threatened, in which there is an abnormal presentation or the presenting part does not apply itself well to the pelvic inlet, and in which the placenta prævia aprroaches the complete variety. In all these conditions radical interference is indicated to bring about firm compression of the bleeding area. This object must be attained with a minimum disturbance of the cervix and adjacent placenta. The best way to accomplish this firm compression is to introduce two fingers through the slightly dilated cervix and, by bimanual manipulations, carefully turn the fetus so as to bring a foot over the internal os (Braxton Hick's bipolar verson). The membranes are then ruptured, or the placenta ruptured if the membranes can not be reached, and one foot is grasped and quickly brought outside. This brings the buttocks of the fetus down against the lower uterine segment, and the bleeding area is thus firmly and quickly compressed between the fetal body and the pelvic wall. In order to maintain this compression of the bleeding area during the process of gradual delivery, slight steady traction on the leg is useful. This continuous traction may be conveniently maintained by tying around the ankle a strip of gauze to the other end of which is attached a two-pound weight. The weight is hung over the foot of the bed. The body of the fetus is thus used as a plug to prevent fatal hemorrhage, while at the same time it gradually dilates the cervix. To bring the fetal body well down against the cervix, the leg is to be brought out until the knee appears at the vulva. Only one foot should be brought down, for the buttocks make a much better plug when one thigh is flexed against the abdomen than when both thighs are brought down together.

The reason for not delivering at once is that it may lead to the death of the mother. In these cases the lower uterine segment is so friable and so easily torn that it is a most dangerous procedure to pull the fetus forcibly through it or even to attempt rapid manual dilatation. In the 22 fatalities in Strassmann's series of placenta prævia cases, 7 of the deaths (almost one-third) were due to laceration of the uterus caused by rapid extraction of the fetus. In Edgar's 9 cases of placenta prævia, the only death was one due to rupture of the uterus caused by rapid manual dilatation of the cervix.

During delivery I think that it is well to give ergot in sufficient quantity to bring the uterus under its influence, in anticipation of the dangerous third stage of labor, as profuse hemorrhage may occur during the third stage or soon after. As the body of the fetus is delivered, the assistant must follow the uterus down by abdominal pressure and hold it there in order to prevent undue relaxation. Then the operator must give close attention to preventing serious hemorrhage during the delivery of the placenta. As soon as the placenta is delivered, the operator should forestall postpartum hemorrhage by a firm tamponade of the birth canal, which should extend into the uterus and be very firm. Other measures preventive of postpartum hemorrhage are also to be employed. These are: The administration of ergot and strychnin, manual compression and stimulation of the uterus through the abdominal wall (replaced later by the pressure of a firm compress) and close watching of the patient to detect and combat any bleeding as soon as it begins.

The necessity for watchful care in this respect may be emphasized by the following reported case.[1]

A young married woman in a wealthy family in one of our large cities was pregnant for the first time. When the pregnancy had advanced to the seventh month there was rather severe hemorrhage, and in consultation it was agreed that placenta prævia centralis was present. The desire for a child was so great that it was decided to try to tide the patient over a considerable period in order to give the fetus a better chance. Suddenly an alarming hemorrhage occurred. The physician, as soon as he could reach the house, turned and delivered an asphyxiated fetus, with which he and the nurse labored enthusiastically, congratulating themselves on the possibility of its survival. When they turned their attention to the young mother, who had been ignored for a short time, they found she was dead of postpartum hemorrhage.

The hemorrhage may be most difficult to control. Behm, who treated fifty-two cases of placenta prævia without a death, mentions one desperate case in which he almost lost the patient through postpartum hemorrhage. Failing to stop the profuse bleeding with ordinary measures, he finally, in despair, packed against the bleeding area in the uterus a large tampon squeezed out of pure liquid carbolic acid, and on top of this two more were quickly packed in. This stopped the hemorrhage and the patient recovered without ill effect, though carbolic acid poisoning was feared. In two subsequent cases he used the same treatment with the same result, and he recommends that carbolic acid he always at hand to be used in such emergency. The vagina was protected by a coating of oil.

CESAREAN SECTION.

Cesarean section as a method of treatment in certain exceptional cases of placenta prævia has given rise to much acrimonious writing and debate. I think that the wide difference of opinion expressed is due largely to the lumping together of the various classes of cases of placenta prævia on the one hand and the various circumstances for Cesarean section on the other. For example, a writer from one extreme, looking at the general statistics of placenta prævia and of Cesarean section, argues forcibly that Cesarean section is an improper and unjustifiable procedure for placenta prævia —certainly a logical conclusion when considering the subject in general. A writer on the other extreme, looking only at the most severe cases (placenta prævia centralis) and at the results of Cesarean section by experienced operators and only in most carefully selected cases, argues forcibly that Cesarean section is an advantageous method of treatment in placenta prævia— and with good reason. Looking closely at these two propositions we find that really they express no difference of opinion.

It is only in those exceptional cases in which a fairly certain diagnosis of placenta prævia centralis can be made in the preliminary examination, that Cesarean section is to be taken into consideration. In these cases, the mortality by the usual methods of treatment, even in the hands of experts, is high. In a series of 350 carefully tabulated cases of complete placenta prævia handled in the antiseptic period (since 1877) and by experienced men (Schauta, 50; Strassmann, 56; Driessen, 53; Doranth, 50; Fournier, 2; Knoblanck, 86; De Lee, 6; Amadi and Ferri, 28; Behm, 20), the maternal mortality was 13.4 per cent. and the fetal mortality 80.5 per cent. Thirteen per cent. is certainly a very high mortality for any pathologic condition which is confined wholly within an uninfected uterus in a patient in fair general health. I can not escape the conviction that it is too high, i. e., that it could be materially reduced if the patients were given the best of treatment from the onset of the trouble until its termination.

Now comes the question: Does this "best treatment" include Cesarean section (classical or Porro) in certain selected cases, or, on the other hand, is it confined entirely to the methods already given in the general rule of treatment? So far, not enough cases of the central variety, properly selected and handled with proper surroundings and technic, have been subjected to this operation to decide certainly whether or not it is really advisable. This much, however, is known positively—no patient should be subjected to Cesarean section by anyone who is not thoroughly qualified, by reason of extensive obstetrical and surgical experience, to select the cases and the form of operation with due care and to perform the operation by a reliable technic. The brilliant results obtained by certain operators in Cesarean section in general, were due to three factors: (1) A rigid selection of cases, by the absolute exclusion of all cases in which there was even a remote probability of infection (i. e., all cases in which there had been any examination in which the antisepsis was doubtful); (2) perfect facilities for the operation; (3) the performance of the operation according to the most approved technic and by a master hand. The indiscriminate use of these statistics by the radical advocates of Cesarean section, has done much by encouraging the attempt at this serious operation under adverse circumstances.

In regard to the fetus, the chance of its survival in placenta prævia centralis is ordinarily so small that it should not be given much weight when deciding on the method of rescuing the patient from her dangerous situation. On account of prematurity and debility the fetus dies in nearly all cases, whatever the method of delivery. Again, the advantage of the slightly increased chance of the survival of the fetus through Cesarean section is more than overbalanced by the disadvantage of the subsequent sterility from the loss of the uterus—for experience so far indicates that the Porro operation is decidedly safer than classical Cesarean operation in these cases.

SUMMARY.

My conclusions are as follows:

1. The general rule for the treatment of placenta prævia is to empty the uterus, *per vaginam*, according to the directions previously detailed, as soon as proper preparations can be made. I am satisfied that if the principles laid down under "Spontaneous Delivery" and "Radical Interference" were strictly followed in all cases from the very first, the mortality in all classes would be materially reduced. That the mortality can thus be reduced is shown by the work of Behm. In eighteen years, Behm treated 52 cases of placenta prævia without a death. And among them were 20 cases of placenta prævia centralis. These truly remarkable results were not due to chance, but to a most careful application of the principles of treatment. His remarks, when discussing the subject, show that he had an unusually clear insight into the causes of death in these cases and that he made a close study of the measures to prevent death. The treatment employed was practically that detailed above. One point on which he lays great stress is that the dilatation of the cervix and the expulsion of the fetus should be slow and spontaneous. This slow spontaneous expulsion of the fetus, extending over a period of from one to ten hours, has four distinct advantages: (a) It prevents serious laceration of the uterus, to which many deaths are due; (b) it gives time for thrombosis to begin in the uterine sinuses, thus tending to prevent the alarming postpartum hemorrhage which comes so frequently in these cases; (c) it allows the abdominal circulation gradually to adjust itself and thus prevents the sudden circulatory disturbance and shock ("anemia of heart," "anemia of brain") which have caused sudden death following rapid delivery; (d) it gives time to administer saline solution and other stimulants, thus preparing the patient for the dangerous third stage. Zweifel, in a recent article, calls attention to the fatalities caused by procrastination in placenta prævia and by imperfect antisepsis in preliminary examinations. He reports 274 cases of placenta prævia with a mortality of 8 per cent. Of the 22 patients who died, each one had lost a quart or more of blood before entering the maternity or had infection already under way. He urges prompt removal of the patient to a hospital whenever there is a suspicion of placenta prævia, to avoid the blood loss and infection attendant on outside delay.

2. In certain exceptional cases, already mentioned, a waiting plan is permissible, but it must be a prepared waiting, i. e., facilities must be at hand for prompt delivery in case of sudden threatening hemorrhage.

3. In certain selected cases of undoubted placenta prævia centralis, the question of delivery by Cesarean section (classical or Porro) comes up. For the present the decision must rest largely on the special circumstances of the case, keeping in mind the important points previously mentioned. For this limited class of cases, the formulation of a positive general rule must await future experience. In the meantime, Cesarean section, if employed at all, should be employed only by operators of large experience and with exceptional facilities. Under ordinary circumstances, the delivery *per viam naturalem* is so far superior to Cesarean section that the latter is not to be considered.

PRACTICAL VALUE OF MODERN CONCEPTIONS OF SYPHILIS.*

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OMAHA.

Notwithstanding the fact that syphilis is probably the oldest disease of humanity, and that it always offered abundant material for investigation, because not influenced by differences of climates and peculiarities of races, its etiology, up to very recent times, was entirely obscure. During the past 25 years claims have been made repeatedly that the specific organism has been found at last, but none stood the test of scientific requirements. Not until May, 1905, when Schaudinn and Hoffman published their first report on their new discovery, was any real progress made. Since that time their investigations have been taken up by scientists all over the world, and innumerable articles, reviews and discussions testify to the validity of their claims. Authorities are agreed now that finding the spirochetes is positive evidence of syphilis, while failure to do so can not be accepted to be of any value.

The *Spirochæta pallida* does not belong to the species of spirilla, as was believed at first, but is more closely related to the protozoa than to the bacteria. Two varieties are known, the *S. pallida* and the *S. refringens*. Only the first variety enters into the etiology of syphilis. The *S. refringens* is thicker, has blunt ends, and stains blue with the Giemsa stain. The *S. pallida* is a long thin organism of a spiral or cork-screw shape, with from 6 to 14 turns, has pointed ends and stains red. It is 4 to 10 mm. long and about ¼ mm. wide, rotates around its long axis when moving, and shows undulating motions when at rest. It takes the stain only very slightly and appears very pale in the specimen, whence its name. On this account, considerable time must be spent to find it, and even when present it is visible only to the trained eye. As it is irregularly and unevenly distributed, a number of slides should always be prepared. Loeffler's alkaline methylene blue may be used for staining, but the stains of Giemsa, Goldhorn and Hastings are preferable.

The method of preparing the slides is as follows:

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* Read before the Southwestern Iowa Medical Association, Creston, Iowa, Feb. 20, 1908.

The lesion is scraped lightly so as to get a little blood-tinged serum; a thin film is made, dried by passing it through an alcohol flame, and fixed by immersing it for five minutes in alcohol and ether. The stain is applied for 20 minutes, and is then washed off by dipping the slide slowly into water, film side down, so as to avoid precipitation. The slide is then left standing upright until dry.

The spirochetes can also be examined alive in fresh tissues and kept so for several hours in physiologic salt solution. This allows a quick and positive diagnosis. It is done with the help of the so-called ultramicroscope, which consists of a special arrangement of a substage condenser and the use of an arc lamp for illumination. The principle, in general, is the same as the well-known one that if a room is darkened, and a small beam of intense light is admitted, dust particles, floating in the air, become visible in the ray of light which are not seen in the room when fully lighted. The complete apparatus, which is somewhat expensive, consists of an arc lamp surrounded by a metal box having a diaphragm arrangement to produce a small ray of light, the special condenser, and a suitable assortment of objectives and eye pieces. The scrapings from the suspected lesion are thinned with water, placed on an extra thick slide, protected with paraffin to prevent too rapid drying, and examined under the microscope in the usual way. The field appears dark, with the spirochetes slowly moving about as silvery looking spirals.

The spirochetes were first found in all primary and secondary lesions of the superficial and deep layers of the skin, and in the regional glands. Now they have been demonstrated in practically all organs and also in the placenta in hereditary syphilis. In early lesions they are found constantly, but as the manifestations grow older, they become less frequent and are seen with increasing difficulty.

The discovery of the organism in late manifestations has shed a new light on our knowledge of tertiary syphilis. Heretofore gummata were thought to be innocuous, as being due to toxins only, and appearing after the active virus had exhausted itself. It is understood now that they do not mark a period of safety, as regards transmission of the disease, but that they are infectious and without doubt responsible for some cases where the mode of infection was obscure. The spirochetes are, however, found only exceptionally in these late lesions, and in broken down gummata their absence is to be expected through the degeneration of the tissues.

To the general practitioner the practical value of these recent discoveries is naturally of most interest. The difficulties of the staining methods and the necessary training of the eyes will, for some time, limit this work to pathologists and men making a special study of this field. In the majority of cases this will work no hardship, because the clinical evidence and, if necessary, test treatment will be sufficient to make the diagnosis. In doubtful cases, however, the demonstration of the spirochetes becomes a necessity. It must be kept in mind that this can be accomplished only before the patient has taken any mercury. Mercury has an inhibitive influence on the vitality of the germ, and a single administration of it, if given early enough, may destroy it altogether. Metchnikoff makes use of this action by rubbing a 20 per cent. calomel ointment into the parts of the skin where infection is suspected and spreading of the disease seems to be prevented. Numerous experiments of this character made on human beings and on apes prove the practical value of this measure as a prophylactic.

After syphilis becomes consitutional, a prolonged intermittent administration of mercury, extending over years, is essential for a cure. During this time, and especially during the periods of apparent freedom from symptoms, an occasional examination for spirochetes is a valuable help to decide the efficiency of the past treatment and the indication for its continuance. The constant appearance of the organism in primary lesions has an important bearing on the question of the most opportune time to begin the systemic treatment. Until now, the rule was to wait until the general eruption began to show. Common sense dictated treatment at the earliest time, that is as soon as the chancre was recognized as such, to prevent the development and spreading of the disease. This was, however, not put into practice for the reason that a mistake in the diagnosis is possible, no matter how typical the sclerosis appears to be. If, in such a case, treatment were instituted, the patient, never seeing any evidence of the disease, would always remain under the impression of having syphilis, believing that it was kept temporarily in abeyance by the early treatment.

With our present ability to make an early and positive diagnosis, all such scruples may be eliminated. The method of treatment should, therefore, be changed radically. Excision of the chancre, followed by cauterization, seems to be the only rational procedure, not with the expectation of shortening the duration of the disease, but of influencing its further progress favorably by eliminating the breeding herd of the virus. An energetic administration of mercury should follow at once to destroy all germs that may have already entered the lymphatics. Excision also prevents autoinfection.

The treatment of tertiary syphilis can now be placed on a scientific basis. To place our main reliance on the iodids is wrong, as the virus is still active in this stage. Mercury is the only direct parasiticide at our disposal. The iodids are valuable only in promoting absorption of pathologic tissues and in eliminating the toxins. The only rational treatment, therefore, in the light of our present knowledge, must be a combination of mercury and iodids.

The discovery of the spirochetes in late syphilis has also an important bearing on the decision of permitting marriage of a syphilitic. Knowing that late manifestations may appear 10 years and later after a period of freedom, with the germs still lingering in them, renders a decision extremely difficult. That most cases of syphilis are finally cured, is doubted by no one, but the very fact that the disease may manifest itself after long intervals, and be infectious, prohibits taking anything for granted. The only mitigating factor is that the danger is very small, considering that this occurrence is exceptional, the virulence considerably milder, and the location of the lesions such as to make a direct contact improbable.

Schaudinn's discovery serves sypilology in still another direction, the importance of which can not, as yet, be appreciated adequately. Inoculations of animals with syphilis have been tried innumerable times without success, so that it finally became an accepted axiom that syphilis is essentially a disease of man. The reason for the failures was that the effects of the inoculations were different in their clinical appearance from similar lesion in the human beings, and there was no way to prove that they were identical. Metchnikoff and others have demonstrated that all apes and probably other animals are susceptible to syphilis and can be infected. The primary sclerosis produced in them has the same histologic structure as the human chancre, and can be inoculated again into other apes with the same result. The final proof, however, of their specific character is finding the same typical spirochetes as are found in human beings.

Pure cultures of the spirochetes have not been grown successfully as yet. Until such time we can only speculate on the possibilities of opsonic treatment and other modern therapeutics. But there is no doubt that the danger from syphilis will be lessened. Meanwhile interesting experiments are reported with serum therapy and serum diagnosis. One is the subcutaneous injection of finely mixed chancre tissue shortly after infection. Quite a percentage of patients, so treated, did not show any evidence of syphilis afterward.

The principles of immunization by which an immunizing serum will only give a reaction with material obtained from individuals affected with the same disease, have been employed in syphilis with positive results. One very important fact brought out in this connection, that not every case of locomotor ataxia is of syphilitic origin, will probably definitely settle this very much discussed question. In deciding the specific or nonspecific nature of some brain tumors serum diagnosis will become an invaluable help.

In conclusion, reference may be made to our changed ideas on autoinfections and reinfections. Though it was always stated that one infection of syphilis conferred an absolute and permanent immunity, this was never accepted universally. But the few reports of reinfections could never be confirmed. It is known at present that there is a period during the existence of a chancre when multiple autoinoculations occur, and that, furthermore, there is a time limit to the protection conferred on an individual by his first attack of syphilis, after which re-infection may take place again.

The diagnostic feature of one single initial lesion of syphilis, as differentiating it from the multiplicity of chancroids should not be relied on any more. Multiple syphilitic chancres have been reported lately by Taylor and others, appearing simultaneously or successively and in different stages of evolution. Finger's explanation of this recurrence seems most rational: Immunity begins and develops gradually with the first appearance of the primary lesion. It grows in intensity during the secondary stage but never becomes absolute. After reaching its climax it again decreases in its potency until a virus which may have remained latent for a time can produce new pathologic changes, or an infection from outside sources becomes a possibility.

Meningitis from Lead Poisoning.—Mosny and Malloizel summarize 47 cases of lead poisoning with more or less involvement of the meninges. This involvement may not be revealed by any clinical manifestations but the cerebrospinal fluid has specific features. A latent, histologic meningitis seems to be almost constant in persons recently intoxicated with lead, and it always accompanies lead colic. Lead meningitis may appear early and be acute or it may be tardy, acute or subacute, suggesting the clinical picture of general paralysis but distinguished by the absence of dementia and occasional recoveries. Their article appeared in the *Revue de Méd.*, June, 1907.

TREATMENT OF ECLAMPSIA.*

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Eclampsia and infection are the two great scourges of pregnancy, parturition and the puerperium. While the latter, through the introduction of asepsis, has been shorn of much of its terror and placed well within the limits of prevention, the former, because of the insufficiency of knowledge concerning its etiology and nature, is still much involved in hypothesis and theory, its treatment is largely empirical, and its morbidity and mortality high. It is a satisfaction, however, to know that much important work has been accomplished in recent years, particularly in regard to its pathology, which in supporting the toxic theory is thus contributing to a more comprehensive knowledge of the disease. That various toxemias affect the pregnant and non-pregnant alike is obvious, but the trend of opinion favors the belief that there are one or more varieties dependent on the gravid state, which are probably the underlying causes of eclampsia, hyperemesis gravidarum, acute yellow atrophy of the liver and many of the minor ailments and psychoses of pregnancy.

Conformably to the various views held as to the origin of eclampsia, different methods of treatment have been practiced, but the results have remained as uncertain as the theoretic foundations on which the methods have been based. So at the present time we are, unfortunately, without a rational treatment with which to combat this dangerous complication of pregnancy, and in the presence of severe types of the disease are well nigh helpless. The graver forms comprise from 3 to 5 per cent. of the cases in general, they are more frequent at different periods and they may appear in groups.

Such was our experience at Columbia Hospital. After having obtained for several years quite successful results, that is to say, with a mortality of only 10 to 15 per cent., these were followed by a series of cases in which the previously approved treatment absolutely failed, the mortality reaching 70 per cent. These malignant cases are frequently attended with but few convulsions, coma quickly supervening after the first seizure, accompanied by fever, jaundice, hemoglobinuria or a complete suppression of the urine, and they are rapidly fatal.

TERMINATION OF PREGNANCY.

Conceive of the etiology of eclampsia as we may, contend that the poisonous material originates in the fetus or the placenta, or place in the foreground maternal autointoxication because of the insufficient activity of the liver and kidneys, or thyroid inadequacy, or claim that it is due to nervous influence reflected from the genital tract, the one certain, incontrovertible fact is that pregnancy at least is necessary, for without pregnancy there can be no eclampsia. Therefore, the therapeutic conclusion must be that in eclampsia prompt termination of the pregnancy, through the quickest possible delivery of the fetus consistent with safety, is of primary importance and to be considered before all other measures. It is quite possible that the eclamptic patient may withstand the attacks without immediate delivery and the birth may terminate safely. It is, nevertheless, true that many women succumb who are left to expel the fetus unassisted. Therefore the prognosis is much more favorable in a prompt delivery than in one that has been delayed.

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* Read at meeting of the Medical Society of Georgetown University, Feb. 8, 1908.

The occurrence of eclampsia is seldom sudden. As a rule there is a gradually developing symptom-complex of a pregnancy nephritis, the daily output of urine decreases, albumin and casts become more abundant, and the edema spreads from the extremities to the hands and face. In spite of a suitable diet and regimen of milk, hot baths and packs, purgatives and diuretics, the action of the kidneys is not improved; but, on the other hand, phenomena affecting the brain and sense organs occur. When headache, vomiting, dizziness, tinnitus aurium and muscæ volitantes persist, then it is highly important to terminate the pregnancy. With the emptying of the uterus the menacing signs quickly disappear and convulsions and other threatening manifestations are averted. If the case is temporized, convulsions may not be prevented, and many formidable conditions are likely to confront the attendant. It is not uncommon to see cases where women have lost their lives in coma after a proposed interruption of the pregnancy had been rejected. But even after the onset of convulsions, immediate delivery is, by all means, the surest measure to control eclampsia.

EVACUATION OF UTERUS.

The more quickly the uterus is evacuated the more favorable is the result. When the first attack occurs, if the soft parts are already dilated and there is no longer any contraindication to the use of forceps or version, rapid delivery is easily accomplished. Such cases, occurring late in the stage of dilation, have, as is well known, a relatively favorable prognosis. It is less promising when the convulsions appear before the cervix is sufficiently dilated. If the cervix is effaced but the external os remains undilated, metal or manual dilatation may suffice to effect quick delivery, in say fifteen or twenty minutes. The same end may also be obtained by the use of rubber bags.

When the cervical canal is not unfolded, metal and manual dilation are liable to cause deep rents, and the rubber bags may act too slowly. Therefore, we have in cases of early onset of eclampsia with intact cervices the operation of vaginal Cesarean section, or hysterotomy which will permit of the evacuation of the uterus within ten minutes. This operation requires skill, and is not to be considered lightly. When properly and early performed it is of great prognostic value. Prompt delivery gives the best results; if one delays, severe lesions of the kidneys and liver parenchyma may develop rapidly, and then even artificial delivery can offer but little help.

USE OF NARCOTICS.

The views regarding the use of narcotics in eclampsia are changing essentially. The extreme was attained through the use, for many years, of large doses of morphia, as recommended by Veit. The protracted administration of chloroform was also practiced, or a mixture of morphia and chloral was given. The treatment with narcotics, especially the hypodermic injection of morphia, is very easy for the physician and assures him yet still greater confidence. The results obtained by it, however, are of little value; the mortality fluctuates around 30 per cent., and, according to the experience of Bumm[1] and others, is quite as great as when nothing is done. Heroic doses of narcotics may undoubtedly forestall the convulsions, and in this manner also hinder the injurious influences which the eclamptic seizures exercise over the respiration and the circulation, but suppressing the convulsions only obviates the symptoms and does not prevent pathologic changes nor cure the eclampsia.

MORPHIA.

Morphia is no antagonist to eclampsia, but, on the contrary, its effect is added to that of the eclamptic poison, as is observed in the already diminishing excitability of the nervous system, the disease is aggravated, the existing coma deepened and fatal conditions favored, in that the respiration and heart's action are weakened and edema of the lungs made more probable. It is better, therefore, in unconscious and comatose cases to withhold the narcotics. In the beginning of the attack, so long as the mind is intact and the susceptibility of the nervous system is preserved, there is no objection to the use of morphia, as its quieting effect exerts a salutary influence.

While eclamptic patients show great tolerance for morphia, as much as 3½ grains being given in twenty-four hours, the patient should be carefully watched for possible idiosyncrasies. I have seen ⅝ grain produce marked physiologic effect, reducing the respirations to twelve per minute, the condition persisting for several hours, even after delivery by vaginal Cesarean section. In another case ¼ grain caused alarming symptoms, slowing the respiration to six per minute.

CHLOROFORM.

Formerly I believed chloroform to be the sovereign remedy in eclampsia, but experience has markedly changed my views. Given at the time of the convulsions, when there is a tendency to asphyxiation, it increases the difficulty by interfering with the supply of oxygen. Furthermore, it is a cardiac depressant, and as this organ has already undergone degeneration, and the blood contains other toxic materials, this, together with its deleterious influence on the hepatic and renal functions, should restrict its administration to the time when intervention is necessary. Chloroform masks the horror of the picture, but in so doing is apt to add fuel to the flames.

CHLORAL HYDRATE.

Chloral hydrate is a very valuable remedy, but the drawback to its employment is its possible rejection when given by the mouth, or expulsion when administered by the rectum. We have used it with happy effect in the prodromal stage and also after delivery. It should be given in large doses, preferably by enema, and in milk, as watery solutions are apt to produce tenesmus.

VERATRUM VIRIDE.

Veratrum viride is much favored in the southern states. It reduces the arterial tension and the frequency of the pulse. As it acts by depressing the heart, the patient must be kept in the recumbent position to guard against syncope. In my judgment, its dangers more than offset its advantages; therefore, I have rarely used it.

NITROGLYCERIN.

Nitroglycerin also reduces the arterial tension, equalizes the blood pressure and promotes diuresis, and we have found it of especial value when these results are desired after delivery.

PILOCARPIN.

Pilocarpin, being a cardiac depressant and favoring edema of the lungs, one of the dangers of eclampsia, should not be used

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[1] Deutsche Med. Wochnschr., 1907, xlvii, 1945.

Nicholson,[2] believing that eclampsia is due to a disturbance of the relation between the function of the thyroid and metabolism of nitrogenous substances, advocated large doses of thyroid extract to readjust the metabolic process.

THYROID EXTRACT AND PARATHYROIDIN.

Vassale[3] has reported striking results of the controlling influence in eclampsia of parathyroidin, but a more extended use of these remedies is necessary to prove whether their effects are constant and trustworthy.

ELIMINATION.

As is well known, the control of the eclampsia in the majority of cases is attended with the complete restoration of the function of the kidneys. So long as the diminished secretion of urine and marked presence of albumin continues the danger is great. With the increasing excretion the menacing signs usually subside, one after another; the disease is checked, the patient reacts, and often within a few hours returns to consciousness. Quite naturally there arose the idea, entertained for a long time, that by artificially increasing the activity of these organs the way to recovery was prepared. However, experience has clearly demonstrated that diuretics, whether administered internally or subcutaneously, exert only a very small and no constant effect. The principal channels of elimination, therefore, are the bowels, skin and lungs. Croton oil and elaterium are preferable during the attack, because of the ease of administration and the rapidity of action. Where the patient is able to swallow, the saturated solution of magnesium sulphate should be given to further eliminate the poison from the bowels. Hot packs and hot air baths are, when well borne, beneficial. The prolonged use of the latter, however, is inadvisable, as it may cause great depression.

The free use of normal salt solution, subcutaneously or by colonic irrigation, is a rational measure, as it permeates the tissues, dilutes the toxins and promotes elimination by the skin and kidneys. It should be given in large quantities, three to four pints every few hours. It is sometimes surprising how quickly the suppression of the function of the kidney is relieved when it is administered in this way.

VENESECTION.

To guard against aspiration pneumonia it is necessary, in the comatose stage, to regularly free the throat and larynx from the aspired saliva, mucus and blood, and as the breathing becomes embarrassed to resort to artificial respiration. In the presence of a full, quick pulse, cyanosis and labored respiration, great benefit is derived from venesection. This measure has, unfortunately, been replaced in recent years by less effective and more depressing remedies. It is particularly serviceable when the seizures continue after delivery.

LUMBAR PUNCTURE.

Lumbar narcosis has been practiced in eclampsia, but without particular success; likewise lumbar puncture, with subsequent aspirating of the cerebrospinal fluid. Reducing the increased blood pressure to normal has been employed, but with no apparent beneficial effect.

DECAPSULATION OF KIDNEY.

As to whether the Edebohl's operation of decapsulation of the kidney will extend its sphere of usefulness to eclampsia it is not possible to form any definite conclusion from the available data. Franck[4] reports a case of rebellious eclampsia, in which he performed decapsulation of the kidneys, and he compares the results in nine similar cases that have been reported. The eclampsia subsided in his case, but the patient succumbed to an intercurrent pneumonia. The autopsy, seventy-two hours after the decapsulation, showed that the kidney had become firmly adherent to the adjacent tissues, thereby establishing a collateral circulation; and he believes this explains the benefit derived in these cases. Of the ten cases on record the decapsulation was followed by the rapid recovery of six of the patients; in two cases no benefit was manifest, and in the remaining two improvement was probable but not pronounced. In eight cases the women had been delivered before the operation, including one of the cases in which no influence from the operation was apparent. In the other cases the operation had been done before the evacuation of the uterus, the results being successful in only one of them.

It is questionable whether the result in one of Edebohl's cases should be attributed to the decapsulation, and whether the collapse in Polano's case was the result of pulmonary edema. All the other patients recovered. He says: "Even if the mortality of 30 per cent. is ascribed to the operation, it is such a lowering of the average death rate in severe eclampsia in which the convulsions continue after the uterus is emptied, that immediate decapsulation should be advised in all such cases.

PROPHYLAXIS.

However divergent the views regarding the curative treatment of eclampsia may be, there is universal accord concerning prophylaxis. It consists of hygienic, medical and dietetic measures. Good pulmonary ventilation, nourishing and easily digested food, frequent bathing, moderate exercise in the open air, proper clothing, the avoidance of fatigue and exposure to cold, are the principal hygienic measures to be employed.

The frequency of eclampsia could be greatly diminished if more careful supervision of the pregnant woman was exercised. The perfunctory examination of the urine for albumin, during the latter weeks of pregnancy, is not sufficient; the total amount of solids excreted in twenty-four hours should be ascertained. The constitutional signs and symptoms must also be scrutinized closely. When intoxication exists, as manifested by slight digestive disturbance, headache, etc., the regulation of the bowels and restriction of the diet will usually suffice. Persistent headache, vertigo, uncontrollable vomiting, disturbance of vision, insomnia, and neuralgia, showing involvement of the nervous system, will call for more vigorous and active measures. Free purgation, hot baths, absolute milk diet and rest in bed should be enjoined. Diuretics are of secondary importance and of little use until the bowels and skin have been acted on freely.

The medical treatment will vary according to the indications of the individual case. If there be pre-existing cardiac disease, or chronic nephritis, remedies appropriate for these diseases should be used. In the former digitalis, strophanthus, strychnia and other heart tonics are serviceable, while in the latter nitroglycerin is of inestimable value. In the acute nephritis of toxemia our chief reliance should be on free catharsis and diaphoresis. Mercurials, followed by salines, hot-air or plunge baths, followed by envelopment in blankets, rectal injection of salt solution frequently repeated, citrate of lithia and caffein, and an abundance of water, are the agents that have proved very successful in our hands.

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[2] Jour. Obstet. and Gyn. Brit. Emp., 1904, v, 32-37.

[3] Frommel's Ber., 1905, xix, 796 and 804.

[4] München. med. Wchnschr., liv, pp. 2465-2512.

WHEN TO TERMINATE THE PREGNANCY.

If, in spite of vigorous treatment, the volume of the urine is not increased, and the excretion of urea remains stationary or diminishes, together with persistence of menacing constitutional symptoms, it will be necessary, particularly if the fetus is viable, to terminate the pregnancy.

In conclusion, while the etiology of eclampsia is still unsolved, its clinical phenomena and pathology point to a probable intoxication of maternal, fetal or combined origin. Therefore, sedation, elimination and evacuation of the uterus are the chief indications in the treatment. The sedatives are valuable for their tranquilizing influence, while the delivery is being promoted or effected by other direct measures. The result in a given case will depend on the severity of the attack, the judgment and skill of the physician, and the rigid observance of asepsis. Essential to success is a well thought-out plan of prompt but not overzealous procedure based on the various phases of the disease, combined with a knowledge of the condition of the cervix and the changes which it must undergo before pregnancy can terminate or be terminated.

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SOME OF THE MOTOR PHENOMENA OF CHOREA CLINICALLY CONSIDERED.

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The word chorea still stands as the name of a syndrome which we still regard as a disease. When we speak of chorea we mean the juvenile or Sydenham chorea and must use the term with a qualifying adjective if we are speaking of something else, as Huntington's chorea, hysteric chorea, etc.

The distinctive feature of the disease chorea, so far as we yet know it, is its motor phenomenon. In this last statement I would not be understood as claiming that the diagnosis of chorea is never made and can never be sustained in the absence of choreic movements. It is a fact, however, that we always seek for their confirming presence in every questionable case. In the main and in their typical appearance there is no question or confusion as to what is meant by choreic movements. Many classic descriptions of them are to be found and certain expressive catch-words and phrases, to which we still cling, have passed from one generation of writers to another, as "insanity of the muscles," "an exaggerated fidgetiness," "bizarre," etc.

Yet there are a good many instances in which, if we rely on the movements alone for a diagnosis, we will be misled. Some children subject to attacks of chorea never have typical choreic movements; or the movements may occur in one attack and be absent in another attack. I have observed cases with all the somatic and psychic signs, including arthritic, cardiac and the nutritional changes, in which the movements were tic-like from beginning to end. I have also observed very typical attacks of chorea pass, as it were, into conditions of tic. I have full notes of two notable patients, one a boy of 12, another a girl of 9, who, under my personal observation, had severe attacks of chorea, in all respects typical. In each instance there appeared a desperate condition of tic with coprolalia and echolalia. In the boy's case this condition developed as he seemed to be approaching a normal convalescence from the choreic attack. In the case of the girl it came on more insidiously. In both there was a chronic course. The girl, now a young lady, although greatly improved, still has occasional tic movements and some rather troublesome imperative tendencies. The boy, when last seen three years after the onset of his attack, was a physical and psychic picture of tic neurosis.

CHOREIC MOVEMENTS AND TIC.

I believe that the somatic conditions which produce choreic attacks in certain individuals produce rarely tic phenomena in others who are especially predisposed thereto. The distinction between tic and choreic movements is an important one. The tic is an affair of a higher cerebral level, so to speak. It is closely related to psychic functions. The choreic movement, on the other hand, is due to some defect in the motor inhibitory apparatus, physiologically speaking, a comparatively simple cerebral function. Clinically it is quite as important to make this distinction as it is physiologically. The tic is the more important stigma. It is evidence of a more pronounced neuropathic predisposition.

I have dwelt on this point at some length, wishing to emphasize the fact that there are occasional combinations of chorea and the tic neurosis and that my personal experience confirms the recorded experience of others along this line. It was to keep in mind this important fact that some years ago in a published paper I used the words "tic chorea" and "choreic tic," not for the purpose of confusing two things, but with the idea of keeping the distinction before us for practical study in all questionable cases. All observers recognize the frequent combination of chorea and hysteria. Some writers dispose of these tic phenomena of chorea by assigning them all to hysteria. Many of them may be thus disposed of. I do not believe this the proper assignment for all of them, and if we keep well in mind the distinctions between hysteria and the tic malady we will have a clearer conception of some cases. In order to do this we must carefully watch the psychic conditions of the patients. The psychic symptoms are a better guide than the character of the movements in making this distinction in this type of cases.

In this connection I shall not undertake a full discussion of the psychic accompaniments of chorea, of tic and of these juvenile cases of hysteria, but I may briefly so far characterize them respectively as to make more evident the point for which I am arguing. Even in the mildest cases of chorea there is generally a slight psychic change, a lack of tone, of stability, a hypersensitiveness, an irritability. The general asthenic state is reflected in the mental condition. In the graver cases there is an exaggeration of this to the point of actual maniacal attacks, which may last for days or for weeks. And in still graver cases an acute, profound and dangerous delirium appears.

IMPERATIVE AND IMITATIVE TENDENCIES.

The one characteristic of the tic cases is the "imperative" tendency, expressing itself either in imperative movements or imperative ideas, or both. The characteristic of the hysterical cases is the imitative tendency; imitating, on the one hand, the actual choreic phenomena and, on the other hand, the actual tic phenomena or the actual paralytic conditions. It is for the counterfeit, the hysterical pseudosymptom, that we must look and distinguish it from the real. At times it is difficult to do this, especially in the younger subjects. On this point Oppenheim remarks:

> Chorea may develop in a hysteric individual, and remain independently of the hysteria, or it may cause hysteria in predisposed persons; or a hysteric chorea may be present; i. e., a neurosis of motility on a hysteric basis which, notwithstanding a close relationship with true chorea, differs from it in many important points.

This expresses very well the problem which is presented in studying these particular cases. On the question of tic in this connection the same author remarks: "In a few cases we find a *partial chorea,* limited to the musculature of speech, or of the eyes, or to the muscles of the lips, tongue, pharynx or larynx. These are severe, although limited in extent and often very stubborn." I would complete this description by adding that attacks of this kind occasionally occur, presenting the severe somatic symptoms of chorea, and that they sometimes distinctly recur in the same manner, and that they sometimes alternate with the ordinary chorea.

It was in trying to characterize this kind of cases that I used the term "tic chorea," i. e., attacks of chorea in which the movements are tic-like. By "choreic tic," on the other hand, I had in mind the picture of certain cases of general tic in which, along with the tic movements, there is a general, jerking, dancing, choreic aspect. Some of these latter cases are called chronic chorea. Some have been mistaken for Huntington's chorea and for hysteria.

The paralysis of chorea I shall only consider briefly. It is often the first prominent symptom and sometimes the most important symptom of an attack. It is sometimes present in the absence of choreic twitching of the slightest kind. Generally, however, by careful observation, we will be able to find characteristic movements in some region of the body and often in the paralytic member or members. The paralysis is more often hemiplegic in distribution than some of the text-books would lead us to believe. It is rarely complete, however, and especially in two members of the same side at the same time. It is often hysterical or has a hysterical exaggeration about it. In some cases the hysterical element in the paralysis is very difficult to estimate. The pathology of it is obscure. In fact, we know nothing about it. Until we do we shall study these paretic phenomena with the same perplexed interest that they have always excited.

SPEECH PHENOMENA.

I will close this fragmentary communication by alluding to a choreic phenomenon which I have occasionally studied with much interest, but without much satisfaction so far as conclusions are concerned. I refer to the speech defect, and especially to some phases of it. As we all know, many of these subjects are very silent. In most instances it is evident that the difficulty is largely, if not entirely, one of motility. The presence of choreic movements in the speech organs makes it so difficult that the patient abstains from talking. In others the silence is due to a sluggish general mentality. A more interesting condition is sometimes noticed in which there is some special psychic defect in the speech faculty; in short, an aphasic state. I recently studied a case of this kind in a girl of 10 years with a rather severe attack of chorea of the paretic type, with severe heart complication. Intellectually she remained very bright and cheerful for an attack of the kind. When the other paretic conditions were largely disappearing she developed an interesting aphasia, an apparent loss in the comprehension of language. Subsequently I satisfied myself that the condition was largely or entirely hysterical.

THE EYE SYNDROME OF DEMENTIA PRÆCOX.

PRELIMINARY REPORT ON OCULAR SIGNS AND SYMPTOMS OF DEMENTIA PRÆCOX AND THEIR SIGNIFICANCE, AS OBSERVED IN 115 CONSECUTIVE CASES.*

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In 1899, Siglas saw a case of anxious melancholia, followed by mental confusion, evolve parallel with gastrointestinal autointoxication. Meyer reported five similar cases. The idea that dementia præcox is an autotoxic disease originated with Morro, who first connected hebephrenia with this cause in 1900. The evidence for its autotoxic nature may be grouped as follows: (1) There is a coincidence of certain ocular symptoms with gastrointestinal autointoxication similar, in many respects, to those seen in typhoid, lead colic, and simple intestinal putrefaction. (2) The urine in dementia præcox shows very defective elimination. (3) Fully one-half of the subjects of dementia præcox die of tuberculosis. (4) The co-existence of certain toxic dermatoses, such as certain types of erythema, vasomotor paresis, with chronic gastrointestinal intoxication, is noteworthy. (5) Some additional facts are at hand, as shown in the co-existence of psychic excesses, neurasthenia, etc., with states of autointoxication. (6) The study of the blood in dementia præcox shows evidence of a toxic state.

More specific evidence is at hand in Kuhnt and in Blin's work, especially the latter. In 1905 Blin published a monographic consideration of the autotoxic nature of dementia præcox. He attempted to show that the retinal changes are analogous to those seen in various acute and chronic infections. It is of passing historic interest to say that Dide and Assicot (1901) had already noted the alteration of anemia and congestion in the discs of dementia præcox. None of these various observers have made any thorough or systematic attempt to analyze the significance of the eye changes in dementia præcox.

The subject of the ophthalmoscopic changes in dementia præcox receives little attention in the most recent reference works. Our bibliographic research has unearthed but two studies in which the subject is considered. These are the general papers by Kuhnt and Wochenin on alterations in the retina in psychoses, and the work by Blin on the ocular changes in dementia præcox. Kuhnt and

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* Read before the New York Psychiatrical Society, November, 1907.

Wochenin[1] examined 511 cases of mental diseases with the ophthalmoscope. Of these there were 5 cases of hebephrenia. The other forms of dementia præcox are not mentioned. Pathologic changes in but one case are mentioned, presumably the others were not noteworthy. This one patient had pallor or anemia of the temporal half of the papilla.

The work of Blin is much more to the point. He examined the retina in 87 cases of dementia præcox. A second examination was frequently undertaken. Despite his extensive material, Blin appears to have made no careful analysis of the significance of the findings. Of the 87 cases some abnormality of the papillæ was found in 59. The material was divided into three groups. Nine cases (10.2 per cent.) showed constant hyperemia of the discs, and in 23 (36.8 per cent.) the congestion was transitory. Blin does not mention the condition of the blood vessels as to overfilling, tortuosity, etc., nor does he appear to have examined closely into the coincident eye symptoms necessary to establish an eye syndrome for dementia præcox. An anemia of the papillæ was constant in 7 cases (8 per cent.), and inconstant in 15 (25.3 per cent.). He uses the term intermittent in connection with the latter. There were 5 cases in which congestion alternated with anemia (5.74 per cent.).

Various points often mentioned in individual cases are not summed up, such as haziness of the border, or the absence of demarcation between papillæ and retina, predominance of lesion in one eye and the like. Doubtless all these facts seemed somewhat contradictory and did not lend themselves easily to a summary.

Three years ago we undertook an independent research[2] on the significance of the ocular signs and symptoms in dementia præcox. We have analyzed 115 consecutive cases. The work was undertaken with the view that a careful analysis of the eye symptoms in dementia præcox might throw some definite light on the uncertain and perplexing pathogenesis of the disorder. In this respect, we believe we have not been disappointed, inasmuch as we have found definite changes and symptoms in all cases which are fully distinctive of this psychosis.

The fundus changes as seen clinically may be divided into three groups, which are usually in the order of their occurrence, as follows:

1. Congestion of discs; hyperemia and edema; dilated, dark colored veins; slightly contracted arteries and blurring of the edges of the discs, all varying in degree. These changes constitute a low grade of perineuritis of the optic nerve.
2. Congestion of the nasal side, with temporal pallor of discs, dilated veins, contracted arteries.
3. Pallor of discs, dilated veins, contracted arteries. These changes constitute anemia and partial atrophy of the optic nerve.

One hundred and nine cases were examined with the ophthalmoscope; 55 were males and 54 females. The ages of the males were from 12 to 47 years, and those of the females were from 13 to 39 years.

All the different forms of dementia præcox were under study. While the results by form-types have not been fully analyzed, we are prepared to say that the more marked changes in the eye syndrome were found in the more rapidly deteriorating types of dementia præcox.

The cases embrace those who have used alcohol and tobacco moderately or to excess, as well as abstainers. It is possible that alcohol and tobacco have contributed toward the clinical picture in some cases. In differentiating the pathologic condition of the optic nerve in tobacco and alcohol users from those in cases of dementia præcox, one observes central scotoma in the former. The one case showing a central scotoma for red in dementia præcox gave a history of alcohol and tobacco excesses. The disc changes in dementia præcox have some resemblance to those seen in the toxic amblyopia of tobacco and alcohol. But the fundus changes above detailed are seen in all cases under study. There is strong evidence that some other potent toxin is responsible for the disc changes in dementia præcox. We do not hesitate to say that we believe the toxin is primarily a vascular poison. Its most probable source is in the autointoxication (intestinal putrefaction is almost invariably evident from clinical symptoms) from the intestines or from the liver. It is possible that a faulty metabolism from a perverted action of some of the ductless glands (thyroid especially) may be the pathogenic agent. The primary departure from the normal in the disc is in the veins. They become dilated, tortuous and darker than normal. Edema of the disc appears shortly afterward. These changes are analogous to those seen in the passive congestion of the face and hands in dementia præcox cases. All these edemas produce such lasting disturbance in the nutrition of the optic nerve that slow degeneration of the nerve fibers finally results. Thus, of the 109 cases examined by the ophthalmoscope, a low grade perineuritis was found 62 times in the right eye and 67 times in the left. Temporal pallor, with nasal side congested, was found in the right eye 10 times, in the left eye 11 times. Pallor of discs was found in the right eye in 37 cases and in the left eye in 31 cases.

Inasmuch as the disc changes in the first stages resemble somewhat those seen in ordinary intestinal toxemia, we have repeatedly examined the discs in a number of cases while the patients were under active hygienic treatment of free catharsis, intestinal antiseptics, baths and dietetic regulations. A marked degree of betterment was noticed of the congestive margins of the discs, but the central edema and transitional pallor have continued. Indeed, while patients were under this treatment a general physical improvement was noticed, but the mental state seemed little improved.

Coincident with the study of the changes in the papillæ, the pupils were examined in 85 cases. The changes uniformly found here were not less significant. The examinations were made in moderately light rooms with the eyes fixing a distant object. The size of the pupils varied from 3 1/2 mm. to 7 mm., with an average of 4 77/85 mm., while the average of the control pupils (physician and attendants) was 3 68/85. An average enlargement of 1 9/85 mm. for dementia præcox over the normal was evident.

The light reaction was active in 71 cases and sluggish in 14. Consensual reaction was active in 68 cases and sluggish in 17 cases.

Accommodation and convergence were active in 71 cases and sluggish in 13. Hippus was present in one case.

The sensory pupillary reflex was slightly positive in 6 cases and negative in 79 instances. The psychic reflex was slightly positive in 4 cases and negative in 85 cases. Piltz-Westphal reflex was positive in 2[3] and negative in 85 cases.

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[1] Ueber Veränderungen der Netzhaut bei Geisteskrankheiten, Ztschr. f. Augenh., 1903, xiii, 89.

[2] This work was undertaken at the suggestion of Dr. Clark and the greater part of the work was carried out in his service at the Manhattan State Hospital and at the Vanderbilt Clinic (Dr. Starr's service). Dr. Tyson made the eye examinations and is responsible for the detailed findings of the same. Both authors are jointly responsible for the interpretative significance of the study.

Great care was exercised in measuring the pupils on account of the tendency of the eyes to change their visual lines. One is apt to complicate the accommodation and convergence reflex with the other tests. The negative reactions of the pupil appear to be due (1) to loss or partial loss of function through defective nerve innervation; (2) defect in attention; (3) diminished apperception.

Corneal sensibility was diminished in 69 cases and present in 17.

The visual color fields were examined in 81 cases. All were found concentrically contracted. The largest field was 30 degrees. The smallest 0 degrees. The fields were practically abolished. The average of the 81 cases was 10.6 degrees, which was a marked contraction from the normal. This may be explained partially by the inattention of those patients, diminished capacity for externalization and finally, and not least, by the edema and congestion of the optic nerve (perineuritis) in the first stage of degeneration of the nerve and by the ultimate shrinkage of the new connective tissue in the partial atrophy of the nerve.

The changes in the discs, pupils, visual fields and corneal sensibility which, when taken together, constitute the new syndrome, are all in accord with each other. In our examination of all other types of insanity, imbecility or idiocy we have found no other condition similar to what we have outlined here for dementia præcox.

The clinical significance of these findings is of importance:

1. They indicate that dementia præcox is attended by such an early and constant syndrome of alteration and disc, visual field, pupil and corneal sensibility as to materially aid in diagnosticating this psychosis. Consideration of the syndrome will particularly aid in the differential diagnosis of dementia præcox from the manic-depressive group, acquired neurasthenia, hysteria and the various forms of imbecility and constitutional inferiority.

2. The syndrome is a distinct contribution to the theory that dementia præcox is an autotoxic disease, and that the poison is primarily vascular, which finally induces neuronic degeneration. It points to a toxin of some sort, which is either a metabolic defect in the tissues (ductless gland defect) or, what seems more probable, that the poison is generated in the liver or in the gastrointestinal tract itself.

3. The syndrome is of prognostic value, as the severer grades of eye changes are found in the more rapidly deteriorating cases.

4. Finally, the optic nerve lesion is quite in accord with our best knowledge of the pathologic anatomy of dementia præcox, in other tracts of the brain (than the optic nerve which itself may be counted an analogue). The early vascular changes in the brain ought to receive more serious investigation.

We desire to thank Dr. Mabon and his staff, Dr. Smith of Central Islip and his staff, and the staff of assistants in the neurologic department of the Vanderbilt Clinic (Dr. Starr's service), and Dr. C. E. Atwood in particular, for the courtesies extended to us in placing their patients at our command.

Special Article

THE AMERICAN ASSOCIATION OF MEDICAL MILK COMMISSIONS.

OTTO P. GEIER, M.D.

CINCINNATI.

It was while demonstrating the impure and dangerous milk supply of Cincinnati, before the Academy of Medicine, that Dr. W. H. Crane died suddenly on May 7, 1906. A vigorous, keen, intellectual, broad-minded physician, filled with the love of humanity, passing out in this tragic way, left a deep impression on the medical fraternity of Cincinnati. One month later the formation of a milk commission was proposed and a commission was appointed. Two personal friends of Dr. Crane took their places on this commission, and whatever they may have been able to accomplish in this work along with their associates, is but a reflection of his unselfish devotion to this cause.

In August, 1906, "certified" milk appeared in the Cincinnati market. Some few months later "inspected" milk, then "inspected bulk" for hospitals, and the further history of this commission differs little from that of earlier commissions. The Cincinnati commission placed a clinical and a household milk in the market, educated themselves as well as the physicians of their city on this topic, and used their influence to raise the standard and quality of the general supply.

A few months after the organization of this commission it addressed a series of twenty-five questions, covering every phase of milk commission activity, to the twelve commissions then known. An exhaustive tabulation of these replies formed part of a report to the Cincinnati Academy of Medicine in November, 1906. It showed that there was considerable diversity in supervision, in working methods, in bacteriologic and chemical standards, etc.

An invitation to hold a conference was issued Feb. 25, 1907, by the Cincinnati commission. An enthusiastic response was received from most of the commissions. From that time things moved quickly. A temporary organization was formulated, which mapped out a program and decided that the meeting should be held at Atlantic City, June 3, 1907, one day previous to the meeting of the American Medical Association. One hundred and twenty-five delegates were present. Members of commissions from New York to Oakland, California, elbowed with scientists and hygienists who had been devoting themselves to some particular phase of the pure milk crusade. Twelve commissions reported their methods and results. Dr. Coit, the originator of the medical milk commission idea, traced its early history and development, while other papers were presented on the more general topic.

A permanent organization known as the American Association of Medical Milk Commissions was formed. A president, secretary and treasurer and a council consisting of five members were elected. The executive officers are to be elected each year, while the members of the council were elected for one, two, three, four and five years, respectively, so that one member of the council will be elected at each annual meeting. Committees were appointed on (1) medical examination of employés, (2) chemical standards, (3) bacteriologic standards, (4) veterinary inspections, (5) protection against tuberculosis.

One clause in the constitution of this association gives the keynote of its life: "The purpose of this association shall be to federate and to bring into one compact association the medical milk commissions of the United States; to exchange views and to adopt uniform methods of procedure in the work of medical milk commissions; to fix chemical and bacteriologic standards; to determine the scope of veterinary inspections, and to foster and to encourage the establishment of medical milk commissions in other cities."

The conference agreed that a crusade for pure milk in any section could be best advanced by the establishment of a medical milk commission appointed by the county medical society.

It was likewise determined that the secretary should edit and have printed for distribution the proceedings of the annual meetings. The next annual meeting is to be held in Chicago, Monday, June 1, 1908, one day previous to the session of the American Medical Association.

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[3] At first positive, later examination was negative.

At the time of the first conference we had knowledge of twenty-two commissions. The secretary of the association has been in correspondence since June, 1907, with fourteen other cities, which have organized or which are contemplating the formation of medical milk commissions. This has brought with it the writing of several hundred letters along with the distribution of such printed matter as the secretary had at his command, and which would assist in the proper conduction of this work.

Out of this experience has come the realization of the present limitations of this association, as well as its tremendous possibilities under more favorable circumstances. One can not conceive of any organization capable of doing more good than this had it sufficient funds to print and distribute a concise, working manual covering every phase of milk commission activity, as well as to do the heavy clerical work and correspondence that naturally follows the request for information from all quarters.

The American Association of Medical Milk Commissions should be in position to put into the field a representative who would visit one county medical society after another in our larger cities, giving a stereopticon lecture on this subject. The address should be held under the auspices of the county medical society, which would invite representative business men and charitably inclined citizens. The demonstration should cover bacterial and chemical analyses of their own milk supply and that of hospitals and institutions. Pictures of their best and worst dairies should be thrown on the screen. All facts bearing on the urgent necessity for an intelligent and concerted study of the local milk supply by a disinterested, unselfish set of men organized into a medical milk commission would be advanced.

At such meetings funds should be raised with which to begin the work. The literature and the working manual of the association could be distributed and a broad interest created as well as a demand for a clean milk supply.

Once established, each milk commission would become a potent factor in the community, not only in the supervision of a limited supply of clinical milk such as "certified," but its activity and study of the milk problem would stimulate the efforts of the local boards of health and naturally affect and eventually raise the quality of the total supply of those cities. Dr. Goler shows a lowering mortality in children under 5 from 33 to 15 per cent. by such a crusade in Rochester, N. Y. The general mortality of civilized communities has been steadily lowered, while the mortality of infants under 1 year has remained about the same. Gastrointestinal diseases, the largest single factor of infant mortality, are due chiefly to improper feeding and cause an enormous loss of potential wealth to the nation.

Mr. Nathan Strauss has had his name heralded from coast to coast as a benefactor of mankind for the "heated milk" supplied to New York City's poor. Stripped of all overestimation, his pasteurization merely kills a certain percentage of the bacteria in a dirty milk, possibly leaving the toxins that have already been elaborated by their growth. This method tends likewise to create a false sense of security as to the keeping qualities of milk, while it actually lowers the germicidal power of milk. "Pure milk is better than purified milk."

It is not the purpose of this paper to minimize or depreciate Mr. Strauss' noble charity, but rather to hold in contrast the efforts and the far-reaching results obtainable in medical milk commission work. Mr. Strauss works with a product from an unknown source and of unknown quality. The medical milk commission starts out at the dairy with healthy cattle, free from tuberculosis. It insists on modern sanitary rules throughout the process of milking. It cools the milk, bottles it in a clean state (practically free from bacteria), and retards the increase of bacteria by keeping the milk cold until delivery to the consumer. In other words, the milk commission stands for clean, cold milk secured from healthy cattle, free from pathogenic bacteria, and prompt delivery. That does not seem like an unreasonable demand, yet few cities comparatively can claim such a product.

Mr. Strauss' philanthropy ends with the delivery, after pasteurization, of a definite amount of milk which a certain amount of money will buy. Any money given toward the furtherance of the milk commission idea, through the American Association of Medical Milk Commissions, will be the means of starting hundreds of centers of philanthropy in as many cities. Such charity would become national in scope and increase a thousandfold.

This is not a tale of an Aladdin's lamp. The history of any well-organized medical milk commission is that of careful study of the local milk problem by the leading physicians of a community. One or more model dairies are soon established. A demand for their product is created by educating the physicians of that community to the value of such a clean supply. The laity begin to demand milk of a better quality and are educated to pay a higher price for the same. The demand for any articles soon creates a supply, and dairymen try to produce the quality of milk for which there is a demand, especially since it is sold at a premium.

Philanthropy usually steps in at this point and supplies this clean, safe milk to the babies of the poor through milk dispensaries. With the publicity that naturally follows, there comes the demand that the local health board improve the general supply and through these many links in the chain the masses are finally reached.

All over this great land men of large means and generous hearts are seeking some avenue of well-doing. If they knew the tremendous possibilities for good that lie in this work; if they could see how far-reaching their philanthropy could be made through the establishment of hundreds of medical milk commissions in as many cities; if they could appreciate how quickly these results would become national in extent and help solve the most serious economic and social problems of all people in all lands; then this association would be embarrassed by the riches that would flow in to do this work. And what better trusteeship for such a fund than the American Association of Medical Milk Commissions, including in its membership the leading physicians and hygienists of the country, who have given their best thought to the solution of this very vital subject of pure milk, and all born of unselfish devotion and a broad humanity?

Clinical Notes

UNEXPECTED AURAL EFFECTS OF SOME COMMON DRUGS.

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AURAL IODISM FROM POTASSIUM IODID.

History.—Dr. G., aged 29, was seen by me June 12, 1904. He had contracted syphilis a year before that date. He had noticed only a papular eruption and was under the influence of mercurials. Six weeks before his visit to me he began to take potassium iodid (gr. x, t.i.d.). After five or six doses, he manifested a slight iodism of the upper respiratory tract. His hearing was normal in the evening of the second day of the administration of the iodid. On rising, the next morning, he found he was deaf on the left side. Besides some hissing tinnitus, he had no other aural symptoms.

Examination.—It was found that the drum head was retracted and that the tuning forks were all heard by bone but not by air conduction. The acoumeter was not heard. He had stopped the iodid of potassium and received hypodermatic injections of salicylate of mercury (gr. i) once a week.

Subsequent History.—Aural tests a month later showed air conduction of the lower three forks of the Hartmann set. Bone conduction equal to bone conduction of the other ear. The acoumeter was heard at 4 inches. On December 4 all forks were heard except C^4. Bone conduction was greater than air conduction, and the acoumeter was heard at 5 inches. Since then he has shown no advance and has discontinued treatment, which consisted in the main of catheterization and probe massage of the short process of the hammer.

The *Index Medicus* furnishes one case of iodism of the middle ear. It was published in an East Indian journal. The aural symptoms followed small doses of the drug and consisted of conduction deafness. The tympanum was filled with exudate and incision of the drum head resulted in a gradual recovery which, unlike my case, was perfect. The defective resolution in the case I report has, no doubt, resulted from the organization of an exudate in the fossula ovalis—a point of selection which is prognostically unfortunate and not uncommon.

This case, rare as it may be, should sound a warning against the reckless administration of iodid of potash. While its benefits elsewhere may not be decried, it is too often prescribed in aural disease from an *ipse dixit* reason rather than from the results of personal experience. I confess to very little gain from its use in aural affections. The tertiary manifestations of syphilis are more apt to come under our aspect and iodid of potash is prescribed because it is *secundum artem.* The discouraging results of its administration should make us all the more careful, since an idiosyncrasy on the part of the patient is hard to predetermine. The history of iodism shows us that the untoward effects are more apt to appear in nephritics and in the two extremes of age, and the size of the provocative dose is generally small. Finger has pointed out that, experimentally, potassium iodid produces dilatation of the cerebral vessels with retardation of the circulation, and it should be given carefully, therefore, in intracranial lesions. Paralysis and retinal hemorrhage have followed its use.

RHEUMATIC (?) OTALGIA—SALICYLATE OF SODA. EAR.

History.—A young woman, aged 17, was referred to me on account of a pain in the right ear. The pain was not constant, but was occasionally severe. It seemed to be more often present toward night. At the same time she complained of pain in the metatarso-phalangeal joint of the big toe. On examination, the pain was referred to the interior of the ear and did not radiate. The canal, drum, temporomaxillary joint and audition were normal. The teeth had been examined by a good dentist. The family practitioner prescribed salicylate of soda for the joint affection, which disappeared with the aural pain after a few days.

The connection of the two pains is purely conjectural, yet the case admits of a speculative opinion as to the value of salicylate of soda in aural pain in persons of the rheumatic dyscrasia. The action of salicylate of soda in deep-seated affections of the eye is a fitting analogue. Whether it is simply by reason of its action on the circulation or by its specific power, further experience may demonstrate.

ERGOT IN AURAL FIBROSIS.

History.—Mr. E., aged 36, a musician, presented himself on March 17, 1906, with the following history: During the previous summer, while abroad, he contracted pleurisy. He recovered very slowly, and began to suffer from a chronic nasopharyngitis. His hearing, very acute and trained by his musical profession, began to depreciate rather suddenly in the right ear; the left was unimpaired. He was much annoyed by a diplacusis. He immediately consulted a prominent aurist, who diagnosed his trouble as tubal stenosis. He received every possible form of treatment, catheterization, massage, bougieing, etc. The nasal stenosis was relieved, but his ear did not show any improvement in function.

Examination.—When I examined him both drumheads showed marked retraction. The right was decidedly sclerotic. He heard the acoumeter on the right side at 3 inches. There was some mucus in the right tube. Inflation did not augment the hearing. The tuning forks were not heard by air conduction. All except C^4 were heard by bone conduction.

Treatment and Subsequent History.—On April 11, the tube was patent and free. The reaction to the forks was practically the same. The acoumeter was heard up to 4 inches. He was taught to catheterize his ear and on account of the catarrhal condition, which persisted, he was advised to go to the mountains of North Carolina. He came back with the ear trouble unchanged, but with his catarrh and general condition somewhat better. Shortly after his return he began to have symptoms in the left ear similar to the initial symptoms of the attack in the right ear. The tube became somewhat stenosed. He lost the power of differentiating low-pitched instruments and the hearing in the left ear became less acute. He felt the similarity of the two attacks and became very much depressed. He received nasopharyngeal treatment and inflation, but the ear was not in such good condition as before. Feeling that his fear of deafness despite treatment was perhaps well founded, and that perhaps some constitutional cause was in operation, I referred him to Dr. Heinrich Stern for examination. Dr. Stern found nothing organically wrong, but thought that the local condition was a vasomotor disturbance back of the fibrosis, not manifested generally as yet. After careful examination, it seemed best to Dr. Stern to put the patient on ergot. The man had very little local treatment after this, but came to me from time to time for tests. He recovered entirely from the tubal catarrh and nasopharyngitis, and on his last visit showed a normal left ear. The right ear had not materially changed, and he still kept up catheterization of that ear. It is rather premature to predict any benefit from ergot in this type of fibrosis of the ear, but the results of some trials justify the hope that the drug may have some effect in the arrest of the progressive deterioration of sclerosis.

A CASE OF BRAIN ABSCESS SHOWING THE PNEUMOCOCCUS.*

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In The Journal of the American Medical Association for Jan. 6, 1906, Drs. E. E. Southard and C. W. Keene reported a series of "twelve cases of human brain infection with the pneumococcus, together with the results of inoculation of the pneumococcus in the brains of guinea-pigs." The following is a report of another similar case, showing some points of especial interest, with an abstract of previously reported cases of pneumococcic cerebral infection collected from the literature.

Drs. G. L. Walton and G. K. Sabine have kindly furnished clinical notes on the case. Dr. P A. Lewis made the bacteriologic cultures. The autopsy was done by Dr. E. E. Southard.

History.—Patient was an unmarried woman, 35 years old. Had had measles, scarlet fever and whooping cough in childhood. On Feb. 5, 1905, after riding in a trolley car, patient noticed a tingling in the right foot, followed by numbness extending to the entire right side, headache and gradual onset of right-sided motor paralysis, with dragging of the toe and difficulty in using the pen, slight aphasia and dulness of intellect. There was gradual improvement until March 5, 1905, when headache returned with aphasia, slight stiffness of the neck and temperature of 101 F., pulse of 70. At this time patient was seen in consultation by Dr. F. C. Shattuck, whose examination was negative otherwise than as concerned the paralysis. Her condition grew worse, with occasional vomiting and moderate leucocytosis. Seen in consultation by Dr.

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* From the Pathological Laboratory of the Harvard University Medical School.

G. L. Walton on March 12, 1905, she had a normal fundus and no hemianopsia. She had rigidity of the neck, none of the back, and a suggestion of Kernig's sign on both sides. She talked freely and in a rambling manner, suggesting a low form of delirium. She showed paraphasia and could not name the days of the week or months of the year. She grew steadily worse and died April 11, 1905, with moderately high temperature toward the end.

Clinical Summary.—Gradual onset of right-sided sensory and motor disturbance, with headache, slight aphasia and mental dulness. Slow course of disease with very marked remissions. After four weeks, onset of meningeal symptoms, with vomiting, fever and leucocytosis, progressing to death nine weeks and two days after first attack.

Anatomic Findings.—Fairly developed, poorly nourished woman with dark hair. Extremities rigid. Postmortem lividity of dependent parts. No edema. The walls and fluid of the peritoneal cavity were normal. Appendix normal and the mesenteric lymph nodes normal. The pleural cavities were normal, except for slight, easily separable bands at the apices. In the pericardial cavity were found several hundred c.c. of clear fluid without fibrin. The auricular cavities of the heart were distended with cruor clot. Heart walls, endocardium, valves, and coronary arteries normal. Both apices of the lungs, behind and below, showed small areas, less than 1.5 cm. square, of yellowish-brown fibrosis without caseation. Lung substance in general normal. Lower lobes behind were blood-filled and here and there showed ill-defined areas of lighter color and increased consistence. The bronchi were clear and the bronchial lymph nodes normal. The capsule of the spleen was fairly tense, the substance a trifle pulpy, the Malpighian bodies distinct and the trabeculæ normal. In the gastroenteric tract no lesion was found. The liver border was sharp and its consistence normal. Its color was slightly yellower than normal. The gall bladder and pancreas were normal. The kidneys stripped well, their blood content was high and substance normal. The ureters were normal. The adrenals showed central brown softening (postmortem). The aorta was normal.

The scalp and cranium were normal. Dural sinuses contained cruor clot. The dura was tense and the dural veins full. The arachnoidal villi were moderately developed. Subdural space was almost dry. The pia mater was congested, more over left hemisphere than over right. Convolutions were flattened, slightly more on right side. The basal pia mater was filled with slightly viscid, greenish, serous pus, which ran up along the Sylvian vessels a few centimeters. The under surfaces of the pons and medulla were bathed in pus. The velum interpositum and especially the sheath of the left anterior chorioidal artery were soaked in pus. The pituitary body was soft. There was no great amount of exudate about the optic nerves. On section the brain substance was everywhere moist and fairly firm. Puncta cruenta distinct. Both ventricles contained pus in the posterior cornua. The ependyma was moist and over the lenticular nuclei of a salt-sprinkled appearance. The right ventricle contained more pus than the left. On section of the ganglia an abscess, 2 cm. in average diameter, was found in the left optic thalamus, communicating with the body of the lateral ventricle, but not with the third ventricle. The cavity was filled with pus similar to the pus in the basal cisternæ. The wall of the abscess was irregular and injected. There was a zone of reaction about it, 2 or 3 mm. in diamter, of a firm, opaque, pinkish-gray, injected tissue. The middle-ear cavities were both clean.

Anatomic Diagnosis.—Abscess of left optic thalamus and wall of lateral ventricle. Pyocephalus and ependymitis. Basal leptomeningitis. Early bronchopneumonia. Healed tuberculosis of apices.

Bacteriologic Finding.—Pneumococci were recovered from the abscess, but died on the first subculture.

Anatomic Summary.—A pneumococcic abscess of the left optic thalamus, with secondary pyocephalus, ependymitis, basal leptomeningitis and bronchopneumonia. Source and port of entry of infection not discoverable.

Microscopic Findings.—There were slight chronic interstitial myocarditis, slight arteriosclerosis of spleen and pancreas, moderate fatty infiltration of the liver, and in the kidneys slight general increase of interstitial connective tissue and cloudy swelling of the tubular epithelium. The lung showed focal areas of pneumonic consolidation, the exudate contained little fibrin, but consisted chiefly of polymorphonuclear neutrophiles, with a few large mononuclear basophiles and an occasional red blood corpuscle and large phagocytic cell. Within the latter, and scattered here and there in the exudate, were a few lanceolate diplococci. There were also large masses of staphylococci. The cerebral meninges were somewhat thickened and edematous, with some increase of connective tissue, but without exudate. They were, however, slightly infiltrated with polymorphonuclear and lymphoid cells. The subpial layer of neuroglia was neither wider nor denser than normal. The cortex showed slight edema and a few wandering polymorphonuclear and large mononuclear leucocytes. The subcortical tissues showed considerable general and perivascular infiltration with plasma and lymphoid cells and foci of more marked infiltration in which a differential count of the white cells showed the proportion: Lymphocytes, 66 per cent.; plasma cells, 20 per cent.; polymorphonuclear neutrophiles, 10 per cent.; large mononuclear cells, 4 per cent. There was also a considerable increase of connective tissue through this region, both interstitially and about the blood vessels. Gram-staining, capsulated, lanceolate diplococci were to be found freely in the infiltrated areas. The walls of the lateral ventricles showed slight general edema. There was scattering infiltration of the tissues with wandering individual leucocytes, and here and there, especially in the perivascular spaces, large areas and smaller foci of cellular aggregation, which gave average differential counts of lymphocytes 40 per cent., plasma cells 36 per cent., polymorphonuclear neutrophiles 20 per cent., large mononuclear cells 4 per cent. Among these cells were observed many lanceolate diplococci. There was considerable thickening of the subependymal layer of neuroglia. The ependymal cells appeared normal, but an occasional leucocyte could be seen pushing its way between them toward the ventricular lumen. In the ventricular cavity was a richly cellular exudate composed of polymorphonuclear neutrophiles 75 per cent., lymphocytes 15 per cent., large mononuclear cells 10 per cent.

The abscess was surrounded by a fairly thick and definite wall of fibrous connective tissue. In the adjacent areas there was diffuse cellular infiltration, particularly in the adventitia of the larger arteries, giving a differential count of lymphocytes 63 per cent., plasma cells 30 per cent., polymorphonuclear neutrophiles 5 per cent., phagocytes 2 per cent. Lanceolate diplococci were seen everywhere. The contents of the abscess consisted of necrotic material, pneumococci, and cells, the latter in the proportions of polymorphonuclear neutrophiles 65 per cent., lymphocytes 30 per cent., large mononuclear leucocytes 5 per cent.

The chorioid plexus showed granular coagulum and leucocytes caught in the villi. Lining cells were occasionally swollen, as a rule normal and supplied with large vacuoles. The perivascular tissues showed great numbers of plasma cells, some with two nuclei. In the same locus were cells with basophilic cytoplasm caught in mitosis. The cerebellum was normal in every respect.

In the medulla, the meninges were overlaid by an exudate consisting of considerable fibrin, with cells in the percentages, lymphocytes 83 per cent., large mononuclear cells 15 per cent., polymorphonuclear neutrophiles 2 per cent. The meningeal vessels were densely surrounded by similar cell aggregations. The spinal accessory nerves were not invaded by leucocytes. There was no neuroglial hyperplasia. There was slight sclerosis of the meningeal arteries. Pneumococci were present in them and in the exudate. The adjacent tissues of the medulla were but slightly infiltrated. In the olivary nuclei were many large ganglionic cells, some showing the axonal reaction.

In the cervical cord, the meninges were much thickened, with an exudate composed of lymphocytes 60 per cent., plasma cells 12 per cent., large mononuclear leucocytes 20 per cent., and polymorphonuclear neutrophiles 8 per cent., with very little fibrin. There was comparatively little increase of connective tissue, and little infiltration of the cord except in an area immediately surrounding the central canal, where there was also considerable increase in thickness and density of neuroglia. The ependyma was normal. There were no changes in the motor cells of the anterior horns.

Microscopic Summary.—Slight arteriosclerosis. General perivascular lymphocytic infiltration of nerve tissue. Walled-off abscess with contents of the usual cellular composition.

GENERAL SUMMARY AND REMARKS.

The case was characterized by cerebral symptoms and signs from the outset, subacute for the first four weeks, then increasingly acute till death after a total duration of nine weeks and two days. The points of especial interest in connection with it are two: First, the cellular proportions in the meningeal exudate and in the perivascular and general infiltration; second, the absence of determinable source or port of entry for the infection.

As is shown by the figures in the foregoing paragraphs, there was a marked predominance of lymphocytes and plasma cells in the infiltration of cortical tissue and ventricular walls and in the meningeal exudate, whereas in the abscess cavity, in the ventricular lumen, and in the pulmonary exudate, polymorphonuclear leucocytes prevailed. In this respect this case resembles numbers 1, 4, 7 and 16 in the series of Drs. Southard and Keene described in the article referred to above, but the preponderance of mononuclear forms was much greater than in any of them. There was distinct subpial and subependymal gliosis. Lanceolate diplococci were found freely in all the affected tissues, showing a generalized infection.

In each case of the Southard-Keene series some source for the infection is determinable: otitis media, trauma, acute or chronic pulmonary conditions, septicemia. In this case no such source could be found. The onset of symptoms was gradual, there was no antecedent injury or infection elsewhere. The pneumonic process in the lung was evidently terminal and secondary to the brain infection, which must be concluded to have been primary and coming either from the general blood stream or possibly through the nose.

With a view to comparing this case with others, and for the sake of completeness, I have attempted to collect from the literature all previously reported cases of pneumococcic cerebral abscess.

After careful and thorough search I have found reported only eight cases of cerebral abscess, in which the presence of the pneumococcus of Fränkel in the pus from the brain was demonstrated by bacteriologic examination. I have thrown out a number of cases of cerebral abscess following pneumonia, in which the presence of the diplococcus lanceolatus was not thus demonstrated but in some of which it doubtless was an etiologic factor in the production of the abscess. Following are the references and brief summaries of the eight cases in question:

1. MACEWEN:[1] An otitic cerebellar abscess of the left side, with a subdural abscess of large size situated above the tentorium, involving the posterior third of the two upper temporal convolutions, the angular gyrus, and a considerable portion of the adjacent occipital lobe. Both abscesses were opened and drained, with complete recovery. Pus from the subdural abscess contained pneumococci and staphylococci pyogenes aurei.

2. SAHLI:[2] An abscess of the occipital lobe, with hemiopia, following an influenza otitis. Pus from the abscess and from the ear showed Fränkel's pneumococcus. The patient died, a few weeks after operation, of purulent meningitis proceeding from a small secondary abscess near the almost healed original focus.

3. SIRON and JOSUÉ:[3] Multiple cerebral abscesses following influenza with bronchopneumonia. At the autopsy was found a subarachnoid abscess, communicating through the left temporal lobe with the ventricles, which were full of pus. There was also an abscess of the frontal lobe, one of the lenticular nucleus, one of each occipital lobe, and one of the lung. In all these the pneumococcus was found. The ears and sinuses were normal.

4. BOINET:[4] In this case there was onset of cerebral symptoms six weeks after recovery from influenza with bronchopneumonia. Death occurred five weeks later. At autopsy an abscess was found in the left temporal lobe, ruptured into the ventricle, with three subcortial diverticula. There was incipient meningitis. Pneumococci and streptococci were present in the pus. There had been destruction of the corpus striatum and part of the corona radiata. The middle ears were normal.

5. BOINET:[5] Five days after the sudden onset of cerebral and meningeal symptoms death occurred. At autopsy a purulent meningitis was found, especially at the base, and a small abscess in the corona radiata of the parietal lobe, pus from which contained pneumococci, staphylococci and streptococci. In the lungs there was hepatization at the base.

6. LANDRIEUX:[6] Death occurred on the fifth day from a lobar pneumonia, two days after the onset of cerebral symptoms with complete left hemiplegia. An abscess was found in the right hemisphere, occupying partly the lenticular nucleus, partly the anterior segment of the posterior arm of the internal capsule. It contained pneumococci in pure culture.

7. APERT and DELILLE:[7] After a fortnight's illness, there was sudden onset of meningeal symptoms, and death three days later. The patient, a girl of 14, had had bronchitis two years before, followed by a persistent cough. At autopsy was found dilatation of the bronchi, a pulmonary abscess, and multiple cerebral abscesses, one in the right prefrontal region, one in the left temporo-occipital, one in the left parietal lobe, and one in the right occipital lobe. All the abscesses contained pneumococci.

8. GRUENING:[8] A pneumococcus infection through the nose produced orbital cellulitis. At the first operation the orbit and the empyematous ethmoid cells and frontal sinus were drained. Cerebral symptoms ensued. A second operation exposed a large abscess of the frontal lobe, with a number of pockets, pus from which showed pneumococci. Pneumonia and pneumococcemia followed, with death in five days.

To these may be added the one case of the Southard-Keene series which showed an abscess.

9. SOUTHARD-KEENE:[9] Man of 25, with obscure history of previous head injury, had headache for four days and was unconscious two days. Death occurred six days later, ten days from onset of symptoms of meningitis. Autopsy showed cerebrospinal meningitis, with small focal abscess in the white matter opposite the left frontal cortex, encephalitis and pyocephalus. Cultures from heart's blood and brain gave pneumococcus.

These nine cases, then, with the one now reported, make a series of ten in which the pneumococcus is definitely determined as the infecting organism. Of these two (Cases 1 and 2) were secondary to otitis media, three (3, 4 and 6) to pneumonia, one (7) to chronic pulmonary condition, one (8) to nasal infection, one (9) to trauma, and two (5 and 10) to infection through undiscoverable sources. Case 5 was probably one of fulminating septicemia, leaving the present case (Case 10) as the only one of slow onset without demonstrable port of entrance for the infection. In this respect, and in the relative proportions of the cells in the exudate and infiltration, it is believed to be unique.

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[1] Pyogenic Infectious Diseases of the Brain and Spinal Cord, Glasgow. 1893.

[2] Volkmann's Sammlung klinischen Vorträge, July, 1891, xxiii, p. 293.

[3] Presse méd., 1895, p. 235.

[4] Marseilles méd., xxxvii, p. 641.

[5] Rev. de Méd., vol. xxi, p. 113.

[6] Jour. des Practic., 1903, xvii. No. 9, p. 129.

[7] Bull. de la Soc. anatom. de Paris, 1904. vi, p. 631.

[8] Med. Record, lxv, p. 215.

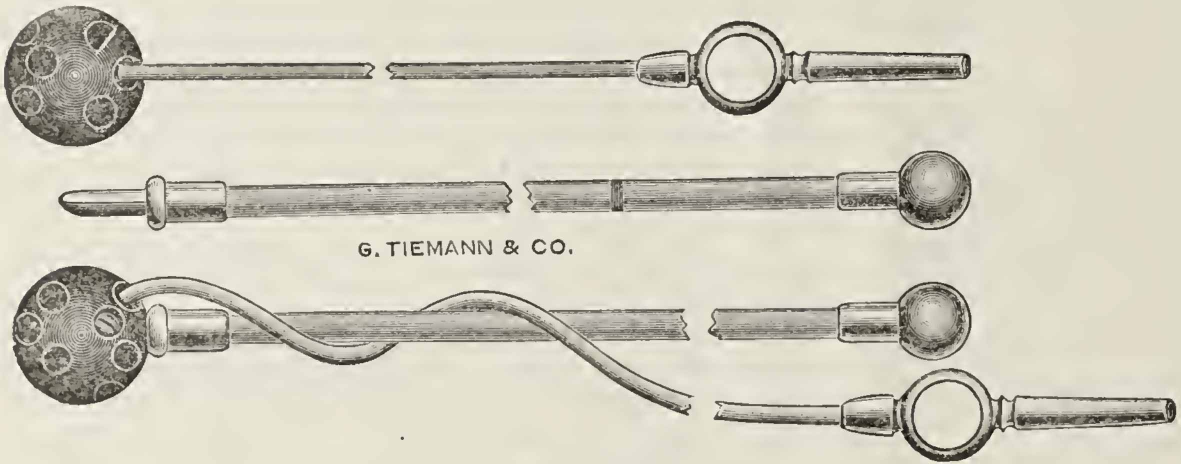
[9] THE JOURNAL A. M. A., 1906, xlvi, p. 16.

Attention is especially drawn, moreover, to the occurrence of lymphocytes and plasma cells in the various nervous tissues. The occurrence of such cells has been made the basis of extravagant claims by several German writers of the virtual specificity of the plasma cells in the meninges and perivascular tissues in general paresis of the insane. Those who maintain the virtual specificity of the plasma cell in paretic tissue charily admit, of course, that luetic and tuberculous tissues likewise exhibit local collections of lymphocytes and plasma cells. The same cells occur in the present case of pneumococcic abscess.

A NEW INTRAGASTRIC ELECTRODE.

ANTHONY BASSLER, M.D.
NEW YORK CITY.

The electrode herein described, in addition to the essential features necessary in such an instrument, possesses the added advantages of being easily and quickly introduced into the stomach or esophagus, of being comfortably borne by the patient during the treatment, and is practical in its strength of construction rather than a toy.



Intragastric Electrode.

The intragastric electrodes now in use may be divided into two classes: those which have a narrow conducting cable (the Einhorn, and Ewald's and Lockwood's modification of it), and those which depend on a thick stiff tubing (like a stomach tube) around the wires to give the cable firmness so that the end piece can be easily pushed into the stomach (Boas', Stockton's and others). The first class comprises the best instruments for practical use, for the latter only magnify such objectionable features as may be found in most of the first group. The matter of irrigation during the time of the passage of the constant currents (possible in some of the electrodes of the second class) is not of much practical value in intragastric work, excepting in a few isolated instances.

The main objection to the deglutable electrode of Einhorn is the fact that it must be swallowed for its introduction. This is often a discouraging performance to patients, is time consuming and is not devoid of dangers to the physician (infections and abrasions from the teeth incident to placing the olive far back into the mouth of the patient). I have had patients who could not swallow or would vomit up the end piece even when the utmost care had been exercised in its introduction. Furthermore, as Lockwood has pointed out, the trailing string of this instrument is a disadvantage, although in my hands not so much of a one as the first mentioned. Therefore, the deglutable feature is a decided drawback rather than an advantage in the constant use of this otherwise good instrument.

When a stiff straight wire (Ewald) or a spiral one (Lockwood) has been incorporated in the cable the valuable migratory feature of the Einhorn electrode is done away with, and the instrument is rendered uncomfortable for the patient to bear in the pharynx during the course of a treatment sufficient in length of time to obtain results.

Another objectionable feature to the American made Einhorn electrode is the thinness of the insulated rubber tubing about the wire. In practice, this rubber is constantly breaking down from wear and tear of use and the teeth of the patient. This objection is minimized to a degree by the thicker tubing to the electrode here shown, a modification now carried into effect in the German makes of the deglutable electrode. This thicker cable makes no practical difference in the comfort to the patient.

This new electrode consists of two separate parts, the electrode proper and the introducer. The end capsule of the electrode (13 mm. in diameter) is a hard rubber perforated case inclosing a metal ball of steel in which the conducting cable is held. The introducer is the main feature of the instrument. It consists of a spiral wire covered with rubber tubing on which is marked the usual distance from the incisors to the stomach. At one end of the introducer is a stem, flattened on one side, which fits into the metal ball. The flat surface prevents the ball from turning when the instrument is assembled for use. On the off end of the introducer is a round metal ball of no significance.

TECHNIC OF INTRODUCTION.

The patient is first made to drink a tumblerful or more of water; this is essential as a conductor of the current from the metal ball in the end piece to the external electrode. The introducer is lubricated with glycerin, then the electrode (which has been immersed in water) is mounted by slipping the spherical end on to the stem of the introducer after which one turn of the cable is made around the end of the introducer shaft. The entire instrument is inserted into the patient in the same way as is a stomach tube. At the desired point in the esophagus, or better in the stomach, the electrode is freed by making one or two short in and out movement of the introducer, the cable being free from the hand. The introducer is then withdrawn, leaving the electrode within the patient. It is my custom at this time to have the patient take another swallow or two of water. Care must be taken not to have more than one turn of the cable about the end of the introducer, and it is advisable to free the cable from the hand after the capsule has been delivered below the laryngopharyngeal junction.

WITHDRAWAL OF THE INSTRUMENT.

At the end of the treatment the electrode is withdrawn in the same way as is the simple deglutable instrument; that is, the string is drawn on until the ball end is held at the back of the larynx, then with an effort at swallowing (when the entroitus of the esophagus opens) the end of the instrument is delivered. I have used this electrode several hundred times with universal success and thus can recommend it as a most practical and satisfactory instrument.

228 East Nineteenth Street.

A CASE OF INTERMITTENT LIMPING WITH SUGGESTIONS AS TO TREATMENT.

LEONARD W. ELY, M.D.
NEW YORK.

Under this and other names[1] various authors have described a disease rather rare in this country, but occurring much more frequently in Russia. It consists of an obliterating endarteritis, and often ends in gangrene. The two characteristics are: First, the absence of pulsation in the arteries of the affected limb; and, second, a peculiar lameness accompanied by pain and by a sense of constriction in the calves. This pain comes on when the patient has walked a short distance, and subsides when he comes to a stop.

The case here reported is interesting for several reasons, principally, however, as showing the curative powers of rest. The patient was seen while under treatment, without the knowledge of his regular attendant, by one of the most eminent consultants in New York, and was told that he would never walk on his foot again. He had already lost one foot, and therefore was willing to carry out the long and tedious treatment prescribed for him. Lovett, in his excellent article on this disease,[2] strongly advised rest as the one hope for recovery.

No examination was made of the foot that had been amputated, and little that is interesting can be learned of the patient's previous history from his former medical advisers, except the rather suggestive statement of one of them that "A. M. has lived a pretty swift life and has been a puzzle to all the doctors. The amount of albumin in his urine at times is shocking."

Patient.—A. M., aged 39 years, manager, married, and having two children, was first seen Aug. 6, 1906, complaining of intermittent limping.

History.—In 1897 he was examined for life insurance and albumin was found in the urine. In 1898, patient had what appeared to be rheumatism in the heel, followed by a similar condition in the forearms, both of which were swollen, red and sore. Symptoms yielded to anti-rheumatic remedies. He denies syphilis.

In 1899 a peculiar form of limping appeared, a sense of constriction and pain in both calves appearing when the patient had walked a short distance, and disappearing when he rested. This was followed by swelling and redness along the right leg and foot. The patient went to bed for six weeks, took large doses of bicarbonate of soda, lemon juice and iron, and gradually recovered. There was a slight recurrence of these symptoms in 1900 and in 1901, in both legs, but not severe enough to keep the patient from his business.

In June, 1902, an ulcer appeared under a corn on the fourth toe of the right foot, and refused to heal. One month later this ulcer was curetted. Then, on account of failure to heal, the toe was amputated. After this, for the same reason, there followed four more operations, the last in July, 1903—evidently, first, an amputation of the metatarsal; second, an amputation from the big toe across the foot, removing the four outer toes; third, skin grafting; fourth, an amputation of the lower third of leg. The wound then healed promptly.

In 1904 and 1905 there was a slight recurrence of the trouble in the left leg, which seemed to be held in check by antirheumatic remedies. There has been no trouble in the right lower extremity since the amputation. Patient wears an artificial foot.

In May, 1906, the patient began to experience pain in the left foot and leg. The symptoms increased and interfered with the carrying on of his business.

Examination and Treatment.—Aug. 6, 1906, there was a slight redness and thickening about the internal malleolus and inner side of foot, which was sensitive to pressure. The diagnosis made was lymphangitis. Treatment consisted of wet dressings of aluminum acetate.

The symptoms grew better, then recurred. Mercurial ointment was applied, and although the patient presented no signs of syphilis, and said that he had undergone a rather thorough anti-syphilitic treatment some years before, he was put on iodid of potassium, and later had five injections of salicylate of mercury. Stockinette bandages were applied to the leg. On one or two occasions the patient kept his bed for a week or two and then seemed to become markedly better.

Following the inflammatory swelling about the ankle came a similar condition along the inner border of the gastroenemius, a painful, thickened, indurated cord—evidently a phlebitis. Later, this phlebitis spread up to the knee, and then could be traced along the inner side of the thigh to the saphenous opening.

A consultation in the latter part of October, with Dr. Clarke, established the absence of pulsation in the posterior tibial and in the dorsalis pedis arteries. Pulsation in the left radial artery was smaller than in the right. The arteries throughout the body were apparently normal. There was no sclerosis.

The patient was then put to bed and was not allowed to leave it on any pretext.

Nov. 15, 1906.—Femoral artery pulsates somewhat. Pulsations can be felt in artery just internal to front of tibia. This pulsation ceases at a point half way down the leg. The patient wears stockinette bandages. The terminal joint of his left forefinger is numb and cold.

Jan. 10, 1907.—The patient has been in bed since last note. Inflammatory symptoms have disappeared. Will now go about apartment in wheeled chair.

January 22.—Leg in fairly good condition; circulation fair.

January 24.—Slight trace of albumin in morning urine. Albuminous food cut down.

February 10.—The patient walks about apartment to a moderate extent. The lower half of the leg and the foot are cold.

Jan. 1, 1908.—The patient remained in his apartment during the entire winter. As soon as all acute symptoms had disappeared, massage was begun, and for several months was continued. It was later replaced by vibratory massage. With the advent of warmer weather he began to go about, and gradually resumed his accustomed manner of life, continuing however, the vibratory massage. He was instructed to avoid injury and exposure to cold.

February 13.—The leg is in better condition than it has ever been since first observation. Circulation is good in the toes; there is slight coldness of the foot. Pulsation can be felt as before half way down the leg, but no arterial pulsation can be felt below that point. Radials and temporals are normal. Patient says that he injured the skin on the back of his foot three months ago, but that the wound healed slowly. Vibration twice daily is being continued.

In spite of the improvement in the leg, the prognosis, if our ideas on the underlying pathologic process are correct, is very unfavorable. A wound is liable to put on the nutrition of the tissues a strain they are unable to bear, and the patient will lose this leg as he did the other.

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[1] Intermittent claudication: dysbasia angiosclerotica, angina cruris; myasthenia paroxysmalis angiosclerotica, etc. The term intermittent claudication is misleading. The closure of the arteries is permanent, though the symptoms may intermit. Herein this disease appears to differ from Raynaud's disease and from erythromelalgia. Again, Raynaud's disease is found most often in the upper extremities.

[2] Jour. Am. Orthop. Assn., 1906.

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[*For other information see second page following reading matter.*]

SATURDAY, MAY 2, 1908.

HARKING BACK TO FORMER CHICAGO SESSIONS.

The coming session of the American Medical Association will be the fourth held in Chicago, the previous ones being in 1863, 1877 and 1887.

1863.

The general meetings of the 1863 session were held in Bryan Hall, on Clark Street, between Randolph and Washington, opposite the County Court House and about where the Grand Opera House now stands. Dr. Wilson Jewell of Pennsylvania was the acting president, Dr. Eli Ives of Connecticut, elected president in 1860, having died during the intervening years. Dr. S. G. Hubbard of Connecticut and Dr. Hosmer A. Johnson of Illinois were the secretaries. The opening prayer was by Rev. Robert L. Collier, then pastor of Unity Church and one of the most influential men of his day. Dr. N. S. Davis, as chairman of the Committee on Arrangements, delivered an address of welcome in which he said that the usual notices for the regular meeting for 1861 had been issued early in that year and that preliminary arrangements for the meeting of the Association had been made when the excitement following the breaking out of the Civil War led to the postponement of the session to the first week in June, 1862. This date coming about the time of the battles of Fort Donelson and Shiloh, and the impossibility of a session of the Association being apparent, the meeting was again postponed until 1863.

The sections met in Bryan Hall, Bryan Hall No. 2 and in the Methodist Church Block. This location, at the corner of Clark and Washington, is still occupied by the First Methodist Church. Drs. N. S. Davis, Thomas Bevan, Edmund Andrews and H. W. Jones composed the Committee of Arrangements. Delegates to the number of 216 were present from eighteen states and the territory of Dakota. Dr. Jewell, the acting president, delivered an address on "Hygiene, the Science of Health." A number of committees reported on various subjects, the plan of procedure at that time being to refer scientific matters to special committees for investigation and report. A recent order of the Surgeon General of the United States Army, W. A. Hammond, prohibiting the use of calomel and antimony in the army, was discussed and a committee appointed to inquire into the reason for this order. A committee was also appointed to memorialize President Lincoln on the necessity for the organization of an ambulance system for the army. A number of papers were read, as well as reports of committees, but it is evident from the minutes that the minds of all present were on other things. References to military experiences, camp life and its diseases, etc., are frequent.

1877.

The twenty-eighth annual session was held in Chicago, June 5-8, 1877. A copy of the original program of this session states that the general and section meetings would be held in Farwell Hall, 148 Madison Street. Old residents of Chicago will remember this building, for years one of the centers of city life. The Association was called to order by the retiring president, Dr. J. Marion Sims of New York, who introduced the president-elect, Dr. Henry I. Bowditch of Massachusetts. The opening prayer was made by Bishop Harris of the Protestant Episcopal Church. Dr. N. S. Davis was again the chairman of the Committee on Arrangements. In welcoming the delegates he said: "Thirty-one years ago seventy-six gentlemen met in New York City to organize the Association. Two-thirds of the original members have passed away." The speaker said that he failed to recognize a single person in the meeting who was present on that occasion. At this moment a hand was raised and Dr. Davis recognized Dr. Washington L. Atlee of Philadelphia, the only other one of the original members present beside Dr. Davis. The roll call showed 660 present, representing thirty-five states. Dr. Bowditch, in his presidential address, discussed the work and the plan of organization of the Association. Much space was given to the discussion of the United States Pharmacopeia and the relation of the Association to it. The question of the organization of state boards of health was discussed and a resolution for transmission to the governors of the various states adopted, endorsing the establishment of such boards. Resolutions were adopted protesting against the Morrison tariff bill on account of the tax levied on quinin.

Dr. Bowditch further, in his address, made two suggestions which are interesting as outlining the developments of after years. The first was that, in order that every honorable physician in the United States might become a member of the Association, such changes should be made in the organization of county and state societies that membership in the county society would include and carry with it membership in the state society and that every member of the state society should become a member of the American Medical Association. His second recommendation was that the basis of representation (at that time one delegate for every ten members) be changed so as to make the representative body smaller to facilitate business. These changes, long needed for the growth of the Association and often advocated, were not adopted for thirty-one years, or until the reorganization in 1901

1887.

The third session of the Association held in Chicago convened at Central Music Hall, June 7, 1887, twenty-one years ago. This building, long a landmark in the downtown district, stood on the corner of State and Randolph and was torn down a few years ago to make room for the new building of Marshall Field and Company. The Association was called to order by Dr. Charles Gilman Smith, chairman of the Committee of Arrangements, and the opening prayer was made by Rev. Samuel P. McPherson, at that time pastor of the Second Presbyterian Church. Mayor Roche delivered the address of welcome. Dr. E. H. Gregory of St. Louis delivered the presidential address on the subject of "Cell Antagonism." The report of the trustees stated that The Journal was now in its fifth year and that the offices were located at 68 Wabash Avenue. The report showed the total weekly circulation to be 4,387, or a net increase of 116 subscribers during the year. An inventory of the property of the Association showed its value to be $1,058.56, on which an insurance of $800 was carried.

At this session Dr. N. S. Davis reported for the special committee on changes in the plan of organization which had been appointed at the previous session. Dr. Davis' report is noteworthy on account of the fact that the changes and improvements embodied in the present plan of organization were practically all included in his report, which was adopted but was later reconsidered and laid over until the next year, when discussion arose as to some of the details and for some reason the entire matter was laid on the table and lost sight of. It is also interesting to note that a communication from the American Pharmaceutical Association was received, requesting members of the Association to prescribe and use only official preparations or those having a published formula. Dr. A. Y. P. Garnett of Washington was elected president. The amount of business transacted at this session seems to have been small, much of the time being taken up with the report of the Rush Monument Committee and a discussion of ways and means for raising funds for this memorial, which was finally erected in 1904. The Journal for the following week states that this session was the "largest, most pleasant and most profitable in the history of the Association."

1908.

It is characteristic of the rapid growth of the city and the consequent changes that the meeting places of previous sessions exist to-day only as memories, two of the buildings having been demolished to make room for larger structures, and the third, Bryan Hall, having been burned in the fire of 1871. The meeting places of the Association at the coming session would have been considered far away from the business center in both 1877 and 1887, while in 1863 they would have been well-nigh on the outskirts of the city. While the membership of the Association has changed, as have the places of meetings, and while old faces have given place to new, yet the problems, work and duties of the Association and its members are much the same as in years gone by. Members of the Association will find a greater and busier city than they visited before, just as they will find an Association stronger, better organized, and better equipped to carry on the work for which it was founded.

INTESTINAL ANTISEPTICS.

Unsatisfactory as may be the clinical results produced by administration of antiseptics for the purpose of decreasing infection of the intestinal tract, yet the results obtained by experimental investigation have been fully as inconclusive. On the whole, however, the prevailing opinion among both clinical and laboratory investigators is that the so-called intestinal antiseptics really have little or no effect on the bacteria of the intestines, and that no valuable results are to be expected from their use. Nevertheless, as Steele[1] points out, the investigations so far conducted on human material have been of questionable value. In some the index of the effect of the antiseptic on the intestinal bacteria has been the amount of aromatic substances in the urine, which is a totally unreliable test. Direct determination of the number of living bacteria in the feces by examination of plate cultures is also of little value, because a large number of the bacteria present in the small intestine are killed before the bacteria escape in the feces. Numerous investigations have also been made of the bacterial flora of the material escaping from fecal fistulas, but here the unnatural conditions impair the value of the results.

Probably the most valuable means of determining the amount of bacterial growth in the intestines consists in directly weighing the bacteria isolated from the feces by the method of Strasburger. In this method the bacteria are separated from the other solid constituents of the feces by centrifugation, and many will probably be surprised to learn that from one-fifth to one-eighth of the total dry weight of the feces is made up of bacteria; the enormous number of bacterial cells that such a weight represents is beyond comprehension, and in conditions of intestinal infection the bacteria may constitute one-third or even more of the weight of the fecal solids.

The results of Steele's investigation of a limited number of cases by this method indicate that, in the normal individual at least, bismuth salicylate greatly reduces the number of bacteria to be found in the feces, while beta-naphthol is somewhat less effective. If the intestinal tract is diseased, however, it is probable that irritating antiseptics may rather increase bacterial growth, because the injurious effect on the normal protective agencies of the gastrointestinal tract may more than offset any antiseptic effect that the drug may exert.

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[1] Jour. Med. Research, 1908, xviii, 93.

Furthermore, it may well be that intestinal antiseptics, even when they do destroy the bacteria of the intestines, do more harm than good, for it is generally agreed that the normal bacterial flora is of great defensive value in suppressing the growth of more noxious forms, and the latter might prove more resistant to antiseptics than the former, so that the natural means of defense may be impaired by antiseptics and permit the objectionable bacteria to multiply with but little opposition. However, the fact that intestinal antiseptics may really decrease the amount of intestinal bacteria, at least under certain conditions, is a matter of importance, while the uncertain value of these drugs under differing conditions, and the irregularity of the results of different investigators, indicate how great is the need of further scientific investigation of this subject.

COLONIES FOR THE NEURASTHENIC POOR.

The results of state control and care of the insane and epileptic have shown the wisdom of the sociologic view that sound biologic laws underlie the principle. The idea of the protection of the body social is gaining ground over the altruistic sentiment of preservation of the unfit through humanitarianism. On the other hand, there is a large class of borderland cases of hysteria, neurasthenia and psychoneuroses for which no adequate provision has been made in this country, but for which both sociologic and altruistic sentiment might well coöperate.

It may not be generally known that sanatoria of the colony type for the neurasthenic poor have been in successful operation in some parts of Europe for several years. The first to be established was "Haus Schönow," near Berlin, which opened in 1899. Since then others have appeared in Germany, Switzerland and Sweden. The International Congress for Assistance to the Insane, at the Milan meeting in 1906, adopted a resolution expressing a general desire to see "popular colony sanatoria for the nervous," organized and erected in propitious localities, which should be open to all without preliminary formalities. This indorsement and the record of the practical workings of the colonies themselves have led various scientific men to visit and study them, and gradually marked interest in the subject is being awakened in other countries, especially among neurologists.

At present these colonies are supported partly by private contribution and partly by state funds. Undoubtedly, however, it is only a question of time when full state support will be given to this charity in the countries above mentioned. The United States should not be backward in taking up the work of forming state colonies for sufferers from our national ailment. The social, economic and medical aspects of the problem are urging solution. The cure of neurasthenia and hysteria can not be effected in general hospitals or ambulatory clinics, and successful treatment of these conditions demands qualities possessed by few physicians. A congenial occupation frequently offers the best remedy for many of their manifestations. The treatment which the poor are at present unable to obtain, from financial reasons, in private sanatoria, could be suitably provided in colonies. Neuroses and psychoneuroses are undoubtedly increasing, and the ultimate tendency of these disorders is the hereditary production of even graver conditions. Colony treatment would, therefore, be in the line of prophylaxis. We must ultimately recognize the menace to the public health of the existence of this numerous class of nerve weaklings, and we must rationally base our treatment on the restoration of normal physical conditions. The sanatorium affords a change of surroundings, proper food and medical equipment, rest, and yet proper occupation.

Möbius, Peretti, Determann, Grohmann, Lähr and other German writers have laid down various principles of treatment of these cases in colony sanatoria. Jacoby,[1] in this country, is advocating their establishment here. In one of the Boston hospitals treatment of certain organic and functional diseases in the same building has been found beneficial to both classes of patients. So far, however, in foreign practice it has been considered advisable to exclude all organic cases from colonies for functional conditions, and this would seem to be the rational attitude to adopt.

THE RURAL HEALTH OFFICER.

In the present sanitary activity in this country the public health officer, especially in rural districts, is a most important factor. For instance, it has been held that the prime essential in the antituberculosis campaign is not the sanatorium, the day camp, the dispensary, the visiting nurse, the illustrated lecture, the instructive leaflet or the relief fund; it is the efficient health officer. On the principle that the whole body will be sound if the individual cells composing it are normal, there is no doubt that state and national health affairs would present little difficulty were rural health conditions properly conserved.

Health officers, to be sure, are sometimes inefficient; and regarding our minor ones at least the reason is that they generally owe their positions to politics, which means the spoils system. An officer under such obligation, while well-meaning enough, would hesitate to offend one or another of his fellow-townsmen—perhaps the "boss" who bestowed his appointment on him. Too often the incumbent's own professional brethren look askance at him and refuse him their loyal support. He is often without the authority to enforce wholesome, though elementary and necessary measures; usually he is not trained in the principles of sanitary science and in their application to public affairs. Excellent men hold such positions; they accept them from a sense of public duty; but they are almost never sufficiently compensated—generally they are absolutely uncompensated by the government.

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[1] New York Med. Jour., April 18, 1908.

Under such circumstances these men must depend on private practice or some other remunerative side occupation for a living. Their unofficial occupations are often so exacting that their public duties must remain inefficiently done or altogether neglected. In this respect, however, it is likely that we are not so badly off as they are in England, if we may judge by the fact that there are, in all England and Wales, but four rural districts whose medical officers give their whole time to their official duties. One of these officers, in a district of nearly 60,000 acres, with a population of 14,000, is a veritable Pooh-Bah, being highway surveyor, inspector under the petroleum acts, collector to the board of guardians, vaccination officer, registrar of births, deaths and marriages, and collector of income taxes. It would, indeed, not be surprising if an unhealthful dwelling or polluted well should occasionally escape the examination of such a busy man. We can understand how under such circumstances the *Practitioner's*[1] story might be realized. This relates how a lady from the city expatiated at the village tea on the delights of drinking that delicious beverage made from the pure, crystal water of the rustic well; how presently there appeared on the scene an indiscreet agriculturist, who triumphantly held up a dripping and much defunct cat that had for some weeks been missing, and which he had just hauled out of that same well.

The status of the public health officer should surely be raised in the near future. The reason why thus far it has not been of adequate dignity, authority and efficiency is, besides those here set forth, that its fundamental and vital importance has not yet been sufficiently recognized in the community. The position of health officer should be absolutely independent of the favor or disfavor of political rings, free from the possibly conflicting claims of private practice. Dr. Herman M. Biggs, in his address as president of the National Association for the Study and Prevention of Tuberculosis, indicated two steps essential to the making of an efficient health officer: first, the provision of the necessary instruction, and next, the restriction of appointments to those who have become qualified. Very few, indeed, of our medical institutions provide instruction in public prophylaxis; they should all have courses on this subject. Other means of education are county bacteriologic laboratories,[2] and the facilities for the detection and diagnosis of disease which are now being provided in a number of states and by municipal health departments.

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[1] Returns of the Medical Officers and Inspectors of Nuisances in the Rural Districts of Each County in England and Wales, Practitioner, December, 1907.

[2] The County Bacteriologist, THE JOURNAL, A. M. A., Oct. 27, 1906, p. 1382.

LEGISLATION IN NEW YORK.

Information received from New York indicates that the state legislature, which adjourned last week, passed the "optometry" law and that it is now in the hands of Governor Hughes. No more striking example could be desired of the inconsistency of legislation regulating the practice of medicine. Last year, after a long-drawn-out campaign involving discussions of the principles regulating medical practice participated in by all branches of the medical profession and all sects of "healers," as well as by many of the newspapers of the state the legislature adopted a law doing away with the three boards which had previously existed and establishing a single board and a single standard. Now, in less than a year after this bill became a law, the same legislature passes a bill establishing a board of "optometrists," whatever they may be. Fortunately, the present governor of New York is noted for his ability to go to the bottom of every question submitted to him. It will not require a very lengthy investigation for Governor Hughes to ascertain that the proposed law is scientifically unsound and practically unwise. It is a pleasure to report that the antivivisection bill, regarding which there was so much preliminary discussion, was withdrawn by the member of the legislature who introduced it.

ARMY MEDICAL REORGANIZATION BILL BECOMES A LAW.

The Army Medical Reorganization Bill, which had been in the hands of a conference committee of the Senate and House, has been modified to the satisfaction of both houses, adopted by them and signed by President Roosevelt. The bill became a law practically as reported by the Senate committee, with the exception of some modifications made in the House, reducing the number of medical officers of the higher grades. The passage of this bill insures an adequate medical staff for the Army in time of peace, means of expansion to meet war conditions or special demands, and sufficient inducement in the way of pay, rank and promotion to attract a desirable class of young physicians to enter the Army Medical Service. It also insures the abolition of the contract surgeon system. Provision is made for a medical reserve corps, auxiliary to the regular medical corps, from which additional medical officers can be drawn in time of war. Those officers of the medical department, as well as those members of Congress who have worked earnestly for years to secure the passage of this bill, are entitled to congratulations on securing these results, so vital to the best interests of the Army and of the nation.

ONE DUTY OF COUNTY SOCIETIES.

In another department[1] will be found a summary of the press comments of Mississippi papers regarding Dr. McCormack's recent tour through the state. One of the most striking evidences of the readiness of the public to improve sanitary conditions is shown by the results of his statements in Vicksburg regarding the slaughter houses in that city. During the day preceding his lecture he visited the local slaughter houses and in the evening described the conditions as he found them. Almost immediately the Vicksburg *Morning Democrat* began an investigation, with the result that conditions were discovered in the slaughter houses which, according to that paper, were indescribable. The *Democrat* is now demanding, for the sake of the people, proper regulation and control of these establishments. This incident contains a lesson: No county society is fulfilling its mission or is doing its duty so long as the meat and milk supplies of the community are open to suspicion. The society should be thoroughly informed on the sources from which the milk is obtained and the manner in which the fresh meat of the community is prepared and supplied. In at least two-thirds of the towns and cities of the United States there is work to be done along these lines that is sadly needed. If county societies wish to demonstrate their value to the public, let them begin by learning and making public the actual conditions affecting the public health, and so arouse the people to action.

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[1] Medical Economics, page 1446.

REED FOR SENATOR.

Newspaper reports from Ohio indicate that pressure is being brought to bear on Dr. Charles A. L. Reed of Cincinnati to induce him to become a candidate for the United States Senate in place of Senator Foraker, whose term expires next March. It is hoped that Dr. Reed will consent to make the sacrifices necessary for such a candidacy. This decision would be in accord with the recommendations adopted last year by the House of Delegates, urging that physicians offer themselves as candidates for both houses of Congress. Dr. Reed has long been well and favorably known as a prominent member of the medical profession. He was president of the American Medical Association in 1901, resigning as trustee to accept this office. Since 1903 he has been chairman of the Committee on Medical Legislation. He has long been distinguished for his interest in and knowledge of public affairs. As special commissioner to Panama a few years ago he presented a report that attracted the attention of the entire country and which brought about much needed reforms. He is well and favorably known throughout Ohio and would fil the position of United States senator with dignity and credit to himself, to his state and to the medical profession. As an authority on sanitary and hygienic questions the presence on the floor of the Senate of a well-known and able physician closely in touch with latter-day progress in science and medicine would be of incalculable value. It is hoped that the citizens of Ohio will be able to induce Dr. Reed to become a candidate and that the legislature of that state may see fit to send him to Washington as the junior senator from Ohio.

Treatment of Mercurial Poisoning.—L. Sabbatani states that experiments on rabbits demonstrated the efficacy of sulphydric acid by the mouth and rectum and by inhalation in treatment of mercurial poisoning. It is given in small and frequent doses, and seems to transform the mercury into harmless sulphids while hastening its elimination. The details of his research were published in the *Riforma Medica* for July 13, 1907.

Medical News

CALIFORNIA.

Society Reorganized.—At a meeting of medical men of Kings County, held recently at Hanford, the Kings County Medical Society was reorganized with the following officers: President, Dr. Robert W. Musgrave; secretary, Dr. Charles T. Rosson, and treasurer, Dr. Edmond Dixon, all of Hanford.

Druggists Fined.—Two druggists of San Francisco, who were selling poisons without the prescription of a physician, pleaded guilty April 6 and were fined $50 each, with the alternative of 50 days in jail. All fines were promptly paid.——Twenty-nine complaints have been sworn to against druggists and all for similar offenses.

Found Guilty.—F. M. Hoque, San José, charged with practicing medicine without having first obtained a license from the State Board of Medical Examiners, is said to have been found guilty April 1, and fined $100. The defendant gave notice of appeal.——Former coroner, Dr. R. S. Lanterman, Los Angeles, charged with falsifying expense accounts against the county, while holding office, is said to have been found guilty by the jury April 7, but recommended to mercy.

Hospital Notes.—The new Sequoia Hospital, Eureka, was thrown open to the public for inspection April 4.——The Western Hospital Association has been incorporated at Los Angeles with a capital stock of $25,000.——The Douglas Hospital Association has been incorporated in Los Angeles County, with a capital of $50,000.——The Shasta County Hospital, Redding, is said to be full to overflowing. A new ward is to be built for the accommodation of tuberculosis patients.

DISTRICT OF COLUMBIA.

Medical Society Meets.—The Medical Society of Georgetown University held its annual meeting April 11 and elected the following officers: President, Dr. John F. Moran; honorary president, Dr. Warwick Evans; vice-presidents, Drs. Edwin B. Behrend, Thomas F. Lowe, Loren B. T. Johnson, J. Llewellyn Eliot, William E. Rogers and George W. Wood; corresponding secretary, Dr. Roy D. Adams; recording secretary, Dr. Ralph A. Hamilton; treasurer, Dr. Prentiss Wilson; members of the business committee, Drs. Wilfred M. Barton, John J. Repetti and Paul B. Johnson, and historian, Dr. J. Llewellyn Eliot.

Entertain Professor Schäfer.—Prof. E. A. Schäfer, F.R.S., of the University of Edinburgh, delivered a lecture April 23 on "Internal Secretion," before the Medical Society of the George Washington University. The lecture was followed by a smoker. April 22 a dinner was given at the Shoreham Hotel in honor of Professor Schäfer by representative educational and medical men of Washington. Brief speeches of welcome were made by President Needham, George Washington University; President Buell, Georgetown University; Dr. Barchfeld, member of Congress; Surgeon-General Wyman, United States Public Health and Marine-Hospital Service; Dr. White, superintendent of the Government Hospital for the Insane; Professor Shields, Catholic University of America; and Professor Franz, George Washington University, to which Professor Schäfer fittingly replied.

FLORIDA.

County Society Meeting.—At the annual meeting of the Valusia County Medical Society, held in Daytona, recently, the following officers were elected: President and delegate to the state medical society, Dr. Edward L. Stewart; vice-president, Dr. J. P. Esch; secretary-treasurer and censor, Dr. Hiram H. Seelye; and censor to fill unexpired term, James E. Rawlings, all of Daytona.

GEORGIA.

Charge Against Physician Dismissed.—Dr. Arthur M. Spier, Macon, bound over from the recorder's court to the city court on the charge of violation of the prohibition law, in writing a prescription for alcohol for a patient, was discharged by Judge Robert Hedges, the case not even going to the jury.

State Society Meeting.—The fifty-ninth annual meeting of the Medical Association of Georgia was held in Fitzgerald, April 15, 16 and 17. The following officers were elected: President, Dr. Thomas D. Coleman, Augusta; vice-presidents, Drs. William B. Armstrong, Atlanta, and Ralston Lattmore, Savannah; secretary, Dr. Claude A. Smith, Atlanta, councilors: Drs. J. Lanton Hiers, Savannah, first district; Dr. Fred D. Patterson, Cuthbert, second district; Dr. Thomas J. McArthur, Cordele, third district; Dr. William L. Fitts, Carrollton, fourth district, and Dr. Henry M. Fullilove, Athens, eighth district, leaving the remaining districts to be supplied, and delegates to the American Medical Association, Drs. William W. Owens, Savannah, and Henry F. Harris Atlanta. Macon was selected for place of meeting for 1909.

Society Meetings.—The Fourth District Medical Society was organized at Columbus March 6, by Dr. Edward C. Davis, Atlanta, chairman of the board of councilors. The following officers were elected: President, Dr. Charles L. Williams, Columbus; vice-president, Dr. M. M. Hallum, Carrollton, and secretary-treasurer, Dr. Charles A. Dexter, Columbus.——The Seventh District Medical Society was organized at Rome, March 11, with the following officers: Dr. Ross P. Cox, Rome, president; Dr. Charles F. McLain, Calhoun, vice-president, and Dr. Harlan L. Erwin, Dalton, secretary-treasurer.——Physicians of the second congressional district met at Albany, March 22, and with the aid of Dr. Mallie A. Clark, Macon, councilor for the Sixth district, perfected the organization of the Second District Medical Society. Dr. Wallace W. Bacon, Albany, was elected president; Dr. William J. Jennings, Blakely, vice-president, and Dr. Hugo Robinson, Albany, secretary-treasurer.——At a recent meeting of the Elbert County Medical Society the following officers were elected: President, Dr. William J. Mathews, Elberton; vice-president, Dr. James E. Cole, Middleton; secretary-treasurer, Dr. Albert S. J. Stovall, Elberton; censors, Drs. Beverly W. Hall, Bowman; L. Pope Eberhardt, Eberton, and O. B. Walker, Bowman; and delegate to the state association, Dr. Amos C. Smith, Coldwater.——At a meeting of the Irwin and Ben Hall Counties Medical Society, held at Fitzgerald, March 24, the following officers were elected: Dr. John C. Luke, Ocilla, president; Dr. William D. Dorminy, Fitzgerald, vice-president; Dr. Lyman S. Osborne, Fitzgerald, secretary-treasurer, and Dr. J. L. Frazer,, Fitzgerald, delegate to the state association.——The Emanuel County Medical Association held a meeting at Swainsboro, April 8, and elected the following officers: Dr. James W. Bowie, Summit, president; Dr. J. H. Chandler, Swainsboro, secretary-treasurer; Dr. Edward T. Coleman, Graymont, delegate to the state association, and Dr. R. Elliott Graham, Nunez, alternate.

IDAHO.

Charge Dismissed.—The complaint against Dr. L. F. Inman, Lewiston, charging him with criminal abortion, was dismissed by the Idaho State Board of Medical Examiners on account of errors. The complainant intends to file a new complaint, if possible free from errors.

Society Meeting.—At the annual meeting of the South Idaho District Medical Society, April 17, the following officers were elected: Dr. James A. Young, Caldwell, president; Dr. C. L. Dutton, Meridian, vice-president, and Dr. Franz H. Brandt, Boise, secretary-treasurer. The next meeting will be held at Caldwell in July.

Personal.—Dr. Howard T. Ricketts, Chicago University, is in Idaho studying the Rocky Mountain spotted fever (tick fever), which prevails in some districts in the southern part of the state for four months, beginning in April.——Dr. W. F. Smith, Boise, has returned after ten weeks in the East.——Drs. Charles W. Craik and J. L. Magee have sold the Cœur d'Alene Hospital to Drs. M. A. Dorland and Hunter.——Dr. George E. Hyde and associates have leased the dormitory building at Rexburg and will establish a hospital in that place.

Illegal Practitioners.—The Idaho State Board of Medical Examiners has initiated an active campaign to purge the state from all forms of illegal practitioners. J. J. Raaf, of Hailey, who has successfully defied the medical law for four years, appeared at Cœur d'Alene, April 7, to take the examination for the third time. He is said to have finished his paper on the first branch, but gave up on the second branch when the examiner refused to tell him the name of the tenth cranial nerve. He has been arrested and tried three times and pleads not guilty, on the witness stand admits the charges in full and the juries acquit him.

ILLINOIS.

Personal.—Dr. William B. Peck, Freeport, sailed for Europe April 25.—Dr. Robert B. Spalding, Clinton, has removed to Selma, Cal.

Charity Ball.—The first annual charity ball for the benefit of Oak Park Hospital given in the Oak Park Club, April 21, under the auspices of the medical staff of the institution, netted almost $2,000.

Smallpox.—On April 16, for the first time since last summer, Peoria was without a case of smallpox. Fairbury reports 9 cases, all under strict quarantine.——No new cases have occurred in Chenoa for four weeks.—Twelve cases are reported in Virginia.——Dr. Thomas H. Griffiths, inspector of the State Board of Health, was sent to Monee, April 20, to investigate a reported outbreak of smallpox.

Meeting of County Society Secretaries.—There will be a meeting of secretaries of component county medical societies of the State of Illinois at the annual meeting of the Illinois State Medical Society in Peoria, May 19-21. The following program has been arranged: "How to Make the Secretary's Work Easier," Dr. Herbert N. Rafferty, Robinson; "What Can a Secretary Do to Obtain More Members?" Dr. Edward W. Fiegenbaum, Edwardsville; "What the President Can Do to Help the Secretary," Dr. Robert A. McClelland, Yorkville; "The Problem of the Small County Society," Dr. Harry M. Ferguson, Morris, and "How Does Post-Graduate Study Help the County Society," Dr. Marion K. Bowles, Joliet.

Result of Investigation.—As a result of the investigation of the state penal and charitable institutions by the committee of the legislature, three bills are to be introduced, the first of which will provide for a new commitment law to make impossible the sentencing of sane but incorrigible girls to insane asylums and of adults to the state reformatory at Pontiac. This bill may also provide for the reorganization of the three penal institutions of the state under one head, and the regrading of prisoners. The second bill will provide an appropriation of $30,000 to construct a wall 30 feet high about the grounds of the state reformatory at Pontiac, in accordance with the request of the superintendent. The third bill contemplates doing away with the seventeen sets of trustees who now control the destinies of as many institutions, and placing the management of all penal and charitable institutions in the hands of business and professional men.

Chicago.

Vaccination Decision Reversed.—The Supreme Court is said to have declared that the state law, which makes vaccination compulsory is illegal.

German Medical Society Banquet.—On April 18 the annual banquet and meeting of the German Medical Society was held at the Bismarck Hotel, after which a vaudeville entertainment was given.

Benefit for Convalescent Home.—On April 22 a benefit performance was given at Orchestra Hall for the benefit of the Home for Convalescent Women and Children, the net receipts of which were about $2,000.

Smallpox.—During the week ended April 25, 10 smallpox patients were sent to the Isolation Hospital, 3 of whom were from Evanston, Ill., and 8 of whom contracted the disease from the same source, an unvaccinated colored boy with a mild type of smallpox. At present there are 15 cases of smallpox remaining at the hospital.

Faculty Changes.—Dr. John B. Murphy has resigned as professor of surgery and co-head of the department in Rush Medical College, and has accepted the professorship of surgery, head of the department, in Northwestern University Medical School, and the position of attending surgeon at Mercy Hospital.——Dr. Weller Van Hook has resigned the chair of surgery in Northwestern University Medical School.

Communicable Diseases.—During the week ended April 25, 607 cases of communicable diseases were reported; of these, 326 were of measles; 78 scarlet fever; 62 diphtheria; 44 tuberculosis; 28 chickenpox; 25 typhoid fever; 24 whooping cough; 7 smallpox, and 12 cases of minor importance. All the diseases of childhood, with the exception of whooping cough, showed an increase compared with the preceding week.

Death Report.—The total deaths reported during the week ended April 25 were 623, 4 fewer than for the preceding week and 55 fewer than for the corresponding period of last year. Chief among death causes were: Pneumonia, 112; consumption, 78; nephritis, 48; violence (including suicide), and heart diseases, each, 47; diarrheal diseases, 40; nervous diseases, 25; cancer, 23; acute contagious diseases, including diphtheria, scarlet fever, measles and whooping cough, 21.

INDIANA.

March Disease and Death.—There were reported to the State Board of Health during March 3,201 deaths, 301 fewer than for the corresponding month of 1907, the respective annual death rates being 13.8 and 15.3 per 1,000. Consumption caused 416 deaths; pneumonia, 483; diphtheria, 18, as compared with 35 in March, 1907; typhoid fever, 45, as compared with 40 in March, 1907; scarlet fever, 10; cancer, 110; smallpox, 2, and violence, 154.——During the month 164 cases of diphtheria were reported; 245 cases of typhoid fever; 284 cases of smallpox, and 150 cases of influenza. The order of disease prevalence is as follows: Influenza, bronchitis, rheumatism, measles, pneumonia, tonsillitis, scarlet fever, smallpox, typhoid fever, pleurisy, diarrhea, diphtheria, chickenpox, whooping cough, erysipelas, inflammation of bowels, intermittent and remittent fever, dysentery, typho-malarial fever, cerebrospinal meningitis, cholera morbus, puerperal fever and cholera infantum.

MARYLAND.

Sanatorium Buys Farm.—A farm adjoining the Endowood Sanatorium has been leased by the directors of that institution for the establishment of a farm colony for convalescent consumptives. The lease was effected through the generosity of several wealthy men without drawing on the funds of the institution. It is intended for poor patients who are to be provided with outdoor work for six months or a year after leaving the hospital.

Contracts Awarded.—The directors of the State Sanatorium for Consumptives, Sabillasville, have awarded contracts for the construction of a power-house and four shacks. Each shack will be 125 feet long, 24 feet deep and one story in height, and will accommodate 20 patients. Each shack will be equipped with steam heat, electric lights, hot and cold baths and entire glass fronts. The institution will be ready for 20 patients June 1, and will be open to all white patients who hav resided in the state one year.

Elections.—The George's Creek Branch of the Allegany County Medical Association on March 21 elected the following officers: President, Dr. Timothy Griffith, Frostburg; vice-presidents, Drs. A. G. Smith, Ocean, and James O. Bullock, Lonaconing; secretary, Dr. Thomas A. F. DeNaouley, Frostburg; treasurer, Dr. Oliver W. McLane, Frostburg, and censors, Drs. John H. McGann, Barton; Oliver W. McLane, Frostburg, and James O. Bullock, Lonaconing.——At the annual meeting of the Kent County Medical Society, held in Chestertown, March 31, Dr. G. Irvin Barwick, Kennedyville, was elected president; Dr. William S. Maxwell, Stillpond, vice-president; Dr. Henry G. Simpers, Chestertown, secretary-treasurer, and Dr. W. Frank Hines, Chestertown, delegate to the Medical and Chirurgical Faculty of Maryland

Society Meetings.—At the annual meeting of Montgomery County Medical Association, held April 21, the following officers were elected: President, Dr. Charles Farquhar, Olney; vice-president, Dr. Otis M. Linthicum, Rockville; secretary-treasurer, Dr. John L. Lewis, Bethesda; censors, Drs. William L. Lewis, Kensington, Otis M. Linthicum, Rockville, and Horace B. Haddox, Gaithersburg; delegate to state association, Dr. James E. Deets, Clarksburg, and alternate, Dr. Upton D. Nourse, Darnestown. Dr. George M. Sternberg, surgeon-general, U. S. Army (retired), delivered an address on "Tuberculosis."——The fourth Maryland conference of charities and correction held a meeting in Baltimore, April 30 and May 1, at McCoy Hall, Johns Hopkins University. The care of defectives and management of county jails and almshouses and other humanitarian subjects were discussed. Two sessions were held, jointly with the Medical and Chirurgical Faculty of Maryland and the State Federation of Women's Clubs.——At the annual meeting of Somerset County Medical Association, held at Crisfield, Dr. William F. Hall, Crisfield, was elected president; Dr. Charles T. Fisher, Princess Anne, vice-president, Dr. Ralph L. Hoyt, Oriole, secretary.——At the annual meeting of the Cecil County Medical Society, held in Elkton, April 16, Dr. Howard Bratton, Elkton, was elected president; Dr. Jesse J. Wright, Warwick, vice-president; Dr. Canullus P. Carrico, Cherry Hill, secretary-treasurer; Dr. George S. Dare, Rising Sun, delegate to the Medical and Chirurgical Faculty of Maryland, and Dr. John H. Jamar, Elkton, censor.

Baltimore.

Measles Epidemic.—During the week ended April 18, 109 cases of measles were reported in the state.——Measles is epidemic at St. Vincent's Infant Asylum, where 55 of the 200 children are ill.

Midwife Fined.—The first conviction under the law passed to prevent blindness of infants was obtained in the criminal court March 27, when Mrs. Mary Fogler, a midwife, was found guilty and fined $25 and costs, amounting to $43.

The Martins in Baltimore.—Dr. August Martin and his son of Berlin, Germany, spent a week in Baltimore as guests of Dr. Howard A. Kelly. The senior Dr. Martin, who is Medical Councilor of the German government, delivered a clinical lecture at Johns Hopkins Hospital, April 13.

Physicians Lose Suits.—The suit of Dr. George A. Strauss against the United Railways and Electric Company for $10,000, for injuries alleged to have been received October, 1903, at its third trial, was decided in favor of the company.——In the case of Mrs. Margaret B. Leib against Dr. Irving Miller, in which the plaintiff claimed that she had not been properly treated for a fractured hip, the jury is said to have returned a verdict in favor of the plaintiff for $2,000.

Law Violators Arrested.—Dr. M. Curby Burkhard and N. W. Seifert, claiming to be Dr. Burkhard's manager, were arrested, April 22, on a warrant charging them with violating the law by the manufacture and sale of a medicine for women known as "Female Pills." The pills are said to have been sent all over the United States. They were committed to jail pending the action of the federal grand jury in default of bail of $5,000 and $2,500, respectively.——Robert H. Darrah and Frederick Morris have been arrested charged with practicing medicine without a license, on complaint of the president of the State Board of Medical Examiners.

MASSACHUSETTS.

Benefit for Floating Hospital.—A benefit performance was given at Potter Hall, Boston, March 25, by the Emanon Club, for the benefit of the Boston Floating Hospital.

Physician Wins Suit.—A verdict of $1,178 in favor of Dr. William M. Conant, Boston, was found against George R. Evans, March 26, by direction of Judge Hardy. Dr. Conant sued for $1,000 for performing a surgical operation on the son of the defendant.

Opens Hospital to Pay Patients.—At the March business meeting of the Woman's Charity Club, Boston, it was voted to permit physicians in good standing, belonging to the Massachusetts Medical Society to send private patients to the Woman's Charity Club Hospital and treat them, as the institution has accommodation for other than free patients.

New Dormitory for Harvard Students.—A large dormitory for students of Harvard Medical School, to be erected on Longwood Avenue, near the new building, is a possibility in the near future through the efforts of Dr. J. Collins Warren. Plans have already been prepared, which include a club house, commons, library, billiard room and hall, seating from 500 to 1,000.

Exhibition of Engravings of Physicians and Surgeons.—An exhibition of prints and engravings of famous physicians and surgeons was opened at Harvard Medical School, April 6, including a large group of works contributed by the Royal College of Surgeons, England, and by Dr. Walter G. Chase and Dr. Ernest B. Young. The exhibition will be on public view for five weeks.

Communicable Diseases.—The high school at Topsfield has been closed on account of an epidemic of diphtheria.—By order of the Board of Health of the South chool building, Brockton, has been closed for two weeks on account of smallpox.——Scarlet fever of mild type has appeared at Harvard, where eighteen students are confined at Stillman Infirmary and several other patients are under quarantine in the dormitories.——Jamaica Plain reports 246 cases of typhoid fever. The health officer is positive that the infection is due to milk, but the source of pollution has not yet been discovered.——On April 16, 26 new cases of typhoid fever were reported in Boston, on April 17, 37 cases, on April 18, 15 cases. The total for the city since April 1 is 507 cases.

The Chelsea Fire.—The offices of the following physicians were destroyed in the recent fire in Chelsea, Boston, April 12: Drs. J. Thomas, E. A. Brown, Charles C. Carroll, Frank H. Chase, William R. Chipman, Joseph B. Fenwick, Louis M. Freedman, Frank S. Garrett, Elias Goldberg, Thomas W. Green, E. Frank Guild, Frederick B. Gunter, Samuel Hobermann, Frances C. James, Henry J. Jelen, Edward S. Johnson, Richard H. Mansur, Patrick H. McCarthy, Isaac B. Molin, Frederic Plummer, Edward J. Powers, J. Morrill Putnam, Frederick S. Raddin, Ernest B. Schallenbach, Charles H. Shackford, Benjamin Van Magness, Jr., and Fred Van Mangess. The wife of Dr. Fenwick was burned to death.——The Rufus Frost and Children's hospitals were destroyed, but the patients were removed without casualty.——The physicians in the city met April 13, in an emergency meeting, to devise means of checking the spread of any contagious diseases resulting from conditions following the fire.

Vital Statistics.—For the ten weeks ended April 18 there were reported to the Boston board of health 2,371 deaths, equivalent to an annual death rate of 20.28 per 1,000, and exactly the same as for the corresponding period of 1907. There were 543 cases of diphtheria, with 35 deaths; 726 of scarlet fever, with 18 deaths; 549 of typhoid fever, with 24 deaths; 1,902 of measles, with 17 deaths; 553 of tuberculosis, with 265 deaths, and no deaths or cases of smallpox. Of the deaths 374 were due to pneumonia; 10 to whooping cough; 274 to heart disease, and 51 each to bronchitis and marasmus. Of the deaths, 446 were under one year of age, 651 under 5 years of age, and 589 over 60 years of age. There is, therefore, quite an extensive epidemic of measles, the number of cases reported in the last week being 306. Typhoid fever, too, shows a great increase. Of the cases reported 509 have been reported since March 28. Most of these have been discovered in the district known as Jamaica Plain and have been traced to a "walking typhoid" patient who was a milk taster by trade. Another large group is in East Boston, but the source is as yet unknown.

Personal.—Dr. Franklin S. Newell has been appointed assistant professor of obstetrics and gynecology; Dr. John Warren, assistant professor of anatomy, and Dr. David Cheever demonstrator of anatomy in Harvard Medical School.——Dr. Eugene Hill, Chelsea, has been appointed physician at the Chinese Detention Hospital, Malone, N. Y., vice Dr. Stacy D. Williamson, deceased.——Dr. William E. Roberts, Boston, has been appointed physical director in the Central Y. M. C. A., Cleveland, Ohio.——Dr. Charles Dudley, Cambridge, saved the life of his two children, April 7, by throwing one out of his automobile and leaping with the other over the side, just before a collision with a heavy runaway fire wagon.——Dr. William H. Davis, Dorchester, has been appointed medical inspector by the president of the Board of Health, vice Dr. James J. McDevitt.——Dr. James Foster has been made chairman and Dr. Willis LeB. Hale, secretary, of the North Attleboro Board of Health.——Dr. John A. Gordon, Sailors Snug Harbor, Quincy, has returned from New Orleans.——Dr. Charles P. Morrill has been appointed school physician of North Andover, Dr. Walter P. Hutchinson, medical inspector in the public schools of Abington, Dr. Clara M. Greenough, medical examiner for the schools of Greenfield, and Drs. Emanuél Harris, Michael H. Shea, Frank H. Beckett, George G. Parlow, F. DeBorgia, Pierre T. Crispo, Thomas Cox and David H. Fuller have been appointed medical inspectors of the schools at Fall River.——Dr. and Mrs. Henry Lee Morse, Dedham, are taking a trip to the Mediterranean.——The Rumform committee of the American Academy of Arts and Sciences has made a grant of $200 to Dr. Lawrence J. Henderson, Harvard Medical School, in aid of his investigation on the direct determination of the physiologic heats of reaction.——Dr. Theobald Smith of Harvard University was elected a member of the National Academy of Sciences at its annual meeting in Washington, D. C., April 23.

MICHIGAN.

Physician Loses Suit.—A jury in the Circuit Court in Bay City is said to have returned a verdict for $2,000 in the suit of Peter Foster against Dr. Isaac E. Randall, in which it was claimed that the defendant had failed properly to treat a fractured leg. The defendant will appeal.

For Care of Consumptives.—The Board of Health, Detroit, has decided to begin at once the erection of a new contagious disease hospital, on Brush Street, in the rear of the Grace Hospital. It also instructed Health Officer Kiefer to submit plans and specifications for two tuberculosis shacks to accommodate 25 patients. The council appropriated $1,400 for the care of consumptive patients.

State Board Meeting.—At the regular meeting of the State Board of Health, held in Lansing, April 10, the board authorized the secretary to have printed in several foreign languages instructions as to the contagious character of the preventable diseases and the methods of preventing their spread. It also authorized the secretary to issue and have posted in public places placards regarding the danger of the spitting habit and the spread and prevention of tuberculosis.

Communicable Diseases.—There are said to have been 60 cases of typhoid fever at St. Clair, with three deaths.——The schools at Spring Lake and Manton have been closed on account of the prevalence of scarlet fever.——Several new cases of scarlet fever have been reportd to the Tecumseh Board of Health.——There are now 23 cases of scarlet fever in the contagious ward of Harper Hospital, Detroit.——Several cases of smallpox are reported in Rutland.——Cedar Springs has 4 cases of smallpox.

Personal.—Dr. W. Earle Chapman, Cheboygan, has been appointed lieutenant and assistant surgeon, N. G., Michigan, and assigned to Companies "K" and "F."——Dr. C. W. O'Brien, Wyandotte, was stabbed four times with a lancet in a fight in Detroit, March 29.——Dr. Thomas B. O'Keefe, Grand Rapids, has been appointed physician of Kent County, vice Dr. Clarence C. B. Hernam, resigned.——Dr. E. S. Gilmore, Ann Arbor, has been appointed superintendent of Wesley Hospital, Chicago.——Dr. Frank N. Martin, St. Joseph, has been compelled to give up practice on account of his health, and has gone to New Mexico.——Dr. Douglas Rothschild, former assistant city physician of Detroit, has been made surgeon for the Duluth, South Shore and Atlantic Railroad at Calumet.

MINNESOTA.

Physician Fined.—F. Young, Ogema, charged with practicing medicine without a license, is said to have pleaded guilty, April 7, and to have been fined $50 and costs, amounting in all to $63.70.

Personal.—Dr. Alexander J. Stone, St. Paul, has resigned from the State Board of Health.——Dr. Philemon Roy, St. Paul, who was operated on for appendicitis, March 27, is reported to be convalescent.——Dr. William J. Awty, Moorhead, was thrown from his buggy in a runaway accident, April 8, and was badly bruised, but escaped serious injury.

Society Meetings.—Rice County Medical Society held its annual meeting in Faribault, April 4, when the following officers were elected: President, Dr. Arthur C. Rogers, Faribault; vice-presidents, Drs. Warren Wilson, Northfield, and Francis M. Rose, Faribault; secretary-treasurer, Dr. William H. Rumpf, Faribault; censor, Dr. Evans E. Brubaker, Northfield; delegate to state society, Dr. Frederick U. Davis, Faribault, and alternate, Dr. Conrad W. Wilkowske, Faribault.——At the annual meeting of the Stearns-Benton County Medical Society, held in St. Cloud, April 16, the following officers were elected: President, Dr. Julian A. Dubois, Sauk Center; vice-president, Dr. James H. Beaty, St. Cloud; secretary-treasurer, Dr. John C. Boehm, St. Cloud; censor, Dr. John B. Dunn, St. Cloud; delegate to the state society, Dr. Claude B. Lewis, St. Cloud, and alternate, Dr. Arthur D. Whiting, St. Cloud.

Communicable Diseases.—Diphtheria is said to be raging at Henning, where two deaths have occurred. Schools and churches have been closed and public meetings have been prohibited.——The public school of Mapleton has been ordered closed for a week on account of diphtheria.——The public schools of Ceylon have been closed on account of an epidemic of measles.——Smallpox, diphtheria and measles are said to be epidemic in Eveleth.——A number of cases of smallpox are reported in and near Hendricks.——Carleton College, Northfield, was closed March 16 by the faculty on account of the appearance of a case of smallpox.——The secretary of the State Board of Health on March 25 issued an order that students failing to show proof or certificate of vaccination shall be barred from the University of Minnesota.——About a dozen cases of smallpox are reported from the State School of Agriculture, St. Anthony Park.——Several cases of smallpox are reported among the pupils of the Riverside School, South St. Paul.——Two nurses at the State Hospital for the Insane, Anoka, are ill with smallpox.——An epidemic of scarlet fever is said to exist in St. Anthony Park.——Scarlet fever is prevalent in the town of Holt.

MISSISSIPPI.

Hospital Notes.—Work has been begun on a twenty-room addition to the Gulf Coast Health Resort, Biloxi.——A bill has been introduced in the senate to provide for the establishment of a charity and pay ward hospital in Jackson to be supported by state appropriation.

Charity Hospital Appointments.—Dr. L. B. Austin has been elected steward of the State Charity Hospital, Vicksburg.——Dr. J. J. Wilson, interne, has resigned and will practice in Coldwater.——Dr. John W. D. Dicks has been re-elected house surgeon of the Charity Hospital, Natchez.

State Association Meeting.—At the forty-first annual meeting of the Mississippi Medical Association, held in Natchez, April 14, 15 and 16, the following officers were elected: President, Dr. James W. Gray, Clarksdale; vice-presidents, Drs. James B. Bullitt, University, and Jefferson D. Donald, Hattiesburg, and secretary-treasurer, Dr. Hugh L. Sutherland, Rosedale. The association will meet next year in Jackson.

MISSOURI.

Personal.— Dr. C. H. Neilson has been advanced from assistant professor to professor of physiologic chemistry in the St. Louis University.

NEW YORK.

An Appeal to the Medical Profession.—Dr. Frank Van Fleet, chairman of the committee on legislation of the Medical Society of the State of New York, and Dr. Walter E. Lambert, member of the committee on legislation of the Medical Society of the County of New York, have sent out the following appeal: The legislature has passed a bill creating a profession of optometrists, and it is up to the governor to sign or not to sign as the merits of the case appeal to him. The bill, which is Senate Bill No. 1033, defines the practice of optometry as follows: It creates a board of examiners of "five persons who shall possess sufficient knowledge of theoretical and practical optics to practice optometry and who shall have been residents of the state actually engaged in the practice of optometry for at least five years." It provides that any person who has been engaged in the practice of optometry for two years next prior to the passage of the act, may receive a license without examination, on recommendation of the board of examiners. This bill is an invasion of the sphere of medicine in one of its most important branches, and confers privileges on certain people, which, in accordance with the wording of the act, they are utterly incompetent to exercise. The bill grants to opticians the right to adjust lenses to people's eyes in need thereof, and denies them the right to use drugs. Without the use of drugs, in certain cases, even the most competent physicians can not properly adjust lenses to the eyes, especially in children, and great harm can be produced by attempting such practice without using drugs. The knowledge of optics alone, however extensive, does not render a person competent to do the work this bill would give opticians the right to do. To examine the eyes and adjust lenses one should have a knowledge of anatomy and physiology at least, but this bill provides only for a knowledge of optics. The many diseased conditions which may influence the eyes and vision are not considered at all. The ability to make a diagnosis is necessary to enable one to discriminate between visual defects due to diseases and those due solely to optical errors, both of which often exist at the same time, and this ability requires more than a knowledge of optics. The passage of this act denotes gross and inexcusable ignorance on the part of members of the legislature, or an utter disregard of the welfare of the community. It is a most vicious type of special legislation in that it permits an examining board of five members to discriminate between opticians who apply for certificates of exemption. The recommendation of this board is necessary before these certificates can be granted, and this board can limit its recommendations to a chosen few. If the physicians of this state will go on record with the governor, opposing this bill, it will never become a law. Will you write at once, urging the governor to withhold his approval?

New York City.

Abortionist to Prison.—Dr. Francis Gray-Blinn has been sentenced to not more than two years in state prison for attempting to perform a criminal operation.

Personal.—Dr. Simon Flexner, director of laboratories of the Rockefeller Institute for Medical Research, New York City, was elected a member of the National Academy of Science at its annual meeting in Washington, D. C., April 23.

School for Crippled Children.—A free school for crippled children of the East Side was opened April 13. It will accommodate 150 pupils, and is especially adapted to training these unfortunates so that they may become useful members of society.

Money for Hospitals.—More than $3,000 was cleared for consumptive children in the Loomis Sanatorium by a vaudeville entertainment given at the Plaza by amateurs.——The committee of the Hospital Saturday and Sunday Association, Mayor McClellan presiding, distributed the $71,000 realized among the hospitals on the basis of free days of service.

Registration of Tuberculosis Cases.—An important bill sent to the governor for his approval and signature was passed by the legislature, requiring the registration of all persons afflicted with tuberculosis. Another bill was sent to allow the city of New York to purchase land in the Croton watershed for enlarging and protecting its water supply system and to contract for the disposal of sewage of the villages within the watershed.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended April 18, 1,640 cases of measles, with 46 deaths; 1,005 cases of scarlet fever, with 66 deaths; 444 cases of tuberculosis, with 189 deaths; 436 cases of diphtheria, with 51 deaths; 19 cases of typhoid fever, with 5 deaths; 13 cases of whooping cough, with 3 deaths; 7 cases of cerebrospinal meningitis, with 7 deaths; 108 cases of varicella and 2 cases of smallpox, a total of 3,674 cases and 367 deaths.

Ban on Fattened Oysters.—The board of health has been investigating the cultivation of oysters since 1904 and as a result has promulgated the following addition to the Sanitary Code "No oysters shall be held, kept or offered for sale anywhere in the city of New York without a permit in writing from the board of health and subject to the rules and regulations of said board." The aim of this measure is to prevent the sale of fattened oysters, which are usually fattened in beds polluted by sewage.

Bequests.—By the will of William Wheeler Smith, an architect, which has just been filed, the endowment fund of St. Luke's Hospital has been increased by nearly $3,000,000. The hospital will receive the benefit of practically the whole amount at present, and will get entire control of the money on the death of the testator's wife. This will make possible the immediate construction of a convalescents' home in the country. An offer of a plot of ground for a site for this home, which will be accessible to New York City, has been made, but the name of the would-be donor can not be made public as yet.——Miss Clement L. Stephens, who died April 1, made the following bequests: Home for Incurables, $10,000; for a free bed in St. Luke's Hospital, $5,000; New York Home for Convalescents, $2,000; Society for the Relief of Destitute Blind, $2,000; Society for Crippled Children, $2,500; Manhattan Eye and Ear Infirmary, $1,000; St. Luke's Hospital, $2,000; Home of Rest for Consumptives, $2,000, and Presbyterian Hospital, $2,000.——Samuel Scholle bequeathed $1,000 each to Mount Sinai Hospital and the Montefiore Home for Chronic Invalids.

OHIO.

Found Not Guilty.—In the suit of Esther A. Clark against Ralph A. Bunn, Dayton, in which the physician was sued for $5,000 for alleged malpractice in the treatment of an injury of the hand, the jury returned a verdict, March 25, exonerating the physician.

National Guard Appointments.—The following first lieutenants and assistant surgeons have been commissioned after examination: Dr. Leon G. Tedesche, Cincinnati, First Infantry; Dr. James C. Pence, Lima, Second Infantry; Dr. William C. Gill, Cleveland, Fifth Infantry; Dr. J. R. McDowell, Zanesville, Seventh Infantry; Dr. Charles A. Belich, Eighth Infantry; Dr. Howard J. Ware, Cincinnati, First Hospital Section, and Drs. Edwin A. Hamilton and John B. C. Eckstrom, Columbus, Second Hospital Section.

Medical Society Notes.—At the meeting of the General Practitioners' Medical Society, Columbus, March 26, the constitution was so amended as to admit to membership any registered practitioner of the city. A committee was also appointed to confer with the North Side Medical Society regarding the advisability of a merger. Dr. Isaac C. Edwards was elected treasurer.——The North Side Medical Research Society, Columbus, at its annual meeting, March 11, elected the following officers: President, Dr. Albertus C. Wolfe; vice-presidents, Drs. John F. Jones and Robert B. Taylor; secretary, Dr. Darlington J. Snyder, and treasurer, Dr. Earl W. Enans.——At the annual meeting of the Barberton Medical Society Dr. Frederick Lahmere was elected president; Dr. H. A. Snyder, vice-president, and Dr. George A. Brown, secretary.——The Columbus Academy of Medicine gave a banquet and smoker April 4, in celebration of the sixteenth anniversary of the founding of the organization.——At the semi-annual meeting of the Association of Assistant Physicians of State Hospitals, held at Gallipolis, April 2, Dr. Edson B. Morrison was elected president, and Dr. Samuel P. Fetter, secretary, both of the Ohio Hospital for Epileptics, Gallipolis.

PENNSYLVANIA.

Bequests.—By the will of the late Benjamin Whitman, Erie, bequests of $1,000 each are made to the Home of the Friendless and St. Joseph's Orphan Asylum, and a fund is created for newspaper workers and members of the Erie Typographical Union who may require care at either the Hamot Hospital or the St. Vincent Hospital.

Philadelphia.

Personal.—Dr. George A. Ulrich is suffering from a fracture of the right forearm.——Dr. Charles Browne sailed for Europe April 23.——Dr. Frederick Henry has been appointed editor in chief of the historical volume which is to be published in connection with Founder's Week.——Dr. George Weinstein, recently resident physician in St. Joseph's Hospital, has been appointed physician-in-chief to St. Vincent's Home.——Dr. Frederick O. Waage has been appointed anesthetist to the Methodist Hospital.

Health Reports.—The total number of deaths reported for the week ended April 25 reached 499. This is an increase of 3 over the preceding week and a decrease of 109 from the corresponding week of last year. The principal causes of death were: Typhoid fever, 13; measles, 10; scarlet fever, 6; pertussis, 1; diphtheria, 8; consumption, 56; cancer, 25; diabetes, 4; apoplexy, 24; heart disease, 49; acute respiratory disease, 75; gastric disease, 11; enteritis, 13; Bright's disease, 50; congenital debility, 15; premature birth, 11; suicide, 5; accidents, 15; and marasmus, 2. There were 201 cases of contagious disease reported, with 27 deaths, as compared with 225 cases and 27 deaths reported in the previous week.

Charges Against Physician Upheld.—Dr. Louis J. Lauterbach, against whom charges of unethical and unprofessional conduct have been preferred, will remain a member of the Philadelphia County Medical Society until June. Whether he will then be suspended, expelled, reprimanded or absolved will then be determined. The Board of Censors of the Medical Society April 15 reported him guilty of the charges preferred. He is accused of diverting to his private practice patients who applied for free treatment at the Philadelphia Eye, Ear, Nose and Throat Institute, a chartered state institution, but under the directorship of Dr. Lauterbach. It was recommended that the courts be petitioned to revoke the charter of the institution.

More Filtered Water.—An increase in the filtered water supply to parts of the Twentieth, Thirty-second and Thirty-seventh wards was inaugurated April 6, and the Torresdale filtered water district now embraces the whole of the northeastern section of the city north of Girard Avenue between Broad Street and the Delaware River. North of Hunting Park Avenue and between Broad Street and the Schuylkill, the whole northwestern section of the city receives filtered water from the Roxborough plant, and the Belmont plant furnishes filtered water to the whole of West Philadelphia. The total filtered water output is at present 132,000,000 gallons daily, which will be shortly increased to 150,000,000 gallons. The Torresdale plant now filters 75,000,000 gallons, the Belmont plant 35,000,000 gallons, and the Roxborough plant 22,000,000 gallons.

TENNESSEE.

Medicine Vendor Fined.—William Champion was arrested at Mount Pleasant, April 10, charged with selling "patent medicines" without a license, and is said to have been fined $29.25.

Mulcted for Mistake.—The case of Homer Williams, Franklin, vs. Fleming & Williams, West Harpeth, and Coleman, Tompkins & Co., Nashville, in which morphin is said to have been sold for quinin, was decided April 14, the jury awarding the plaintiff $1,000.

Society Meeting.—At the annual meeting and banquet of the Nashville Academy of Medicine, held April 7, Dr. William H. Witt was elected president; Dr. William Litterer, vice-president; Dr. Holland M. Tigert, secretary-treasurer, and Dr. Matthew C. McGannon, delegate to the state association.

Smallpox.—The general vaccination order, which became effective in Nashville, February 30, is believed to be responsible for the fact that the Isolation Hospital is now without a tenant.——Several cases of smallpox are reported in the neighborhood of Montgomery; 17 cases are in the Shelby County Isolation Hospital and 3 cases of quarantine in the vicinity.——Smallpox has been stamped out at Huntington. During the epidemic 14 cases were reported in two houses.——Chattanooga has ordered 20,000 vaccine points for the vaccination crusade.

Colored Physicians Graduate.—The Medical, Dental and Pharmaceutical departments of Meharry College, Nashville, held their graduation exercises March 31. The principal address of the evening was delivered by W. P. Vernon, registrar of the United States Treasury. Dr. Charles A. Kelley, Clarksville, delivered the baccalaureate address. A medical class of 20 was graduated.—On April 8, the graduating exercises of the University of West Tennessee Medical School, Memphis, were held, when a class of 9 was graduated. The doctorate address was delivered by Prof. Robert G. Martin.

Personal.—Dr. F. G. Hudson, Camden, while making a professional call, was thrown from his horse and sustained serious injuries of the head and eye.——Dr. Edward E. Reisman has been made house surgeon of the Nashville City Hospital, vice R. W. Grizzard, Jr., whose term has expired.——Dr. Samuel F. Casenburg, Knoxville, has been appointed a member of the Board of Health, vice Dr. Edward H. Pierce, removed from the city.——Dr. Henry Berlin has been elected chief of staff of Erlanger Hospital, Chattanooga, vice Dr. Thomas E. Abernathy, and Dr. J. Jefferson Gee has been reappointed secretary.

VIRGINIA.

Smallpox.—Smallpox, which has prevailed in Caroline County since last October, during which time about 600 cases were reported, is said to have broken out afresh. Four houses in Bowling Green are under quarantine.

Massive Dosage of Quinin.—The article with this title, abstracted in The Journal, April 18, was wrongly ascribed to Dr. R. L. Payne, Norfolk. It should have been credited to his son, Dr. R. L. Payne, Jr., of the same place.

Cocain Traffic.—Richard Morris and wife, colored individuals of Richmond, were arrested while selling cocain, April 5. On the male prisoner was found a letter from a firm of manufacturing chemists in New York, stating that 50 ounces of cocain had been sent to the prisoner, March 2.

Hospital Notes.—Dr. George Ben Johnston, Richmond, has purchased a house at the corner of Sixth and Franklin Streets, and will remodel the building and convert it into a private surgical hospital.——King's Mountain Memorial Hospital Association has been chartered under the laws of the state of Virginia.

Infectious Diseases.—During March, 177 cases of infectious diseases were reported to the health department of Richmond, divided as follows: Typhoid fever, 23 cases, with 2 deaths; diphtheria, 10 cases; scarlet fever, 6 cases; smallpox, 1 case; measles, 78 cases, with 1 death; chickenpox, 32 cases; mumps, 9 cases, and whooping cough, 18 cases, with 2 deaths.

March Mortality.—During March there were reported in Richmond 223 deaths, almost equally divided between white and colored. This is equivalent to an annual death rate of 23.08 per 1,000, the death rate for whites being 17.99 and for colored 31.89. Chief among death causes were: Pneumonia, 31; tuberculosis, 18; cerebrospinal meningitis, 17; heart diseases, 16, and nephritis, 13.

Personal.—Dr. Charles M. Hazen has succeeded Dr. Ennion G. Williams in the department of *x*-ray therapeutics in the Memorial Hospital, Richmond.——Dr. Charles R. Grandy, Norfolk, has been appointed a member of the State Board of Health.——Dr. Richard C. Hume has succeeded Dr. Emory H. Connelly, resigned, as first assistant physician of the Central State Hospital, Petersburg, and Dr. Jarrett has been promoted to second assistant physician.

WASHINGTON.

Plague Work to Continue.—Dr. Frank S. Bourns, special officer in charge of plague work in Seattle, states that it will be necessary to keep up the work for at least two years, at an estimated cost of $3,100 a month.

Upholds State Board.—Dr. James G. Stewart, Seattle, whose license to practice medicine and surgery was revoked by the State Board of Medical Examiners in July, 1906, is said to have failed to block the filing and carrying out of the order of revocation in the Supreme Court.

Physician Wins Suit.—In the case of Mrs. S. M. Preston, who sued Dr. J. S. Kloeber, Green River Hot Springs, for damages alleged to have been received by carelessness of the employés by allowing her to drop while carrying her down the steps of the sanitarium, the jury returned a verdict in favor of the defendant.

Communicable Diseases.—During the winter Wenatchee has had about 200 cases of smallpox, without fatality. The last patient was removed from quarantine April 1.——Several cases of smallpox have appeared at Union Flat, near Endicott, and the school of District 75 has been closed.——Othello reports 4 new cases of diphtheria.

Personal.—Dr. James H. Lyons, library commissioner of Seattle, has resigned.——Dr. Edwin P. French, Elma, was seriously injured in a runaway accident recently.——Dr. Arthur B. Cook, Colville, has been re-elected a member of the local school board.——Dr. Dennis E. Biggs, Bellingham, has gone to New York for postgraduate study.——Dr. Alfred J. Helton, North Yakima, has been appointed health officer, vice Dr. Thomas Tetreau.——Dr. Joseph I. Kaulback, Edwall, has gone to Europe.—Dr. Frank M. Carroll, Seattle, has been appointed lieutenant and assistant surgeon in the National Guard.——Dr. Nelson G. Blacock, Walla Walla, who has been ill in hospital, is convalescent.——Dr. Frank S. Bourns has been appointed chief of the sanitation department, and Dr. John Hunt assistant health commissioner of Seattle.——Dr. Harry C. Watkins, Hoquiam, has been appointed a member of the State Board of Medical Examiners, vice Dr. Charles S. Kalb, South Bend.

WEST VIRGINIA.

Physician Assaulted.—Dr. Robert M. McGuffin, Bramwell, was waylaid and assaulted, at Welch, April 14, and is reported to have been seriously injured.

Epidemic Diseases.—During the first two weeks of March, 8 deaths from cerebrospinal meningitis were reported in Huntington.——Scarlet fever is reported to be epidemic at Island.——Measles has broken out in Riverdale.

Must Provide Cuspidors.—The State Board of Health on April 14 promulgated an order providing that railroads and street-car lines shall provide cuspidors for each coach and that cuspidors shall be provided in all theaters.

Medical Library.—A movement is now on foot among physicians of Wheeling and the members of the Wheeling Medical Library Association to secure a central location in the city for a reading room. The library now contains about 4,000 volumes and receives about fifty periodicals.

Society Meetings.—At the annual meeting of the Marshall County Medical Society, held in Moundsville, April 9, the following officers were elected: President, Dr. Rezin W. Hall, Moundsville; vice-president, Dr. James J. Duffy, Rosby's Rock; secretary, Dr. Ora F. Covert, Moundsville; treasurer, Dr. John W. Rickey, Moundsville; censor, Dr. W. DeWitt Stewart, Moundsville, and delegate to the state society, Dr. W. P. Bonar, Wheeling.

WISCONSIN.

Druggist Fined.—Of three druggists of Oshkosh, arraigned in court, April 2, on the charge of having dispensed adulterated drugs, one pleaded guilty and paid a fine of $25 and costs; the other two pleaded not guilty and were held for trial. The warrant in each case was obtained by the inspector of the State Dairy and Food Commission and charged the druggists with selling camphor below the standard.

GENERAL.

Medical Editors Meet.—The annual meeting of the American Medical Editors' Association will be held at the Auditorium Hotel, Chicago, May 30 to June 1.

Laryngologists to Meet.—The thirtieth annual congress of the American Larynogological Association will be held in the Windsor Hotel, Montreal, May 11, 12 and 13, under the presidency of Dr. Herbert S. Birkett, Montreal. On the first afternoon there will be a symposium on "Recurrent and Abductor Paralysis of the Larynx."

Academy of Medicine Meeting.—At the thirty-third annual meeting of the American Academy of Medicine, to be held at the Lexington Hotel, Chicago, May 30 and June 1, a number of important reports on medical sociology are to be made. The symposium for the year is on "The Place of Women in the Modern Business World as Affecting Home Life Through Marital Relation, Health, Morality and the Future of the Race."

American Medical Association Outing Club.—This club has arranged to take a nine days' tour to Battle Creek, Detroit and Mount Clemens at the close of the Association session. Members of the American Medical Association and their friends are invited to join, and tickets covering all necessary expenses will be issued. For any further information regarding details of the trip write to Dr. Edward R. Campbell, Bellows Falls, Vt.

Notice to Tulane Alumni.—It is important that all graduates of Tulane University, who intend to be present at the meeting of the American Medical Association, Chicago, will write at once to Dr. Hugh B. Williams, 100 State Street, for information concerning the gathering of the Alumni, June 2. The headquarters for Tulane will be at the Auditorium Hotel and the alumni are urged to call there immediately on arrival for information.

Pathologists and Bacteriologists.—At the eighth annual meeting of the American Association of Pathologists and Bacteriologists, held in Ann Arbor, Mich., April 17, a committee was appointed to assist in the raising of a relief fund for the widow of the late Major Carroll, U. S. Army, and of Dr. Lazear, U. S. Army. The following officers were elected: President, Dr. Harold C. Ernst, Harvard University, Boston; vice-president, Dr. Philip H. Hiss, Columbia University, New York City; secretary, Dr. Frank B. Mallory, Harvard University, Boston, and treasurer, Dr. Herbert W. Williams, University of Buffalo, N. Y.

Seaman Prize.—The American Institute of Social Service announces that a prize has been offered by Dr. Louis Livingston Seaman, New York City, of $100, for the best essay on the "Economic Waste Due to Occupational Diseases." All essays must be sent in not later than June 15 to the director of Museum at the Institute, 231 West Thirty-ninth street, New York City. The essays must not contain more than 5,000 words, and must be signed by a *nom de plume*, but the real name and address must be sent in a sealed envelope to the director of the museum.

Pure Water Board.—The mutual organization of Chicago and neighboring cities to promote the further purification of Lake Michigan as a water supply, was completed at a meeting, held in Chicago, April 18, at which Dr. William A. Evans, health commissioner of Chicago, was elected president; Prof. Edward Bartow of the University of Illinois, Urbana, secretary; Dr. Frank W. Shumway, Lansing, secretary of the State Board of Health of Michigan, treasurer, and Drs. William A. Evans and Perry Schurtz, Grand Rapids, Mich., and Mr. C. D. Hill of the Chicago Board of Local Improvements, with other members to be chosen later, executive committee.

FOREIGN.

Exclusion of Immigrants with Trachoma from Mexico.—Strict regulations are now being enforced at all the frontier towns and ports of entry of Mexico to detect and turn back all immigrants with signs of trachoma. The *Anales de Oftalmologia* hails this as a much neded innovation, as conditions among the poorer classes there offer peculiarly favorable soil for the spread of the disease if it once gains a foothold.

Professional Secrecy Versus the Public Welfare.—A provincial medical court of honor in Prussia recently fined a physician $12.50 because he had denounced to the local medical school inspector in his town a certain married teacher who had recently infected with syphilis a young woman who applied to the physician for treatment. On his demand she revealed the name of the man who had infected her. The young woman lived with her sister, a midwife with several children, and the midwife was attending the physician's wife at the time. On account of the danger to the school children and the other circumstances the young physician felt justified in disregarding the obligation to professional secrecy. Appeal to the higher tribunal of honor resulted in a confirmation of this view, the physician being acquitted. The decision stated that the collision of duties under these circumstances justified his action.

Medical Examination of Applicants for Positions.—Certain factories, etc., in Europe insist on a medical examination of applicants for positions. When one such applicant at Liège, Belgium, was recently rejected by the medical examiner, he assaulted the latter and threatened to kill him. The workman was arrested and severely punished, but the *Gazette Méd. Belge* comments on the case that the system is wrong which throws the burden of rejection on the medical examiner. The *Gazette* suggests that the candidate should be admitted to the factory on the understanding that his professional skill and physical qualifications attain a certain standard. After a certain interval, during which his skill is tested and he is examined by the company's physician, the candidate is told that he is definitely accepted or rejected, no details being imparted in respect to rejection, whether it is based on professional, moral or physical grounds. This shields the physician and professional secrecy while the desired purpose is attained, namely, to weed out those predisposed to injury in the factory or liable to contaminate others.

Conditions for Competition for the International Riberi Prize.—This prize of $4,000 is awarded every five years by the Academy of Medicine at Turin, Italy, for the best work or discovery made in the medical sciences during the five-year interval and entered to compete for the prize. The works must be in the hands of the secretary of the Academy by Dec. 31, 1911, to compete for the prize for the current period, 1907-1911. They must be written in French, Italian or Latin, and have been published or announced since 1907. The prize for the five-year period just ended has recently been awarded to Prof. B. Gosio of Turin for his discovery of the biologic reaction—the characteristic growth of mold fungi—on substances containing arsenic, tellurium or selenium, and its practical application. The test for arsenic by the growth of the *Penicillium glaucum* is in current use in laboratory work, and is said to surpass in delicacy and reliability any chemical test known to date. His work on the "Bioreactions of Arsenic Tellurium and Selenium" was published at Rome in 1906. Eleven works were received in competition for the prize, including four from persons outside of Italy. The Riberi prize for the preceding five-year period was awarded to Golgi.

Final Outcome of Damage Suit Against Munich Medical Weekly.—Last year the *Münch. med. Wochenschrift* was sued for alleged slander by a physician who has allied himself with a well-known "nature faker." Our exchange commented on the way in which this physician, Dr. H. Fischer, has fallen "step by step" from good professional standing to be the "pitiable hireling of a quack." The suit was mentioned in these columns Dec. 14, 1907, page 2016. The Munich court fined the defendant 100 marks (about $25) and costs, but the court of last resort has reduced the fine to 30 marks (about $7.50) and divided the costs of the suit between the parties. The evidence admitted showed that Fischer wrote medical write-ups for pay, that his book and his play were gross denunciations of "orthodox medicine," and that he served as assistant to Mistelsky, a notorious Berlin charlatan, and advertised in quack style. The court stated that these facts placed in a milder light the counter attacks of the defendant in his position as representative of the medical profession. Our exchange regards this verdict as a complete victory; the judgment passed on Fischer by the court harmonizes with the condemnation of Fischer on several occasions by the Medical Tribunal of Honor. A Munich daily paper wrote up the first suit with sharp criticism of Fischer and Mistelsky, and they also sued this paper for slander. This suit, which was tried at Berlin, has also resulted in a denunciation of Fischer by the judge, although the technicalities required the imposition of a nominal fine. The full text of the article in the *Münchener Neuesten Nachrichten*, the daily involved, is given in the *Münch. med. Wochenschrift*, March 31, which also contains the full report of its own appeal suit, and a communication from a saddler at Berlin describing his experiences when he consulted the Fischer-Mistelsky combination for furunculosis.

LONDON LETTER.

(*From Our Regular Correspondent.*)

London, April 11, 1908.

Sleeping Sickness Bureau to Be Appointed by the British Government.

In a previous letter, the failure of the International Conference on Sleeping Sickness, which recently met in London to agree to the establishment of a central bureau in London for collection of information with regard to the disease, has been reported. The British government has now decided to take independent action by establishing a National Sleeping Sickness Bureau with headquarters in London. It will be maintained by a strong committee. Annual grants will be made to it by the Imperial and Sudanese governments. To combat sleeping sickness Great Britain and Germany are concluding a convention on the subject of joint measures for the prevention of the malady in Uganda and German East Africa.

The Fight Against the Common House Fly.

The part played by the common house fly in the propagation of disease has attracted much attention. The advisory committee for the tropical diseases research fund in its report for 1907, which has just been published, describes an investigation by Dr. Robert Newstead of the Liverpool School of Tropical Medicine into the life history of the common fly with a view to devising measures to prevent its increase. Mr. Newstead found that the use of disinfectants does not prevent flies from increasing in refuse receptacles, but the presence of fowls (not ducks or geese) to a marked extent does.

Tropical Disease Research.

A government report of the advisory committee for the Tropical Disease Research Fund, which has just been issued, shows that the revenue for the last year was made up by contributions from the imperial government ($2,500), the Indian government ($2,500), the Rhodes trustees ($1,000), and the colonial governments ($9,000), making a total of $15,000. The expenditure included grants as follows: The Liverpool School of Tropical Medicine, $2,500; the London School of Tropical Medicine, $5,000; the University of London, $3,750, and Cambridge University, $500. The Liverpool grant was employed for the payment of a lecturer in economic entomology and parasitology. A further grant has ben applied for and the advisory committee has agreed to allot $2,500 extra to the school, to be applied to work in connection with sleeping sickness. A further sum of $5,000 has been granted the London school for the establishment of a post of entomology. This is subject to the condition that the entomologist shall make a collection of noxious insects of the colonies—a separate collection for each colony—the collections to be kept in readiness for reference by colonial officials or physicians. The secretary of state asked the committee for advice as to the existing condition of sleeping sickness in Uganda. The committee decided that the measure to be adopted should include 1. Segregation of all persons infected with tryanosomes in camps situated in places free from *Glossina*. 2. Removal of the apparently healthy from fly-infested areas to places where it is believed that no fly exists. 3. The clearing of such bush as would afford shelter for the flies at all fords, ferries, landing places and sources of water supply, such cleared areas to be kept free of bush and cultivated with low-growing crops which could not afford shelter for the fly. Steps are now being taken to carry these recommendations into effect.

A School for Mothers.

In one of the poorer quarters of London, St. Pancreas, an interesting experiment is being made in the education of poor mothers in the feeding and rearing of children. A school has been established which has a big shop window filled with pictures of rickety children and an invitation displayed to passing mothers to come in and learn how to keep their babies from becoming bowlegged. A cookery teacher from the London County Council attends and gives demonstrations in the preparation of cheap nutritious meals. An attempt is also made to get the father interested in the welfare of the mother and the child. Fathers are invited to the school and after a cup of coffee and a pipe they receive "talks" on hygiene. It is intended to open a milk depot for the use of mothers who can not suckle their babies. Prizes are given to the mothers who attend regularly and follow the advice given. The mothers pay a penny a fortnight for the classes and the weighing of their babies. It is claimed that the school has already done something to lessen the infant mortality of the district.

The Care of Children's Teeth; Scheme to Provide a Dental Hospital for the Young in London.

A scheme is under consideration for providing a dental hospital for school children in London. Dr. James Kerr, medical officer to the education committee of the London County Council, in his last report states that the need for such an institution is great. Out of 700 children examined at the time of admission to school, only 20 had no obvious decay of teeth; many had only a few stumps, and others only two or three teeth. At present there is not hospital accommodation in London for more than 200 cases weekly, but at least ten times that accommodation would be necessary for even part of the children whom school dentists would select as requiring it.

The United Hospitals Conference.

The third United Kingdom Hospital Conference has been held under the chairmanship of Mr. Charles Lupton, chairman of the General Infirmary, Leeds. It was attended by lay representatives of the governing bodies and members of the medical staffs of most of the hospitals in the United Kingdom. Discussions had been arranged on many important topics in connection with hospital management, eligibility for hospital treatment, gratuitous treatment in compensation cases, payment for food and medicines, hospital accounts, the prevention of tuberculosis, etc. On the question of eligibility for hospital treatment Mr. H. C. Gosnell representing the city of London Lying-in hospital, argued that poverty or want of means should not be considered the only test in determining a patient's inability to pay for medical treatment. Among the middle classes there are a number of persons who wear black coats and show no external signs of poverty yet who are equally as deserving of the benefits of charitable institutions as the laboring classes. As an amendment to the proposal discussed at the last conference, "That inability to pay should be the consideration for the admission of all patients;" he moved: "That in determining the suitability of patients for admission into hospitals, particularly with reference to their inability to pay for adequate treatment, poverty or want of means should not be deemed the only test, but persons should be deemed eligible whether they belonged to what are termed the working classes or not, if owing to their obligations being disproportionate to their means, they are unable to pay for the services of a doctor." This amendment was lost. Considerable discussion took place on the motion of Mr. Sydney Holland, chairman of the London hospital: "That where they can afford to do so, hospital patients ought to be asked to pay for the food, medicine and bandages supplied to them." He said that all hospitals, and especially London hospitals, are in a serious financial position. Hospital authorities are making a great mistake in not asking patients whether they can afford to contribute toward treatment. It is economically unsound to give everything to everybody for nothing, whether the individuals can afford to pay or not. At the London hospital last year 157,000 persons paid sums representing $10,000 without any pressure being put on them. The charitable work of hospitals should be restricted to providing for the sick poor that help, which they can not afford for themselves. Mr. W. Carnt, Manchester Royal Infirmary, said that a large proportion of the patients in this institution paid sums ranging from 50 cents to $1.50 weekly. By this means from $5,000 to $6,000 is added to the income yearly. Dr. Henry Davy, president of the British Medical Association, opposed the proposition and stated that the question of payment raised that of the whole charitable system of the country. He prefers the German system of municipal hospitals. Dr. G. A. Heron, City of London Hospital for Diseases of the Chest, said that the sooner reliance on state support of hospitals comes the better. This system of payment, small though it is, strikes at the root of true charity. There is the greatest difficulty in separating those who are necessitous from those who are not. He knows of people in receipt of $4,000 per annum who habitually used the out-patient department of hospitals. Mr. R. G. Paterson of Glasgow Eye Infirmary asserted that the working classes who supported that institution looked on treatment as a right and that to ask for payment would shut off a large portion of the income. Mr. Sydney Holland in reply said that his hospital had never lost a farthing of support in consequence of making a charge.

The Housing of the Working Classes.

The problem of better and more sanitary housing for the working classes has long exercised governments, sanitarians and philanthropists. Mr. John Burns, president of the local government board, has introduced a most drastic measure into parliament. Hitherto legislation on this question has been of a piecemeal and permissive character, and the accommodation available for the working classes in slum quarters of towns is often lamentably insanitary. Mr. Burns' bill provides for the town planning schemes by which the creation of insanitary and unhealthy areas shall in future be prevented. It increases the powers of local authorities, compels them to exercise their powers, facilitates the financial operations necessitated by its provisions, compensates tenants as well as house owners who are dispossessed, and taxes for the benefit of the community those property owners who profit by the unearned increment resulting from the betterment of their estate by public improvements. The local authority is authorized to prepare a town-planning scheme in relation to any land they believe likely to be used for business purposes. It is also given compulsory powers of purchase and demolition. If the local authority proved reluctant to do its duty—if, as sometimes happens, it is dominated by house farmers, jerry builders or speculators—the local government board reserves to itself the power of compelling it to obey the law.

VIENNA LETTER.

(From Our Regular Correspondent.)

Vienna, April 15, 1908.

Regulation of Dentistry.

By a bill which will go in force in a few weeks the long quarrel between the dental surgeons and the non-medical dentists will be settled. As there was no legal definition of dentistry, numerous dentists cropped up within the last fifteen years who had never had any anatomic teaching, and who not only made artificial teeth for patients, but also extracted teeth and filled carious teeth. The medical profession was unable to grapple with the situation because the law was inadequate. In fact, the position had become so bad for the dental surgeons that the dentists even disputed the doctor's right to make artificial teeth and to fit them in the mouths of patients. According to them, nothing but purely surgical dentistry—extraction and operations on the alveolar process—should be the domain of the dental surgeons. By the united efforts of the profession, who saw the danger of that sort of argument, the attack was repelled, and an arrangement was agreed on stipulating that all present licenses of dentists should remain in force, allowing them, besides making artificial teeth, also to fill carious teeth; while all those who are not yet licensed, qualified dentists will be licensed within three years. After that time only medical men will be able to obtain license to practice dentistry.

Outbreak of Ergotism Near Vienna.

An outbreak of acute ergotism has occurred a few miles from Vienna. So far there have been 27 cases and 3 deaths. The cause of the outbreak has been traced to a carload of Hungarian flour which had been conveyed thither on the Danube. It is many years since such an epidemic occurred before, as strict precautions are taken by the authorities to prevent such outbreaks. Strennous efforts are being made to ascertain whether any of the infected flour has found its way into the city of Vienna.

The Twenty-fifth German Congress on Internal Medicine.

The twenty-fifth German Congress on Internal Medicine was held in Vienna from April 6 to 10, inclusive, and proved a very successful meeting, both scientifically and socially. The number of physicians present—mostly from German-speaking countries—was upward of 500, a record attendance. The congress was welcomed both by the government and the city, and held its meetings in the ceremony hall of the university. The minister of education delivered an address to the gathering, and in it called attention to the newly erected hospital and the advantages it will offer for scientific research. The burgermeister of the city, in his welcoming address, invited all the attending members to a banquet that was given by the municipality.

The transactions of the congress were arranged on a new plan; certain subjects were selected, on each of which introductory addresses or reports were delivered by two eminent physicians, and the discussion, as well as papers referring to it, were given the same day. Thus Professors Rosthorn (Heidelberg) and Lenhartz (Hamburg) each gave a report, on the same day, on "The Correlation of the Female Sexual Organs to Internal Diseases." While Rosthorn gave more attention to the physiologic and anatomic side of the question, Lenhartz dealt more with therapeutic measures. An interesting paper by Tuszkai (Marienbad) dealt with "The Heart in Pregnancy," in which he expressed the opinion that the danger of cardiac disease being complicated by pregnancy had been greatly exaggerated. The question of the existence of "Sexual Asthma" was discussed by Dr. Haufbauer (Vienna), who asserted its presence, although in such cases no crystals can be found in the sputum and there are no bronchitic symptoms. Professor Neisser (Breslau) read a paper on "The Present Status of the Pathology and Therapy of Syphilis," in which he discussed the three important discoveries of recent times regarding this disease: Schaudinn's observations on the *Spirocheta pallida*, Metchnikoff's experiments in monkey inoculation and Wassermann's method of sero-diagnosis. The question of the specific properties of the syphilitic serum was discussed by many physicians, among them being Professors Spiegler, Finger, Ehrmann and Porges. In the afternoon of the second day a number of papers referring to other branches of internal medicine were read and discussed. There was an interesting symposium on "The Heart," in which several competent observers gave their opinions as to the possibility of producing acute insufficiency by overexertion. Professor Schott (Nauheim) described the results of his experiments with wrestlers, in which he has shown that when exertion is pressed to the point where dyspnea and palpitation occur, the heart becomes acutely dilated even though before such exertion the heart muscle was perfectly normal. Dr. Wachenfeld spoke on the treatment of the diseased heart. He considers a rest cure for the heart one of the most important therapeutic measures.

Dr. Herz discussed the danger of impairment of the heart's action by lack of space for the organ due either to malformation of the internal organs or to incorrect posture on the part of the patient. The phonoscope, a new instrument for the examination of the heart, was demonstrated by its inventors, Drs. Weiss and Joachim (Königsberg). The third and last report was made by Professor Schmidt on the subject of "Diseases of the Stomach and Intestines." The paper dealt chiefly with modern clinical methods of examination of the functions of the alimentary canal. Dr. Schütz then read a paper on "The Examination of the Stomach of Infants." A series of papers was read on the relation between the "internal secretion" glands (pancreas, thyroid, adrenals), and in a joint paper by Drs. Falta, Eppinger and Ruedinger it was asserted that the action of each of the three glands mentioned is regulated to a certain degree by the other two, and that a very close relationship exists between them. Among other notable papers read were two dealing with sciatica. One by Dr. Bum described his method of treatment by injection of sterile salt solution into the nerve sheath; the other, by Dr. Erben, dealt mainly with methods of diagnosis. A commercial exhibit of pharmaceutical and surgical products was given at the time the congress was in session. The twenty-sixth congress will convene in Wiesbaden.

Therapeutics

[It is the purpose of this department to outline an up-to-date management of disease, to suggest scientific treatment for diseased conditions, and to present prescriptions that are simple, useful and palatable. Prescriptions are written in both the metric and apothecaries' systems, but the amounts of the ingredients are NOT exact translations of one system into the other, but quantities convenient for pharmacist and physician. It should be understood that solids are weighed in grams or fractions of grams, while liquids are measured in cubic centimeters; that a teaspoon holds five cubic centimeters, i. e., more than a fluid dram, hence a 100 cubic centimeter preparation will contain twenty doses.]

Euonymus.

Euonymus or wahoo is the bark of the root of a shrub (sometimes called "spindle tree") of the eastern United States. It contains a bitter resin called euonymin, a crystalline glucoside termed atropurpurin, and citric, malic and tartaric acids. The bitter principle euonymin is supposed to cause the laxative or purgative action of wahoo. Euonymus is a mild laxative, somewhat resembling podophyllum and rhubarb, only its action is weaker. It increases the secretion of the mucous membrane of the bowel, does not ordinarily cause griping, and as it acts but slowly, for laxative effects should be given from twelve to fifteen hours before its action is desired. It has been claimed to have a slight tonic action on the circulation, slight expectorant and diuretic action, and to be a stomachic. None of these activities is of any importance. Some of its active principles are excreted by the kidneys, but probably it is mostly excreted by the intestines.

It is a useful drug in chronic constipation, perhaps especially when the constipation is complicated by dyspepsia and liver insufficiency.

The official preparations are:

EXTRACTUM EUONYMI, which really represents the euonymin of the drug. The dose is about 0.10 gram, or 2 grains.

FLUIDEXTRACTUM EUONYMI, the dose of which is 0.5 c.c., or 8 minims.

This drug is best used in combination, and may be combined with any other laxative to increase its action, as:

℞.	gm.		
Aloini	|20		gr. iii
Extracti euonymi	1|	or	gr. xv
Extracti belladonnæ foliorum	|20		gr. iii

M. et fac pilulas 20.

Sig.: One pill after supper.

Or:

℞.	gm.		
Aloini	|10		gr. iss
Ipecacuanhæ	|20	or	gr. iii
Extracti euonymi	1|		gr. xv
Resinæ podophylli	|06		gr. i

M. et fac pilulas 20.

Sig.: One pill after supper.

Or:

℞.	gm.		
Euonymini	|20		gr. iii
Extracti rhamni purshianæ	3|		gr. xlv
Extracti belladonnæ foliorum	|15	or	gr. iiss
Extracti nucis vomicæ	|20		
Oleoresinæ capsici	|20		āā, gr. iii

M. et fac pilulas 20.

Sig.: One pill after supper.

Gonorrhea.

Mr. Reginald Harrison (*Lancet*, Feb. 8, 1908), reports a study of the condition of the urine in patients suffering from chronic gonorrhea; he seems to have demonstrated that sometimes, even without local treatment, the discharge will improve and the patient recover by the administration of alkalies. He attributes this to the production of phosphaturia, and does not believe that the improvement is due to the alkalinity of the urine, but to the phosphaturia.

Of course, it has been long known that acute urethritis is improved by the administration of alkalies; in other words, by rendering the urine neutral or alkaline. The best alkalinizers of the urine are the well-known potassium salts, the acetate, bicarbonate and citrate, and every physician has his favorite combination of these drugs. Any one of these salts is efficient if given in sufficient doses, though many physicians think a combination is better. The acetate is perhaps the most active alkali of the three, the bicarbonate the most disagreeable to take, and the citrate the pleasantest.

The urine is more readily rendered alkaline by the administration of the alkali directly after a meal, at which time the urine is the nearest to neutral on account of the production of hydrochloric acid in the stomach. The amount of an alkali that should be administered can not be determined except by examination of the urine; in other words, if the object is to render the urine alkaline, enough should be given to cause that condition.

Any of the following combinations are satisfactory:

℞.	gm. or c.c.		
Potassii citratis	40|	or	ʒix
Aquæ	200|		flℨvi

M. et Sig.: Two teaspoonfuls, in water, three times a day, after meals.

[The water may be flavored with an aromatic, as peppermint, spearmint, wintergreen, or cinnamon, if desired.]

It will often be necessary to administer the above dose more frequently than three times a day. Also, as an adjunct it is sometimes advisable to have the patient drink several glasses of artificial or natural vichy, or some other alkaline water, during the day.

Or:

℞.	gm. or c.c.		
Potassii acetatis	10|		
Potassii bicarbonatis	10|	or	āā, ʒiiss
Potassii citratis	20|		ʒv
Aquæ cinnamomi	200|		flℨvii

M. et Sig.: Two teaspoonfuls, in water, three times a day, after meals.

Alkalies should not be pushed long if there is considerable mucus coming from the bladder, or if there is bladder irritability, for it must be remembered that the bladder mucous membrane is accustomed to an acid secretion, and a continuous alkaline urine sooner or later causes irritability of the neck of the bladder, frequent micturition and even tenesmus. Also, if the urine becomes at all ammoniacal, the irritation of the bladder is made worse by alkalies, and the likelihood of deposits in the bladder is increased.

Ulcers of the Leg.

Dr. Julius T. Rose, Brooklyn, N. Y., in the *Dietetic and Hygienic Gazette*, February, 1908, offers good advice for the treatment of this troublesome condition. He divides his management under several headings.

1. He believes that most patients need a general tonic treatment, as:

℞.	gm.		
Strychninæ sulphatis	|04		gr. ⅔
Quininæ sulphatis	2|	or	
Ferri reducti	2|		āā, gr. xxx

M. et fac capsulas 20.

Sig.: One capsule, three times a day, after meals.

Or:

℞.	c.c.		
Tincturæ nucis vomicæ	25|	or	flℨi

Sig.: Ten drops, in water, three times a day, before meals.

Constipation, if present, should be relieved by a compound aloin tablet, or cascara sagrada, or by the compound rhubarb pill. The food should be properly selected and nutritious, and fresh air should be arranged for house patients, as anything that improves the general nutrition will, of course, aid in the healing of the ulcers. If there is a specific history, of course mercury and potassium iodid are indicated.

2. If there is acute inflammation in and around the ulcer, he applies wet dressings, as:

℞.	gm. or c.c.		
Zinci sulphatis	4		ʒi
Tincturæ lavandulæ compositæ	60	or	fl℥ii
Aquæ	ad 1000		ad Oii

M. et Sig.: Use externally.

Or:

Ichthyolis	25	or	flʒvi
Aquæ	ad 500		ad Oi

M. et Sig.: Use externally.

Either of these solutions should be applied on a sufficient amount of gauze to keep the leg moist from the ankle to the knee, and sufficiently often to keep the gauze wet. He would also soak the leg two or three times a day in water as hot as can be borne, and after two days of such treatment the inflammation generally subsides. Of course he presumably presupposes that the leg should be kept elevated while such inflammation is in evidence.

3. If there is no inflammation around the ulcers, he shaves the leg from foot to knee, to prepare it for the application of adhesive strappings, and then sprinkles powdered naphthalene crystals over the ulcers and covers this with a layer of diachylon ointment, using both generously.

℞.	gm.		
Naphthaleni	25	or	℥i

Sig.: Use externally, as directed.

℞.	gm.		
Unguenti diachylon	50	or	℥ii

Sig.: Use externally, as directed.

He next straps the leg from the foot to well above the calf with zinc oxid adhesive plaster, each strap ¾ of an inch wide and nearly long enough to go twice around the leg. He applies the straps as follows: "Hold a strap back of the leg (the foot being supported on a chair or stool), an end in each hand. Bring it forward till the middle adheres to the back of the ankle, then, estimating the amount of tension required, lay one end in an upward direction obliquely across the front of the leg, and then lay the other, crossing the first somewhat below a right angle. Apply the first one farthest down. Let each succeeding strip overlap the preceding one about one-third. Keep up the same amount of tension in laying each strip so that the pressure may be uniform. There must be no folds or bunches, as they might cause the skin under them to blister or ulcerate. Apply over this a muslin or gauze bandage from toes to knee." He allows this dressing to remain for a week or ten days, and finds after such a period that improvement in the ulcerations is marked. If the granulations do not look sufficiently healthy, he then applies boric acid ointment and again straps for another week.

℞.	gm.		
Unguenti acidi borici	25	or	℥i

Sig.: Use externally.

4. He then proceeds to the next stage in the treatment, viz., he flushes off the granulating ulcers with a solution of salt (a teaspoonful of salt to a pint of boiling water) and then applies skin grafts which he takes from the patient's leg not far distant from the ulcers. An anesthetic is not needed, as he uses a very sharp razor and takes a very thin, little more than epidermal, skin graft. He first places a sharp razor and a small probe in a 5 per cent. phenol solution for about fifteen minutes, then transfers them to a salt solution, and they are ready for use. He cleans the skin from which the grafts are to be obtained with soap and hot water, then flushes with salt solution. The operator next "wraps the left thumb with a single layer of gauze to make it adhere to the skin, then stretches the skin lengthwise of the leg, after wetting it with salt solution." With the razor held lightly as for shaving, "a very thin, translucent graft is cut with a quick sawing motion, using absolutely no pressure." The skin graft will lie on the blade of the razor. It is then immediately transferred to the granulations, which are wet with the salt solution, the probe aiding in its transference to the exact spot desired. After the grafts are all in place, as many as are deemed necessary, and they would best overlap one another and the edges of the ulceration, the air bubbles are pressed out or pricked with a sterile needle. Silver foil or silver leaf is next placed over the graft-covered ulcers, and also over the parts from which the grafts have been taken. Then the leg is strapped as before, but from ankle to calf only, and the parts which overlie the ulcer should be smeared with boric acid ointment to keep them from adhering to the grafts when removing the dressing. This dressing should be left on for two weeks, at which time when the bandage is removed the ulcers will be found healed. However, the leg should be restrapped for a week or two, and then, if necessary, an elastic stocking worn or a bandage used.

Pharmacology

THE BROADER AIMS OF THE COUNCIL ON PHARMACY AND CHEMISTRY.

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(*Continued from page 1363.*)

VI. ARE THE COUNCIL'S RULES SUFFICIENTLY LENIENT?

The Council realized at its organization that absolute impartiality to all manufacturers and toward all products was essential to the success of the movement. The careful selection of its membership would seem to make it superfluous to throw up safeguards against dishonest partiality; but honest errors of judgment are apt to arise among even the most disinterested and best informed body of men. It was deemed wisest, therefore, to eliminate as far as possible the personal equation and to classify all products in accordance with rigid rules and rulings, established in advance, rather than to trust to the opinions and impressions of the moment. This resulted in the acceptance of the rules of the Council, which are, I take it, so well known as to need no discussion. Before being finally adopted, these rules were widely published for comment and criticism. After they had been in tentative operation for half a year, the Council arranged for a conference with the representatives of large manufacturing houses, for a personal discussion. The Council has been and still is ready to consider carefully any suggestions for the improvement or modification of these rules. As a result of such suggestions, originating within as well as without the Council, minor changes and additions have been made from time to time; but on the whole, the rules now in force are substantially those which were originally adopted. In other words, all the products which have been submitted at various times have been judged by substantially the same standard. The tendency of the minor changes has been in the direction of making the rules more specific, and on the whole, more rigid; and I believe this to be the correct tendency.

Commercial competition had encouraged certain laxities as to exaggerated therapeutic claims, want of originality, unwarrantable methods of advertising and of unscientific and misleading nomenclature. These practices were, when the Council began its work, so universal that products which originated under such conditions should not, in justice, be condemned too harshly, and this had to be recognized in the rules. As higher standards come to be more widely accepted, the Council's requirements also should be raised; and this not only in the interest of the medical profession, but also to protect the honest manufacturer against less scrupulous competitors.

Indeed, it is felt even now that the Council's standard for admission should be much higher in many respects, and measures looking to this end have been discussed repeatedly. It has been decided, however, that the products which were on the market when the rules were adopted, should be given a fair chance to be admitted under these rules. On the other hand, I feel that this opportunity should not be extended indefinitely, and I shall take another occasion to discuss whether or not the time to change has not already arrived.

Of two things I feel quite sure: The present rules are fully as lenient as they should be; compliance with them is quite feasible for every manufacturer. I have yet to hear a valid argument to the contrary.

The advertising pages of many medical journals, however, bear witness to the fact that there are still many, very many proprietary medicines on the market which have not been passed by the Council. The causes of this I shall consider in a later paper. At present, I wish to emphasize that the refusal of a product can not be blamed on any unreasonable severity of the rules; and that, if any revision is needed, it should be in the direction of higher instead of lower standards.

I had barely finished writing the above when I received the following letter through the secretary of the Council. It came so opportunely, and expresses so well my general views on these questions, that I have secured Dr. Brady's permission to publish it in full.

> In The Journal of March 14, 1908, the Council publishes its acceptance of "Elixir Buchu, Juniper and Acetate Potassium, P.-M. Co." In the absence of any comments on the remedy I fail to understand why the Council has approved this mixture under "new" remedies. Since criticisms are asked for I would also mention certain other remedies that have been accepted by the Council, with the objection that their names are very suggestive, unscientific and savoring of quackery. As far as any personal experience with, or knowledge of, these remedies goes I am innocent. But if the "New and Non-Official Remedies" demand the consideration they deserve at the hands of the medical profession, would it not be well to censor the *names* of products, as well as other features, before accepting them even tentatively? I refer to such names as "Atoxyl," "Dentalone," "Diabetin," "Diuretin," "Laminoids Ferruginous (Nascent)," "Migrainin," "Purgatin," "Regulin," "Sextonal," "Vibutero," etc.—all of which are undesirable names and most of them suggestive to patients if prescribed.
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> Another class of remedies that the Council has approved seems superfluous and also slighting to the Pharmacopeia. These are "Cascara Evacuant," "Chologestin," "Elixir Buchu, Juniper and Acetate Potassium," "Elixir Saw Palmetto," "Emulsion Cloftlin," "Kasagra," "Maltzyme" (with this, that and the other), "Phenacetin," "Syrup Cannabis Comp.," "Tablets Acetphenetidin Comp.," "Tonic Hypophosphites," "Tonols," etc.
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> I am deeply grateful for the benefit I have derived from the great good the Council is doing. It seems unfortunate that so many physicians, even members of the American Medical Association, are still utterly in ignorance of the Council or its work.
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> I write this lengthy and tiresome "criticism" simply because I fear that some one more capable may neglect doing so. May you continue with the work of reform and please accept my best wishes for continued success.
>
> William Brady, M.D.

I feel certain that every member of the Council agrees in a general way with the opinions of Dr. Brady. Does he also voice the sentiment of the profession at large? Thus far I have consistently supported the conservative opinion that the older products should be given ample opportunity for admission under the original rules; but I, for one, am ready to consider the question whether three years have not offered the "ample opportunity." If they have, and if the profession desires the further reforms indicated by Dr. Brady, then I feel assured that the Council is ready to take the next step. If the demand is sufficiently serious and extensive, I feel assured, also, that the manufacturers will be ready to cooperate. Pharmaceutical manufacturing is largely a business; and as such it will be ready to defer to the demands of its customers—the medical profession.

(*To be continued.*)

ERGOT.

Its Production and Collection in Russia.

An interesting account of the production and collection of ergot in Russia is given by D. A. Ruffmann and Thomas Maben in the *Pharmaceutical Journal*, London, Feb. 29, 1908. Ergot is not purposely cultivated, but occurs as a fungus (*Claviceps purpurea*) which attacks rye or other cereals. The fungus is spread by a small weevil which carries the spores from one ear of grain to another, thus infecting whole fields and districts. The fungus gradually develops, and by the month of June a long, black, triangular "horn" may be seen growing out of the ear of the rye (whence the old name *Secale cornutum*, horned rye), sometimes as many as ten horns being found in one ear. This horn is the sclerotium, or final stage, in the development of the fungus. Rainy districts and wet seasons are favorable for the development of ergot, and its size depends to some extent on the size of the ear in which it grows. The sowing of rye in Russia usually occurs in July and August and the harvesting in the following June and July.

Ergot is collected during the harvest time, being separated from the rye in threshing. After the ergot is separated it is dried in a fashion; but as the peasants have few facilities for artificial drying, it is usually simply air-dried, and often very imperfectly done at that. The consequence is that if the ergot is kept for some time by the peasants and small dealers, it frequently becomes coated with a mold, and it is then considered useless. By some means, however, these people comb it and treat it with oil, and then palm it off as the fresh crop. This accounts for the fact that much ergot, apparently sound, is, nevertheless, destitute of any therapeutic value.

POTENCY DEPENDS ON FRESHNESS.

While the quality of Russian ergot varies, it is generally admitted that it is better than that produced in other countries. Investigations show that much of the value of this drug depends on its freshness. As time goes on its pharmacologic action becomes weaker, and Grunfeld states that ergot when tested four months after it has been collected has considerably less activity than fresh ergot. After eight or nine months the therapeutic action is almost *nil*. In view of this the Russian Pharmacopeia demands that the Russian pharmacist should lay in a stock that will last for not more than one year, and it is also advised that the year's stock should not be ground at once, only as much being powdered as is required for making up a preparation that is to last for a short time, since ergot keeps longer and better in its original state. The Russian Pharmacopeia goes so far as to recommend the making up of ergot preparations as required.

THE PHYSIOLOGIC TEST.

In consequence of the inertness of many specimens of ergot it is necessary that its activity should be ascertained by physiologic experiment. By the effect on the cock's comb the physiologic activity of this drug can be ascertained. As a result of the researches of Houghton, physiologically tested ergot preparations are available and these give all the characteristic pharmacologic reactions of sound ergot. Blood pressure is raised; peristalsis of the intestines is increased when intravenous injections are administered to dogs and rabbits; gangrene of peripheral parts occurs when the preparations are given to cocks, and expulsion of the contents of the uterus follows when they are administered subcutaneously or internally in proper doses to pregnant animals in various stages of gestation. This method of testing has been in use for the past ten years, experience having proved it to be more generally serviceable than that depending on a determination of the mammalian blood pressure.

Cooperation with the Council on the Part of Manufacturers.

The attitude of some of the pharmaceutical manufacturers toward the Council's work has been demonstrated recently in a gratifying way. In a recent issue of The Journal,[1] the German product pankreon was reported on unfavorably. Merck & Co., the American agents for the preparation, on being notified of the fact, replied to the Council as follows:

> As to pankreon, we regret that your findings should be at variance with the claims of the *Chemische Fabrik Rhenania* (the manufacturers of pankreon), and we have already written them to that effect, at the same time informing them that under the circumstances we feel compelled to give up the agency for pankreon.

If this position on the part of American agents for foreign pharmaceuticals is taken generally, and the signs for it are hopeful, many of these much lauded products will be eliminated.

As a further illustration of the commendable attitude taken by some of the pharmaceutical firms the following is *apropos:* Examination of a certain digitalis preparation, which had been submitted to the Council, caused the claims made for the product to be questioned, and the suggestion was made to the manufacturers that they investigate these claims further. This was promptly done, with the result that the firm wrote: "We have made very careful physiologic examinations of ——— and find that some of the claims which we made for it originally are not supported by the results of these studies . . . . and now we will withdraw it entirely from the market."

Such incidents as these should foster a spirit of optimism in those who are interested in honest products and scientific medicine.

Plagiarism and Paid Testimonials.

The indiscriminate praise of new articles introduced into therapeutics by means of fulsome write-ups of the "original article" type has long been a standing disgrace to medical journalism on both sides of the Atlantic. The evil is being fought in Germany by the organization of some of the more reputable medical journals and one of these, the *Berliner klinische Wochenschrift*, in its issue of March 23, 1908, unearths a ludicrous example demonstrating the worthlessness of such "literature."

The phraseology of the text and the clinical histories in an article appearing in *Heilkunde* on "visvit" had a familiar sound. Diligent search was rewarded by the discovery of the original text, which had been published in 1899 in the *Communications of Styrian Physicians,* as a contribution praising another preparation, "hygiama," and two of the clinical histories were found in another article devoted to the same preparation. The correspondence between the two articles is so complete as to exclude accident. The one is simply a reproduction of the other with the word "visvit" substituted for "hygiama." It must be said, however, that the progress of time had led to the enlargement of the original article in a few places so that the proprietors are able to recommend "visvit" for some things which were not thought of in praising "hygiama." It is noticeable also that while the clinical histories are the same, the age of the patient varies, he having grown ten years older before the second article was published. The names of the authors are withheld by our German contemporary, but parts of the two articles are printed in parallel columns, showing the almost exact identity of language in the two. Visvit is made by Arthur Horowitz, Berlin, manufacturer of arrhovin, pyrenol, etc.

A Lack of Self-Respect.

H. Kohn has an article on "pseudomedical periodicals" in the *Berliner klinische Wochenschrift,* March 30, in which he calls attention anew to the evils of allowing one's name to be published as one of the collaborators or contributing an article to a pseudomedical journal which is in reality a "house journal" sailing under the flag of scientific literature. It is amazing, he adds, to see how readily men of prominence will contribute an article or allow their names to be published as collaborators on some newly founded medical journal, or one that is striving to enlarge its field, when the men floating the journal are personally unknown to them. These physicians would hesitate before giving a person with whom they have but a superficial acquaintance a letter of recommendation to a friend, and yet they give what amounts to the same thing to a journal published by a man of whom they know little or nothing. In the first case they injure only one person, while in the pseudomedical journal they may injure thousands who may act on their recommendation. Any man who respects himself is careful of his associates in public and he should be fully as careful as to his associates in the field of science. Before giving the use of one's name or contributing an article to a medical periodical, it is one's solemn duty, Kohn declares, to investigate the character of the editor and of the journal in view. In Germany a confidential appeal to the Association of the Medical Press will obtain for him the desired information. He adds that any one who would impute unworthy motives to the old and honorable German medical journals in their replies to such an inquiry is unworthy of notice. These medical journals voluntarily relinquish the income which they could have if they consented to accept the advertisements.

Correspondence

An Arraignment of Surgery.

Pekin, Ill., April 12, 1908

To the Editor:—In The Journal, March 28, an article by Dr. Bayard Holmes appears, entitled "A Suggestive Plan for a Modern Hospital of Five Hundred Beds." In it I was surprised to read the following:

> Modern aggressive surgery has made the hospital into a hotel for the temporary care of the vivisected. All that the surgeon cares for is a room for his patient to occupy during the three or four weeks she is recovering from his incisions. She may then go home and get well or lead a life of invalidism, as it happens. To cure his patient and restore her to a life of usefulness and happiness is not the modern surgeon's conception of duty. He looks on the invalid as an incumbrance to his hospital, and all the essentials of recovery as unnecessary expense and space-consuming impediments.

This amazing arraignment of the surgeon, coming from a teacher of surgery and a surgeon of note himself, is about the most inconsistent and untrue statement that has ever been put into print.

The foregoing statements do not, and can not, apply to the surgeons of to-day, who not only exhaust every means in their power to accord to their patients the essentials of recovery, but who watch their patients indefinitely to see that their interests are taken care of and that they are, if not wholly, as nearly as possible restored to their former usefulness and happiness.

These remarks, therefore, have no existence in fact, and it must be concluded that Dr. Holmes speaks from his own experience and of his own methods of practice and conception of duty, as a surgeon, to his patients; for certainly this condition does not exist in the practices of other surgeons, for whom no sacrifice in the interests of their patients is too great.

Such ill-considered and unwise remarks, published in an influential medical journal, only give the yellow press and such cults as the antivivisectionists and Eddyites a chance to construe and promulgate them as another confession of the incompetence and insincerity of our profession—thus undoing in large measure the great and unselfish work done by our profession for the good of humanity, and doing an inestimable amount of harm.

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[1] April 18, 1908, 1281.

I think if Dr. Holmes means exactly what he says, he should never again teach or practice an art of which he thinks so little, but should be consistent and step down and out. If, however, he does not mean what he says and these statements are the result of careless preparation, which some parts of the article suggest, he should tender the profession an apology and set himself right as to the meaning really intended. However, I can hardly conceive that this is the case, and until Dr. Holmes explains his attitude I am left to conclude that he knowingly meant what he said.

I therefore take this method of refuting these statements, in the interests of surgery and that great army of surgeons, whose highest conception of duty is to operate only when necessary and to accord to their patients all "the essentials of recovery." Edwin A. Weimer, M.D.

[Comment:—The statements that are criticised would not have been published had their import been realized. We are in accord with the criticisms of Dr. Weimer.—Ed.]

The Cure of Stammering.

New York, April 23, 1908.

To the Editor:—A letter in The Journal, April 18, 1908, concerning my "melody cure" contains several statements about stammering that should be corrected.

That stammering "is congenital" is incorrect. Among the many hundred patients who pass through my speech clinic many of them began to stammer by imitation, many acquired it after whooping cough (which may disturb the habit of respiration), many had it after scarlet fever, etc. A number "stammered or stuttered as soon as they began to talk;" even in these the cause was not congenital brain lesions, as the patients were often readily cured in a few treatments.

"That those persons who have been apparently cured are not really cured" is an opinion that is widespread among the profession and the laity. It has been true in many cases because the "cure" was attempted by persons who were not physicians who understood the proper treatment. In every case of stammering or stuttering the patient can be cured permanently if the proper method is followed. Beating time, speaking in rhythm, lengthening the vowels, etc., are devices that help some people, occasionally permanently, more often transiently; but devices of this kind are only makeshifts. There is only one method of cure that is truly scientific, always successful and absolutely permanent. It consists in analyzing the entire vocal mechanism of the patient and then correcting every fault. This is sometimes a very elaborate process, requiring apparatus for registering the voice and a rather extensive laboratory outfit. At other times the trained ear can catch the essential defects at once.

Of the principles of analysis, a detailed account will be given on some future occasion. At present I merely wish to protest against statements that imply stammering (and stuttering) to be a hopeless disease, whereas in reality every stammerer can be permanently cured.

87 Madison Avenue. E. W. Scripture.

The Determination of Sex.

New Haven, Conn., April 25, 1908.

I am not a physician or a biologist, and were it not for the fact that I have been assured by both that no one really knows anything about the subject I choose to discuss, I would be very loath to tread on strange ground in the face of assured opposition. Since no one knows, however, I am prepared to submit the following dissertation for exactly what it is worth, the observation of a fairly good observer, wholly untrained in the subject.

Some years ago my attention was attracted to the question of determination of sex by a neighbor, a farmer, who had a Jersey bull which always sired heifer calves. Out of a whole season's get, I do not know how many, not more than one or two were bull calves. This bull was an exceedingly active, robust animal, I think the most eager of desire of any I have ever seen. I have on my own country place to-day a cow which has had to go to the bull two or three times every season before successful impregnation has been obtained, and she has always had heifer calves. In the average country barnyard where one rooster is kept to a flock of twenty or more hens—or if the flock is bigger the number of roosters is somewhat in proportion—it is common knowledge that out of a setting of eggs probably eight or ten chicks in every dozen to hatch will be cockerels. I am given to understand that in the fancy breeding yards where they guarantee fertile eggs, one rooster runs with only a few hens and the proportion of pullets is greater.

I am, therefore, going to propound the theory that the determination of sex in an embryo is in exact proportion to the desire of the parents. Where the male is the most eager for the connection the offspring will be female; where the female is most eager during her period the offspring will be male.

There is ample reason for this, and there are many other examples to be cited than the ones above. Nature has a way of preserving, or striving to preserve, certain balances in all living creatures. The pendulum swings one way or another, but it returns to the balancing point again, just so surely as it is moved away from it. The balance is the more readily marked in those creatures which run wild, because as soon as man steps in he offers artificial support on one side or the other and destroys the true balance. Now what is more certainly the fact than that in a state of nature, if females become more scarce, the males annoy them more and more until they become partially excited and accept the first male before they are more than on the verge of their season, and such males as come thereafter are dealing with a jaded female which hardly cares whether she accepts them or not. On the other hand, if males become more scarce the female goes longer and longer without meeting one, and when she does meet a male she may have to tease him into a desire which is forced, because he has already been partially or almost completely satisfied before meeting her.

Nature's answer to this is to produce in the embryo the sex most desired. But the desire is physical, not mental, subject to the influence which the mental has over the physical. If the woman be weary and overworked physically and the man fresh and robust, the chance of a female offspring should be exceedingly good, or vice versa if physical conditions are reversed. A man and a woman can not beget such sex in offspring as they choose by merely wishing to produce male or female. It is conceivable, however, that by stimulating the desire of one, unknown to the other, the balance could be thrown substantially as desired, with the very uncertain factor left to be accounted for, that no one, in a state of civilization, can accurately measure proportionate desire, because it is so subject to mental influence. The human appetite is not a simple desire of the bodily organs as in wild creatures.

Compare the families you know where the several offspring are all of one sex. Is not the parent of that sex of a notably less robust or passionate nature than the other? Is not the fire and the desire plainly discernible on the other side? Of course, in a small family the element of chance, physical condition or mental stimulus may have controlled, but in a family of five or six, all of one sex, does not the parental temperament bear out this theory? I know of several families in which there are numerous children, all, or all but one of the same sex, and an obvious difference in parental temperament or physique supports the theory without an exception. This should not be a difficult theory to test, had one the funds and the inclination to spend the necessary time. In these days of incubators and woven fencing it would be possible to separate groups of laying hens by wire fences, in one case having many hens with one rooster and in other cases moving one hen during the day to several roosters who had had no other hen for considerable periods of time. By marking the eggs to keep them separate, hatching them separately, and keeping the chicks absolutely separate until the sex characteristics became unmistakable, this theory could be tested with some degree of accuracy. The result might or might not be conclusive, depending on how long the experiment was continued, but there should be an average in a short time which would tend to indicate the correctness or the fallacy of the theory. Of course, the test could be made with animals, but our common domestic fowls—or possibly rabbits, of whose ways I do not know enough to venture judgment on them—are the most rapid in reproduction, the easiest to control, and therefore the easiest creatures to experiment with. ALFRED ELLIS.

[COMMENT:—This view is by no means new. Many persons have noted similar instances and have come to similar conclusions. We publish the letter because the theory ought to be familiar to parents and physicians, to the end that exact observations may add to our knowledge on this important subject.—ED.]

Book Notices

THE INTERNATIONAL MEDICAL ANNUAL. A Year-Book of Treatment and Practitioner's Index. By various authors. Cloth. Pp. 647. Price, $3.50. New York: E. B. Treat & Co., 1908.

The annual presents the progress of the past year in all branches of medicine in a compact and readable form. Special subjects like the opsonic theory, passive hyperemia and examination of the feces are treated by special writers well fitted to deal with them. Especially is this the case with regard to the Bier treatment, which is summarized by Schmieden, assistant to Bier. The important subject of the examination of the feces in chronic diseases is treated by E. Young, who gives a good account of the practicable methods. The article is illustrated by photographs, which, while true pictures, lack the distinctness necessary for them to be very instructive. In our opinion, good drawings would give a much clearer idea of what to look for, even if not so accurate.

AUSCULTATION AND PERCUSSION. By Samuel Jones Gee, M.D., Fellow of the Royal College of Physicians. Fifth Edition. Cloth. Pp. 325. Price, $2.00. New York: Oxford University Press, 1907.

This little work, now in its fifth edition, is in some respects unique. Many works on physical diagnosis are largely compilations in which the author in his desire to omit nothing of importance drags in much that is, if not unimportant, at least diverting or confusing. Dr. Gee has evidently aimed, and successfully, to make his statements concise. No material foreign to the subject is brought in, he sticks closely to his text and there is more in many of his paragraphs than in whole pages by other writers on the same topic. The book is truly a marvel of compactness. This compactness naturally leads to a dogmatism in the manner of statement that occasionally arouses one's opposition because the statement is too broad or perhaps is the expression of the author's individual opinion on a question to which there is another reputable side.

The work is unique because with all this conciseness there is a scholarly finish that at times makes one think of the polish and terseness of Bacon's Essays. It is unique in that there is interwoven an almost continuous thread of historical and bibliographic allusion and quotation that blends so harmoniously with the more somber tones of the scientific facts as to give to the whole a warmth and richness of color that attract rather than repel. It is unique also in a certain quaintness of style, a harking back to archaic forms of words, and a persistent habit of using these in their original derivational meaning, and all this without offense. In its odd, almost eccentric combination of artistic beauty and solid usefulness the book makes one think of an antique oriental rug.

We wish our author had seen fit to say at least a few words concerning the *x*-rays as an aid to diagnosis in diseases of the chest, yet his judgment is perhaps right when he decides to omit consideration of this topic: "Inasmuch as few medical men possess the necessary apparatus, the topic has been excluded from the present book." Soon, however, as knowledge concerning the interpretation of skiagraphs becomes more accurate and classifiable, no book can make such omissions. We note also that there is no mention of the phenomena of heart block; nor is there reference to Litten's so-called diaphragm phenomena, or of Grocco's triangle. One wonders at times if the treatment of certain topics is not unnecessarily scanty and curt because of the desire to be concise, and if brevity has not been secured by the sin of omission.

He is unusually clear and thorough in discussing the shape of the chest, the theory of percussion sounds, and pleurisy with effusion. We wish that there were space to give examples of the sane exposition of many topics. But one must be content to say that the work is to be warmly commended as a brief, condensed, sound and scholarly exposition of auscultation and percussion.

CHRONIC CONSTIPATION. By J. Alexander MacMillan, B.A., M.D., Professor of Therapeutics in Detroit College of Medicine. Cloth. Pp. 257. Price, $2.00. Kansas City, Mo.: The Burton Co., 1908.

The subject of constipation is attracting at present an increased amount of attention. This condition, resulting from morbid alteration of function, is probably the basis of a large number of symptoms, both local and constitutional, and may easily be the starting point of grave organic changes. The earlier methods of treatment, based on empiric notions and viewing the disorder as a symptom without seeking for its cause, have largely failed to produce permanent results. Even the dietetic treatment, while it is based on etiologic principles, has not been entirely successful. There is need to study this subject on a broad basis, and this has been done by Dr. MacMillan, although his studies lead him to a somewhat peculiar theory, which, while it does not lack a physiologic basis, must yet be received with some caution as probably representing only a part of the truth. He begins with a consideration of the anatomy and physiology of the intestinal musculature and reaches the conclusion that the natural stimulus of the intestinal peristalsis is mechanical distention. This distention is furnished by the bulk of the feces and by the evolution of gases from the fermentation of the food residues. This being the case, the constipation must depend on the lack of mechanical distention or on insensitiveness to this stimulus. On this basis, the author founds his treatment, which consists in mechanical distention by rectal tampons. The method recommended is sufficiently simple and according to his experience remarkably successful. The account of constipation is supplemented by chapters on colitis and autointoxication, which are sound in theory and contain excellent practical suggestions, although their connection with the central theme is not exceedingly close. The subject is well handled, and the book is certainly suggestive and presents up-to-date views. It is unfortunate that rather frequent typographical errors should mar an otherwise excellent work. While it may be that the author is somewhat enthusiastic in his estimate of his new procedure, his work should be read by those who have occasion to treat habitual constipation.

APPLIED PHYSIOLOGY. By Frederick A. Rhodes, M.D., Professor of Physiology and Embryology, Medical and Dental Departments of the Western University of Pennsylvania. Pp. 206. Cloth. Price $1.50. Pittsburg: Medical Press, 1907.

The first sentence of the preface states the purpose of this book: "I have attempted," says the author, "in this volume to present to the student of medicine whether in school or in practice an explanation of the most important and frequent symptoms of disease met with."

A book which looks even at old facts from a new standpoint is always welcome; hence this one was taken up hopefully, but only to be disappointed. There is nothing in it not to be found in most books on physical and clinical diagnosis, and, of course, this one does not discuss methods of diagnosis. The viewpoint of the author is certainly not novel. The subject matter is offered in the form of slightly amplified lectures notes and, therefore, is not easy or attractive reading. One must interpret and supplement almost every phrase in order to get much meaning from it. For instance, on page 112 we find:

"Flatulence: Gas in the stomach and intestines. Fermentation of fatty foods. Carbon dioxid generated and retained on account of atony. Air swallowed. Regurgitation of pancreatic juices, causing flatulency, due to decomposition of carbohydrates which liberates the CO_2 Bacterial fermentation. Interchange of gases between the blood and contents of the stomach. Hystéria."

The first statement is a definition doubtless, but it is not so stated. The other collocations of words are intended to express conditions under which flatulence may arise. However, nothing is said of the relative frequency of the occurrence of them or of the coincidence of any of them. The book may be valuable to students who are listening to the author's lectures, but the general reader will find the same facts more lucidly stated in other works on clinical diagnosis and on practice.

TEXT-BOOK OF OTOLOGY. By Fr. Bezold, M.D., Professor of Otology at the University of Munich, and Fr. Siebenmann, M.D., Professor of Otology at the University of Basle. Translated by J. Hollinger, M.D., Chicago. Cloth. Pp. 315. Price, $3.50. Chicago: E. H. Colegrove Co., 1908.

This work differs in some respects from the average text-book. It is based in good part on the authors' own observations, and has hence a somewhat original and certainly a personal flavor. The views expressed are therefore those of Bezold, which differ sometimes considerably from those usually taught. For instance, many aurists would consider the treatment of pyogenic affection of the middle ear too conservative from a surgical point of view. He likewise condemns removal of adenoids during the earlier course of an acute inflammation of the middle ear even when otherwise indicated, differing thus from other otologists. He favors the use of boric-acid powder in acute purulent otitis, denying the superior results obtained by proper gauze tamponing. Bezold's classification of middle-ear diseases is also peculiar. He wants to drop the name catarrh, and hence calls the condition hitherto known as acute (or chronic) catarrh of the middle ear, by the name acute and chronic otitis media (non-perforative). But the term non-perforative otitis media is already in common use for a well-defined inflammation different from the so-called catarrh. In view of the many individual views expressed, and inasmuch as the authors' style can not be called forcible, the book presents no advantage over its numerous rivals as a text-book for the student. But with its wealth of details it is a valuable and suggestive work for study and comparison for any physician interested in diseases of the ear. The translation is well done, and the book is gotten up creditably.

TREATMENT OF INTERNAL DISEASES, for Physicians and Students. By Dr. Norbert Ortner of the University of Vienna. Edited by Nathaniel Bowditch Potter, M.D., Visiting Physician to the New York City Hospital. Translated by Frederic H. Bartlett, M.D., from the Fourth German Edition. Cloth. Pp. 658. Price, $5.00. Philadelphia: J. B. Lippincott.

There may be some difference of opinion as to the desirability of a work on treatment dissociated from pathology and etiology, especially as the subject is pretty well considered by treatises on the practice of medicine. There is, however, a field for a book intermediate between the work on practice and the text-book on materia medica which will give more details than works on practice and which will discuss the special application to individual diseases more fully than the works on therapeutics. Such a work is supplied by Ortner, and the American edition, under the editorship of Dr. Potter, is well suited to assist the physician in working out the details of treatment. The number of synthetics recommended is larger than is desirable and it is to be feared that some preparations have found a place in the book that may outlast their period of service in actual practice.

THE ANIMAL MIND. By Margaret Floy Washburn, Ph.D., Associate Professor of Philosophy in Vassar College. Cloth. Pp. 333. Price, $1.60. New York: The Macmillan Co., 1908.

This is a study of experimental methods in comparative psychology, including only those aspects of the animal mind to the nvestigation of which experiment is adapted and to which it ias been applied. The first chapter on the difficulties and nethods of comparative psychology emphasizes the fact that psychologic inferences are made on the hypothesis that human ninds are built on the same pattern and that what a given vord or action would mean for one mind, it necessarily means or another mind. In considering methods, the old system of equiring data regarding animal psychology is designated as the "method of anecdote" and is contrasted with the present experimental method. In the second chapter, the evidences of mind are discussed under "inferring mind from behavior" and "inferring mind from structure." Manifestations of mind in the lowest animal organisms are reviewed, after which sensory discrimination is considered under the head of chemical sense, hearing, vision and space perceptions, followed by a discussion of modification of conscious process by individual experience; of memory in animals and of attention. No claim is made for completeness, nor is any attempt made to draw general conclusions, the book being simply a most interesting and readable synopsis of present knowledge of the subject. A comprehensive bibliography of nearly 500 entries forms a valuable appendix.

DISEASES OF THE HEART. By Professor Th. v. Jürgensen, Tübingen; Professor L. Krehl, Greifswald; and Professor L. von Schrötter, Vienna. Edited, with Additions by George Dock, M.D., Professor of Theory and Practice of Medicine and Clinical Medicine, University of Michigan, Ann Arbor. Authorized Translation from German, under the Editorial Supervision of Alfred Stengel, M.D., Professor of Clinical Medicine in the University of Pennsylvania. Pp. 848. Cloth. Price $5.00. Philadelphia: W. B. Saunders Co., 1908.

This American edition of one of the Nothnagel series presents few changes from the German. In some cases more recent contributions, especially those from English and American authors, have been introduced to supplement the original text so that the book presents a truly international character. The introductory chapters on "Insufficiency of the Heart" and "Endocarditis and Valvular Diseases" are by von Jürgensen; "The Myocardium and Nervous Diseases of the Heart" are treated by Krehl, and "The Pericardium" by von Schroetter. A certain amount of repetition is thus necessary since the subjects treated by the first two authors overlap, but this gives also the advantages of a difference of opinion and viewpoint by two specialists. The articles in general are full and the symptomatology of endocarditis and myocarditis is given exhaustively, all the organs of the body being passed in review with reference to the symptoms exhibited by them in consequence of disease of the heart. The articles contain a number of case histories and are supplied with full bibliographies. The work is well illustrated and altogether forms a worthy companion to the other volumes of the series.

A SHORT PRACTICE OF GYNECOLOGY. By Henry Jellett, B.A., M.D., B.Ch., B.A.O. (Dublin University), F.R.C.P.I., Gynecologist and Obstetric Physician to Stevens' Hospital. Third edition, revised and enlarged. Cloth. Pp. 518, with 310 illustrations. Price $5.00. Philadelphia: P. Blakiston's Son & Co., 1908.

In the present thorough revision the changes have been made particularly in those chapters dealing with operative work, which, indeed, have been practically rewritten. Many new illustrations have been employed, especially those credited to American works, and a number of the old cuts have been withdrawn. New material has been freely added, so that the work has been brought up to the standard set by most recent research. This is noticeable particularly in the chapter devoted to atmokausis and zestokausis and in that on the radical operation for carcinoma uteri. As in previous editions the author has described but one or two of the many various operative procedures in use for the same or similar conditions, but in this very fact lies the value of the book to the student and young practitioner. Dr. Jellett is primarily a teacher of his subject, and this attitude is reflected throughout the volume. Descriptions are short, indications for operation are clearly and concisely given, and pathologic conditions are adequately presented.

PATHOLOGY. By R. Tanner Hewlett, M.D., F.R.C.P., D.P.H., Professor of General Pathology and Bacteriology in King's College, London. Second Edition. Cloth. Pp. 585. Price, $3.25. Philadelphia: P. Blakiston's Son & Co., 1907.

Hewlett's work is intended especially for the medical student who needs to have presented to him from the large number of pathologic facts such as will be of use in the practice of medicine. The author has endeavored to give the essentials of general and special pathology and has met the needs of the medical student in a satisfactory manner. The necessity of preparation of a second edition within a year of the issue of the first testifies to its popularity. In the new edition many additions have been made and the book brought up to date.

Diseases of the Nervous System. Edited by Archibald Church, M.D., Professor of Nervous and Mental Diseases and Medical Jurisprudence, Northwestern University, Chicago. An authorized translation from "Die Deutsche Klinik," under the general editorial supervision of Julius L. Salinger, M.D. Pp. 1205, with 200 Illustrations. Cloth. Price $5.00. New York: D. Appleton & Co., 1907.

In order to avoid unfair criticism it must be understood that this extensive volume, although beginning in the manner of systematic works with sections on anatomy, pathology and examination, does not pretend to be a complete text-book of nervous diseases. It, rather, is mostly made up of a series of short monographs on some thirty-two neurologic subjects. Many of these are treated adequately by acknowledged authorities, e. g., tabes by Erb, aphasia by Wernicke, myelitis by v. Leyden and Lazarus, but not at all with a view to comparative importance. Thus one might be disappointed in looking up the section on cerebral hemorrhage and embolism to find the subject rather summarily dismissed in seven pages, while, on the other hand, lumbar puncture is treated by the master, Quincke, in thirty-five pages, and the mere symptom aphasia in sixty. Even understanding that the work is no text-book, this feature is rather misleading to one who would judge of it by glancing over the list of contributions. Using the book as a work of reference or for systematic study insofar as its scope affords, one soon finds, however, that what is good is exceedingly good. The hundred pages on tabes is a splendid presentation of the subject, the long chapter on methods of diagnosis by Schuster is thorough, detailed and—a capital point for the general practitioner—written with clear reference of symptoms and signs to the underlying structural conditions. Cassirer, with his usual care, writes on neuritis, trophic and occupation neuroses. Sexual neurasthenia is treated at unusual length by Eulenburg. Gutzmann, another master of his subject, contributes a very careful and practical study on the nature and treatment of disturbances of speech. Some other sections of the work are excellent; rarely one seems to us inadequate, such, for instance, as the few pages on migraine and the scanty discussion of the treatment of exophthalmic goiter.

A still nearer view shows only a few errors such as might easily mar any translated composite work. Example: on page 584 we read in a case report that, "No disturbance of sensation could be determined in the region of the *hypoglossal nerve* and usually none in the course of the pneumogastric." (Italics in the original.) A number of moot points one notices taken out of court in rather an offhand manner, e. g., embolism "manifests a peculiar preference for the right side." The American editor states in his preface that he refrains from discussion of disputed matters and, indeed, offers no addenda whatever. The whole work is thoroughly German, as befits "*Die Deutsche Klinik;*" this is seen in such places as where advice is given for the examination of patients and one suspects it as the main cause for some unsatisfactorily treated subjects; for instance, the path of sensory fibers in the cord—a field which has been especially well worked up by the English. Also, the list of names so preponderatingly German in the extensive index is hardly a fair representation of the great workers in neurology—Remak, for instance, with fifty-two references and only two for Hughlings Jackson!

Mortmain. By Arthur Train. Cloth. Pp. 314. Price, $1.50. New York: D. Appleton & Co., 1907.

This book is made up of several stories, medical interest lying in the first, the chief character of which, Mortmain, has the title rôle. A surgeon, having perfected the separate technics of uniting severed bones, blood vessels, nerves, etc., combines them all in one operation on a cat, with success. Then, the opportunity to try this on a human subject presents itself when Mortmain's hand requires amputation because of an injury. A man is found to supply the member to be substituted. Success results; but the grafter hand is a strange one to the new owner, and the former owner of the hand dies as the result of the operation. The plot hinges on the fact that the former owner of the hand had committed a crime which relieved its new owner from imminent bankruptcy, but the grafted hand involves its new owner by reason of the thumb print. The results of this appear in an anesthetic dream which Mortmain has. The problem of the story is whether or not such an operation can be justified, even though it should be done with the consent of the person who loses the member.

Diseases of the Nose. By Ernest B. Waggett, M.A., M.B., B.C. (Cantab.), Surgeon to the Throat and Ear Department of the Charing Cross Hospital. Cloth. Pp. 282, with Illustrations. Price, $2.00. New York: Oxford University Press, 1907.

While this work has all the disadvantages of a manual, and will never take the place of a text-book on rhinology, it gives the author's personal experiences and views, and therefore is of some value. In the preface the author states that the pages are "intended to be read, as they were written, rapidly from cover to cover." If the book had been less hurriedly prepared it might have been better; as it is, it shows evidences of hurried work, notably careless diction. The author also states that the illustrations are chiefly original drawings from Nature; while some are good, others are crude and the details are indistinct.

Miscellany

Education in Matters of Sex.—A. Moll of Berlin, one of the collaborators on the *Ztschr. f. ärztl. Fortbildung* and a well-known psychopathologist, was recently invited by the organization of university students at Berlin to deliver a lecture at one of their meetings. He selected for his theme: "The Sexual Life of the Child," but two weeks before the date he was informed that the head of the university had forbidden the lecture on the ground that the theme selected was not appropriate for a students' meeting, and, further, that its presentation by a practicing physician was not sufficient guarantee that the subject would be treated from the moral and ethical standpoints suitable for such a gathering. The entire faculty of the university endorsed the rector's action, and the matter was written up in the daily papers. The *Ztschr. f. ärztl. Fortbildung*, in discussing the affair, emphasizes the importance for students to learn to know better the workings of children's minds; sooner or later most of them will have more or less to do with the training of children, their own or others'. An auto-summary of Moll's lecture is given in the same number. He maintains that the age at which the sexual impulse first presents itself is much earlier than many suppose, and that an early sexual life may be important for the future; many a child is diverted from work and many a girl led into prostitution by it. At the same time, its consequences in the majority of cases must not be exaggerated. He knows of excellently well-developed persons who fifteen years before or more, at the age of 8 or 9, had a very strong sexual life. He comments on the adroitness with which children conceal the awakening of their sexual instincts. A too early awakening should be prevented, especially by artificial sexual stimuli; erotic literature and pictures should be kept away from the child, local irritation from skin eruptions, etc., cured, and modesty fostered. Coeducation when begun in the primary department is of no moment for sexual development. Education in matters of sex, he says, should not be attempted in the schools, and it is advisable at most for students entering college to enlighten them as to the dangers of venereal diseases. Education of the child in matters of sex should be done individually, best by the mother. Far more important than all is the training in ideals, the development of a moral sense.

Treatment of Facial Neuralgia by Tansini's Technic.—This technic now has a record of 17 cases in which it has been applied and with invariable success, the results remaining absolutely permanent during the interval of from two to nine years or more since the operation. It aims to destroy the nerve with the actual cautery. The needle is introduced as far as possible into the foramen and bone canal, reaching points inaccessible with other instruments. The processes that follow the thermocauterization and the consecutive regeneration alter the structure of the nerve to such an extent that the conduction of sensory impulses becomes impossible. The neuralgia always returned in patients treated with simple neurectomy, after an interval of a few months, but none of his patients has shown the slightest trace of recurrence when the actual cautery was used. The neuralgia in some of the cases was so severe that gasserectomy had been contemplated. S. d'Este publishes in the *Riforma Medica*, March 23, the details of the last six cases thus treated at Tansini's clinic at Pavia. The patients were from 20 to 66 years old, and in some of them a previous neurectomy had proved ineffectual to banish the pain permanently. The neuralgia was of one to thirty-two years' standing. The main point in the technic is the destruction of the central stump under chloroform. The nerve is pulled out as far as possible and the needle is worked deep into the foramen, and then the electric current is turned on for five or ten seconds. All the nerves involved are treated at a single sitting, and resection is done when it is deemed necessary.

History of Medicine.—One of the sections of the German "Naturforscher Congress" this year was devoted exclusively to the history of medicine, as a meeting of the German Society for Study of the History of Medicine. Biographical sketches of Cappeler, 1685-1769, and of Böttger, in the eighteenth century, were read, and various articles on the history of different branches of the medical sciences. Sudhoff exhibited the Latin Codex of Galen, in the Dresden edition, which has a wealth of small pictures portraying medical subjects. P. Richter gave a historical sketch of scarlet fever from its first description by the Arabs. Scarlatinal nephritis was described as early as 1747. It was stated that scarlet fever seems to have grown more serious with time, while other infections seem to have become attenuated. The history of the Leipsic "Lion Apothecary Shop," founded in 1409, was related from official documents. The section adopted a resolution urging better facilities in the universities for study of the history of medicine. Sudhoff has founded the *Archiv für die Geschichte der Medicin*, the first number of which appeared in September. A special bulletin is issued containing the transactions at each meeting of the Society for the History of Medicine. It will be remembered that the chair of the history of medicine at Leipsic was richly endowed by the Puschmann legacy a few years ago. K. Sudhoff is the present incumbent.

Cancer and Erysipelatous Infection.—G. Bolognino reviews the cases on record of erysipelas exerting a favorable influence on cancer and reports two personally observed. In his cases an intercurrent erysipelas followed in the parts ten days after excision of a carcinoma of the testicle in one and a palliative operation on sarcoma of the breast in the other patient. Both cancers had shown exceptionally malignant growth, but since the erysipelas there have been no signs of recurrence during the twenty and thirteen months that have elapsed. He cites 22 authors who have reported an unmistakably favorable influence on cancer from erysipelatous infection and thinks that the reaction from the first excessive enthusiasm is now being carried too far in the other direction. The erysipelas must be a somewhat intense process and the cancer must be small, to have the effect amount to much. He comments favorably on Coley's technic, although he states that the experience of Friedrich and Kocher in Germany failed to confirm the assertions of Coley, Roberts, Stone, Warren and Mynter. His article appeared in the *Ztschr. f. Krebsforschung*, iv, No. 2, page 261.

Differential Diagnosis of Acute Suffocative Catarrh.—Samuel West, in the *Proceedings of the Royal Society of Medicine*, March, concludes an exhaustive article on this subject practically as follows: Laennec's suffocative catarrh is a peculiar and characteristic affection, rare, especially in the adult, and not generally recognized as a clinical entity. It has to be distinguished from capillary bronchitis and disseminated postbronchitic bronchopneumonia. More closely resembling it are primary bronchopneumonia, e. g., disseminated pneumococcal pneumonia, and possibly an acute pneumococcal or other bacterial bronchitis. In association with it may be placed: 1, those cases of acute pulmonary edema which develop in the course of chronic heart obstruction or of acute heart failure; 2, cases of collateral fluxion—respiratory failure; 3, those cases of pneumonia which commence with widespread pulmonary congestion. A careful bacteriologic examination of the sputum should be made in all cases of suffocative catarrh as being likely to throw light on the true nature of the affection.

Treatment of Leg Ulcers.—J. T. Rose, in the *Dietetic and Hygienic Gazette*, gives the following directions for the treatment of ulcers of the leg: 1. Give tonics. Improve the circulation. 2. Reduce inflammation in and around the ulcer by wet dressings. 3. Stimulate the growth of healthy granulations by various applications, but especially naphthalin crystals and diachylon ointment. Apply over this a figure-of-eight zinc oxid adhesive strapping from ankle to above calf. Dress thus once a week. 4. Cover the granulating ulcer with very thin skin grafts, shaved from the leg above with a very sharp razor, without the use of any anesthetic. 5. Apply silver leaf over the grafts and denuded surface. 6. Use figure-of-eight strapping as above. 7. Remove this dressing in two weeks and find the ulcer all healed. 8. Continue to support the circulation as long as necessary. This method gives the best results in the shortest time, with the fewest treatments, with the minimum of lost time, for patients go on about their work as usual.

Respiratory Neuroses.—L. Tarabini reports from Galvagni's clinic at Modena thirty-seven cases of a neurosis affecting the respiration. He discusses the mechanism, ascribing it to some disturbance in the centers of the brain, medulla or spinal cord governing the respiration. The neurosis seemed to be of reflex origin in most of his cases. It came on suddenly when it was due to strong emotion, while it developed more gradually when of other origin. Once established, it seems to occur in attacks of varying intensity, subsiding during sleep. These neuroses may persist indefinitely unless properly treated, the neurasthenic condition requiring suitable measures. Hydrotherapy may prove useful after removing all causes that might favor the neurosis, and some writers have obtained good results from electricity. The neurotic tendency may also be benefited by suggestion. The work appeared in the *Riforma Medica*, March 16 and 23, with numerous tracings.

Contagiousness of Rubella.—H. E. Corbin in the *Proceedings of the Royal Society of Medicine*, February, states that both rubella and measles are admitted into the same wards at the London Fever Hospital, and that during the last two years not one patient with either of these diseases has developed the other. Corbin is inclined to believe that the contagiousness of rubella is at its maximum during the short prodromal period of usually twenty-four hours which occurs before the eruption is manifest, and that it declines rapidly during the following twenty-four hours, disappearing entirely at the end of this period unless faucial catarrh persists. There is little doubt, he says, that the question of age enters much into the question of susceptibility, as shown by a comparison of epidemics in schools and institutions for adults; and this is perhaps more important than previous protection by the disease.

Tics.—Henry Head, in the *Proceedings of the Royal Society of Medicine*, February, states that all true tics cease during sleep, and all can be controlled under exceptional conditions. It is not at all uncommon to find that during a consultation the patient shows no abnormal movements. All sufferers from tic have an unstable nervous system. Many of them are above the average in ability, but there is always something that betrays their want of balance. They are what the French call *"déséquilibrés."* In a vast number of cases there is a bad family history. In one case under Head's care, the mother, a nervous woman, had a brother and four first cousins who stammered badly; the patient, a girl with a profound tic, had a brother who stammered and one who was normal, so far as any obvious neurosis was concerned. The menopause is a not infrequent cause of the development of tic; and such movements are not uncommon among epileptics and high-grade imbeciles.

Treatment of Exfoliating Dermatitis in Infants.—Heubner treats this affection on the same principles as severe intertriginous eczema in infants. No dressings or salves are allowed during the acute stage, but the most inflamed parts are covered loosely with dilute aluminum acetate. This is followed later by painting the parts with a 3 per cent. solution of silver nitrate and bathing once or twice a day in a tannin bath (20 gm. or 300 grains tannin in 20 liters of water). After the bath the children are thoroughly dried and powdered. He regards the affection as very contagious and usually feeds the children with freshly drawn human milk. L. Langstein relates in the *Therapeutische Monatshefte*, December, 1907, the results in eleven cases in which this treatment was applied, the cure being generally complete in a week or two. He regards the affection as a severe form of pemphigus in the newly born. Four of the infants died; complicating sepsis is almost inevitably fatal!

Suprarenal Preparations in Dermatology.—N. E. Aronstam, in *Central States Medical Monitor*, states that the solution of the active principles of the adrenals, about 1 to 1,500 or 1,000 is a very powerful astringent and soothing agent in acute eczematous conditions and dermatitis. It allays the subjective symptoms, blanches the part by virtue of its astringent property without secondary dilatation of the capillaries. It is well to reinforce its action by the addition of some boric acid and camphor water in the following proportions:

℞. Acidi boracici	gr. v		32
Liquoris adrenalini (1:1,000)	ʒi	4	
Aquæ camphoræ	ʒii	8	
Aquæ des. q. s. ad	℥i	30	

M. et Sig.: Saturate a piece of sterile gauze with this solution and apply to the inflamed or affected parts; renew the application when the dressing is dry.

Differentiation of Cancer in the Peritoneum by Examination of Ascitic Fluid.—Marini and Florini report in the *Riforma Medica*, January 6, that examination of the ascitic fluid from four patients with carcinoma in the peritoneum revealed certain structural characteristics of the protoplasm and of the nucleus of the cells, readily differentiating them from the normal cells of the peritoneum. The protoplasm had a granular, dense aspect, taking the stain best at the periphery and displaying a tendency to send out processes like buds around the edge. The nucleus was comparatively very large and round, vesicular, or kidney shaped, and stained deeply. The various features of the cells in these cases of cancer are shown in fifteen illustrations.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Dr. McCormack in Mississippi.

Following a month of successful work in Louisiana, Dr. McCormack has given two weeks to Mississippi, filling engagements there from April 3 to April 15. The work has been under the management of Dr. P. W. Rowland, of the University of Mississippi. A letter from him in part reads:

> "Dr. McCormack closed his itinerary in the state of Mississippi at the Baker Grand Opera House, Natchez, on April 14. He began his tour of the state at Oxford, the center of the state, where he gave a lecture to the student body on the morning of April 3. This was followed by a talk to doctors at 3 o'clock in the afternoon, at which all the physicians of the county were present. In the evening at 8 o'clock he spoke to the people. The large auditorium of the Methodist Church was filled to its full capacity. The expression is general on all sides that our people have never before listened to such a great uplifting and soul-stirring lecture. It has made its impression on the lives of the people in such a way that they will long remember and practice the principles it taught. A movement is now on foot at Oxford looking to improve conditions through the organization of a city board of health. Dr. McCormack has the happy faculty of being able to deliver the keenest thrusts and the most scathing rebukes without causing offense. The benefits which will follow his work are beyond ordinary calculation."

The following quotations from Mississippi papers will show the impression produced on the public by Dr. McCormack's work in that state:

The *Oxford Eagle* says:

> "The large audience that greeted Dr. McCormack at the First Methodist Church on Friday evening felt well repaid at the close of his instructive and entertaining talk. If we could hear him often or others like him we would indeed be a wiser, healthier and better people. At the close of the lecture Dr. P. W. Rowland, chairman of the meeting, called on a number of citizens for an expression of their views. All responded promptly, giving their full endorsement and promises of coöperation in all ideas advanced for the health and welfare of the community."

A dispatch from Jackson to the *Commercial Appeal* of Memphis says:

> "The First Methodist Church was filled to its capacity last night on the occasion of the address of Dr. J. N. McCormack, the learned and plain-spoken representative of the American Medical Association. Those who went expecting perhaps a dry or abstruse discussion along the lines of medical and hygienic ethics were soon disabused of any such idea. From introductory phrase to the close Dr. McCormack held the interest and attention of everyone, doctors as well as laymen, and to-day mothers, fathers, husbands and wives who listened are thinking over and discussing the very patent truths expressed as to the ordinary habits of living. He pointed out to the people in terms as clear and comprehensive as the sun in an unclouded sky that the very matters which had been regarded as inconsequent or which have failed to stir up more than passive interest are the ones which need looking after. That the address has already had a good effect seems almost certain. The advisability and desirability of improvements on the part of the citizens with a view to cooperating with the health authorities and the doctors and ministers in bringing about practical and sanitary hygienic reform is being considered."

The Meridian *Morning Dispatch* says:

> "In two lectures of unusual force Dr. J. N. McCormack yesterday inaugurated a campaign for improved sanitary hygienic conditions that is destined to revolutionize the general method of the metropolis of Mississippi and to spread to the surrounding districts. The evening address was delivered to a representative audience."

One of the most striking evidences of the value of Dr. McCormack's work, as well as of the readiness of the public to act when conditions are once known, is afforded by the *Morning Democrat* of Vicksburg. In his address at this city Dr. McCormack stated that the slaughter houses of Vicksburg were in an indescribable and utterly unendurable condition. The following day the *Democrat* made a personal investigation of the slaughter houses in which the fresh meat supply of the city is prepared, and on the front page of its issue for April 20 prints a description of the conditions as they were found. In an editorial of a column and a half the *Democrat* comments on the effect of Dr. McCormack's statements in arousing the public, as well as on the existing conditions so far as food supplies are concerned. The facts as stated are so horrible that it is impossible to believe that any civilized community will tolerate them for a moment after attention is called to them. The *Democrat* concludes its descriptive article by saying:

> "Every obligation that man owes to his fellow-man requires the fullest exposure of these conditions. If there is a law which covers these matters it should be brought to bear. The offenders should be brought before the bar of justice. If there is no law against furnishing death for so much a pound one should be framed to cover such matters."

The editorial concludes:

> "The *Democrat* will have no favorites when the health and lives of the people are at stake. It will print the truth regardless of whom it may affect and it does not promise to permit any person or any community to stand in the way of public health. It now makes the earnest request of the health authorities of this city to do something and to do it quickly for the protection of the people whose health and lives have been entrusted to their care and watchfulness. Provide ade-

quate and certain means for the inspection of foreign and home-killed meats and thus preserve the health and safety of this community. In the name of all the people provide means for the protection of health and the preservation of human life."

Lodge Practice.

An article on lodge practice, by Dr. George E. Holtzapple, York, Pa., appears in the April number of the *Pennsylvania Medical Journal.* It is a praiseworthy and careful study of this phase of contract practice and is based on data secured from fraternal orders and from physicians of Pennsylvania. Dr. Holtzapple defines lodge practice as that branch of contract practice which furnishes medical attention to members through an organization or club. In order to secure material for this paper Dr. Holtzapple addressed a circular letter to 231 physicians living in as many different cities in the state, asking for information on seven points as follows:

1. Number of lodges in your town which employ physicians by contract.
2. Membership of such lodges.
3. Number of individuals receiving free treatment owing to the head of the family belonging to such a lodge.
4. Amount paid by such lodges for medical services.
5. Number of physicians in the town doing lodge practice.
6. Number of such physicians belonging to a component county medical society.
7. Provisions in the by-laws of county societies prohibiting lodge practice.

A second letter requesting this information was sent to 150 physicians who did not reply. Of the 231 to whom letters were sent, 126 made no reply. From the 105 replies a table was prepared showing graphically the information received.

The results of the investigation show that in the 105 towns under consideration, 63,238 individuals, either members of fraternal orders or their family, receive treatment at an average annual price of $2 a member. Estimating this on the basis of population, 3 per cent. of the inhabitants receive free medical treatment. As the population of the towns considered amounts to about one-third of the population of the state, it is estimated that about 200,000 individuals in the state of Pennsylvania receive practically free medical treatment.

The reports show that the average amount paid is $1 per annum for each member, when only the member is entitled to treatment and $2 yearly per member when the member and his entire family receive treatment. This would amount to a maximum of $1 for each individual for twelve months' medical attention, or a little over 8 cents a month, or about 2 cents a week.

In considering the personality of the physicians engaged in contract practice, they are divided into three classes: Young men just beginning medical practice and accepting such positions as temporary expedients; men of all ages who have failed to establish well paying practices; those well established and doing a lucrative business, but selfish and avaricious and desirous of securing all the money possible.

In the discussion following the reading of the report, Dr. Albert Eaton of Philadelphia stated that the lodge practice evil is a foreign importation and that it has practically ruined the medical profession in Austria, Germany and Great Britain, and that the same fate will befall the physicians of the United States unless prompt and drastic measures are taken. He objected to lodge practice because it places the practice of medicine on a purely commercial basis, inhibits organization, prevents the physician from obtaining proper remuneration for his service, places a blight on medical progress and reduces the physician who engages in it to the position of a poorly paid promoter for the organization by which he is retained. He considers that the remedy lies in the establishment in medical colleges of a course of lectures on the business side of the medical profession, setting forth the objections, both economic and professional, to such practice. He also declared that the various county medical societies should take positive action regarding this evil and should enforce their decisions.

Enforcing the Texas Medical Practice Act.

The *Texas State Journal of Medicine,* April, discusses the constitutionality of the new Texas medical practice act, and some of the general principles of medical legislation. It says:

> The police power of the state is an attribute of sovereignty and exists without any reservation in the constitution. It is founded on the duty of the state to protect its citizens and to provide for the safety and good order of society. Its essential element is to secure orderly government. On it depends the security of social order, the life and health of the citizens, and the comfort of existence in thickly populated communities. Indeed, it is the very foundation of our social system, and finds its basis in the maxim of public policy, *Salus populi suprema est lex.* Everything necessary for the protection and safety, as well as the best interests of the people of the state, may be done under its power, and in its exercise persons and property may be subjected to all reasonable restraints and burdens for the common good. The preservation of the public welfare must be maintained even at the expense of private rights. So the contention of a practitioner that he has secured a right to practice medicine which is a vested right and that it can not be taken away from him is begging the question. The purpose of the legislature is not to take away any man's right, but to regulate him in the exercise of it. . . . The right which a man has by nature may be taken from him if it interferes with the best interest of society.

The principle underlying the theory of the police power of the state, as a means of regulating occupations and professions for the good of the general public can not be too strongly emphasized or impressed on both the public and the profession. Not until there is a proper understanding and appreciation of the purpose of medical legislation shall we see an end of the absurdities and inconsistency of special and sectarian legislation. Only as the public understands and supports medical legislation will it be effective. The medical profession of Texas achieved a notable victory last year in securing legislation substituting a single non-partisan board for multiple partisan boards. If the principles underlying this law are thoroughly understood by the physicians of the state there will be no question of their support and cooperation.

The Professional Secret in Austria.

The legal status of the professional secret appears to be causing considerable disturbance in the minds of our Austrian colleagues. The Austrian law on the subject, as laid down in paragraph 498 of the *Aerzte-Ordnung,* is as follows:

> The physician, the surgeon, the obstetrician or the midwife who shall disclose the secret of the persons who confide in them to anyone, save only to a competent official interrogating them on the matter in the discharge of duty, shall be punished for this offense, on the first occasion by suspension of the right to practice for a period of three months, on the second occasion for one year, and on a third offense permanently.

As things are, the medical profession considers the exception which permits disclosure a permission which is only too prone to become a compulsion. According to the *Vocho de Kuracistoj,* however, there is under consideration a new ordinance, of which paragraph 359 reads as follows:

> Physicians, surgeons, apothecaries, accoucheurs and registrars of deaths, at all times when they shall become aware of any sickness, wound, birth or death which leads them to suspect some crime or offense, or indeed any severe injury caused by a third person, shall without delay report it to the officials. The non-fulfilment of this obligation shall be punished by a fine of from 10 to 100 florins.

It will be seen that this ordinance places the medical profession in the objectionable position of a detective force at the orders of the government. The Austrian profession is demanding that the new paragraph shall be entirely rejected and that the existing paragraph 498 shall also be modified. The medical chamber in Austria, however, on the advice of its counsel, has half yielded the principle involved, by proposing to free the physician from the obligation only of testifying concerning what the patient confided to him, leaving it incumbent on the physician to testify or inform concerning those circumstances which he may have found out by himself.

Faith Healing in Maryland.

An amendment to the medical practice act in Maryland has just been secured, requiring that hereafter Christian Scientists, faith healers or other sectarian practitioners, must be graduates of recognized medical colleges, and must pass the examination before the State Board of Medical Examiners, thereby obtaining certificates as physicians before being allowed to practice.

In commenting on the new law, the *Philadelphia Telegraph*, March 26, says editorially: "Maryland will have no more foolishness about faith healing, under any sort of sectarian denomination in her borders. No more use of mental or psychologic therapeutics by untrained, untaught practitioners; no more making a trade or profession of dealing with the mysteries of health and disease and the laws of Nature for hire by ignorant persons unqualified to handle such problems; no more 'absent treatment' for present payment in hers!

"It seems to an unbiased mind a most just and reasonable law, not oppressive on any form of faith nor restrictive of any proper rights, but conceived for 'the greatest good of the greatest number.' The value of mental healing in various forms has been too often and too conclusively demonstrated to be utterly denied with any sort of reason; and where a healer's services are given gratis, either from a general spirit of Christian charity or from special motives of interest and affection, no one can properly protest against a well-meaning effort; but where persons sell their services for hire and make a practice of it, they should be compelled to give good guarantee of their qualifications and abilities."

POSTGRADUATE COURSE FOR COUNTY SOCIETIES.

DR. JOHN H. BLACKBURN, DIRECTOR.
Bowling Green, Kentucky.

The following county societies, in addition to those already reported, have adopted and are now conducting the course of postgraduate study, making a total to date of 76 societies which are following it.

Indiana: Hart County.
Iowa: Bremer County.
Emmet Count.
Kentucky: Clark County.
Hickman County.
Louisiana: Calcasieu Parish.
Lafayette Parish.
Nebraska: York County.
New Jersey: Mercer Councy.
Ohio: Newcomerstown Club. (Tuscarawas County.)
Tennessee: Rutherford County.
West Virginia: Fayette County.

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Eighth Month.

Second Weekly Meeting.

Etiology of Typhoid Fever.

Influence of age and sex, mode of living, pregnancy, other diseases. Geographic distribution. Season. Repeated attacks. Immunity.

Bacteriology.

Historical Review.

Murchison's decomposition theory. Trousseau's direct transmission theory. Budd's views, 1856-60. Ground water theory. Buhl and Pettenkofer. Work of von Recklinghausen, of Ebarth and Gaffky.

Methods of Detection.

Morphology and biology. Bacillus of Eberth: shape and size. Filaments. Flagella. Motility. Staining characteristics. Growth. Temperature. Anaerobiosis. Media. Articles of food. Gelatin cultures. Agar cultures. Potato culture. Differentiate from *Bacillus coli.* Blood cultures. Cultures from rose spots, spleen, stools, urine.

Methods of Transmission.

Escape of bacilli from body, by feces, by urine, by other excretions. Vitality of typhoid bacilli in cadavers. In soil. Effect of cold, heat, light on bacilli. Persistence of bacilli in stools. Portal of entry of bacilli to body. Bacillus carriers. Water. Effects of filtration. Milk. Vegetables. Oysters. Transmission through air, through earth, on linen.

Medical Education and State Boards of Registration

COMING EXAMINATIONS.

Louisiana Homeopathic Board of Medical Examiners, New Orleans, May 5. Secretary, Dr. Gayle Aiken, 1102 St. Charles Ave., New Orleans.

Tennessee State Board of Medical Examiners, Memphis, Nashville and Knoxville, May 5. Secretary, Dr. T. J. Happel, Trenton.

Mississippi State Board of Health, State Capitol, Jackson, May 12. Secretary, Dr. J. F. Hunter, Jackson.

Illinois State Board of Health, City Hall, East St. Louis, May 12-14. Secretary, Dr. J. A. Egan, Springfield.

Massachusetts State Board of Registration in Medicine, State House, Boston, May 12-14. Secretary, Dr. Edwin B. Harvey, Room 159, State House, Boston.

North Carolina State Board of Medical Examiners, Winston-Salem, May 19. Secretary, Dr. G. T. Sikes, Grissom.

New York State Board of Medical Examiners, Albany, May 19-22. Chief of Examinations Division, Charles F. Wheelock, Albany.

Louisiana State Board of Medical Examiners, New Orleans, May 21-22. Secretary, Dr. Felix A. Larue, 211 Camp St., New Orleans.

Indiana Board of Medical Registration and Examination, Indianapolis, May 26-28. Secretary, Dr. W. T. Gott, 120 State House, Indianapolis.

Nebraska State Board of Health, State Capitol, Lincoln, May 27-29. Secretary, Dr. E. J. C. Sward, Oakland.

The American Medical School and Its Entrance Requirements.

In his address before the American Academy of Medicine, which was printed in the *Indiana Medical Journal*, April, 1908, President Jordan of Leland Stanford University gave his views regarding medical schools and preliminary education. He said that the practice of medicine was not a trade but a profession; that medicine should be taught by the most effective methods and must be based on a thorough knowledge of the sciences on which its art depended. The essentials of medical instruction are well-equipped laboratories, good hospitals and competent teachers. The standards of admission and graduation should be such as to exclude the grossly ignorant and unworthy men from the professional degree. He favored the combination course, stating that if the medical work is of university standard and obtained in a university atmosphere, the university could well afford to abate its non-professional requirements in order that the professional student would not have to enter on the practice of his profession too late in life.

Speaking of the natural line of cleavage at the close of the sophomore year of the college of arts, Dr. Jordan suggested that the work of the universities, including the department of medicine, should begin with the present junior year, leaving what is now included in the freshman and sophomore years of liberal arts' work to the colleges, larger high schools and preparatory schools. The medical course should then be lengthened to five years. The requirement of a single year of collegiate chemistry and biology as a preliminary requirement was a necessary step in advance—a short step and a temporary one, but the requirement of two such years was to be preferred.

University of Mississippi to Teach a Complete Medical Course.

Since 1903 the University of Mississippi at Oxford has been teaching the first two years of the medical course. Beginning this fall, however, the complete four-year course will be offered, the last two or clinical years to be given at Vicksburg. This has been made possible by the recent action of the city of Vicksburg in transferring to the university the Vicksburg State Charity Hospital. The entire property, transferred by deed, is valued at $150,000.

Arkansas January Report.

Dr. F. T. Murphy, secretary of the State Medical Board of the Arkansas Medical Society, reports the written examination held at Little Rock, Jan. 14, 1908. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 40, of whom 24 passed, including 14 non-graduates, and 16 failed, including 13 non-graduates. The following colleges were represented:

PASSED.

College.	Year. Grad.	Per Cent.
College of P. and S., Chicago	(1904)	81
Rush Med. Coll.	(1874)	80
Louisville Med. Coll.	(1907)	83, 88
University of Louisville	(1907)	86
College of P. and S., Baltimore	(1903)	88
Barnes Med. Coll.	(1898) 76; (1907)	87
College of P. and S., St. Louis	(1896)	75
University Med. Coll., Kansas City	(1897)	77

LICENSED WITHOUT EXAMINATION.

There were also licensed at this examination six old practitioners, including one non-graduate, who were granted license by reason of having been registered under the old law. The following colleges were represented:

College.	Year of Grad.
University of Arkansas	(1888), (1896)
College of P. and S., Chicago	(1906)
Rush Med. Coll.	(1895)
Meharry Med. Coll.	(1893)

FAILED.

College.	Year. Grad.	Per Cent.
Medical College of Georgia	(1906)	70
Meharry Med. Coll.	(1907)	49, 71

Queries and Minor Notes

Anonymous Communications will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

FORMULA FOR AROMATIC SYRUP OF CHOCOLATE.

Pisgah, Md., April 10, 1908.

To the Editor:—Please publish a simple working formula for an aromatic syrup of chocolate, to be used as a vehicle, especially for quinin sulphate. George C. Bicknell, M.D.

Answer.—While considerable skill and attention to details are required to make a syrup of chocolate satisfactory in every way, the following simple process will yield a good product: Heat to boiling one pint of water. Mix 4 ounces of powdered chocolate (Baker's powdered chocolate is satisfactory), with sufficient water to make a smooth semi-liquid paste and add this to the boiling water. Also add 1½ pounds granulated sugar, and continue the heat until this has dissolved. When partially cooled, transfer the syrup to carefully cleaned bottles. Should flavor, beyond that of the chocolate, be desired, a little tincture of vanilla or spirit of cinnamon may be added.

JOURNALS FOR MEDICAL STUDENTS.

Chicago, April 18, 1908.

To the Editor:—Will you tell me if there is any journal of anatomy or other publication especially addressed to students of medicine? J. W. Brady.

Answer.—We know of no journal of anatomy or other periodical in this country especially addressed to medical students. A *Journal of Anatomy and Physiology* is published by C. Griffin & Co., Exeter street, London, at six shillings ($1.50) for each part—anatomic and physiologic; the *American Journal of Physiology* is published by Ginn & Co., Boston, monthly, $5 per annum. Both these journals, however, so far from being for students, are of the highest scientific caliber, and are suited only for anatomists and physiologists of the most advanced type.

IS "FORCEPS" SINGULAR OR PLURAL?

Columbus, Ohio, April 25, 1908.

To the Editor:—In the Transactions of the American Gynecological Society, in an article written by a very eminent physician, the first line reads: "When the forceps were first invented it was regarded as," etc. The question is as to the propriety of the "were" and the "it." One or the other would certainly seem to be wrong, but which? As a rule, I think, in ordinary writing, and in discussion, forceps is used in the plural; but, on the other hand, it is frequently used as singular. Which is correct?

J. F. Baldwin.

Answer.—Forceps is singular. It is a noun of the third declension: *forceps,* genitive *forcipis,* plural *forcipes,* genitive *forcipum*—both masculine and feminine. Some writers, however, treating the word as Anglicized, also use the singular form forceps (to avoid the harsh sibilant of forcepses) in place of the Latin *forcipes,* as a plural.

EXTUBATION METHOD OF RENAULT AND MARFAN.

Yonkers, N. Y., April 16, 1908.

To the Editor:—Where can I find a description of the methods of extubation of Renault and of Marfan?

Answer.—The original articles appeared in the *Annales de Méd. et Chirurgie Infantiles,* June 1 and 15, 1907, respectively. The methods are described by J. R. Clemens in the *Archives of Pediatrics,* February, 1908, and an abstract of this article appeared in The Journal, April 11, 1908, p. 1222.

LIST OF ARTICLES RELATING TO OPSONINS.

Poplar Bluff, Mo., April 3, 1908.

To the Editor:—Please advise me where I can get authentic literature on the opsonic theory. Alfred R. Rowe.

Answer.—A list of articles dealing with this subject was published in The Journal A. M. A., May 4, 1907, p. 1539. The following additional articles have been published up to April, 1908:

Albert, H.: Opsonic Index and Vaccine Therapy, *Iowa Med. Jour.,* August, 1907; also *Western Med. Rev.,* October, 1907.

Alderson, H. E.: The Opsonins and Certain Bacterial Cutaneous Diseases, The Journal A. M. A., Aug. 3, 1907, abstracted from *Jour. Cutan. Dis.,* July, 1907.

Amberg, S.: Opsonic Content of Blood of Infants, The Journal A. M. A., Jan. 26, 1907, p. 304.

Arinkin, M., and Schneider, C.: Opsonins and Their Diagnostic Importance, *Berl. klin. Wchnschr.,* Feb. 3, 1908.

Bass, C. C.: Present Status of Opsonins and Vaccine Therapy, *New Orleans Med. and Surg. Jour.,* January, 1908.

Beebe, T. C., Jr.: Applications of Opsonic Therapy, *Boston Med. and Surg. Jour.,* Jan. 9, 1908.

Bergey: Nature of Opsonins and the Limit of Bacterial Inoculations in the Treatment of Infections, *Month. Cycl. Prac. Med.,* August, 1907.

Bergey, H.: Opsonins and Vaccines as Applied to Surgical Therapy, *Univ. Penn. Med. Bull.,* June, 1907.

Boellke, O.: Opsonins in Acute Infections, The Journal A. M. A., Oct. 19, 1907, p. 1407, abstracted from *Deutsch. med. Wchnschr.,* Sept. 12, 1907.

Bine, R., and Lissner, H.: Opsonins in Pulmonary Tuberculosis, *Münch. med. Wchnschr,* Dec. 17, 1907.

Bolduan, C. F.: Value of Opsonins in Treatment of Bacterial Infection, The Journal A. M. A., Nov. 2, 1907, abstracted from *Long Island Med. Jour.,* October, 1907.

Bosanquet, W. C., and French, R. E.: Influence of Antituberculous Serum on the Opsonic Index, *Brit. Med. Jour.,* April 13, 1907.

Brown, O. H.: Some Modifications of the Technic of the Opsonic Index Tests, The Journal A. M. A., Feb. 22, 1908, p. 602.

Brown, O. H.: Value of Opsonic Index in Diagnosis and Treatment of Tuberculosis, *St. Louis Med. Rev.,* May 25, 1907.

Clarke, C. P., and Simonds, J. P.: A Study of Typhoid Opsonins, The Journal A. M. A., Feb. 29, 1908, abstracted from *Jour. Infect. Dis.,* January, 1908.

Clarke, H. H., and Sutherland, H. G.: Effect of Tuberculin on General Tuberculo-Opsonic Index in Tuberculous Patients, The Journal A. M. A., Aug. 17, 1907, abstracted from *Lancet,* July 20, 1907.

Charteris, F. J.: Changes Observed in Blood Count and Opsonic Index During Prolonged Fast, *Lancet,* Sept. 7, 1907.

DaCosta, J. C., Jr.: The Opsonic Index in Diabetes Mellitus, *Am. Jour. Med. Sc.,* July, 1907.

Dodds, H. B.: Modification of Leishmann's Method of Estimating the Opsonic Index, The Journal A. M. A., Nov. 9, 1907, p. 1163, abstracted from *Brit. Med. Jour.,* Oct. 12, 1907.

Hamilton, A.: Opsonic Index and Vaccine Therapy of Pseudodiphthetric Otitis, The Journal A. M. A., July 6, 1907, abstracted from *Jour. Infect. Dis.,* June 15, 1907.

Hektoen, L.: Opsonins and Therapeutic Inoculations of Dead Bacteria, *Ibid.*

Hollister, J. C.: Opsonins, Opsonic Index and Vaccine Therapy, The Journal A. M. A., Aug. 10, 1907, abstracted from *Illinois Med. Jour.,* July, 1907.

Houghton, E. M.: Theory of Opsonins and Bacterial Vaccines, *Detroit Med. Jour.,* May, 1907.

Houston, T., and Rankin, J. C.: Opsonic and Agglutinative Power of Blood Serum in Cerebrospinal Fever, *Brit. Med. Jour.,* Nov. 16, 1907.

Houston, T., and Rankin, J. C.: Opsonic Power of Serum with Reference to the Meningococcus of Cerebrospinal Fever Occurring in the Belfast Epidemic, *Lancet,* May 4, 1907.

Inman, A. C.: Exercise and Opsonic Index in Tuberculosis, The Journal A. M. A., Feb. 22, 1908, p. 647, abstracted from the *Lancet,* Jan. 25, 1908.

Jeans, P. C., and Sellards, A. W.: Tuberculo-Opsonic Index and Treatment by Tuberculin, The Journal A. M. A., Aug. 31, 1907, p. 804, abstracted from *Johns Hopkins Hosp. Bull.,* June-July, 1907.

Kämmerer, H.: Opsonins and Phagocytosis, *Münch. med. Wchnschr,* Sept. 24, 1907.

Kellogg, W. R. M.: Opsonic Index in Tuberculosis, *Northwest Med.,* July, 1907.

Kline, H.: Opsonins in Typhoid Immunity, *Johns Hopkins Hosp. Bull.,* June-July, 1907.

Knight, A. L.: Opsonins, *Lancet-Clinic,* April 27, 1907.

Leonard, E. L.: Opsonic Index as a Guide to the Administration of Vaccines, The Journal A. M. A., April 4, 1908, p. 1151, abstracted from *South. California Pract.,* February, 1908.

Levaditi, C.: Opsonins, *Presse méd.,* Aug. 31, 1907.

Levaditi, C.: Opsonins and the Treatment of Infectious Diseases, *Presse méd.,* Sept. 7, 1907.

McClintock, R. W.: Opsonic Therapy in Skin Diseases, *Illinois Med. Jour.,* July, 1907.

McConnell, G.: Opsonin and Vaccine, *St. Louis Med. Rev.,* November, 1907.

McFarland, J.: The Nephelometer, The Journal A. M. A., Oct. 5, 1907.

McFarland, J., and L'Engle, E. M.: The Specific Nature of Opsonins, The Journal A. M. A., Oct. 5, 1907, p. 1178.

Mace, L. S.: Opsonins, Technic of *California State Jour. Med.,* April, 1907.

Magruder, A. C., and Webb, G. B.: Acute Otitis Media, Treated by the Opsonic Method, *Laryngoscope,* November, 1907.

Martyn, G.: General Septicemia Treated by Bacteriotherapy, THE JOURNAL A. M. A., Feb. 1, 1908, p. 362.
Moss, W. L.: Opsinins, THE JOURNAL, A. M. A., Aug. 31, 1907, abstracted from *Johns Hopkins Hosp. Bull.*, June-July, 1907.
Neuberger, T.: Opsonic Method, *Deutsch. med. Wchnschr.*, Dec. 12, 1907.
Noguchi, H.: Influence of Reaction and Desiccation on Opsonins, THE JOURNAL A. M. A., Aug. 10, 1907, p. 523, abstracted from *Jour. Exper. Med.*, July 17, 1907.
O'Brien, J. D.: Opsonins and the Use of Therapeutic Vaccination in Treating General Paralysis of the Insane, THE JOURNAL A. M. A., June 29, 1907, p. 2180.
Ogilvy, C., and Coffin, T. H.: The Opsonic Index in Orthopedic Surgery, THE JOURNAL A. M. A., Jan. 11, 1908, p. 115.
Ohlmacher, A. P.: Therapeutic Bacterial Inoculation with and without Opsonic Index as a Guide, *Jour. Mich. Med. Soc.*, July, 1907.
Ohlmacher, A. P.: Enlarged Field of Opsonic or Bacterial Therapy, *Ohio State Med. Jour.*, Sept. 15, 1907.
Ohlmacher, A. P.: Practical Bacterial Therapy and the Theory of Opsonins, *Ohio State Med. Jour.*, May, 1907; *Columbus Med. Jour.*, August, 1907.
Opie, E. L.: Opsonins of Inflammatory Exudates, THE JOURNAL, A. M. A., Oct. 26, 1907, abstracted from *Jour. Exp. Med.*, Sept. 21, 1907.
Opie, E. L.: Opsonins and Their Relations to Diagnosis and Treatment of Bacterial Infections, *Yale Med. Jour.*, May, 1907.
Painter, C. F.: Experience with Opsonins and Bacterial Vaccines in Arthritis, THE JOURNAL A. M. A., Nov. 23, 1907, p. 1803, abstracted from *Boston Med. and Surg. Jour.*, Nov. 7, 1907.
Park, W. H., and Biggs, H. M.: Opsonic Index as a Guide to Regulate the Use of Vaccines in the Treatment of Disease, *Jour. Med. Research*, October, 1907.
Paton, D. M.: Passive Raising of the Opsonic Index, *Med. Press and Circular*, June 12, 1907.
Pigger, H.: Artificial Pneumothorax and the Opsonic Index, THE JOURNAL A. M. A., Feb. 8, 1908, p. 488, abstracted from *Beitr. z. Klin. d. Tuberk.*, viii, 4.
Porter, L.: Opsonins, *California State Jour. Med.*, April, 1907.
Potter, N. B.: Opsonins in Normal and Pathologic Sera, THE JOURNAL A. M. A., Nov. 30, 1907, p. 1815.
Potter, N. B., and Krumwiede, C.: Opsonins in Pneumonia and in Four Streptococcus Infections. THE JOURNAL A. M. A., Dec. 14, 1907, p. 2038, abstracted from *Jour. Infect. Dis.*, November, 1907.
Rankin, A. C.: Effect of Anesthesia on the Opsonic Index, *Montreal Med. Jour.*, January, 1908.
Riessmann, C., and Mayo, H.: Opsonic Treatment in Pulmonary Tuberculosis, THE JOURNAL A. M. A., Oct. 19, 1907, p. 1406, abstracted from *Australas. Med. Gaz.*, Aug. 20, 1907.
Romanelli, G.: Opsonic Index of Blood Serum in Tuberculosis, *Gaz. d. Osp.*, Sept. 1, 1907.
Rosenow, C.: Human Pneumococcal Opsonin and Antiopsonic Substance in Virulent Pneumococci, THE JOURNAL A. M. A., July 6, 1907, abstracted from *Jour. Infect. Dis.*, June 15, 1907.
Roseuow, E. C.: Virulent Pneumococci, Opsonin and Phagocytosis, *Ill. Med. Jour.*, January, 1908.
Ross, G. W.: Opsonins and Practical Results of Therapeutic Inoculation with Bacterial Vaccines, THE JOURNAL A. M. A., Oct. 12, 1907, p. 1245.
Rotch, T. M., and Floyd, C.: The Opsonic Index and the Tuberculin Test, THE JOURNAL A. M. A., Aug. 24, 1907.
Ruediger, G. F., and Davis, D. J.: Phagocytosis and Opsonins in Lower Animals, THE JOURNAL, A. M. A., July 6, 1907, abstracted from *Jour. Infect. Dis.*, June 15, 1907.
Russell, F. F.: Specificity of Opsonins, THE JOURNAL, A. M. A., Aug. 31, 1907, abstracted from *Johns Hopkins Hosp. Bull.*, June-July, 1907.
Schorer, E. H.: Opsonic Index in Erysipelas, etc., *Am. Jour. Med. Sc.*, November, 1907.
Shaw, C. J.: Opsonic Index in Sane and Insane, THE JOURNAL A. M. A., June 8, 1907, abstracted from the *Lancet*, May 11, 1907.
Shorer, E. H.: THE JOURNAL A. M. A., Feb. 15, 1908, abstracted from *Med. Fortnightly*, Jan. 25, 1908.
Simon, C. E.: Opsonins, *Ibid.*
Sleeswijk, J. G.: Research on Opsonins, *Ann. de l'Inst. Pasteur*, December, 1907.
Squire, J. E.: Opsonins in the Treatment of Tuberculosis, THE JOURNAL A. M. A., July 13, 1907, p. 191, abstracted from *Brit. Med. Jour.*, June 15, 1907.
Stark, J.: Surgical Tuberculosis and Opsonic Index, *Brit. Med. Jour.*, June 29, 1907.
Strubell, A.: Opsonins, *Münch. med. Wchnschr.*, Oct. 29, 1907.
Taylor, A.: The Opsonic Index and Agglutination in Cerebrospinal Meningitis, *Lancet*, July 6, 1907.
Taylor, R. T., and Knorr, E. A.: Study of Vaccines and the Opsonic Index in Relation to Orthopedic Surgery, *Am. Jour. Orthop. Surg.*, July, 1907.
Thomas, B. A.: Variability and Unreliability in the Determination of the Opsonic Index, THE JOURNAL A. M. A., Oct. 12, 1907, p. 1249.
Thurston, H. S.: Practical Application of Opsonins, *Indiana Med. Jour.*, June, 1907.
Tunnicliff, R.: Streptococco-Opsonic Index in Scarlatina. THE JOURNAL, A. M. A., July 6, 1907, abstracted from *Jour. Infect. Dis.*, June 15, 1907.
Tunnicliff, R.: Opsonic Index in Diphtheria, THE JOURNAL, A. M. A., Feb. 29, 1908, abstracted from *Jour. Infect. Dis.*, January, 1908.
Turton, E., and Appleton, R.: Relative Opsonic Power of the Mother's Blood, Serum and Milk, *Brit. Med. Jour.*, April 13, 1907.
Turton, E.: Opsonic Treatment of Pulmonary Tuberculosis by Tuberculin, *Practitioner*, November, 1907.
Varuey, H. R.: Opsonic Therapy in Skin Diseases, THE JOURNAL A. M. A., July 27, 1907.
Walker, R. E.: Phagocytosis in Relation to the Opsonic Index, THE JOURNAL A. M. A., Oct. 5, 1907, p. 1222, abstracted from *Jour. Med. Research*, July, 1907.
Warner, L. H.: Opsonin Theory and Probable Future for Bacterial Vaccines, *Med. Fortnightly*, Feb. 10, 1908.
White, A. H.: The Opsonic Index and Therapeutic Inoculation of Bacterial Vaccines, *Dublin Med. Jour.*, September, 1907.
Whitefield, A.: Opsonic Method in Skin Diseases, *Jour. Cutan. Dis.*, December, 1907.
Wiens: Antiferment Reaction of Blood and Its Connection with the Opsonic Power in Acute Infectious Diseases, *Münch. med. Wchnschr.*, Dec. 31, 1907.
Wright, A. E.: Principles of Vaccine Therapy, THE JOURNAL A. M. A., Aug. 10 and 17, 1907.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending April 25, 1908:

Schreiner, E. R., asst.-surgeon, returned to duty at Army General Hospital, San Francisco, from detached service to Madison Barracks, N. Y., and leave of absence.

Clark, J. A., asst.-surgeon, ordered to Madison Barracks, N. Y., for temporary duty.

DeLoffre, S. M., asst.-surgeon, ordered to Columbus Barracks, O., for duty; advanced to grade of captain, with rank, from Sept. 10, 1907.

Davis, W. R., asst.-surgeon, ordered to accompany troops from San Francisco, to Ft. Thomas, Ky., and return; granted leave of absence for fifteen days.

Greenleaf, H. S., asst.-surgeon, ordered to duty at Madison Barracks, N. Y., at the expiration of his present leave of absence.

Kendall, W. P., surgeon, granted leave of absence for one month, about April 20.

Harris, H. S. T., surgeon, granted an extension of one month to his leave of absence.

Thornburgh, R. M., asst.-surgeon, ordered, at the expiration of his present leave of absence, to Alcatraz Island, Cal., for duty at the Pacific Branch, U. S. Military Prison.

Gunckel, G. I., dental surgeon, left Ft. Morgan, Ala., for duty at Ft. Barrancas, Fla.

Ames, J. R., dental surgeon, relieved from duty at Ft. Leavenworth, Kans., and ordered to Jefferson Barracks, Mo., for duty.

Mount, J. R., cont. surgeon, granted an extension of ten days to his leave of absence.

Wells, F. M., contract surgeon, granted leave of absence for two months, about June 10.

Kierulff, H. N., contract surgeon, arrived at Ft. Apache, Ariz., for duty.

Kress, C. C., contract surgeon, arrived at Ft. Sill, Okla., for temporary duty.

Wilson, E., contract surgeon, ordered from Presidio of Monterey, Cal., to Department Rifle Range, Point Bonita, Cal., for duty.

Mount, J. R., contract surgeon, granted an extension of ten days to his leave of absence.

Johustoue, E. K., contract surgeon, ordered to duty with troops in the Yosemite National Park.

Bastion, J. E., contract surgeon, returned to Ft. D. A. Russell, Wyo., from leave of absence.

Tignor, E. P., dental surgeon, left Ft. DuPont, Del., for duty at Ft. Schuyler, N. Y.

Hamuiond, W. G., dental surgeon, ordered to visit in succession Ft. Wingate, N. M., Ft. Apache, Ariz., Whipple Barracks, Ariz., Ft. Huachuca, Ariz.

Cass, W. E., contract surgeon, relieved from duty at Vancouver Barracks, Wash., and ordered to his home, St. Louis, Mo., for annulment of contract.

Hewitt, J. M., contract surgeon, granted leave of absence for twenty days.

Ashburn, J. K., contract surgeon, arrived at Ft. Assinniboine, Mont., for duty.

Jones, G. B., contract surgeon, relieved from duty in the Philippines Division, and directed to proceed to San Francisco, for further orders.

Pinquard, J., contract surgeon, granted leave of absence for one month.

Public Health and Marine-Hospital Service.

List of changes of stations and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for seven days ended April 22, 1908:

Brooks, S. D., surgeon, granted leave of absence for three days, from April 20, 1908.

Holt, J. M., passed asst.-surgeon, granted leave of absence for 7 days, from April 21, 1908.

Vogel, C. W., passed asst.-surgeon, granted leave of absence for 1 month, from May 1, 1908.

Altree, G. H., acting asst.-surgeon, granted leave of absence for 30 days, from May 5, 1908.

Balley, C. A., acting asst.-surgeon, directed to proceed from St. John, New Brunswick, to Quebec, Canada, for duty.

Brown, S. E., acting asst.-surgeon, leave of absence granted for 14 days, from March 15, 1908, revoked.

Foster, S. B., acting asst.-surgeon, leave of absence granted for 15 days, from April 6, 1908, revoked.

Foster, S. B., acting asst.-surgeon, granted leave of absence for 7 days, from April 13, 1908.

Hamllton, J. H., acting asst.-surgeon, granted leave of absence for 2 days, from April 20, 1908.

Simonson, G. T., acting asst.-surgeon, leave of absence granted for 2 days, revoked.

Small, E. M., acting asst.-surgeon, granted leave of absence for 8 days, from April 18, 1908.

BOARDS CONVENED.

Boards of medical officers were convened to meet on April 27, 1908, for the purpose of examining candidates for the position of cadetship in the revenue-cutter service as follows:

New York: Passed Asst.-Surgeon J. A. Nydegger, chairman; Acting Asst.-Surgeon F. Mahoney, recorder.

Portland, Me.: Surgeon W. P. McIntosh, chairman; Acting Asst.-Surgeon A. F. Stuart, recorder.

Boston: Surgeon R. M. Woodward, chairman; Asst.-Surgeon T. W. Salmon, recorder.

Philadelphia: Surgeon J. M. Gassaway, chairman; Passed Asst.-Surgeon Taliaferro Clark, recorder.

Baltimore: Surgeon L. L. Williams, chairman; Asst.-Surgeon H. J. Warner, recorder.

San Francisco: Surgeon H. W. Austin, chairman; Passed Asst.-Surgeon C. H. Gardner, recorder.

Chicago: Surgeon G. B. Young, chairman; Passed Asst.-Surgeon J. S. Boggess, recorder.

Seattle: Passed Asst.-Surgeon M. W. Glover, chairman; Asst.-Surgeon C. W. Chapin, recorder.

Washington: Assistant Surgeon-General W. J. Pettus, chairman; Passed Asst.-Surgeon J. W. Trask, recorder.

Galveston: Passed Asst.-Surgeon G. M. Corput, chairman; Acting Asst.-Surgeon W. H. Gammon, recorder.

Mobile: Surgeon G. M. Guiteras, chairman; Acting Asst.-Surgeon J. O. Rush, recorder.

Detroit: Surgeon Fairfax Irwin, chairman; Passed Asst.-Surgeon M. J. White, recorder.

Newport News: Asst.-Surgeon G. L. Collins, chairman; Acting Asst.-Surgeon A. C. Joues, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ended April 24, 1908:

SMALLPOX—UNITED STATES.

California: Berkeley, March 28-April 4, 1 case; Los Angeles, 5 cases; San Francisco, 7 cases.

District of Columbia: Washington, April 4-11, 21 cases.

Illinois: Chicago, April 4-11, 4 cases; Springfield, April 2-9, 5 cases.

Indiana: Indianapolis, March 29-April 12, 6 cases; South Bend, April 4-11, 1 case.

Iowa: Davenport, April 1-30, 11 cases; New London, March 28, 1 case (imported); Ottumwa, April 4-11, 7 cases.

Kansas: Kansas City, April 4-11, 12 cases; Topeka, March 28-April 11, 26 cases; Wichita, April 4-11, 8 cases.

Kentucky: Covington, April 4-11, 3 cases.

Louisiana: Hornbeck, December 20-April 13, 34 cases; Lake Charles, April 14, 2 cases; New Orleans, April 4-11, 14 cases, 2 deaths (imported).

Michigan: Port Huron, March 28-April 11, 5 cases; Saginaw, 4 cases.

Missouri: Kansas City, March 28-April 4, 9 cases; Ozark, February 13-April 13, 17 cases; St. Joseph, March 7-14, 23 cases, 1 death.

Minnesota: Winona, April 4-11, 2 cases.

Nebraska: Fall City and vicinity, to April 9, 13 cases; Nebraska City, April 6-13, 2 cases.

New York: Buffalo, April 4-11, 1 case; Niagara Falls, 3 cases.

Ohio: Chillicothe, March 3-April 15, 18 cases; Cincinnati, April 3 10, 13 cases, 1 death; Murray, March 1-April 3, 25 cases.

Pennsylvania: Sayre, March 14-April 11, 2 cases.

Tennessee: Knoxville, April 4-11, 1 case; Memphis, March 28-April 12, 9 cases.

Texas: San Antonio, April 4-11, 20 cases.

Wisconsin: La Crosse, April 4-11, 6 cases; Racine, 5 cases.

Washington: Spokane, March 28-April 4, 12 cases.

SMALLPOX—FOREIGN.

Arabia: Aden, March 16-23, 2 deaths.

Brazil: Manaos, March 14-21, 3 cases; Rio de Janeiro, March 8-15, 87 cases, 9 deaths.

Egypt: Cairo, March 11-18, 5 cases, 1 death.

France: Paris, March 21-28, 5 cases.

Italy: General, March 26-April 2, 98 cases.

India: Bombay, March 10-17, 44 deaths.

Java: Batavia, February 22-March 7, 10 cases.

Malta: February 29-March 21, 23 cases, 1 death.

Manchuria: Dalny, February 9-15, 1 case.

Mexico: City of Mexico, February 22-March 7, 11 deaths.

Portugal: Lisbon, March 21-28, 4 cases.

Russia: Odessa, March 21-28, 5 cases; Warsaw, February 1-8, 9 deaths.

Spain: Almeira, February 1-29, 6 cases; Vigo, March 1-28, 2 cases.

Turkey: Bagdad, February 22-29, 40 cases, 8 deaths; Constantinople, March 15-22, 3 deaths; Smyrna, January 1-28, 10 cases, February 1-29, 6 cases.

YELLOW FEVER.

Brazil: Manaos, March 7-21, 6 cases, 5 deaths; Para, March 21-28, 2 cases, 2 deaths.

CHOLERA.

India: Madras, March 7-13, 4 deaths; Rangoon, February 29-March 7, 2 deaths.

PLAGUE—INSULAR.

Hawaii: Hilo, April 6, 1 death.

PLAGUE—FOREIGN.

Africa: Gold Coast: Akkra, January 11-March 3, 114 deaths; Brewa, 19 deaths; Ninnyano, 5 cases; Tema, 9 deaths.

Australia: Brisbane, February 1-8, 2 cases; Sydney, February 24-March 2, 1 case.

Brazil: Para, March 21-28, 1 case, 1 death; Rio de Janeiro, March 8-15, 1 case, 1 death.

Ecuador: Quayaquil, March 30, present; Quito, vicinity, March 21, present.

Egypt: General, March 10-17, 19 cases, 7 deaths; Alexandria, 1 case.

India: General, February 22-29, 7,403 cases, 5,945 deaths; February 29-March 7, 8,103 cases, 6,854 deaths; March 7-14, 8,048 cases, 6,739 deaths; Bombay, March 10-17, 306 deaths; Rangoon, February 29-March 7, 29 deaths.

Peru: Callao, March 4-11, 3 cases; Catacaos, 1 case; Chepen, 1 case, 1 death; Chiclayo, 2 cases, 2 deaths; Eten, 1 case, 4 deaths; Ferrenhafe, 2 cases; Lima, 4 cases, 3 deaths; Mollendo, 4 cases, 3 deaths; Trujillo, 39 cases, 15 deaths.

Turkey in Asia: Kerbela, March 13, 2 cases.

Marriages

John Joseph Egan, M.D., to Miss Theekla Gensler, both of Chicago, April 20.

Howard F. Schultz, M.D., to Miss Mand List, both of Philadelphia, April 15.

Charles S. Cochran, M.D., Follansbee, Ohio, to Miss Bady of Mannington, W. Va.

Henry Sykes, M.D., to Miss Elizabeth M. Bergan, both of Philadelphia, April 16.

Martin Olson, M.D., Chicago, to Miss Inga Aagot Rovel of Elgin, Ill., April 22.

William Carson, M.D., to Mrs. Martha Melson, both of Shelbyville, Mo., April 9.

Albert Charles Geyser, M.D., to Anne S. Higbie, M.D., both of New York City, April 15.

James Lynch, M.D., Baltimore, to Miss Anne Imboden Duff, at East Nashville, Tenn., April 15.

Harry Merriman Stumpf, M.D., to Miss Bessie Wardell Foster, both of Baltimore, April 15.

Eugene Herbert Robertson, M.D., to Miss Elinor Agnes Brown, both of Boulder, Colo., April 14.

Elmer D. Snyder, M.D., Onward, Ind., to Miss Catherine Slipher of Delphi, Ind., at St. Joseph, Mich., April 15.

Assistant Surgeon Renier J. Straeten, U. S. Navy, Guam, to Miss Emeretta Root of Washington, D. C., April 12.

Lieutenant Commander George Augustus Lung, M.D., U. S. Navy, to Miss Helen Van Courtland De Peyster of New York City, April 28.

Deaths

James King Crook, M.D. New York University Medical College, New York City, 1880; a member of the American Medical Association, New York Academy of Medicine and National Association for the Prevention and Cure of Tuberculosis; clinical assistant, instructor and adjunct professor of clinical medicine at the New York Post-Graduate School from 1883 to 1904; visiting physician to the Post-Graduate Hospital and physician to the Outdoor Department of Bellevue Hospital and St. Mary's Hospital; a delegate in 1896 to the Pan-American Medical Congress in Mexico, and in 1897 and 1903 a delegate to the British Medical Association; died at his home in New York City, April 15, from pneumonia, after a brief illness, aged 49.

Cola H. Peete, M.D. Vanderbilt University, Medical Department, Nashville, Tenn., 1892; a member of the American Medical Association, Tri-State Medical Society of Georgia, Alabama and Tennessee, and American Laryngological, Rhinological and Otological Society, and formerly president of the Macon (Ga.) Medical Society; a member of the medical board and oculist and aurist to the Macon Hospital, Georgia Academy for the Blind and South Georgia Orphans' Home; one of the leading specialists of Macon, Ga.; died at his home, April 13, after a long illness, aged 45.

Hugh McColl, M.D. Bellevue Hospital Medical College, New York City, 1871; for many years a member of the American Medical Association; local surgeon to the Grand Trunk Western Railway; a practitioner of La Peer, Mich.; who retired from practice in 1906 on account of his health and moved back to his old home in London, Ont., and in January of this year presented his medical library to the Western Medical College, London; died at his home in that city, April 19, aged 63.

Norwood Kincaid Vance, M.D. University of Maryland School of Medicine, Baltimore, 1882; a member of the American Medical Association; formerly councilor of the fourth Louisiana district; formerly of Shreveport, and later of Puerto Cortez, Honduras; died in the Kimball Hotel, Atlanta, Ga., March 31, from the effects of a gunshot wound of the breast, said to have been self-inflicted while despondent on account of ill health, aged 48.

Richard Armstrong, M.D. Jefferson Medical College, Philadelphia, 1854; a member of the American Medical Association; vice-president of the Jefferson Alumni Association; formerly vice-president of the Medical Society of the State of Pennsylvania; president of the board of trustees of Lock Haven Hospital; died at his home in Lock Haven, Pa., April 17, from atheroma and cardiac asthma, aged 75.

Joseph Henry Edwards, M.D. Birmingham (Ala.) Medical College, 1897; a member of the Medical Association of the State of Alabama and Jefferson County Medical Society; city physician of Wylam and president of the local board of education; died April 16 at the Davis Infirmary, Birmingham, from cerebral hemorrhage, said to have been due to a fall from his horse three days before.

Jonathan B. Hawk, M.D. Hahnemann Medical College and Hospital of Chicago, 1883; for several years a member of the pension examining board of Hall County, Neb.; coroner of Hall County, and chief surgeon of the Grand Island Soldiers and Sailors' Home; a veteran of the Civil War; died at his home in Grand Island, April 14, from intestinal obstruction, after an illness of ten days, aged 62.

Joseph B. Ross, M.D. University of Greifswald, Germany, 1881; for 14 years a practitioner of Australia; a member of the Missouri State Medical Association, and once vice-president of the St. Louis Medical Society of Missouri; died at the home of his brother in Westphalia, Germany, April 15, from heart disease, after a long illness, aged 50.

Ralph S. Wilder, M.D. Dartmouth Medical School, Hanover, N. H., 1902; for five years a member of the staff of the Medfield (Mass.) Insane Asylum; was found dead in his room in that institution, April 15, from the effects of a gunshot wound of the head, supposed to have been self-inflicted, while despondent from ill health, aged 30.

Franklin Pierce Moore, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1874; of Lisbon, Ohio; a member of the American Medical Association and a charter member of the Columbiana County Medical Society; died in San Antonio, Texas, April 14, from tuberculosis, after a prolonged illness, aged 56.

Henry T. Legler, M.D. University of Leipsic, Germany, 1844; who participated in the Saxon Rebellion of 1848 and was expatriated; brigade surgeon in the federal service during the Civil War; formerly physician of Alameda County, Cal.; died at his home in Oakland, Cal., April 14, after an illness of one week, aged 88.

Charles H. Hubbard, M.D. Yale Medical School, New Haven, Conn., 1860; a member of the Connecticut and Middlesex County medical societies; for many years town health officer and medical examiner of Essex; died at his home in that town, April 12, from cerebral hemorrhage, after an illness of three days, aged 71.

William Jackson Gamble, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1881; a member of the Medical Society of the State of Pennsylvania and Washington County Medical Society; died at his home in Gastonville, April 14, from pneumonia, after an illness of ten days, aged 55.

William F. Wergen, M.D. College of Physicians and Surgeons, Chicago, 1904; formerly of Lead, S. D.; one of the medical assistants at the Ottawa (Ill.) Tent Colony for Tuberculosis; died at the home of his parents in Ottawa, April 16, from tuberculosis, after an illness of more than three years, aged 28.

Ermin B. Rentz, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1870; a member of the American Medical Association; formerly a practitioner of Forest Grove, Ore., but for the last two years a planter of Drewy's Bluffs, near Richmond, Va.; died recently, aged about 60.

Charles Francis Magers, M.D. Starling Medical College, Columbus, Ohio, 1896; a member of the American Medical Association and a prominent young practitioner of Tiffin, Ohio, died at his home in that city, April 12, from general nervous breakdown after an illness of several months, aged 37.

James Stephenson, M.D. McGill University Medical Faculty, Montreal, 1859; a veteran practitioner of Iroquois, Ont.; reeve of the town for many years, and a member of the Dundas County Council, and local surgeon to the Grand Trunk System; died at his home in Iroquois, April 13, aged 73.

Charles W. Ellis, Jr., M.D. Detroit (Mich.) College of Medicine, 1889; a member of the Michigan State and Saginaw County Medical Societies; a member of the staff of St. Mary's Hospital, Saginaw, and surgeon to the local traction company; died at his home, April 18, from pneumonia, aged 45.

Henry Bennett Gammon, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1898; of Hastings, Mich.; a member of the American Medical Association; contract surgeon U. S. Army from 1898 to 1899; died at the West Side Hospital, Chicago, April 21, aged 39.

Wallace Rouse, M.D. University of Texas, Medical Department, Galveston, 1902; a member of the State Medical Association of Texas and Galveston County Medical Society; lecturer and demonstrator at his alma mater; was killed by lightning, April 21, while fishing, aged 33.

Thomas J. Finley, M.D. Medical Department of the Tulane University of Louisiana, New Orleans, 1904; demonstrator of bacteriology in the New Orleans College of Dentistry; died at his home in that city, April 18, from acute nephritis, after an illness of one week, aged 41.

Armistead Leftwich, M.D. Medical College of Virginia, Richmond, 1884; for several years coroner of Henrico County; physician to the Henrico County (Va.) Almshouse; a member of the Church Hill Medical Association; died in his office in Richmond, April 15, aged 50.

William G. Patterson, M.D. Miami Medical College, Cincinnati, 1855; one of the oldest practitioners of the Ohio Valley; overseer of the poor of Cincinnati during the Civil War; died at his home in that city, April 17, from paralysis, after an illness of three years, aged 93.

Alexander McLeod Sommerville, M.D. Medical School of Harvard University, Boston, 1872; of Hatfield's Point, Kings County, Ont.; died at the home of his daughter in Rothesay, Ont., March 9, after an illness of two months, from heart disease and diabetes, aged 58.

Howard S. Straight, M D. Western Reserve University Medical College, Cleveland, 1885; of Cleveland, Ohio; an eye and ear specialist; died April 14, in a hospital in New York City, while on his way home from Europe, after a prolonged illness, aged 50.

George R. Cox, M.D. Jefferson Medical College, Philadelphia, 1895; of Beaman, Mo.; died at the home of his sister in Sedalia, Mo., April 16, from the effects of a gunshot wound of the heart, believed to have been self-inflicted with suicidal intent.

Andrew J. McIntosh, M.D. Cincinnati College of Medicine and Surgery, 1869; a member of the American Medical Association; died at his home at Allendale, Ill., April 10, from cerebral hemorrhage, aged 73.

George P. Weaver, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1875; died at his home in Philadelphia, April 11, from septicemia, following amputation of the leg, aged 75.

Orion W. Toby, M.D. Eclectic Medical Institute, Cincinnati, 1873; health officer of Perry township, Montgomery County; died suddenly at his home in Pyrmont, Ohio, April 14, aged 58.

James D. R. McKenzie, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1869; died at his home in Milnor, N. D., April 12, aged 67.

John Wilson Robie, M.D. College of Physicians and Surgeons in the City of New York, 1861; died at his home in New York City, April 16, aged 71.

Sarah J. Hogan, M.D. Bennett College of Eclectic Medicine and Surgery, Chicago, 1886; died at her home in that city, April 23, aged 83.

Charles Jefferson Towne (Examination, Mass., 1894), died at his home in Essex, Mass., April 16, after an illness of four weeks, aged 67.

W. H. Reed, M.D. Curtis Physio-Medical Institute, Marion, Ind.; died at his home in Hartford, City, Ind., February 18, aged 54.

Deaths Abroad.

F. Terrier, M.D., professor of surgery at the University of Paris until last year; editor of the *Revue de Chirurgie;* died in Paris, April 9, aged 71. He was one of the leading French surgeons and writers on surgical topics, and was a pioneer in preaching asepsis.

L. Gigli, M.D.; assistant at the Maternity at Florence, Italy; the inventor of the wire saw and the first to propose pubiotomy, the extramedian division of the pubic bone, to enlarge the pelvis; died at Florence, April 9, aged 42.

Society Proceedings

COMING MEETINGS.

American Medical Association, Chicago, June 2-5.

Kansas Medical Society, Iola, May 5-7.
Ohio State Medical Association, Columbus, May 6-8.
American Therapeutic Society, Philadelphia, May 7-9.
American Association of Physicians, Washington, May 12-13.
State Medical Association of Texas, Corpus Christi, May 12.
Utah State Medical Association, Salt Lake, May 12-13.
Louisiana State Medical Society, Alexandria, May 12-14.
Montana State Medical Association, Butte, May 13-14.
Arkansas Medical Society, Little Rock, May 13-15.
West Virginia State Medical Association, Clarksburg, May 13-15.
New Hampshire Medical Society, Concord, May 14-15.
Oklahoma State Medical Association, Sulphur, May 12-14.
Illinois State Medical Society, Peoria, May 19-21.
Missouri State Medical Association, Springfield, May 19-21.
Nebraska State Medical Association, Lincoln, May 19-21.
North Dakota State Medical Association, Grand Forks, May 20-21.
Iowa State Medical Society, Des Moines, May 20-22.
Rhode Island Medical Society, Providence, May 26.
Connecticut State Medical Society, New Haven, May 27-28.
American Pediatric Society, Delaware Water Gap, May 26-28.
American Gynecological Society, Philadelphia, May 26.
American Academy of Medicine, Chicago, May 30-June 1.
American Association of Medical Examiners, Chicago, June 1-2.
American Gastro-Enterological Association, Chicago, June 1-2.
American Proctologic Society, Chicago, June 1.
American Urological Association, Chicago, June 1.
National Congress of State Medical Examining and Licensing Boards, Chicago, June 1.
American Orthopedic Association, Chicago, June 4-6, 1908.

TENNESSEE STATE MEDICAL ASSOCIATION.

Seventy-fifth Annual Meeting, held at Knoxville, April 14-16, 1908.

(Continued from page 1372.)

Diagnosis and Treatment of Appendiceal Infections.

Dr. W. D. Haggard, Nashville, summarized by saying: 1. That the treatment of appendicitis should be surgical operaion in all well-marked cases as soon as the diagnosis is made within the first twenty-four or forty-eight hours, if possible. 2. Immediate operation in cases which have apparently been doing well, but suddenly have chill or a drop in temperature, with rise of pulse. 3. Moderately severe cases seen on the third to fifth day which have not had the benefit of early operation, and especially if there is any special contraindication to operation, are given their best chance by the Ochsner method. 4. Cases seen when the process is distinctly abating are treated in he above manner and operation deferred until the attack has ompletely subsided. 5. Cases with well-defined abscesses seen on or about the end of the first week can often be watched a ew days if there is any opportunity of the abscess becoming adherent to the abdominal wall. If this occurs adhesions are quite competent at the end of the tenth day and evacuation hould be practiced, but the appendix left alone, unless it is asily seen and very accessible in the abscess cavity. 6. In eneral peritonitis a short operation with quick removal of he appendix, no irrigation, a large glass tube in the pelvis bove the pubes, the patient in the Fowler position and the blood-washing,” continuous enema of salt solution is the est treatment. Where the abscess is not adherent to the abominal wall, the entire field should be walled off with gauze efore opening and sponging it dry. Irrigation should not be sed. 7. Cases after one attack are safer with operation in he interval than to wait for another attack.

Dr. B. Merrill Ricketts, Cincinnati, said that 64 surgeons, epresenting 80,251 operations, reported about 60 cases of emorrhage from one or more branches of the vessels of the ppendix. Twenty lantern slides were given to illustrate the arious methods of ligating the stump. His conclusions are hat simple ligature with silk is the quickest and safest ethod.

Salicylate of Mercury in Syphilis.

Dr. J. W. Handly, Nashville, described the use of intramural jections of salicylate of mercury in the treatment of this sease, and said it is applicable in all stages, the intervals eing governed by the results obtained. In deep ocular lesions, retinitis, chorioiditis, iritis, he finds the deep injections espeally effective, particularly when combined with the iodids. o summarize, intramural injections are best for the following reasons: 1, Accuracy of dosage; 2, better control of patient; 3, secrecy of treatment; 4, no gastrointestinal disturbance; 5, little tendency to salivation which can be quickly controlled; 6, patient can not give remedies to other patients, thereby cutting out the other fee of the physician; 7, patient is not forced to take three doses a day, but one injection every seven to ten days; 8, no smearing over the body with a filthy ointment, a tale bearer to those around him; 9, the greatest good to the patient with the smallest amount of trouble.

DISCUSSION.

Dr. Jere L. Crook has tried this treatment in three cases, and in one of tertiary syphilis he obtained fine results. It is very essential to get a good syringe for these injections.

Dr. Leroy said mercurial injections are the surest and infinitely the most rapid method at our command. They do not disorganize digestion, and a good digestive system is one of the best assets that a man has in the overcoming of a syphilitic infection.

Snoring and Mouth Breathing.

Dr. G. E. Vaughan, Clarksville, said the most frequent cause of mouth breathing in a child is adenoids and enlarged tonsils. The next is hypertrophic or intumescent rhinitis, and he called particular attention to this, as it is frequently neglected. The enlarged turbinate is considered frequently to be the result of adenoids and tonsils, and yet it does not always disappear after their removal. So he is constrained to think that the enlarged turbinate, adenoids and tonsils are all the result of some condition, and not always dependent on each other. A grievous mistake is made by not following up cases on which operations have been done for adenoids and tonsils and seeing to it that nasal obstruction is completely relieved and normal breathing established.

Treatment and Prevention of Tuberculosis by Tuberculin Immunization.

Dr. William Litterer, Nashville, stated that (1) experiments on animals demonstrate the possibility of creating immunity to tuberculosis by the use of the tuberculins. (2) The time is not far distant before individuals showing a tuberculous tendency will submit themselves to the repeated injections of some form of tuberculin as a means of prophylaxis against this disease. (3) The clinical method in the administration of tuberculin is far preferable to the one advocated by Wright in which the estimation of the opsonic index is essential. (4) Tuberculin therapy is proving an essential aid in the treatment of tuberculosis, especially as an adjuvant to the hygienic, dietetic, open-air treatment.

DISCUSSION.

Dr. Louis Leroy thinks some members of the profession have gone mad over opsonic therapy and have followed opsonic work further than they have been justified. The opsonic portion is simply an attachment to the value obtained from vaccine therapy. The advantage to be obtained from the injection of bacterial products has been known for many years, and it was only in casting about for a method to control this that the work of Wright was developed.

Tuberculosis.

The membership of the Tennessee State Committee of the International Congress on Tuberculosis presented a symposium on tuberculosis. Papers were read as follows: “Prophylaxis in Tuberculosis,” by Dr. Y. L. Abernathy, Hill City; “Experimental Tuberculous Peritonitis,” by Dr. William Litterer, Nashville; “Tuberculosis of the Cervical Lymphatic Nodes,” by Dr. W. A. Bryan, Nashville; “How Best to Utilize the Knowledge of the Communicability of Tuberculosis,” by Dr. H. P. Coile, Knoxville; “The Marriage and Intermarriage of Tuberculous Subjects,” by Dr. I. A. McSwain, Paris; “Bovine Tuberculosis,” by Dr. M. Jacob, Knoxville.

Significance of Uterine Hemorrhage.

Dr. L. E. Burch, Nashville, said that every case of uterine hemorrhage should be subjected to an immediate vaginal examination; that the vast majority of cases having this symptom are due to pelvic pathology, and that by carefully considering cancer, extra-uterine pregnancy, abortion, endometritis and fibroid tumors, and then by a process of exclusion a correct diagnosis can usually be made. When pelvic pathology is discovered it is generally necessary to resort to surgery to effect a cure.

Movable Kidney.

Dr. William D. Sumpter, Nashville, said that the frequency of movable kidney demands careful examination of position of the kidneys in vague abdominal pain. He spoke of the relation of movable kidney as a causative factor in appendicitis, diseases of the biliary passages, disturbances of the gastrointestinal tract, etc. He discussed the diagnostic methods of examination and the importance of differential diagnosis; palliative treatment, with its results; the indications for operative treatment; choice of incision; method of fixation, and the anatomic and therapeutic results of operation.

Papers were likewise read as follows: "Retention of Urine in a Female Infant Nine Weeks Old," by Dr. T. J. Happel, Trenton; "Some Symptoms Produced by Appendicitis," by Dr. W. A. Bryan, Nashville; "Herniotomy," by Dr. George R. West, Chattanooga; "Conservative Surgery in Crushing Injuries," by Dr. Jere L. Crook, Jackson; "Diseases of the Frontal Sinus and Their Surgical Treatment," by Dr. C. M. Capps, Knoxville; "Ethics," by Dr. J. M. Kennedy, Knoxville; "Purulent Ophthalmia," by Dr. M. M. Cullom, Nashville; "The Treatment of Detachment of the Retina, with Reports of Cases," by Dr. L. B. Graddy, Nashville, and "Adenoids," by Dr. C. H. Davis, Knoxville.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Regular Meeting, held March 11, 1908.

The President, Dr. A. M. Eaton, in the Chair.

SYMPOSIUM ON NOSTRUMS AND NOSTRUM PRESCRIBING.

Nostrum Prescribing—Its Cure.

Prof. Joseph P. Remington believes that the practice of prescribing nostrums by physicians is decreasing, and that with persistent activity the sale and use of nostrums will be greatly curtailed. Little good will be accomplished by a propaganda of abuse of personal vilification, but far more by presenting to physicians a reasonable and effective alternative, with a campaign of education, which will present facts alone, studiously avoiding sensational and exaggerated statements, intended to inflame public opinion and terrorize the masses. The old idea of mystery in the preparation of medicines, the writer observes, lies at the foundation of the nostrum traffic, and that science is ever the foe of mystery and secrecy. That secrecy is not essential in securing commercial success has been shown by the splendid example of Dr. Edward R. Squibb, who willingly published his processes and threw open his laboratory doors to the inspection of the medical and pharmaceutical professions at a time when his competitors closely guarded their secrets, and yet he died a rich man, not only in worldly effects, but in the satisfaction that his labors had benefited a multitude. His example is now being followed by the best manufacturing pharmacists, and the best and largest concerns are giving freely to the committee of revision of the U. S. Pharmacopeia information heretofore withheld. This spirit can be encouraged by physicians "by never prescribing a remedy the composition of which is not known to them."

The cure for nostrum prescribing is said to be: 1. Education; 2, application and close study of the therapeutic effects of the preparations of the U. S. Pharmacopeia and National Formulary and such unofficial agents of known composition as are now available.

Nostrums in Dosage Form.

Mr. M. I. Wilbert said that the advent and popularity of nostrums in the form of factory made prescriptions is the direct cause of at least three of the highly objectionable conditions present to-day. In the order of their importance they are: 1. A pernicious and widely developed medicine habit on the part of the great American public. 2. An all too evident lack of self-confidence and a want of knowledge of how to formulate a satisfactory prescription, for active medicaments, on the part of the physician. 3. The loss of interest and skill in compounding, controlling and dispensing, on the part of the pharmacist or retail druggist.

Of the first of these conditions it was asserted that among the more potent drugs popularized in this exploitation are acetanilid, phenacetin, chloral and its derivatives, the bromids, strychnin, sulphonal, trional, veronal, cocain, eucain, heroin, codein and a number of others scarcely less injurious, to say nothing of the alcohol presented in insidiously attractive forms. Of the second condition, the efforts in combating the evil are best illustrated in the method of teaching pharmacology and therapeutics in the medical schools of Harvard, Western Reserve, Cornell and Pennsylvania universities. For signs of progress on the part of medical men in actual practice it is but necessary to point to the work being done in connection with the American Medical Association. The third condition is regarded by the author as most serious, not alone because it has not yet been recognized or appreciated by the pharmacists themselves, but also because it appears to have been all but overlooked by the medical profession and the community at large.

Mr. Wilbert argues that if the standards of the Pharmacopeia are reasonable, every pharmacy or drug store that essays to dispense physicians' prescriptions should contain a copy of the latest edition of the Pharmacopeia and of the National Formulary, also that the persons in charge should be fully capable and have at their command the necessary apparatus to apply all of the pharmacopeial tests and to make all of the official preparations strictly in accordance with the directions as laid down in these standards. In conclusion, Mr. Wilbert read the following proprietary names under which castor oil and phenolphthalein are offered for sale: Castol, castolax, castoline, castorol, castormel, cholelith, dulcinol, laxans, laxatin, laxatol, laxarol, laxathalen, laxatolin, laxiconfect, laxoin, laxophen, laxaline, laxatine, laxomel, lazarome, laxol, laxora, laxolia, purgo, purgol, purgen, purgella, purgolade, purgylum, purgatin, purgativa, parathalen, probilin, ricinol, saccharol.

The Relative Frequency in the Prescribing of Proprietary Medicines Up to 1905.

Mr. Ambrose Hunsberger traced the rapid growth of the habit of prescribing proprietary preparations from the earliest available records, those gathered in 1875, to the chaotic period of 1905. An investigation of 50,000 prescriptions, reported by Dr. Jacobi, revealed in 1875-80 2 per cent. of proprietaries; 1880-90, 5 per cent.; 1895, 12 per cent.; 1898, 15 per cent.; 1902-03, 25 per cent.

Another investigation, made by members of the American Pharmaceutical Association, residing in widely separated localities in the United States, was reported to that body at its 1905 meeting by Mr. Patch of Boston. This analysis covered 27,000 prescriptions and showed a total of 20 per cent. that called for proprietaries, not including proprietary chemicals such as antipyrin, phenacetin, etc. (which were being advertised heavily at that time), but embracing a class of compounds bearing fanciful and catchy names, many of which are no longer prescribed, yet are enjoying large sales direct to the laity because of their popularization by the medical profession.

A summing up of the reports, supplemented by a general knowledge of conditions, indicates that in 1905 approximately 35 per cent. of the prescriptions written throughout the country called for proprietary products. An interesting point for the "therapeutic nihilist" to consider is the fact that the A. Ph. A. analysis shows calls for 1,777 separate and distinct articles in 27,000 prescriptions, a far cry to "hope and nux vomica." Simple medication appears to have been practiced, since the average number of articles per prescription was but 2.25. The percentage of prescriptions calling for proprietaries varies considerably in different sections of the same locality. Jacobi reports 70 per cent. of the prescriptions of reputable physicians, compounded at a "gaudy" drug store, as calling for proprietaries. Chicago and Boston report similarly. The low percentages are found in the "family drug store," honored in its community and having the confidence of the good old "family doctor." Jacobi pertinently says "Clear your own skirts, professors and doctors."

The Legal Safeguards Surrounding U. S. P. and N. F. Preparations.

MR. W. L. CLIFFE said that there are no standards for the quality of proprietary medicinal compounds other than those that are self-imposed on the maker, and that it has been repeatedly shown that alteration in the character and content of this class of medicinal products is of frequent occurrence. Statutory requirements in state and federal laws do not interfere in this changing of formulæ, except in the case of a dozen or so specifically named narcotic or habit-forming drugs, in which case the actual content of such ingredients must be shown on the label, thus rendering changes in composition as far as the ingredients named are concerned apparent. In the case of the official preparations of the U. S. Pharmacopeia and National Formulary there can be no legally permissible deviation from the formulæ, standards and tests laid down in those authorities on the part of the dispenser, when such preparations are ordered by prescription, because the laws of the various states and territories as well as the federal statutes demand conformity.

In regard to the effectiveness of the administration of these laws, it is said that bureaus of departments, health and drug commissions are slowly but surely being put into a state of organization for this purpose. Quotations from the various statutes were made by Mr. Cliffe in substantiation of the statements made.

Results Accomplished by the Propaganda.

MR. CHRISTOPHER KOCH referred to the institution of the propaganda for reform in the prescribing of proprietary remedies by the American Medical Association in 1905 and to the work of the Council on Pharmacy and Chemistry of that association. Reference was also made to the work of the Ethical Preparations Committee. In November, 1906, it was found on investigation that 20.4 per cent. of all prescriptions written in Philadelphia called for proprietaries. In November, 1907, the prescription files of the same stores showed a decrease of one-third in such prescriptions. All sections of the city suffered. West Philadelphia is the worst, and Kensington the least offender. The condition in Kensington is attributed to the fact that joint meetings of physicians and pharmacists have been held, and to the fact that a spirit of good feeling exists between the two professions. In Germantown a large percentage of homeopaths are found prescribing proprietaries. In West Philadelphia there are three cooperative companies with many physicians as stockholders and hundreds of prescriptions for these proprietaries are written daily. The southern end of the city and the central district show some improvement. The north central part of the city contains another cooperative corporation, and, strange to say, one of the hardest workers in the propaganda is a pharmacist in this section. He is obliged to report an increase in spite of all his efforts, due entirely to two physicians practicing in his neighborhood who are members of the corporation.

DISCUSSION.

DR. JAMES M. ANDERS felt that the papers presented should be heartily endorsed by the Philadelphia County Medical Society. While the figures presented on the use of nostrums make the medical profession appear to better advantage than those cited by other observers the situation is still in a measure deplorable. Dr. Anders endorsed the suggestion of Professor Remington for a closer application to the study of the U. S. Pharmacopeia. To this Dr. Anders would add the standard works on materia medica and therapeutics. Certain synthetic proprietary remedies of known composition, in general use and widely approved by the leading members of the medical profession, he believes may be employed as occasion demands. In favor of the National Formulary Dr. Anders said that, while this work gives only unofficial preparations, these have been brought to a common, authoritative standard by the labors of a special committee of the American Pharmaceutical Association, and can now be employed with confidence to meet definite indications, although, as a rule, it is necessary to formulate prescriptions at the bedside. Joint meetings between pharmacists and physicians he believes will not only promote friendly feelings between the two professions, but advance the interests of scientific pharmaceutics and practical therapeutics.

DR. H. A. HARE referred to the general interpretation of a "proprietary" and of a "nostrum," the former embracing those preparations, the ingredients of which are all known, which are not made under a patent, but which bear some official name so that the physician in ordering may get the product of one particular manufacturer; the latter being those secret preparations made under a patent. He claims the right to prescribe anything he pleases for his patients, provided he knows what he is prescribing and has information that leads him to believe it will do good.

DR. S. SOLIS COHEN said that any ready-made mixture is bad, whether it is prescribed by the National Formulary or by a manufacturer. He thinks the real advance is being made in the fact that pharmacists and physicians are uniting on nonsecret pharmacy. He is in accord with Professor Remington's paper and with much said by the other gentlemen. He feels that the profession must not suffer itself to use incautious unguarded, overemphatic remarks which can be construed by journals and newspapers into a confession that the medical profession prescribes secret remedies, which it does not, or into an idea that physicians are ignorant of pharmacy and of chemistry, and put unknown concoctions into the stomachs of their patients with the object of destroying their lives which can only be saved by the efficacy of Christian Science and osteopathy.

DR. DAVID L. EDSALL attributed to ignorance the prescribing of nostrums by a certain portion of the profession. This ignorance, he said, is being dissipated by the work of the Council on Pharmacy and Chemistry of the American Medical Association. He feels that the profession should show its disapproval of so-called medicinal foods at present widely used and enthusiastically trusted in by many persons. A report which appeared in THE JOURNAL of the American Medical Association showed that of these foods an amount equal to 20 cents' worth of milk costs from $1.50 to $3.50. He has seen persons in a decidedly starved condition through the use of these substances. He thinks it important that students should be taught therapeutics in small ward classes and in actual work in the wards.

DR. M. H. FUSSELL thinks the crux of the entire nostrum question lies in the queries whether there "are any fixed formulas of drugs necessary or even desirable," and whether it is "not better to use single drugs, or a combination of drugs for each special case?" With these questions answered he thinks that rational physicians and equally intelligent pharmacists can at once meet on a common ground. He feels that the host of nostrums, the myriads of ethical preparations, the many formulas of the National Formulary and the few fixed formulas of the Pharmacopeia are the outcome of a natural desire of the laity for relief, coupled with their inherited belief from ancestors in æons past in the infallibility of drugs in curing diseases. The continued existence of secret preparations he attributes primarily to the lack on the part of physicians to practice the sound principles of therapeutics taught in the best medical schools.

DR. JOHN B. ROBERTS said that to put a dirty scalpel into the brain, abdomen or joint of a patient is a breach of trust. To put an unknown amount of an unknown medicine into his stomach or under his skin is equally censurable. The boast and glory of medicine is its approach to accuracy. Accuracy can only be obtained by a knowledge of the drugs used and the quantities given. The dirty scalpel and the secret remedy may lead to the death of the confiding patient. No honorable and self-respecting physician wishes to vie with the abortionist in causing the death of his patient. All such practices are unbecoming a physician and gentleman and can not be tolerated by the Philadelphia County Medical Society.

Medicolegal

Testimony of Unregistered Physicians Not Excusable—Consent to Removal to Sanitarium Not Inconsistent with Abandoment of Hope.

The Supreme Court of Louisiana holds, in the case of State vs. Howard, that when a witness in a criminal prosecution is offered, and, over the objection that he has not been examined and has not registered as required by act No. 49 of 1894, is permitted to testify, as an expert physician or surgeon, it is no answer to the objection that the testimony is incompetent to say that the facts testified to might have been established by competent testimony, or that the testimony as given "was not strictly that of a medical expert." The act in question provides that practitioners who have not been examined and passed by the state board of medical examiners and have not otherwise complied with its provisions "shall not . . . be allowed to testify as medical or surgical experts in any court of this state."

The court also holds that the fact that a person mortally wounded consents to be removed to a sanitarium for the satisfaction of his wife and children is not inconsistent with his own abandonment of the hope of recovery; and where, on the whole, the evidence justifies the belief that he is impressed with a sense of impending dissolution, his statements may be admitted as a dying declaration.

Physicians Entitled to Compensation as Expert Witnesses.

The Supreme Court of Minnesota says that, in the personal injury case of Anderson vs. Minneapolis, St. Paul & Sault Ste. Marie Railway Company, where the plaintiff recovered a verdict, application was made to the trial court on proper notice for the allowance of witness fees of physicians claimed to have been called as experts at the trial. The court does not think that there was error in allowing the witnesses their fees as experts.

The court says that it was claimed that it was held in Le Mere vs. McHale, 30 Minn., 410, that physicians could not be called as experts when they had been employed professionally to attend the plaintiff, and while so attending him, in the ordinary practice of their profession, acquired personal knowledge of the nature and extent of his injuries. But it certainly was not intended to hold in Le Mere vs. McHale that, simply because physicians and surgeons treat an injured person in their professional capacity, they are thereby precluded from being sworn and examined at the trial as experts to give an opinion on the facts, whether those facts were ascertained wholly or partially as a result of their personal experience in treating the patient. That decision goes no further than to hold that a physician who testified to facts coming under his notice during the performance of his professional duties is not necessarily an expert witness. In that case there was nothing to distinguish the physicians from any other witnesses. In this case it appeared from the motion papers that the physicians and surgeons not only treated the injured man professionally, but were employed so to do for the purpose of making preparation to testify as experts. They made special examination of his injuries, with the intention of acquiring knowledge which should make them the better qualified to testify as to what were the probable results of the injury. Of course, applications of this kind should be carefully scrutinized by trial courts. The statute was not intended to furnish a plaintiff the means of procuring medical treatment at the expense of the party charged with negligence.

In other words, the court holds that physicians and surgeons who testify as witnesses concerning facts coming under their observation while professionally attending a patient, and express opinions with reference thereto, are not necessarily entitled to compensation as expert witnesses. But where physicians and surgeons are engaged to treat and examine an injured person for the purpose of acquiring the knowledge necessary to qualify them as expert witnesses they are not necessarily disqualified as such by the fact that they also treated the patient professionally.

Medical Works Can Not Be Gotten Before Jury by Indirection.

The Supreme Court of Iowa says, in the case of State vs. Blackburn, that medical works are not admissible in evidence, and, when not alluded to in direct examination, can not be gotten before the jury, over objection, on cross-examination, nor can this be done by indirection in assuming their supposed teachings. Therefore, in this case, where a physician had based his opinion solely on his own experience and observation, it was error to cross-examine him on the state of the medical authorities in order thereby to get their supposed teachings before the jury. The range of cross-examination in testing the learning and skill of one who is presented as an expert is largely discretionary, but under that pretext improper evidence or inferences from assumptions not supported by the record ought not to be brought before the jury, especially with the sanction of the court.

Good Bases for Hypothetical Questions.

The Supreme Court of Minnesota holds, in the personal injury case of Masteller vs. Great Northern Railway Company, that the opinion of an expert witness may be based in part on his own testimony as to facts within his personal knowledge and on a hypothetical presentation of other matters not within his knowledge. It says that it is not the rule that under all circumstances a hypothetical question must contain a statement of all the material facts concerning which there is evidence. If a witness was present in court and heard the evidence, he may express an opinion with reference to it, although not set out in the form of a hypothetical question. This is no infringement on the rule that when a physician has not made a personal examination of the patient, and has not heard other witnesses testify with reference to the facts, then the hypothetical question must be based on a statement of all the evidence which was produced at the trial.

Damages for Injuries Causing Consumption.

The Supreme Court of New York, Appellate Division, Second Department, holds, in the personal injury case of Roenbeck vs. Brooklyn Heights Railroad Company, that $9,000 damages is not so excessive as to demand a new trial where a man, earning $40 a week, sustained injuries developing a tubercular condition of the lungs, even if under certain conditions of living he could be cured of the consumption in one to four years.

Damages for Colles' Fracture of Wrist.

The Supreme Court of New York, Appellate Division, Fourth Department, holds, in the personal injury case of Powers vs. Village of Moravia, that the jury was not unreasonable in awarding to a married woman, who earned $5 or $6 working out, $2,000 damages for a Colles' fracture of the right wrist, where, although the bone had united, there was more or less deformity, and the hand had been weakened and fingers stiffened.

Frightening of Pregnant Woman Not Deemed Cause of Death Following Premature Delivery.

The Court of Appeals of Kentucky says that, construing the indictment in the case of Commonwealth vs. Couch most strongly against the accused, it showed that by the discharge of firearms on the public highway he frightened a woman who was quick with child or pregnant, and that by reason of this undue excitement thus brought on she gave premature birth to her child, following which she became sick and later died. Could it be said that her death was either the natural or the probable consequence of the shooting on the highway? The court thinks not.

At common law, and by statutory enactment in many of the states, if one while doing an unlawful act not amounting to felony, unintentionally kills another, he is guilty of manslaughter. It is not necessary that he shall have intended to violate the law in order to constitute the offense; but he must have intended to commit the act which constitutes a misdemeanor.

But the court has been unable to find any case wherein the doctrine has ever been extended as far as the commonwealth asked to have it extended in this case. The most that could be said of the contention of the commonwealth was that the woman, being pregnant, became badly frightened on account of the unlawful act of the defendant, which brought on or caused her to give premature birth to her child; that following this she became sick, from which sickness she later died. Her sickness was not due to the fright, and could not be said to be either the natural or the probable result of her becoming frightened.

There would be some plausibility in the contention of the commonwealth if the woman had died in the act of childbirth, but such was not the case. Her death may have been due to want of attention following her confinement, or to improper attention, or to disease due to other cause than her fright or confinement; and, this being true, the court is of the opinion that the ruling of the trial judge sustaining a demurrer to the indictment was correct.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

April 18.

1 *Constructive Surgery After Gunshot Wound of Abdomen. W. M. Polk, New York.
2 *A Phenomenal Aortic Aneurism. W. G. Thompson, New York.
3 Case of Recurrent Jaundice: Death in Third Attack from Carcinoma of Pancreas. G. L. Peabody, New York.
4 *Bright's Disease and Its Treatment. O. Lerch, New Orleans.
5 Electromechanical and Thermic Removal of Local Stasis. W. B. Snow, New York.
6 Integrity of Stereognostic Function and of All Forms of Sensation in a Case with a Lesion of Left Parietal Lobe. A. Gordon, Philadelphia.
7 *Fractures of the Tip of the Olecranon Process. F. E. Peckham, Providence, R. I.

1. **Extensive Gunshot Wound.**—Polk describes an extensive gunshot wound caused by the accidental discharge of both barrels of a shot gun in contact with the body, three layers of clothes only intervening. The contents of the two barrels struck the abdomen at and above the left anterior superior spine of the ilium, and came out at and above the iliosacral joint, tearing away all the soft tissue from the crest of the ilium and the crest itself, above a line drawn from a point one inch back of the anterior superior process, around the outside of the bone to the upper limit of the sacroiliac joint. The joint was not entered, but two transverse processes of vertebræ were blown off and many pieces of detached bone were scattered throughout the soft tissues. The peritoneal cavity was entered, exposing the sigmoid flexure, the lower pole of the left kidney, and the anterior end of the floating rib. It could not at first be determined whether the sigmoid was perforated or not, but in one or two days leakage of gas showed that it had been injured. The lumbar muscle was practically destroyed. As there were no signs of serious hemorrhage and it was recognized that the wound had been practically sterilized by the burning of the discharge, the attending practitioner wisely refrained from overmuch probing or interference, merely removing loose and dead tissue, clothing, etc., and applying a sterile dressing. In about two weeks the patient was taken by train to New York, about 1,000 miles. There it was found necessary to remove the anterior part of the crest of the ilium, which had become denuded of periosteum, and other portions of embedded bone that were found, and zinc plaster was used to narrow the wound. Another operation was performed four months later, anastomosing the under surface of the transverse colon, between the mesocolon and omentum at the junction of the middle and left third of the mesocolon with that portion of the sigmoid which could most easily be brought into apposition. A fourth operation was undertaken, still a year later, to close the intestinal opening and furnish a parietal peritoneum, against which the intestine could rest, thus minimizing chances of adhesion and protecting against ulcerative processes in the exposed intestinal area; to find an external covering for what must be a large hernia; and to devise a means for controlling its extension and future enlargement. The various operations are described in detail. The patient, at the time of report, two years after operation, was in excellent health, able to perform all the duties of life, walking four or five miles a day for recreation; the digestion was excellent, as well as the action of the bowels.

2. **Aortic Aneurism.**—Thompson reports an abdominal aortic aneurism, of falsely sacculated and dissecting type, measuring 6 by 9 by 11 inches, containing 6½ quarts (3,000 c.c.) of fluid blood and clots, causing marked displacement of the kidneys and erosion of five vertebræ. The patient was able to walk about until within three weeks of his death. The paroxysmal and nocturnal type of pain, noted by Sansom (Twentieth Century Practice, vol. iv, p. 511) as existing when there is erosion of the vertebræ, was a marked feature of the case. Considering the phenomenal size of the mass and the compression and displacements to which it gave rise, it is astonishing that the patient presented so few subjective symptoms.

4. **Bright's Disease.**—Lerch discusses in detail the etiology, symptoms, pathology and treatment of Bright's disease, and urges attention to the necessity for early recognition of the condition while it is yet in a stage amenable to treatment. He points out that while we are most assiduous in attempting to discover the earliest signs of tuberculosis, even positive symptoms of beginning nephritis are neglected, though that disease is just as certain sooner or later to destroy life.

7. **Fracture of Olecranon.**—Peckham reports cases of fracture of the tip of the olecranon which tend to show that the general rules of the text-books—that in fracture of the olecranon the arm should be put up in almost complete extension—do not always hold good. On the contrary, there are cases, which the *x*-ray will show, in which there is a riding by of the fragments, the tip being pulled upward and backward by the triceps. To put up the arm in extension would aggravate the deformity, while, on the other hand, by flexing the forearm on the arm leverage is obtained, and with the fragment held as a fixed point by the triceps and ligamentous attachments there is a degree of flexion, varying in each case, which will bring the tip of the olecranon into perfect apposition with the other fragments. He urges, therefore, a careful clinical and *x*-ray study in each case and individual treatment accordingly.

Boston Medical and Surgical Journal.

April 16.

8 *Chronic Obstruction of the Duodenum by the Root of the Mesentery. E. A. Codman, Boston.
9 Acute Yellow Atrophy of the Liver. Report of Two Cases, One with Ascites. W. Tileston, Boston.
10 *Significance of Clinical Histories Before and After Operative Demonstration of the Real Lesion. (Concluded.) M. H. Richardson, Boston.

8. **Mesenteric Obstruction of the Duodenum.**—The contentions that Codman sets himself to prove in this paper are as follows: 1. In the human being the transverse portion of the duodenum is more or less compressed by the root of the mesentery. 2. Slight anatomic deviations from the normal or certain pathologic conditions may increase this pressure to a varying extent up to the point of complete occlusion of the gut. 3. When this pressure reaches a degree great enough to give more resistance to the muscular efforts of the duodenum than the closed pylorus, the condition becomes of pathologic significance. 4. Thus anatomically the duodenal secretions are brought into contact with mucous membranes unfitted physiologically to withstand their corrosive action. 5. The obstruction favors stasis in the duodenum and thus bacterial invasion of the tissues. 6. If the above propositions can be proved they will materially alter the present conceptions of the etiology and treatment of a variety of pathologic conditions, e. g., hyperchlorhydria, nervous dyspepsia, duodenal and gastric ulcer, pancreatitis, cholelithiasis, persistent vomiting after laparotomy and in pregnancy, and excessive fluid drainage from wounds in the common duct and duodenum. He endeavors to show that facts collected about the duodenum by Dwight in anatomy, Cannon in physiology, Türck in experimental bacteriology, and Ochsner and others in operative surgery, substantiate his contentions, and proceeds to consider each of them in detail.

10. **The Significance of Clinical Histories.**—Richardson concludes his article from the preceding issue, the general pur-

port of which is to show the value of clinical histories in refined deductive reasoning and how narrow sometimes is the margin between a course in which death is inevitable and one in which recovery is probable. One little variation in reading the history may lead the surgeon off the true course and to irreparable disaster, just as surely as a slight variation in the reading of the compass will make a false course and land the mariner in the breakers. It is our duty, despite our unwillingness to accept always the experience of the past, to call attention to our failures and to insist that better methods be employed. The sailing directions in this course are enumerated by the author as follows: 1. To gain from the patient without suggestions and without leading questions a careful and leisurely statement of the symptoms from the very beginning. 2. To have the patient repeat the history at subsequent visits. 3. To compare these two or more histories. 4. To put questions which will tend to throw light on the patient's voluntary statement. 5. To question the patient as to specific organs and diseases. 6. To bring out in detail family diseases and tendencies as particularly and extensively as in life-insurance histories. 7. To cross-examine the patient on all his statements. 8. To avoid leading questions in all the details of the history. 9. To make use of every reasonable means of physical examination, excepting only those of doubtful efficacy which are painful or distressing. 10. To make repeated deductions from the above data. 11. To demonstrate, when possible, to others, the histories, the physical examination, the diagnosis and the real lesion (as in the clinical lecture). 12. To review the previous history in the light of the operative demonstration. 13. To question and cross-question the convalescent patient, as indicated by the abnormalities, old and recent, demonstrated at the operation. By this means the measurable error in diagnosis in indications and contraindications dependent on diagnosis may be materially diminished.

New York Medical Journal.

April 18.

11 *Colony Sanatorium for the Nervous and Neurasthenic; a Much Needed Work of Philanthropy. G. W. Jacoby, New York.
12 The Most Useful Specialty in Medicine. J. M. Taylor, Philadelphia.
13 Palliative Treatment of Prostatic Hypertrophy. F. Bierhoff, New York.
14 Attempts to Repair the Effects of Great Destruction of the Lids and Orbital Tissues Caused by Disease of the Antrum. B. Chance, Philadelphia.
15 Dislocation of the Neck with Recovery. L. Lofton, Emporia-Belfield, Va.
16 Principles of the Climatic Treatment of Children. Wachenheim, New York.
17 A Retrospect in Phthisiotherapy. H. F. Stoll, Hartford, Conn.
18 External Urethrotomy for Acute Retention of Urine Caused by Impaction of a Vesical Calculus in the Penile Portion of the Urethra. F. T. Woodbury, Camp Jossman, P. I.
19 Case of Multiple Tapeworm Infection. R. L. Wilson, New Orleans.

11. This subject is discussed editorially in The Journal, this issue.

The Lancet-Clinic, Cincinnati.

April 11.

20 Choice of an Anesthetic. S. Iglauer, Cincinnati.
21 *Alimentary Albuminuria. A. C. Croftan, Chicago.
22 When the Baby Is Born. T. A. Frazier, Marion, Ky.

21. **Alimentary Albuminuria.**—Croftan discusses the explanation of the phenomenon, and in regard to diagnosis says that the use of specifically precipitating sera in any form of albuminuria occurring with or without nephritis following the ingestion of large amounts of albumin in normal individuals, or of smaller amounts in persons suffering from dyspeptic disorders, should aid in clearing up the pathogenesis of this particular albuminuria. If it is found that the native albumin as such is eliminated, then the administration of digestive ferments or the withdrawal of this particular form of albumin should lead to the cessation of the albumin excretion. From a life-insurance standpoint this is particularly important, for applicants suffering from this form of albuminuria might present themselves for insurance examination and might be rejected for a nephritis, when, as a matter of fact, they may be suffering merely from a transitory digestive disorder. The prognosis in this form of albuminuria is, of course, very much more favorable than in any other form that comes under observation.

Medical Fortnightly, St. Louis.

April 10.

23 Longevity. A. S. Ashmead, New York.
24 Glimpses of Early St. Louis Medical History. W. B. Outten, St. Louis.
25 *Aprosexia: Some Eye, Ear, nose and Throat Facts in Child Development. E. E. Clark, Danville, Ill.
26 Influence of Gynecologic Operations on the General Organism. P. Findley, Omaha, Neb.
27 The Island of Java. R. G. Eccles, Brooklyn, N. Y.
28 Atheroma Therapeutics. W. C. Abbott, Chicago.
29 *Hysteria in Children. G. E. Price, Philadelphia, Pa.

25. **Aprosexia.**—Clark considers aprosexia, which, he says, may depend on an inherited, weak and vicious mind, on animal instincts so strong that even slight mental exertion may be quite beyond the child's capabilities, but most often of all on some physical ailment or defect. A large proportion of such defects are due to conditions of the eye, ear, nose and throat. The most frequent of these are amblyopia from uncorrected refractive errors, otitis media, perforations of the membrana tympani, mastoid disease, disease of the ossicles, and adenoids. He points out that ailments unaccompanied by pain are very apt to go unrecognized. The medical profession, besides realizing the importance of these conditions themselves, should see to it that parents and teachers are instructed on the point.

29. **Hysteria in Children.**—Price discusses the symptoms, diagnosis and treatment of hysteria in children. The diagnosis depends on the history, the absence of other adequate cause, and the presence of so-called hysterical stigmata. These stigmata represent certain of the sensory changes, and, briefly enumerated, are as follows: Areas of cutaneous hyperesthesia along the spine, under the breasts, and over the inguinal regions (the two last named being, as a rule, most marked on the left side), glove-like and stocking-like anesthesia or hypesthesia of the extremities, anesthesia of the retinæ causing contraction of the visual field and anesthesia of the pharynx and conjunctiva and the choking sensation—the common "globus hystericus." But it must be remembered that the presence of hysterical stigmata in a given case does not rule out the possibility of a more serious condition being present. Price describes four cases representing the hysterical tremor (unusual), the hysterical joint type, the psychic type, and the visceral type, the latter in a case of hysterical dyspnea.

Surgery, Gynecology and Obstetrics, Chicago.

March.

30 *Technical Methods of Performing Certain Cranial Operations. H. Cushing, Baltimore.
31 Fibromyomata. Study of Degenerations, Complications and Associate Conditions in 3,561 Cases. S. E. Tracy, Philadelphia.
32 *Acquired Atresia of the Common Duct Due to Gallstones. J. C. Hancock, Dubuque, Iowa.
33 *Hematuria in Pregnancy. E. A. Balloch, Washington, D. C.
34 *Tuberculosis of the Patella. J. B. Murphy, Chicago.
35 *Prophylactic Use of the Filigree in Infected Wounds of the Abdominal Wall. W. Bartlett, St. Louis.
36 *Differential Diagnosis of Duodenal Ulcer and Gallstones. W. D. Haines, Cincinnati.
37 *Preparatory and Postoperative Treatment. J. E. Moore, Philadelphia.
38 New Form of Surgical Adhesive Plaster. C. L. Leonard, Philadelphia.
39 *Treatment of Fibroid Tumors Complicated by Pregnancy. L. E. McMurtry, Louisville, Ky.
40 *Case of Tuberculosis of the Tongue. W. A. Harsha, Chicago.
41 Case of Interscapulothoracic Amputation for Sarcoma of the Face. E. M. Hasbrouck, Washington, D. C.
42 Case of Degenerated Uterine Myoma. E. A. Vander Veer, Albany, N. Y.
43 Stab Wounds of Fetus *in Utero*. D. A. K. Steele, Chicago.
44 Case of Ovarian Hernia. R. A. Boldt, Cleveland, Ohio.
45 *Intraglandular Enucleation of Goiter. J. L. Reverdin, Geneva, Switzerland.

30. This article appeared in the *Interstate Medical Journal*, February, 1908, and was abstracted in The Journal, April 11, 1908, page 1221.

32 and 33. Abstracted in The Journal, Jan. 25, 1908, pages 308 and 310.

34. **Tuberculosis of the Patella.**—Murphy notes the surprising infrequency of tuberculosis of the patella in view of the comparative frequency of tuberculosis of the knee joint. The immunity of the patella is probably due to absence of an

watched carefully, as its effects are decidedly depressing in literature of the subject. The primary focus generally develops during the period of most active growth of sesamoid bone, namely, early adult life. Infection is more dependent on the degree of virulence or the absence of opsonin or individual resistance, than on the number of bacilli. A tuberculous focus may open externally into the prepatellar bursa or internally into the joint, which is most common. The age of incidence varies greatly. The symptoms are divided by Forget into periods of (a) pain; (b) abscess formation; (c) fistulous tract. The diagnosis in primary tuberculosis is often difficult. In Murphy's clinic a 0.1 c.c. of old tuberculin in 10 c.c. of a 0.5 per cent. solution of carbolized water, of which 7½ minims are equal to 5 mg. of tuberculin, is used for diagnostic purposes. He considers the ocular tuberculin reaction, however, simpler, more effective, and less disagreeable. Differential diagnosis calls for exclusion of cold prepatellar abscess, lupus and chronic prepatellar bursitis with infection. If the cavity is small the sequestrum can be removed, the cavity curetted, and filled with iodoform wax, or the glycero-gelatin-formalin plug, the preparation of which is described. In other cases, the patella should be extirpated *in toto;* it is not essential for perfect mobility and function of the joint, and by employing the subaponeurotic removal of the patella, if possible, the bone may be reproduced. He describes the technic and reports cases with illustrations.

35, 37, 40. Abstracted in THE JOURNAL, Feb. 1, 1908, pages 393, 394, 397.

36. Abstracted in THE JOURNAL, Jan. 18, 1908, page 232.

39. Abstracted in THE JOURNAL, Jan. 25, 1908, page 309.

45. **Intraglandular Enucleation of Goiter.**—Reverdin says that in his opinion intraglandular enucleation is indicated in every case in which it can be carried out without danger. It should be given preference in all enucleable tumors, liquid or solid, which are not excessively vascular, and when the connections of the tumor with the enveloping gland have not been modified by irritants or inflammation. Partial thyroidectomy should be reserved for diffuse neoplasms or for very vascular adenomata, or such as have become adherent to their glandular envelope. Intraglandular enucleation of goiters or the Porta-Socin operation presents the following advantages: It does not expose neighboring structures (recurrents, etc.) to immediate or subsequent lesions. It saves all the healthy thyroid tissues as well as the parathyroids, consequently avoids thyroid or parathyroid insufficiency. It leaves in case of recurrence the possibility of intervention without exposing the patient to the dangers of myxedema. Its results are very good from the cosmetic point of view, and its rate of mortality is very low. The danger of hemorrhage that might occur has been much exaggerated, and if recurrences are more frequent than after partial thyroidectomy, they are amenable to operation without serious consequences. Intraglandular enucleation is not useful except for benign encysted tumors, liquid or solid. It is contraindicated if the tumors are exceedingly vascular, or adherent to the enveloping gland because of previous treatment or inflammation.

Northwestern Lancet, Minneapolis.

March 15.

46 Etiology, Symptoms and Pathology of Acute Infectious Diseases of the Lungs and Pleura. W. R. Bagley, Duluth, Minn.
47 *General Therapeutics of Infectious Diseases of the Lungs and Pleura. E. J. Abbott, St. Paul, Minn.
48 Surgical Treatment of Acute Infections of the Lungs and Pleura. W. H. Magie, Duluth, Minn.
49 Eclampsia. D. W. Craig, Sioux Falls, S. D.

47. **Therapeutics of Pneumonia.**—Abbott discusses the serum treatment, which is too variable in its results to arouse great faith. For relieving pain and lowering temperature he advocates ice bags placed along the axillary region; they are in every way preferable to poultices and pastes. In all diseases no suffering that can be avoided should be allowed. At the beginning it may be necessary to control the pain with a full dose of morphin, keeping it in check with the ice bag subsequently. Strychnin, while for most people an excellent tonic, both to the nervous system and the circulation, must be epiphyseal or capillary loop circulation. Murphy discusses the some individuals. The enormous doses of digitalis which are now coming into vogue may be perfectly safe in hospital patients carefully watched by trained nurses and skilled internes, but in private practice, especially in the country, they are fraught with danger. If digitalis is indicated, the use of ordinary moderate doses will be sufficient, and one should not wait until the pulse is weak and rapid and the pulmonary sounds have changed, but should give it at the first sign of weakening, watching it regularly and carefully. Nitroglycerin is useful, particularly in old people, either alone or with digitalis. It should be given freely to dilatation of the systemic vessels. Abbott has great faith in atropin. Cough mixtures and expectorants are not needed in pneumonia and they interfere with nutrition. If the cough is persistent and irritable, codein or heroin may be given, in sufficient quantity to check the irritability. The ammonium salts, carbonates and chlorids, so much in vogue are disagreeable and undesirable. Quinin also in non-malarious districts he does not see the necessity for, and its effect on the digestive organs renders it undesirable. The coal-tar antipyretics are particularly objectionable and dangerous, and are entirely unnecessary, as it is rarely in a self-limiting disease of short duration like pneumonia that the temperature need cause much alarm. In any event, ice externally is better than antipyretics internally. There is a decreasing tendency toward the use of alcohol, but in the case of a patient accustomed to use it constantly as a beverage, sickness is a bad time to stop it. There is no necessity to go to either extreme in regard to the temperature of the room.

Journal of the Kansas Medical Society, Columbus.

March.

50 Diffused Septic Peritonitis. C. E. Bowers, Wichita, Kan.
51 *Effects of Tobacco. W. L. Chilcott.
52 The Eye in Its Relation to Systemic Conditions. H. L. Scales, Hutchinson, Kan.
53 Medical Science. T. A. Stevens, Caney, Kan.
54 Treatment of Abortion. H. Randles, White City, Kan.
55 Proprietary Epsom Salts. L. A. Clary, Wyant, N. D.

51. **Tobacco.**—Chilcott discusses at length the physiologic effects of tobacco. He considers that the future indicates a reduced use instead of an increase, as school boys of from 10 to 15 years old are becoming informed as to its injurious effects. He concludes with the following counsel: While there seems to be very little harm done by mild indulgence, very few advocate any benefit derived by its use. Unless their systems are being irritated by the accumulated antinicotin bodies, it is not necessary to wean the old indulgers; only prevent its use among the young, and in a few years it will be a habit of the past.

Virginia Medical Semi-Monthly, Richmond.

March 27.

56 Materia Medica—Old and New. C. S. Webb, Bowling Green, Va.
57 The New Currents (High-Tension, Coil, or Static) in Treatment of Nervous Diseases. C. M. Hazen, Bon Air, Va.
58 Method of Removing a Retained Placenta. D. M. McIntosh, Old Fort, N. C.
59 *Use and Abuse of Drugs. J. T. Graham, Wytheville, Va.
60 "Patent Medicines"—What They Are and Why Objectionable to the Medical Profession. P. Green, Wytheville, Va.
61 *Intubation of the Larynx. J. N. Lewis, Roanoke, Va.

59. **Use and Abuse of Drugs.**—Graham, in discussing this subject, suggests that its causation may be found partly in the following fact: If we compare the prescriptions of a few years ago with those we now write for the same diseases we shall recognize two facts: first, we have followed the advice of manufacturing chemists in prescribing their special preparations periodically as they have been brought to our notice; second, we have abandoned many drugs that we once regarded as specific, and are at a loss now to know why we prescribed them. The diseases have the same symptoms and pathology and run the same course now as formerly, consequently the change must be in the remedies used, which he attributes to a lack of working knowledge of drugs in health and disease.

61. **Intubation.**—Lewis describes the operation with its indications, contraindications and complications. The irritation

from removal of the tube sometimes causes laryngeal spasm, with excessive secretion of mucus, rendering it necessary to reintroduce the tube, which is often very difficult under those circumstances. He finds that the spasms and mucous secretion can be obviated by administering a dose of atropin sulphate fifteen or twenty minutes before removal. He never uses the instrument provided with the set for removal, but finds it easier, quicker and safer to remove the tube by exerting slight pressure backward and upward below the tube on the trachea. The patient then gags, when the tube can be easily grasped with forceps or fingers.

Vermont Medical Monthly, Burlington.

March.

62 Four Cases of Pernicious Endocarditis with Autopsies. H. C. Gordinier, Troy, N. Y.
63 *Relation of Eye Strain to Epilepsy. M. B. Hodskins and G. A. Moore, Palmer, Mass.
64 Vomiting of Pregnancy. J. R. Patton, Fairfield, Vt.

63. **Eyestrain and Epilepsy.**—Hodskins and Moore have carried out at the Massachusetts Hospital for Epileptics the experiment of placing on full mydriasis a large number of patients, so as to eliminate eyestrain and keep them with paralyzed accommodation for one month, and then comparing the results as evidenced by the number of seizures with the number shown in other months. They had 88 cases, the analysis of which gives the following results: The total number of seizures in a minimum month was 545, or an average of 6.1 per patient. The total number of seizures shown in a maximum month with the same patients was 1,630, or an average of 19.6 per patient. Adding the totals, this gives 2,275 seizures, which, divided and averaged, give 13.2 per patient. The results as regards the seizures during the month of full mydriasis was 1,110, giving an average of 12.6 seizures per patient, or approximately the same as that afforded by averaging the maximum and minimum months. The authors, while they admit that eyestrain may be an excitant in an individual of sufficiently unstable nervous system, yet firmly believe the rôle played by ocular defects in the causation of epilepsy to be a very modest one.

Western Medical Review, Omaha.

March.

65 Surgeon vs. Internist. P. C. Moriarty, Omaha.
66 *Gallstone Disease: Symptoms and Treatment of Acute Attacks Preparatory to Operation. O. Grothan, Kearney, Neb.
67 Inhalation of Formaldehyd in Infective Disease of the Respiratory Tract. C. J. Alger, Leigh, Neb.
68 Type of the Insane. J. H. MacKay, Norfolk, Neb.
69 Tetanus Treated by Intramuscular Injections of Ergot Followed by Recovery. E. S. Lauzer, Rock Springs, Wyo.

66. **Gallstone Disease.**—Grothan discusses the present position of gallstone surgery, describes four cases, and suggests that instead of sending for a surgeon post haste to operate during acute attacks, or sending the patients a long distance to a hospital for operation, the physician should keep them at home, absolutely at rest, and treat them medicinally with small doses of calomel, sodium phosphate, morphin if necessary, icebag over tumor and epigastrium, and rectal feeding. Then, when the acute attack has subsided and the patient has been built up by easily digested nutritious food for a longer or shorter period, the surgeon may be called, or the patient sent to a hospital for operation, with an almost positive assurance of recovery.

Albany Medical Annals, Albany.

March.

70 State Campaign for the Prevention of Tuberculosis. S. W. Rosendale, New York, and Others.
71 The Guest; or Personal Knowledge of a Patient in a Hospital of the Insane.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London.

April 4.

1 Pygmy and Negro Races of Africa. F. C. Shrubsall.
2 *Tuberculosis of the Kidney and Malignant Disease of the Cecum. C. J. Symonds.
3 *Delayed Chloroform Poisoning; Its Nature and Prevention. W. Hunter.
4 *Bacteriology of Scarlet Fever. H. Kerr.
5 *Tuberculo-Opsonic Index of the Urine and Sweat in Health and in Tuberculosis. J. Miller.
6 Opsonins with Special Regard to Lupus Vulgaris. A. Reyn and R. Kjer-Petersen.
7 Motoring Notes. C. T. W. Hirsch.

2. **Malignant Disease of the Cecum.**—In his third Lettsomian lecture Symonds takes up malignant diseases of the cecum, pointing out the characters of early cancer thereof, the comparative safety of operation in suitable cases, and the degree of immunity from recurrence that may be secured. The two main signs are the presence of the tumor and the occurrence of early intestinal colic due to obstruction of the ileocecal orifice. Symonds describes the peculiar characters of both conditions and reports five cases, in one of which the patient was well without recurrence in 1907, ten years after the operation. He discusses the diagnosis, limits of operation, and palliative treatment, and pays particular testimony to the value of the Murphy button, though he never uses the button without supplementing it by a row of Lembert sutures all round, and, where possible, enfolding the junction by the great omentum.

3. **Delayed Chloroform Poisoning.**—Hunter discusses the pathogenesis, the disturbances connected with glycogenesis, with the metabolism of fats, and those affecting proteolytic and antitoxic functions. He concludes that the vomiting that occurs after the administration of anesthetics is not of nervous origin, but essentially toxemic, due to the profound depression of the liver function during the period of the administration. This depression will be the greater if a liver already weakened by disease or by poor nutrition be further unduly weakened by food having been withheld for many hours before the administration. This enforced abstention from food before the administration of an anesthetic may be carried too far, and, in his opinion, it is largely responsible for the fatal effects of delayed chloroform poisoning in exceptional cases. Such effects could, in all probability, be completely prevented if, instead of withholding food, particular care be taken to give the patient a very nutritious and easily digestible meal, well sweetened, two or three hours before the operation.

4. **The Bacteriology of Scarlet Fever.**—As the result of an investigation of the organisms present in the throats, etc., in 160 cases of scarlet fever at the Bury and District Joint Hospital, Kerr concludes that in the present state of our knowledge of the etiology of the disease Gordon's tests must be regarded as of little value. If the tests are of real differential worth for the various strains of streptococci—and the remarkable constancy shown by different generations of individuals to them, in his experience, indicates that they are—we find ourselves confronted by the fact that they fail absolutely to point to any particular strain as being even more frequently present in scarlet fever than in any other catarrhal and inflammatory condition of the throat. That the infecting agent is present in the pharyngeal and faucial mucous membrane is absolutely all that has been certainly established regarding the causation and source of the disease. If none of the streptococci in the throat are causative of the primary conditions, some other agent must have made it possible for them to obtain entrance to the tissues in order to produce the secondary complications. It is shown that the staphylococci are relatively increased in scarlet fever. Possibly a careful examination of these, on similar lines to that described for the streptococci, might reveal something of importance.

5. **Tuberculo-Opsonic Index of Urine and Sweat.**—Miller's observations and experiments lead him to the conclusion that urine and sweat contain antibacterial or bacteriotropic substances. He suppposes that not being required in the ordinary functions of the cells of the body they are eliminated as foreign substances.

British Medical Journal, London.

April 4.

8 Physiology of the Emotions. F. W. Mott.
9 *Vicious Circles Associated with Disorders of the Heart. J. B. Hurry.

10 Six Cases of Heart Block with Tracings and One Postmortem Examination of the Heart. E. O. Jellinek and C. M. Cooper.
11 *A Specific Treatment of Leprosy. Deycke.
12 Electrolysis in Tic Douloureux and in Spinal Sclerosis. D. Turner.
13 Toxic Effects of Petrol Fumes. C. R. Box.
14 Rigor Mortis in the Stillborn. J. Bain.

9. **Vicious Circles in Heart Disease.**—Hurry divides vicious circles in heart disease into five groups, as follows: 1, Circles associated with the myocardium; 2, circles associated with the endocardium; 3, circles associated with the pericardium; 4, circles associated with neuroses; and 5, circles associated with a fall in blood pressure. He discusses each group in detail and gives a diagrammatic representation showing the analysis of the vicious circles into component factors. As regards treatment, most of the recognized principles of cardiac therapeutics apply, but he adds, with illustrations, the following special points: 1. The exciting cause must be sought. 2. It is frequently desirable to treat actively each of the several factors concerned. 3. When there is a choice of treatment, each practitioner must attack what appears to him the *locus minoris resistentiæ*. Hence results a varying *modus operandi* for the same disorder, a variety which puzzles the patient, especially if several physicians are consulted in succession. 4. The close dependence of the heart on the central nervous system is shown by the existence of several vicious circles in nervous introspective patients. 5. Many vicious circles associated with the myocardium arise from the failure of compensatory changes, as, for instance, when a salutary hypertrophy is followed by undue dilatation, caused either by degeneration of the myocardium or by the excessive work thrown on the heart. Here treatment may do much to increase the vigor of the myocardium or to lighten its load.

11. **Specific Treatment of Leprosy.**—Deycke reports the result of his researches with reference to attempts to grow the lepra bacillus in pure culture. He was unable to grow the bacillus in the form in which it appeared in leprous tissue, but he isolated a characteristic micro-organism of specific characters, which he terms *Streptothrix leproides*. From this organism he has extracted with ether a genuine neutral fat which he calls "nastin." The injection of this substance in lepers gives rise to a reaction comparable to the tuberculin reaction in tuberculous patients. Deycke found that by combining nastin with benzoyl chlorid the nastin was activated to an unexpected extent. Benzoyl-nastin solution appears to act on the lepra bacilli, the nastin enabling the benzoyl to deprive the lepra bacilli of fat and this destroys them. He is convinced that in leprosy benzoyl-nastin therapy is harmless and may be conscientiously recommended as a real advance in the treatment of that disease.

Medical Press and Circular, London.

April 1.

15 Two Cases of Subacute Infective Epiphysitis. E. M. Corner.
16 Maladies of the Heart. Sir J. Sawyer.
17 *Open Windows and Adenoids. J. S. Wallace.
18 Seaside Treatment for Sick Children. G. Carpenter.

17. **Open Windows and Adenoids.**—Wallace discusses the evolution of man's habits from his primitive condition to his present one, in the temperate and colder zones, to explain his view that adenoids in children are largely connected with open window sleeping. It is not the fresh air, however, but the cold and damp that accompany it, a combination not found in the tropics, that is to blame. It is not right to attempt to ventilate a room by simply keeping the windows open if the weather is cold and damp. The increase in adenoids, he says, seems to have been concomitant with the cult of open windows night and day, summer and winter. He finds adenoids much more common among children of the educated classes who are instructed to keep their windows open at night throughout the year. His investigations show that children brought up with open windows are fifteen times more liable to contract adenoids than those who sleep with closed windows on cold and damp nights, or throughout the greater part of the year. For instance, out of 69 children sleeping with closed windows, 2 cases of adenoids were found; while out of 49 sleeping with open windows at night winter and summer, 22 cases of adenoids were found. Wallace supports his opinion by the known effect of cold and damp on the nasal and nasopharyngeal mucous membrane. Further, the tendency to adenoids in a family he considers attributable, not to hereditary predisposition, but rather to similarity of mal-environment.

Intercolonial Medical Journal of Australasia, Melbourne.

February.

19 Medical Treatment of Exophthalmic Goiter. K. Hiller.
20 Pathology of Thyroid and Parathyroid Glands. B. Kilvington.
21 *New Generalization in Serum Therapy. D. M. Paton.
22 Three Unusual Obstetric Cases. G. R. Adam.
23 Juvenile General Paralysis. F. H. Cole and H. D. Stephens.
24 Alveolar Sarcoma in Undescended Testicle. G. A. Syme.

21. **Serum Therapy.**—Paton offers an amendment to the accepted theory of immunity, as propounded by Ehrlich, which theory, he says, "takes no notice of the elements in the serum which have caused the reaction in the cell which produced the excess of cell receptors, nor of whether they can also be transferred to the patient to produce the same cell relation in him as in the animal producing them. These elements are in all serums, and yet they are unaccounted for." He considers that Ehrlich's theory, while true in part, can not account for the whole resistance to microbic invasion. He concludes that resistance to infection in man and animals consists of the following elements, and that these elements are in their serums: 1. Antitoxins and bacteriolysins of lymphatic origin, chemical in nature, and capable of acting *in vitro*—present only in response to the stimulus of infection. 2. Tissue antitoxins or opsonins, consisting of excess receptors—present normally in physiologic quantity, and increased by pathologic stimuli. With the cell reaction necessary for their production, they form the "tissue resistance." 3. Hormones—for all tissues—present at all times, but increased by pathologic stimuli. They act only in contact with the tissue cells and not *in vitro*. He considers the way in which each of these fares on hypodermic injection of the serum, and concludes that: 1. Lymphatic antitoxins are absorbed when injected hypodermically and act as though produced by the patient. They are not absorbed when given by mouth. 2. Tissue antitoxins, opsonins or surplus tissue receptors are not capable of being transferred to the patient by any known method without destroying their specific character. 3. Hormones are changed to anti-hormones on hypodermic injection as soon as they reach the lymphatics. In the lymph spaces they act locally in contact with the tissue cells. Given by rectum or by mouth, they act on all tissues physiologically in normal serum, and with increased power on tissues which have been pathologically affected in the animal from which the serum has been drawn. The recognition of the double lines of defense, instead of one of general resistance, and the consequent dual character of the resulting serum, with the necessity for each antibody to be passed directly into the system in which it originated, throws a flood of light on the whole problem.

Clinical Journal, London.

April 1.

25 Strangulated Hernia. A. A. Bowlby.
26 Pancreatic Reaction in the Urine and the Diagnosis of Pancreatic Disease. P. J. Cammidge.
27 Chronic Intestinal Obstruction. H. L. Barnard.

Glasgow Medical Journal.

April.

28 The Schola Salernitana: Its History and the Date of Its Introduction into the British Isles. N. Moore.
29 Lachrymation: Its Causes and Treatment. F. Fergus.
30 Case of Purulent Otitis Media with Involvement of the Sigmoid Sinus; Operation; Ligation of Internal Jugular Vein; Septic Abscess of the Lung; Recovery. J. G. Connal.
31 Serum Disease in Man After Single and Repeated Doses. J. R. Currie.

Presse Médicale, Paris.

March 28, XVI, No. 26, pp. 201-208.

32 *Vacuum Aspiration from Hydrant Water Power. (Aspiration par la trompe à eau.) F. Legueu.
33 *Obesity, Simple and Complicated. M. Labbé.

32. **Vacuum Aspiration from Hydrant Water Power.**—A cylinder cap screws over the mouth of the faucet and a flexible but non-compressible rubber tube connects the cap with a stoppered jar. A second tube passes through the stopper of

the jar and terminates at its outer end in a trocar or cannula which is inserted in the cavity to be drained. After the water has been running from the faucet for a few minutes, the suction from the vacuum thus induced is strong and constant, and Legueu has found this simple apparatus a great improvement over all other devices for aspirating fluids in the clinic. The degree of suction can be regulated by turning the faucet, while the aspiration proceeds with such steady force that no fluid escapes around the outside of the cannula. In purulent pleurisy, for example, a very small incision is made in the pleura through which the bent cannula is introduced. The contents of the pleural cavity are rapidly sucked up by the aspirator. The pleura can thus be completely emptied before it is opened further, and not a drop of pus soils the patient or the field of operation. In suppuration in the kidney he makes the incision in the organ exposed in the lumbar wound and places the tip of a large trocar close to the incision. The pus is sucked up at once into the trocar or the latter can be introduced into the incision and thus soiling of the wound is avoided. An ordinary Potain aspirator is unable to dislodge the thick pus of a pyosalpinx, but the faucet aspirator evacuates it. He says that when a gall bladder is incised, if the tip of the trocar is held at a distance of 1 cm. from the wall of the viscus a small black stream of bile is drawn up into the tube without a drop escaping from this straight stream. In evacuating diffuse peritonitis the effusion can be aspirated from the remotest nooks by this means. In operations on the bladder the apparatus is frequently useful to aspirate the blood and urine accumulating in the bladder, which is thus kept clean. This is also an advantage in operating on the mouth or throat. He has a set of cannulas and trocars of different sizes, with the opening only at the tip, to use with this water power aspiration.

33. **Simple and Complicated Obesity.**—Labbé designates as simple obesity that form in which the obesity is due merely to accumulation of fat, while in the complicated form there is accumulation of both fat and water. Simple or florid obesity requires merely reduction of the food to a point below that actually required by the organism, supplementing this restriction of the diet with vigorous exercise, bicycling, walking, fencing or horseback riding. This treatment should be energetic; it is best carried out at some mountain resort, and it requires great patience and perseverance. Restriction of fluids does no good. After the patient has lost from six to ten pounds there is not much hope of a further reduction. In the complicated form of obesity, on the other hand, with a tendency to heart and kidney troubles and edema, treatment should be based on deprivation of salt or restriction to a milk diet, as in treatment of pronounced chronic nephritis. The amount of food allowed should also be well below the actual needs of the organism. Repose is the main thing, to avoid accidents on the part of the heart. Any exercise taken should be moderate, and under the physician's supervision. The effects obtained in these cases are frequently surprising, the patient losing nearly 85 pounds or 116 pounds, as in two cases he cites, and losing two pounds a week. The necessity for differentiation of the simple and complicated types of obesity is shown by the varying indications for treatment and the results when proper indications are heeded.

Semaine Médicale, Paris.

April 1, XXVIII, No. 14, pp. 157-168.

34 *Diagnosis of Insufficiency of the Pancreas. R. Lépine.

34. **Diagnosis of Pancreatic Insufficiency.**—Lépine concludes from his exhaustive study of the literature on this subject, in addition to his own experience, that the best signs of disturbance in the external secretion of the pancreas are an abundance of fat and scarcity of saponified matters in the stool, the A. Schmidt method of determining the energy of the trypsin by the digestion of the nuclei of muscle fiber, and the reduction of the urinary sulphates. The mydriasis induced by adrenalin seems to be a sign of lack of the internal secretion of the pancreas. Löwi announced last year that instillation of a 1 per thousand solution of adrenalin in the eye did not cause mydriasis in animals except in those in which the pancreas had been removed. Examination of 48 patients, including 18 diabetics, showed positive findings from instillation of the adrenalin in 55 per cent. of the diabetics and only in 2 of the 30 non-diabetic patients, and one of these had cancer of the liver and the other had exophthalmic goiter. Further research on this adrenalin test of pancreatic insufficiency promises interesting results. Lépine's own research has shown that maltosuria is frequent in diabetics and is the rule in dogs after pancreatectomy. The maltosuria is evidently the consequence of defective functioning of the liver, and it is probable that this functional defect is dependent on pancreatic insufficiency, but still it may result merely from some primary liver disturbance. In conclusion, he remarks that it may be possible to obtain further information in regard to pancreatic insufficiency by stimulating the gland by the aid of some of the new methods of research. In the dog, the starch-digesting power of the feces depends almost exclusively on the pancreatic juice, but the saliva in the dog is of comparatively little importance, compared to man. Volhard's test is based on the fact that the duodenal fluid flows back into the stomach when a large amount of oil or very acid liquid is ingested. He introduces into the fasting stomach about 200 c.c. of olive oil. Fifteen minutes later he aspirates about 100 c.c. of stomach content and, after pouring off the supernatant oil, examines the fluid for trypsin by digestion of casein in an alkaline medium. He found trypsin in the stomach nine times out of ten in healthy individuals.

Beiträge zur klinischen Chirurgie, Tübingen.

February, LVII, No. 1, pp. 1-229.

35 Autoplasties of the Urethra. (Autoplastik der Harnröhre.) E. Goldmann.
36 Theories of Various Mechanisms of Luxation of the Semilunar Bone. (Lunatumluxation.) G. Montandon.
37 New Instrument for Extraction of Swallowed Teeth Plates. (Instrument zur oesophagoskopischen Extraktion verschluckter Gebisse.) M. Makkas (Bonn).
38 Surgical Treatment of Peptic Ulcer in Stomach and Duodenum and Its Complications and the Ultimate Results. (Chirurgische Behandlung peptischen Magen- und Duodenalgeschwürs und seiner Komplikationen und die damit erreichten Endresultate.) K. Borszeky.
39 Two Cases of Resection of Breast Wall and Plastic Restoration Over Exposed Lung. (Brustwandresektion mit Plastik auf die freigelegte Lunge.) A. Hoffmann.
40 Solid and Cystic Adamantinoma of Lower Jaw. K. Fritsch.
41 Congenital Defect in Abdominal Muscles and Incarcerated Ventral Hernia. (Kongenitale Bauchmuskeldefekte und Hernia ventralis incarcerata.) R. Levy.
42 Occlusion from Kinking plus Torsion of Intestine on Longitudinal Axis. (Wringverschluss des Darmes.) A. Peiser.
43 Plastic Operation on Nose by Flap of Skin, Periosteum and Bone Taken from Clavicle-Shoulder Region. (Rhinoplastik mittels direkter Einpflanzung eines Hautperiostknochenlappens aus der Schlüsselbein-Schultergegend.) Mandry.

Deutsche medizinische Wochenschrift, Berlin.

March 26, XXXIV, No. 13, pp. 537-576.

44 *Stone Formation in Kidneys and Ureters. (Steinkrankheit der Nieren und der Harnleiter.) H. Kümmell.
45 Case of Hysteric Hemiplegia in Man of 65. E. Schultze.
46 *Mixed Infection in Typhoid. (Mischinfektion bei Typhus abdominalis.) F. Port.
47 *Spontaneous Fractures in Children. (Spontanfrakturen im Kindesalter.) G. Hunaeus.
48 Canthoplasty. (Lidspaltenerweiterung.) Pick.
49 Instantaneous Roentgen Pictures. (Schnellaufnahmen mit Röntgenstrahlen.) M. Levy-Dorn.

44. **Kidney and Ureter Stones.**—Kümmell has frequently found a course of mineral water successful in the treatment of primary aseptic kidney stones with only slight disturbances and hemorrhage. Under other conditions, he advises operative treatment, remarking that there is scarcely any affection of the kidneys that has profited to such an extent by modern diagnostic measures as kidney lithiasis while the results of early operative treatment are more brilliant than in almost any other field of surgery.

46. **Mixed Infection in Typhoid.**—Port reports that in 2 of his 33 typhoid patients last year the *Staphylococcus pyogenes aureus* was found in the blood during life, in another the pneumonia diplococcus, and in a fourth the colon bacillus, with the typhoid bacilli. Study of these 4 cases and 38 others of mixed infection in the literature shows, he thinks, that secondary general infection in typhoid is more frequent than hitherto recognized, and that it is responsible for part of the clinical picture, especially in the fulminating cases. Severe brain symptoms, extremely high temperature, jaundice, hemor-

rhages, chills, high leucocyte count and endocarditis should suggest the possibility of mixed infection. He does not think that the secondary infection occurs by way of the intestinal ulcerations as a rule. Persons with an old endocarditic or similar process are liable to have it flare up under the typhoid infection and entail mixed infection. In his 4 cases the great incongruity between the severity of the clinical picture and the slight extent of the ulceration in the intestines was striking. In bacteriologic examination of the blood he warns that the bile technic destroys germs other than the typhoid, and consequently agar-blood plates (Schottmüller) or the Castellani technic should be preferred. All the cases of mixed general infection known to date terminated fatally.

47. **Spontaneous Fractures in Children.**—Hunaeus reports a case in which a compound fracture of the elbow became infected with staphylococci with the development ten days later of metastatic foci at other points in the marrow of the long bones. Even slight movements of the child—as in sleep—were then able to induce spontaneous fracture at these points, in the left ulna, in both legs and in the metacarpal bones. All the fractures healed in the course of three months.

Medizinische Klinik, Berlin.

March 29, IV, No. 13, pp. 433-476.

50 *External Examination of Upper Air Passages. (Aeussere Untersuchung der oberen Luftwege.) Dorendorf.
51 *Relations Between Multiple Exostoses and the Thyroid. (Beziehungen zwischen Exostosen und Schilddrüse.) C. Ritter.
52 Diagnosis of Persistence of Duct of Botallo. Two Cases. (Diagnose der Persistenz des Ductus arteriosus Botalli.) T. Hondo.
53 Hydriatic Treatment of Rheumatic Affections. A. Fuerstenberg.
54 General "Centrifugal" Electrization. A. Erfurth.
55 *Disturbances in Vision After Loss of Blood. (Sehstörungen nach Blutverlust.) Proell.
56 *Postoperative Parotitis. H. Hellendall.
57 Dangers of "Record Breaking" in Sports. (Sport und Herz.) A. Selig.

50. **Examination of Upper Air Passages from Without.**—Dorendorf reviews the information to be obtained from external examination of the upper air passages, mentioning among other things that suppuration in one side of the nose, in a child under 7, that persists longer than two weeks can be almost positively ascribed to a foreign body. He calls attention further to the insidious onset of lupus of the nasal mucosa which may for a long time present the aspect of ordinary rhinitis with eczema of the outer part. Stridor occurring predominantly during inspiration points to stenosis of the larynx; when it occurs predominantly during expiration it points to stenosis of the trachea. His experience has confirmed the old saying that general dilatation of an artery scarcely ever entails signs of compression on the part of adjacent organs while this is an almost constant occurrence with aneurism.

51. **Relations Between Multiple Exostoses and the Thyroid.**—Ritter describes a family, in which there were seven children, the members of which all presented numerous exostoses except the mother and one daughter. This daughter is now 13 and differs in growth and complexion entirely from the other children, and she exhibits a typical case of exophthalmic goiter. The thyroid in the other members of the family can not be palpated and none has ever shown any tendency to the symptoms of exophthalmic goiter. He thinks that the various features of these cases confirm the assumption in regard to the connection between the thyroid and bone development.

55. **Visual Disturbances After Loss of Blood.**—Proell comments on the 198 cases in the literature in which optic neuritis terminating in atrophy followed excessive loss of blood, and reports a case personally observed. Choked papilla entailing almost total blindness came on a few days after excessive menstrual hemorrhage in a girl of 16, previously apparently healthy, the third time that the menses had occurred. No cause for the excessive hemorrhage could be determined; it was arrested only by tamponing the vagina on the sixth day. Vision improved later in one eye so that the patient can now count fingers at six feet, but the other eye is totally blind. Proell thinks that there must be always some blood affection or nutritional disorder at the basis of these severe visual disturbances after loss of blood, remarking that he knows of no instance of the kind in healthy soldiers after hemorrhages. In only 12.4 per cent. of the total number on record was the amaurosis unilateral, but the degree of disturbance frequently varied in the two eyes, the right being more severely affected in 85.7 per cent. In a few instances the amaurosis came on suddenly and was complete in both eyes—in these cases the patients generally woke in the night with severe headache and found themselves blind, as in the case reported. There is one case on record of sudden total deafness from the same cause. Treatment can be only by dietetic and tonic measures to restore strength and to supply the missing juices to the organism. Injections of strychnin and galvanization are perhaps indicated to maintain the excitability of the optic nerve. On account of the bad prognosis disturbances in vision following great loss of blood are to be feared as much as blindness after the use of quinin, wood alcohol or other poison.

56. **Postoperative Parotitis.**—Hellendall's patient was a woman who had been operated on for a right pyosalpinx following an abortion. On the fifth day parotitis on the left side developed with fever for ten days and irruption of pus into the left ear and its escape outward, after which the process healed with complete restitution. The *Staphylococcus pyogenes aureus* was found in the pus. Postoperative parotitis generally is a severer process than ordinary mumps. Uncomplicated postoperative parotitis has a mortality of 30 per cent., according to Wagner. It is important to poultice and incise early in these cases. Whether to make a practice of disinfecting the mouth after an operation depends on whether one believes that the parotid gland becomes infected through the duct of Steno or by way of the blood. As cases are known in which mumps develops first in the testicles and not until later in the parotid gland, he thinks that this excludes infection by way of the duct of Steno. Another argument against it is the long interval that sometimes elapses between the operation and the development of the postoperative parotitis. In conclusion, he urges further study of the influence exerted on the parotid gland by the genital organs.

Münchener medizinische Wochenschrift.

March 24, LV, No. 12, pp. 601-656.

58 *Natural Immunity of Living Tissue. (Eine Theorie der natürlichen Immunität des lebenden Gewebes.) F. Holzinger.
59 *Serum Diagnosis of Syphilis. (Wassermannsche Serodiagnostik der Syphilis.) E. Fraenkel and H. Much.
60 The Present Tendencies in Operative Obstetrics. (Gegenwärtige Wandlungen in der operativen Geburtshilfe.) K. Baisch.
61 *Localization and Symptoms of Intracranial Extravasation of Blood in the Newly-Born. (Intrakranielle Blutergüsse Neugeborener.) L. Seitz.
62 *Connection Between Stomach and Nasal Affections. (Zusammenhang von Magen- und Nasenleiden.) A. Hecht.
63 Hyperemic Treatment of Acute Inflammatory Affections. (Stauungshyperämie bei akut entzündlichen Krankheiten.) Coste.
64 *Unusual Forms of Puerperal Hemorrhage and Their Treatment. (Intrauterine Blutung bei Blasenmole; Blutung bei abnormer Gerinnselbildung nach Ausstossung der Plazenta; Blutung nach Durchreissung von Vasa prævia.) H. Sellheim.
65 Varying Temperature of Two Sides in Appendicitis. (Halbseitentemperaturen bei Appendicitis.) C. Widmer.
66 *Psychoses in Diabetics. (Diabetes und Psychose.) M. Kauffmann.
67 Genesis of Gallstones. (Genese der Gallensteine.) L. Lichtwitz.
68 Life-saving Effect of Infusion of Adrenalin in Salt Solution in a Case of Peritoneal Sepsis. O. Rothschild.
69 Catgut Tetanus. (Die postoperativen Tetanusfälle von Zacharias.) F. Kuhn.

58. **Explanation of Natural Immunity of Living Tissue.**—Holzinger's experiments were mainly with porous jars set in water and control glass jars, all filled with a sugar culture medium sown with yeast fungi. It was found that when osmosis proceeded naturally through the porous jars the growth of the micro-organisms was inhibited or completely suspended, while the control, non-porous jars presented a luxuriant growth. These findings suggest that normal osmotic processes in the living cells constitute a sort of natural immunity, germs not finding such cells conducive for their growth. When for any reason the osmotic processes are checked, then the germs can proliferate unhindered. The osmotic processes in living tissue can be checked temporarily by traumatism, by obstruction of the emunctories or various outlets; by dryness of the

tissues and by great reduction in the temperature of the parts as chilling has a retarding effect on osmotic processes. Daily experience shows that these conditions do in fact lower the resisting powers at such points, and expose them to invasion of germs.

59. **Serum Diagnosis of Syphilis.**—Fraenkel and Much have been applying the Wassermann technic of serum diagnosis at autopsies, and have found that it is specific and reliable. In many cases when there was nothing during life to indicate syphilis, and yet the test gave positive findings, syphilitic processes could always be discovered somewhere at autopsy. They urge the wider application of serum diagnosis at autopsy to explain or confirm the findings during life.

61. **Diagnosis, Treatment and Prognosis of Intracranial Hemorrhage in New-Born Infants.**—Seitz's previous communication on this subject was reviewed in The Journal, Sept. 28, 1907, page 1151. His experience now includes 23 cases of intracranial extravasation of blood, fatal in all but 5 instances. He emphasizes the clinical importance of the location of the extravasation, above or below the tentorium; the hemorrhage proved fatal in all his cases in which it was located below. He states that the childbirth had been spontaneous and easy in more than one-fourth of the number, so that intracranial hemorrhage is not necessarily due to foreign intervention, but may occur during normal delivery, especially hemorrhage over one hemisphere of the cerebrum. He also mentions that scopolamin had been given to the mother in one of the cases. The constant screaming of the child, commencing about the second day, is an unfailing sign of hemorrhage causing painful distention of the dura. He reiterates the importance of keeping the infant in an incubator to avoid irritation from without.

62. **Connection Between Stomach and Nasal Affections.**—Hecht refers to old chronic affections of the nose or accessory cavities, the pus from which is swallowed and causes a train of stomach symptoms. The nasal process may be ignored or it may manifest itself only in trigeminal neuralgia, pain in the orbit, oculomotor paralysis, etc. In one case, the stomach disturbances from bilateral suppuration in the maxillary antrum were so severe that cancer was suspected and the patient succumbed before long. Kishi has recently reported 15 cases of otitic dyspepsia in infants. The connection between the nasal affection and the stomach troubles in all these cases was confirmed in most of them by the subsidence of the latter as the nasal affection was cured by appropriate measures.

64. **Unusual Forms of Puerperal Hemorrhage.**—Sellheim expatiates on the importance of teaching students on the phantom how to manage puerperal hemorrhage, including the more unusual forms, of which he describes three examples.

66. **Diabetes and Psychoses.**—In the case reported, the mental derangement subsided as soon as strict antidiabetic diet was enforced.

Therapeutische Monatshefte, Berlin.

February, XXII, No. 2, pp. 57-110.

70 Treatment of Psychic Agitation. (Behandlung der psychischen Erregungszustände.) L. W. Weber.
71 Treatment of Trachoma. Pick.
72 *Modern Operations for Improving the Shape of the Nose without a Scar. (Narbenlose Verbesserung der Nasenform.) F. Koch.
73 *Etiology of Uratic Diathesis. Scherk.
74 Treatment of Sleeping Sickness to Date. (Zur Frage der Therapie der Schlafkrankheit.) H. Naegeli-Akerblom and P. Vernier.
75 Discussion of Causal Agent of Syphilis. (Die Spirochaete pallida und der Cytorrhyktes luis.) Jancke. Id. C. T. Noeggerath

March, No. 3, pp. 111-164.

76 Surgical Treatment of Hemorrhoids. E. Braatz.
77 *Chronic Albuminuria in Children. L. Langstein.
78 Physiologic and Therapeutic Importance of Exercises for Nutritional and Circulatory Affections. (Bedeutung der heilgymnastischen Bewegung für die Krankheiten der Ernährung und des Kreislaufes.) Hasebroek.
79 Experimental Research with Intra-arterial and Intravenous Injections. (Intraarterielle und intravenöse Injektionen im Tierexperiment.) A. Mayor.

72. **Improving Shape of Nose Without a Scar.**—Koch gives a number of illustrations showing the cosmetic results obtained with his special fraise applied through the nostril to cut away protuberances in the bone or remedy other conditions which deform the nose. He also illustrates one out of a number of cases in which a saddle-nose was raised to normal shape and size by implantation of a support made of hard paraffin. He takes a plaster cast of the nose, then makes a plaster mold from this cast, and pours melted paraffin on the mold until the desired shape is obtained. The paraffin thus modeled on the cast of the nose is taken off and introduced through the nostril into the desired place under the skin of the nose. He always makes a point of having several of these paraffin supports ready, so that if one breaks while it is being introduced, another is at hand to take its place. This technic is practicable not only for the most extensive defects, saddle-nose, etc., he says, but also for small disfigurements of various kinds.

73. **Etiology of Uratic Diathesis.**—Scherk thinks that evidence is accumulating to sustain the assumption that gout is the result of some disturbance in the action of the ferments engaged in the metabolism of nuclein. Most writers agree that ingestion of nuclein in the food should be reduced to the minimum, and that treatment should aim to promote the oxidation of uric acid. The latter can be accomplished by increasing the amount of oxidases, and this is promoted by exercise in the open air and courses of mineral waters.

77. **Chronic Albuminuria in Children.**—Langstein urges the necessity for treating children with orthostatic albuminuria as if they were healthy, that is, allowing them out-of-door freedom and not restricting their diet, merely protecting them against getting chilled and against exhaustion. Moderate exercise and gymnastics are useful and also an ordinary mixed diet. Drugs should be avoided, and even a change to a hot dry climate is not particularly beneficial. The same rules apply also to chronic nephritis, but it is important to differentiate orthostatic from nephritic albuminuria on account of the prognosis. With the former it is eminently favorable, while the outcome of chronic nephritis in a child is extremely doubtful. His experience with 100 cases has shown that supervision of the child for a year will differentiate orthostatic albuminuria if the night urine is always free from albumin, and if the proportion of albumin in the day urine varies at different times. The absolute proportion of albumin does not decide whether the trouble is of the orthostatic variety or not; precipitation, cold, by acetic acid speaks in its favor, as also a large proportion of oxalic acid. In merely orthostatic albuminuria, he never found the blood pressure increased or any changes in the fundus of the eye. The heart may show signs of vasomotor irritability, but never the hypertrophy and accentuation of the second aortic sound characteristic of chronic nephritis. Signs of latent tuberculosis are not infrequently discovered in children with osthostatic albuminuria. In dubious cases von Noorden gives the child 10 gm. (150 grains) of urea on two consecutive days. Under normal conditions elimination of the urea nitrogen proceeds very rapidly.

Therapie der Gegenwart, Berlin.

March, XLIX, No. 3, pp. 97-144.

80 Treatment of Biliary Lithiasis. (Gallensteinkrankheit.) R. von Renvers.
81 Medicinal Treatment of Fever. (Medikamentöse Therapie fiebernder Kranker.) E. Aronsohn.
82 Physical Measures in Treatment of Asthma. H. Naumann.
83 Dangers of Irrationally Applied Electric Incandescent Light Baths. (Gefahren des irrationell angewandten elektrischen Glühlichtbades.) H. Davidsohn.
84 *Accidental Inoculation of Tendon Sheaths in Hospital Attendants with Tuberculosis. (Impftuberkulose der Sehnenscheiden beim Pflegepersonal.) R. Mühsam.
85 Can a Physician Be Sued for Neglect to Make a Roentgen Examination? (Kann der Arzt für Unterlassung einer Röntgenuntersuchung verantwortlich gemacht werden?) F. Karewski.
86 *Consequences of Pessary Treatment. (Folgen der Pessartherapie.) Walther.
87 *Radium Treatment of Nevus. F. Nagelschmidt.

84. **Tuberculous Inoculation of Tendon Sheaths in Hospital Attendants.**—Mühsam reports three cases of hospital attendants who cut or scratched their hands while washing patients' spit cups or handling a Pravaz syringe. The tendon sheath became inflamed in each after the small wound had apparently healed. The inflammation came on slowly with scarcely any pain, but spindle-shaped enlargement and considerable impairment of function followed. One patient systematically exposed his hand to direct sunlight, with unmistakable benefit, but operative treatment was required in two cases and may yet be

necessary in the third. Mühsam summarizes a few similar cases from the literature, all demonstrating the advantages of operative measures.

86. **The Evils of Pessaries.**—Walther describes a dozen cases in which pessaries had been worn without change for years, the findings later emphasizing the correctness of his plea that a woman fitted with a pessary must be instructed as to its dangers and impressed with the necessity of returning to have the pessary taken out and cleaned and the condition of the mucosa inspected every two or three months. He urges that women should be advised to submit to an operation rather than resort to a pessary. Soft rubber and very large pessaries should be abolished forever, he says. A small, hard rubber ring or "peg" pessary, properly selected for the individual case, may do good service in certain cases. One of his patients had worn the pessary for 20 and another for 30 years. Cancer of the rectum developed in one case in the septum between rectum and vagina.

87. **Radium Treatment of Nevus.**—Nagelschmidt confirms the remarkable efficacy of radium treatment of nevus, far surpassing in effect and convenience for the patient, he says, any other measure known to date. With pure, 100 per cent. radium bromid simple, flat, capillary nevus is exposed for 5 or 6 minutes; cyanotic nevus requires 10 minutes, and protuberant nevus from 15 to 20 minutes. After about 9 days a brownish pigmentation is noticed, with slight exudation and scab formation, followed by local infiltration and superficial desquamation for several weeks. About the fifth week the nevus gradually assumes the characteristics of normal skin or the site remains more like a white cicatrix, the effect proportional to the length of the exposure. By thus treating one point after another, a large flat nevus can be entirely obliterated, the exposed area requiring only from 6 to 10 weeks for complete blanching.

Wiener klinische Wochenschrift.

March 26, XXI, No. 13, pp. 415-452.

88 Anaphylaxis. R. Doerr.
89 Deviation of Complement and Precipitation of Lecithin. (Komplementablenkung und Lezithinausflockung.) M. von Eisler.
90 Multiple Paralysis in Adult Resulting from Intrauterine Constriction of Upper Arm. (Multiple Nervenlähmung infolge intrauteriner Umschnürung.) G. Stiefler.
91 *Gonococcus Infection in the Male. (Klinische Studien über den Gonokokkus.) R. Picker.
92 Color Tests in Railroad and Marine Service. (Farbensinnprüfung im Eisenbahn- und Marinedienste.) J. Rosmanit.

91. **Treatment of Gonorrhea.**—Picker bases his treatment on the finding of gonococci in the rinsing fluid and in the expressed secretions of the lower urinary passages, prostate and seminal vesicles. The microscope and a Janet syringe reveal the foci of retention and rational treatment consists in the systematic evacuation of all these foci, working from above downward, emptying the kidney pelvis, massaging the ampulla of the vas deferens, the seminal vessels, prostate, etc., using a mild antiseptic only when there is profuse secretion. He refrains on principle from instillations, as they interfere with microscopic control.

Zentralblatt für Chirurgie, Leipsic.

March 28, XXXV, No. 13, pp. 393-424.

93 Radical Operation for Femoral and Inguinal Hernia on Same Side by Single Procedure. (Radikaloperation von Schenkel- und Leistenbruch derselben Seite in einem Akt.) F. Berndt.
94 Handy Scissors. (Eine neue Schere.) V. E. Mertens.

Policlinico, Rome.

March 22, XV, Practical Section, No. 12, pp. 357-388.

95 *Diagnostic Significance of Enlargement of Spleen in Typhoid Fever. (Tumore di milza nella febbre tifoide.) T. Silvestri.

March, Surgical Section, No. 3, pp. 97-144.

96 *Hernia of the Ureter. (Ernia dell' uretere.) L. Galassi.
97 *Relations Between the Testicle and Other Glands with Internal Secretion. (Rapporti tra la glandola interstiziale del testicolo e le glandole a secrezione interna.) V. Barnabo.

95. **Enlargement of the Spleen in Typhoid Fever.**—Silvestri states that in 147 cases of typhoid fever, about half of the patients being under 20, the spleen was found enlarged in 130 patients, and only one of these died—a young child who succumbed to pulmonary complications. In the other 17 patients it was impossible to palpate the spleen, and all but one of these patients died, between the fifteenth and thirty-fifth day of the disease. In every case the complications, duration of the disease and relapses were in inverse proportion to the size of the spleen. He is convinced that this organ plays a predominant and even a decisive rôle in the defense of the organism against typhoid infection, among its other functions clearing away the dead leucocytes and leaving the field free for new hosts of phagocytes. The spleen and the lymph glands connected with the intestines all hypertrophy from excessive functioning.

96. **Hernia of the Ureter.**—Galassi summarizes fifteen cases on record in which the ureter formed part of an inguinal hernia; nine of the case reports were published in Italy. He then gives the details of a case personally observed. In none of the cases was the participation of the ureter in the hernia diagnosed before operation. The pains were always vague, but micturition was difficult in some cases and one of the patients had suffered much distress, with swelling of the scrotum and retention of urine, when a truss was used. In one case the loop of ureter had dropped into the scrotum, and the kinking of the ureter had entailed hydronephrosis on that side. His patient was a girl of 17 who had had a femoral hernia for some years, slightly painful, but with no symptoms referable to the urinary organs. The ureter was recognized in the sac when it was opened, and no disturbances followed its reduction. He mentions in conclusion that the ureter has a circulation of its own and consequently can be resected without fear of necrosis.

97. **Relations Between Testicle and Other Glands with Internal Secretion.**—Barnabo reports a series of experiments on guinea-pigs and other laboratory animals to study the effect on other organs of bilateral resection of the vas deferens, bilateral castration and similar operations. The hypophysis became hypertrophied in the castrated animals and also after resection of the vas. The suprarenal capsules, thyroid and parathyroid glands also showed unmistakable signs of increased secretory functioning to supplement the lacking or deficient functioning of the testicles. These glands apparently did not alter their structure, except that the thyroid showed a transient change in structure in the castrated animals. No modification of any kind was observed in the spleen in any instance.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

The Influence of Alcohol and Other Drugs on Fatigue. By. W. H. R. Rivers, M.D., F.R.C.P., Fellow of St. John's College, Cambridge. Pp. 136. Cloth. Price, $1.70. London: Edward Arnold, 1908. New York: Longmans, Green & Co., 1908.

The Anatomy of the Automobile. By (Dr.) A. L. Dyke, Member of S. A. E. First Revised Edition. Pp. 727, with Illustrations. Cloth. Price, $2.00. St. Louis: Published by A. L. Dyke, 3932 Olive Street.

American Practice of Surgery. Edited by Joseph D. Bryant, M.D., LL.D., and Albert H. Buck, M.D. Vol. 4. Pp. 1010, with Illustrations. Cloth. Price, $7.00. New York: William Wood & Co., 1908.

The Thermal Death Points of Pathogenic Micro-Organisms in Milk. By M. J. Rosenau, Director Hygienic Laboratory. Paper. Pp. 85. Washington: Government Printing Office, 1908.

Report of the New York State Commission to Investigate the Condition of the Blind. Cloth. Pp. 586, with Illustrations. Albany: J. B. Lyon Co., State Printers, 1907.

State Board of Health, of New Jersey, Thirty-first Annual Report, 1907. Cloth. Pp. 432. Trenton, N. J.: The John L. Murphy Publishing Co., 1908.

Annual Report of the Health Department of the City of Richmond, Va., for the Year 1907. Paper. Pp. 93. Richmond, Va.: Everett Waddey Co., 1908.

The Common Sense of the Milk Question. By John Spargo. Cloth. Pp. 351. Illustrated. Price, $1.50. New York: The Macmillan Co., 1908.

Twenty-Third Annual Report Adirondack Cottage Sanitarium, with medical supplement. By Lawrason Brown.

The New England Sanitarium. Paper. Pp. 32.

THE CHICAGO SESSION

AMERICAN MEDICAL ASSOCIATION, FIFTY-NINTH ANNUAL SESSION, CHICAGO, JUNE 2-5, 1908.

OFFICIAL CALL.

The Fifty-Ninth Annual Session of the American Medical Association, to be Held at Chicago, June 2-5, 1908.

The Fifty-Ninth Annual Session of the American Medical Association will be held on Tuesday, Wednesday, Thursday and Friday, June 2, 3, 4 and 5, 1908, at Chicago.

The House of Delegates will convene at 10 a. m., on Monday, June 1, 1908.

In the House of Delegates the representation of the various constituent associations for the years of 1907, 1908 and 1909 is as follows:

Alabama	3	Montana	1
Arizona	1	Nebraska	2
Arkansas	2	New Hampshire	1
California	3	New Jersey	3
Colorado	2	New Mexico	1
Connecticut	2	New York	11
Delaware	1	Nevada	1
Dist. of Columbia	1	North Carolina	3
Florida	1	North Dakota	1
Georgia	2	Oklahoma	2
Hawaii	1	Oregon	1
Idaho	1	Pennsylvania	8
Illinois	7	Rhode Island	1
Indiana	4	South Carolina	2
Iowa	3	South Dakota	1
Kansas	3	Tennessee	2
Kentucky	3	Texas	5
Louisiana	2	Utah	1
Maine	1	Vermont	1
Maryland	2	Virginia	3
Massachusetts	6	Washington	1
Michigan	4	West Virginia	1
Minnesota	2	Wisconsin	3
Mississippi	2	Wyoming	1
Missouri	4	Philippine Islands	1
Ohio	6		

The twelve sections of the American Medical Association, the Medical Department of the Army, the Medical Corps of the Navy and the Public Health and Marine-Hospital Service are entitled to one delegate each.

The first General Meeting, which constitutes the opening exercises of the scientific functions of the Association, will be held at 10:30 a. m., Tuesday, June 2.

The Registration Department will be open from 8:30 a. m. until 5 p. m., on Monday, Tuesday, Wednesday and Thursday, June 1, 2, 3 and 4, and from 9 to 10 a. m., on Friday, June 5.

Joseph D. Bryant, President.

George H. Simmons, General Secretary.

HOUSE OF DELEGATES.

Membership of the Legislative Body of the American Medical Association, 1908.

As a number of the state associations have not yet held their meetings for 1908, it is impossible, at this time, to give a complete list of the members of the House of Delegates for the Chicago session. The following is a list of the holdover delegates and of the newly elected members who have been reported up to the time of going to press:

ALABAMA.

W. H. Sanders, Montgomery.
J. D. S. Davis, Birmingham.

ARKANSAS.

Adam Guthrie, Prescott.

CALIFORNIA.

Philip Mills Jones, San Francisco.
H. Bert Ellis, Los Angeles.

COLORADO.

J. N. Hall, Denver.
Crum Epler, Pueblo.

CONNECTICUT.

Chester Brown, Danbury.

IDAHO.

E. W. Kleinman, Hailey.

ILLINOIS.

C. S. Bacon, Chicago.
J. R. Hollowbush, Rock Island.
Frank Billings, Chicago.

INDIANA.

L. L. Whiteside, Franklin.
W. N. Wishard, Indianapolis.
J. B. Berteling, South Bend.
A. M. Hayden, Evansville.

IOWA.

S. Bailey, Mt. Ayr.

KANSAS.

H. L. Alkire, Topeka.

KENTUCKY.

L. S. McMurtry, Louisville.
W. W. Richmond, Clinton.
J. N. McCormick, Bowling Green.

LOUISIANA.

Charles McVea, Baton Rouge.

MARYLAND.

Harry Friedenwald, Baltimore.

MASSACHUSETTS.

D. J. Brown, Springfield.
C. H. Cook, Natick.
R. C. Cabot, Boston.
H. D. Arnold, Boston.
J. A. Gage, Lowell.
O. J. Brown, North Adams.

MICHIGAN.

Ruben Peterson, Ann Arbor.
H. O. Walker, Detroit.

MINNESOTA.

J. B. McGaughey, Winona.
A. E. Spalding, Luverne.

MISSISSIPPI.

W. W. Crawford, Hattiesburg.

MISSOURI.

C. M. Nicholson, St. Louis.
F. E. Murphy, Kansas City.

NEBRASKA.

F. A. Long, Madison.

NEW JERSEY.

Luther M. Halsey, Williamstown.

NEW MEXICO.

W. R. Tipton, Las Vegas.

NEW YORK

A. T. Bristow, Brooklyn.
Chas. Jewett, Brooklyn.
H. L. Elsner, Syracuse.
B. F. Weir, New York City.
W. S. Ely, Rochester.
H. D. Wey, Elmira.
E. B. Angell, Rochester.
J. C. Bierwirth, Brooklyn.
D. C. Moriarta, Saratoga.
Wisner R. Townsend, New York City.
A. Vander Veer, Albany.

NEVADA.

J. E. Pickard, Virginia City.

NORTH CAROLINA.

J. F. Highsmith, Fayetteville.

NORTH DAKOTA.

Victor Hugo Stickney, Dickinson.

OHIO.

Hugh F. Lorimer, Chillicothe.
Rufus Hall, Cincinnati.
Chas. Græfe, Sandusky.
Horace Bonner, Dayton.
D. W. Skeele, Cleveland.
W. D. Deuschle, Columbus.

OKLAHOMA.

A. K. West, Oklahoma City.
Virgil Berry, Wetumka.

OREGON.

Andrew C. Smith, Portland.

PENNSYLVANIA.

Adolph Kœnig, Pittsburg.
Fremont W. Frankhauser, Reading.
Wm. T. Williams, Mt. Carmel.
Samuel Wolfe, Philadelphia.
Alex. R. Craig, Philadelphia.
Philip Y. Eisenberg, Norristown.
Geo. W. Guthrie, Wilkes-Barre.
Edw. B. Heckel, Pittsburg.

SOUTH DAKOTA.

W. G. Smith, Sturgis.

TEXAS.

J. T. Wilson, Sherman.
C. E. Cantrell, Greenville.
A. C. Scott, Temple.
S. T. Turner, El Paso.
Frank Paschal, San Antonio.

VERMONT.

J. N. June, Burlington.

VIRGINIA.

J. Shelton Horsley, Richmond
Wm. E. Anderson, Farmville.
Stuart McGuire, Richmond.

WASHINGTON.

James R. Yocum, Temple.

WEST VIRGINIA.

V. J. Churchman, Charlestown.

WISCONSIN.

L. H. Pelton, Waupaca.
W. T. Sarles, Sparta.
B. M. Caples, Waukesha.

SECTIONS.

PRACTICE OF MEDICINE.

Geo. Dock, Ann Arbor, Mich.

OBSTETRICS AND DISEASES OF WOMEN.

F. F. Simpson, Pittsburg.

SURGERY AND ANATOMY.

....

OPHTHALMOLOGY.

W. Marple, New York City.

LARYNGOLOGY AND OTOLOGY.

Otto T. Freer, Chicago.

HYGIENE AND SANITARY SCIENCE.

N. K. Foster, Sacramento, Cal.

DISEASES OF CHILDREN.

Thomas Parke, Birmingham, Ala.

NERVOUS AND MENTAL DISEASES.

Morton Prince, Boston.

STOMATOLOGY.

M. L. Rhein, New York City.

CUTANEOUS MEDICINE AND SURGERY.

R. R. Campbell, Chicago.

PHARMACOLOGY AND THERAPEUTICS.

S. Solis Cohen, Philadelphia.

PATHOLOGY AND PHYSIOLOGY.

W. M. Coplin, Philadelphia.

GENERAL MEETINGS.

Opening Meeting.

Tuesday, June 2, 1908.

In the Auditorium.

10:30 a. m.—Call to order by the President, Dr. Joseph D. Bryant, New York City.

Addresses of Welcome.

The report of the Committee of Arrangements, Dr. M. L. Harris, Chairman.

Introduction and installation of the President-Elect, Dr. Herbert L. Burrell, Boston.

Annual Address of the President.

Second General Meeting.

Tuesday, June 2, 7:30 p. m.

Orchestra Hall, 165 Michigan Avenue.

At this meeting, the Oration on Medicine by Dr. William S. Thayer of Baltimore, and the Oration on Surgery, by Dr. George W. Crile of Cleveland, Ohio, will be delivered.

Third General Meeting.

Wednesday, June 3, 7:30 p. m.

Orchestra Hall, 165 Michigan Avenue.

At this meeting the Oration on State Medicine by Dr. Charles Harrington of Boston will be delivered.

REGISTRATION.

The Registration Department will be on the main floor of the First Regiment Armory at Michigan Avenue and Sixteenth Street. It will be necessary for a member of the Association to register his name, and those of the ladies with him, and to obtain the official badges provided by the Committee of Arrangements. No one will be admitted to any entertainment without a badge. Members are urged to register on arrival or as early as possible.

The Registration Department will be open from 8:30 a. m. to 5 p. m. on Monday, Tuesday, Wednesday and Thursday, June 1, 2, 3 and 4, and on Friday, June 5, from 9 to 10 a. m.

Attention is called to the following directions:

1. Each physician desiring to register will first fill out a registration card.
2. Each member who has paid his annual dues in full will present his pocket card and registration card at a window marked "Registration by Receipt."
3. The registration of members who have paid their dues, but who have failed to bring their pocket cards will be delayed while the records are consulted. Hence, be sure to bring your "pocket card."
4. Members who have not paid their dues will present registration card and make payment at a window marked "Cash."
5. Each applicant for membership will present his registration card at a window marked "New Members," with a certificate of membership in his state society. Prospective members, however, will save delay and annoyance by sending in their applications before the session. All such applications should be mailed to the American Medical Association, 103 Dearborn Avenue, Chicago, so as to arrive not later than May 25.
6. Each member on registration will receive a badge, a copy of the Official Program, and such other announcements as may be necessary.

BUREAU OF INFORMATION.

A Bureau of Information will be maintained at the First Regiment Armory, where information with regard to hotels, transportation, registration, meeting places, exhibits, entertainments, theaters, etc., may be obtained. In connection with this bureau a branch postoffice and telegraph and telephone offices will be maintained.

POSTOFFICE AND TELEGRAPH.

Mail matter and telegrams addressed in care of the American Medical Association, Chicago, will be sent direct to the postoffice in the First Regiment Armory. Telegrams and special delivery letters will be forwarded from there to the hotels or other stopping places of those whose addresses are recorded at the Registration Department or the Bureau of Information.

TRANSPORTATION.

The Trunk Line Association, the Central Passenger Association and the New England Passenger Association have granted a rate of one and one-half fare for the round trip. Some of the other traffic associations may grant a similar reduction, but thus far no special rates have been made aside from those indicated. It is barely possible that still better rates may be secured, but there is not the kindly feeling on the part of the railroads toward the public that there was previous to the recent legislation. If further changes are made, due announcements will appear in The Journal. As the time at which the special tickets will go on sale varies with different localities, members should consult local railroad officials for definite information.

COMMITTEE ON ARRANGEMENTS.

The Chicago Session of the American Medical Association—Committees in Charge.

The following Chicago physicians are the members of the Committee of Arrangements for the coming session of the American Medical Association in Chicago, June 2 to 5, 1908. For information on matters relating to the functions of the various committees address the chairmen.

Chairman: Dr. M. L. Harris, 100 State St.

Secretary: Dr. R. R. Campbell, 100 State St.

Dr. H. B. Favill, 100 State St., president of Chicago Medical Society.

Dr. W. L. Baum, 103 State St., president of Illinois State Medical Society.

The following members of the committee are also chairmen of the various subcommittees specified:

Finance: Dr. Frank Billings, 100 State St.

Halls and Meeting Places: Dr. Hugh T. Patrick, 34 Washington St.

Hotels: Dr. L. L. McArthur, 100 State St.

Receptions at Railroad Stations: Dr. J. H. Stowell, 103 State St.

Entertainments: Dr. T. A. Woodruff, 72 East Madison St.

Bureau of Information: Dr. J. V. Fowler, 312 Grand Ave.

Clinics: Dr. A. J. Ochsner, 710 Sedgwick St.

Scientific Exhibit: Dr. E. R. LeCount, 6026 Monroe Ave.

Printing, Badges, Etc.: Dr. C. P. Caldwell, 4425 Michigan Ave.

Alumni Meetings, Etc.: Dr. R. T. Gillmore, 103 State St.

ACCOMMODATIONS FOR VISITING MEMBERS.

A Partial List of Hotels.

Members of the American Medical Association desirous of securing definite hotel accommodations should write to Dr. L. L. McArthur, chairman of the Hotels Committee, 100 State Street, Chicago.

Arrangements have been made with the leading hotels for this meeting. Definite instructions to the chairman, as to the character of rooms desired, with or without bath, meals, etc., and number in party, will permit prompt action and more satisfactory reservation.

No section headquarters at hotels have been assigned. The members are therefore at liberty to select the hotel of their choice. Reservations will be made in the order of their receipt.

A partial list of hotels, with rates and locations, follows. Where not otherwise designated, the rates are for rooms on the European plan.

Auditorium Hotel, see Congress.

Briggs House, Randolph Street and Fifth Avenue; 150 rooms; can take 50; rates for one person in room, $1 to $1.50; bath, $2 to $2.50; additional, $1 for each person.

Hotel Brevoort, 143 Madison Street; 350 rooms; can take 200; rates, one person, $1.50 and up; two in room, $3 and up.

Hotel Bismark, 178 Randolph Street; 100 rooms; can take 25; rates, one person, $1 up; two persons in room, $1.75 up.

Congress Hotel Company, Michigan Avenue and Congress Street (operating Congress, Auditorium and Annex); 1,500 rooms; can accommodate 1,400 to 1,600; rate for one person, $2 to $7; two or more persons in room, $3 to $10.

Hotel Del Prado, Midway Boulevard and Jackson Park; 100 rooms; can take 200; rates, American plan, $3 to $4 per day; two or more in room, $5 to $7 per day.

Hunt's European Hotel, 146, Dearborn Street; 105 rooms; can take 50; rates $1 and $2; additional, $0.75 each.

Great Northern Hotel, Jackson Boulevard, Dearborn and Quincy Streets; 375 rooms; can take 300; rates, one person, $1.50 to $4; two persons, $2.50 to $6; additional, $1 each.

Kaiserhof Hotel, 270 Clark Street; 300 rooms; can take 300; rates, one person, $1 to $1.50; with bath, $2 to $3; additional person in room, $2 to $3; with baths, $3 to $5.

Lakota Hotel, Thirtieth Street and Michigan Boulevard; 250 rooms; can take 500; rates, European plan, $3 up; two persons in room, $2 up; American plan, rates on application.

Lexington Hotel, Michigan Boulevard and Twenty-second Street; 400 rooms; can take 150; rates, one person, $1.50 up; additional persons, $1 and up; rooms with private bath, $2 single; $1.50 double.

Hotel Majestic, 20 Quincy Street; 200 rooms; can take 200; rates, one person, $2.50; two persons, $4.

McCoy's European Hotel, northwest corner Clark and Van Buren Streets; 200 rooms; can take 150; rates, one person, $1.50; additional persons in room, $1 up.

Hotel Metropole, Michigan Avenue and Twenty-third Street; 300 rooms; can take 250; rates, for one person in room, $2 per day and up; for two or more persons in a room, $1.50 and up.

Oxford Hotel, Canal and Adams Streets; opposite Union Depot; 70 rooms; can take 40; $2 per day, American plan.

Palmer House, State and Monroe Streets; 700 rooms; can take 500; rates, one person, $1.50 and up without bath; two persons in room, $2 and up; with bath, $2.50 and up one person, and $3.50 and up two persons.

Saratoga European Hotel, 151 Dearborn Street; 318 rooms; can take 300; rates, one person, $1 up; two persons, $2 up; with baths, $1.50 up; three or more persons in room, special rates.

Sherman House, Clark and Randolph Streets; 200 rooms; can take 500; rates, one person, $1.50 up; additional persons, $1.25 each.

New Southern Hotel, Michigan Boulevard and Thirteenth Street; 75 rooms; can take 25; rate, $1 to $1.50 per day; additional persons in room, $1.

Stratford Hotel, Jackson and Michigan Boulevards; 200 rooms; can take 400; rates, $2 to $3 without bath; two in room; $4 with bath.

Victoria Hotel, Michigan Boulevard and Van Buren Street; 200 rooms; can take 300; rates, for one person, $1.50 up; with bath, $2.50 to $4; two in a room, $3 to $4; with bath, $4 to $6; double room, with two beds, two persons, $2 each; four persons, $1.25 each; with bath, two persons, $2.50 each, four persons, $1.50 each.

Virginia Hotel, Rush and Ohio Streets; 400 rooms; can take 250; one person, $1.50 up; two persons in room, $2 per day and up.

Wellington Hotel, Wabash Avenue and Jackson Boulevard; 150 rooms; can take 150; rates, for one person, $2 per day and up; two persons, $3 and up; with bath, one person, $3 and up; with bath, two persons, $5 and up; with bath, three persons, $7.50 and up; with bath, four persons, $8.50 and up.

Windermere Hotel, Fifty-sixth Street and Cornell Avenue; 250 rooms; can take 25 to 30; rates, $3 per day and up; two in room, $5 per day and up; American plan only.

Windsor-Clifton Hotel, Monroe Street and Wabash Avenue; 165 rooms; can take 200; rates, one person, $1 per day and up; additional, same.

Private Homes and Boarding Houses.

The committee also has made arrangements with H. Bates of the Reliable Renting Company, by which it will be possible to locate in private homes and boarding houses those preferring such accommodations. Letters should be addressed directly to H. Bates, care of the Reliable Renting Company, 171 Washington Street, Chicago. On failure to receive prompt reply notify Dr. McArthur.

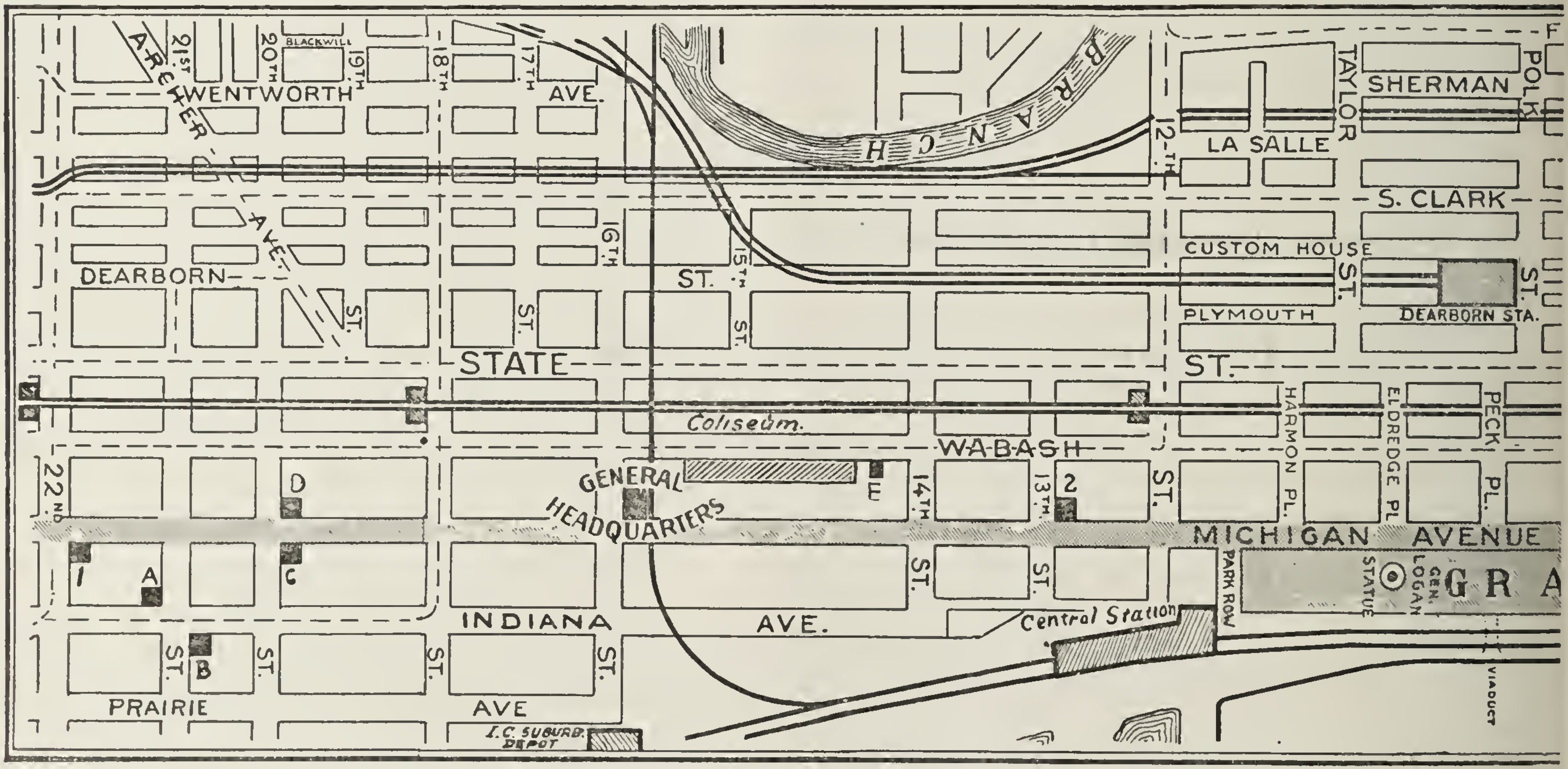
THE MEETING PLACES.

Where the Sessions Will Meet.

The following is a list of meeting places for the Sections as at present arranged:

Practice of Medicine—Sinai Temple, Twenty-first Street and Indiana Avenue.

Obstetrics and Diseases of Women—Second Presbyterian Church, Twentieth Street and Michigan Avenue.



MAP OF BUSINESS DISTRICT OF CHICAGO.—KEY TO MEETING PLACES.

General Meetings, Auditorium Theater, F.
Practice of Medicine, Sinai Temple, A.
Obstetrics and Diseases of Women, Second Presbyterian Church, D.
Surgery and Anatomy, Orchestra Hall, G.
Hygiene and Sanitary Science, First Regiment Armory, General Headquarters.
Ophthalmology, First Presbyterian Church, B.
Diseases of Children, Second Presbyterian Church, D.
Stomatology, First Regiment Armory, General Headquarters.
Nervous and Mental Diseases, Calumet Club, C.
Cutaneous Medicine and Surgery, Grace Parish House, E.
Laryngology and Otology, Sinai Temple, A.
Pharmacology and Therapeutics, First Presbyterian Church, B.
Pathology and Physiology, First Regiment Armory, General Headquarters.

HOTELS.

Auditorium Hotel, 3b; Auditorium Hotel Annex, 3a; Bismark Hotel, 16; Briggs House, 17; Brevoort, 15; Great Northern Hotel, 8; Hunt's European Hotel, 14; Kaiserhof Hotel, 7; Lexington Hotel, 1; Majestic, 9; McCoy's European Hotel, 6; New Southern

SURGERY AND ANATOMY—Orchestra Hall, 169 Michigan Avenue.

HYGIENE AND SANITARY SCIENCE—Second Presbyterian Church, upstairs, Twentieth Street and Michigan Avenue.

OPHTHALMOLOGY—First Presbyterian Church, Twenty-first Street and Indiana Avenue.

DISEASES OF CHILDREN—Second Presbyterian Church, Chapel, Twentieth Street and Michigan Avenue.

STOMATOLOGY—First Regiment Armory, Sixteenth Street and Michigan Avenue.

NERVOUS AND MENTAL DISEASES—Calumet Club, Twentieth Street and Michigan Avenue.

CUTANEOUS MEDICINE AND SURGERY—Grace Episcopal Church Parish House, Fourteenth Street and Wabash Avenue.

LARYNGOLOGY AND OTOLOGY—Sinai Temple, Twenty-first Street and Indiana Avenue.

PHARMACOLOGY AND THERAPEUTICS—First Presbyterian Church, Twenty-first Street and Indiana Avenue.

PATHOLOGY AND PHYSIOLOGY—First Regiment Armory, Sixteenth Street and Michigan Avenue.

HOUSE OF DELEGATES—First Regiment Armory, Sixteenth Street and Michigan Avenue.

On Wednesday afternoon the Sections on the Practice of Medicine and on Pathology and Physiology will have a joint meeting in the meeting place of the former, and on the same afternoon the Section on Stomatology will occupy the room in the Armory otherwise used by the Section on Pathology and Physiology.

ENTERTAINMENTS.

Receptions, Concerts, Entertainments, Excursions and Afternoon Teas for the Pleasure of Visitors.

For the entertainment of the members of the Association and their friends during and following the session the committee has arranged numerous informal and formal functions.

TUESDAY, JUNE 2.

An informal tea to the ladies will be held in the rooms of the Woman's Club and of the Fortnightly Club on Tuesday afternoon from 3 until 5 o'clock. Tuesday evening has been set aside for Section dinners and entertainments and for alumni reunions. The following are reported as having been arranged:

Section on Ophthalmology at the Chicago Athletic Club.

Section on Surgery and Anatomy at the Lexington Hotel.

Section on Laryngology and Otology at the Auditorium Hotel

The alumni headquarters will be the main parlor of the second floor of the Auditorium Hotel, at Michigan Avenue and Congress Street. The following reunions will take place Tuesday evening:

College of Physicians and Surgeons, Chicago, at the Auditorium Hotel at 6:30 p. m.

Dartmouth Medical College; reunion and supper at the new Illinois Athletic Club.

Johns Hopkins Medical School; dinner and reunion at the Auditorium Hotel.

Kentucky School of Medicine; dinner and musicale at the Auditorium Hotel at 6:30 p. m.

McGill University; reunion and dinner at the Great Northern Hotel.

Northwestern University Medical School; banquet and vaudeville at 6 p. m. at new Illinois Athletic Club.

Rush Medical College; annual meeting and dinner at the Sherman House.

University of Michigan; dinner and smoker at the Union Restaurant.

University of Pennsylvania, Medical Department; dinner and musicale at the Chicago Athletic Club.

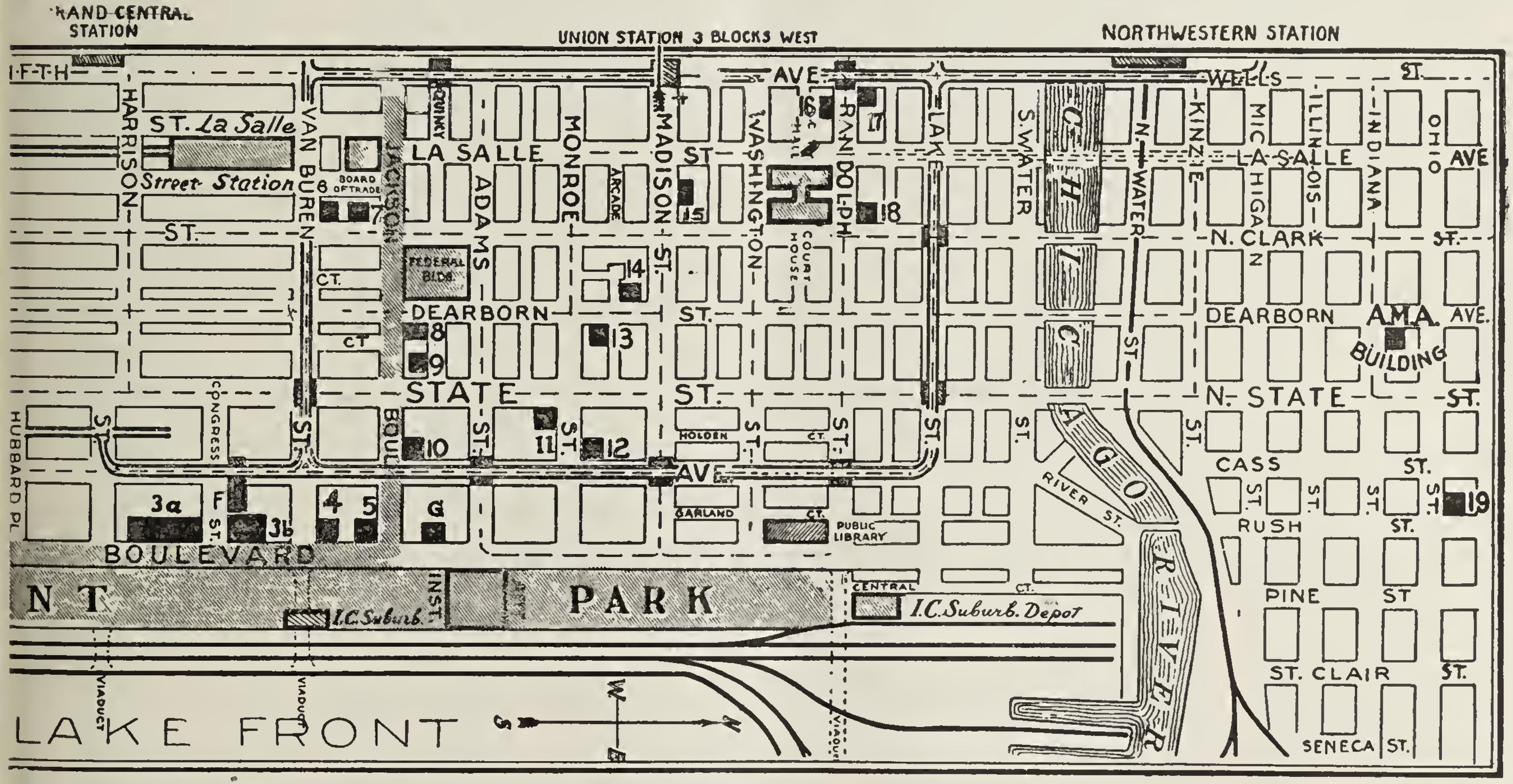
Medical College of Ohio; smoker and entertainment at the Bismarck.

Harvard Medical School; dinner and reunion at the Great Northern Hotel.

Detroit College of Medicine; reception at 468 La Salle Ave.

Tulane University Medical Deparment; dinner and reunion at the Union Hotel.

Arrangements are being made for several other reunions, but the plans have not been completed as yet.



MEETING PLACES, HOTELS AND RAILROAD STATIONS.

HOTELS—CONTINUED.

Hotel, 2; Palmer House, 11; Saratoga European Hotel, 13; Sherman House, 18; Stratford Hotel, 5; Victoria Hotel, 4; Virginia Hotel, 19; Wellington Hotel, 10; and the Windsor-Clifton Hotel, 12.

RAILROAD TERMINAL STATIONS.

Central Station, Park Row, near lake front, receives Chi., Cin. & L'ville.; Big Four; Grand Rapids & Ind.; Ill. Central, and Wis. Central.

Dearborn Station (Polk Street Station), Polk Street and Plymouth Court, receives the Santa Fé; Erie; Monon; Chi. & West. Ind.; Belt Line; Grand Trunk; and Wabash.

Grand Central Station, Harrison Street and Fifth Avenue, receives the B. & O.; Great Western; and Pere Marquette.

La Salle Street Station, La Salle and Van Buren Streets, receives the Chi. & East. Ill.; Chi., Ind. & Southern; Rock Island; Lake Shore & Mich. Southern, and Nickel Plate.

Northwestern Station, Wells and Kinzie Streets, receives the Chi. & Northwestern.

Union Station, Canal and Adams Streets (not shown on map), receives C., B. & Q.; C., M. & St. P.; Chi. & Alton lines; Panhandle; Pittsburg, Ft. Wayne & Chicago.

The Women Alumnæ will hold a banquet and vaudeville at the Auditorium Hotel.

Wednesday, June 3.

On Wednesday afternoon from 2:30 until 5 a reception will be given at the South Shore Country Club to meet Mrs. Herbert L. Burrell, wife of the president-elect of the Association. In the evening, from 8:30 until 10, a reception will be given to the president-elect of the Association, Dr. H. L. Burrell. There will be dancing from 10 to 12.

Thursday, June 4.

A reception and musicale will be given Thursday afternoon, in the Art Institute to the visiting ladies. In the evening a concert by the First Regiment Band and a smoker will be given at the Coliseum by the medical profession of Chicago to the visiting members of the Association and their guests.

Seeing Chicago.

For those who wish to ride through the parks and residential portions of Chicago, automobiles will leave central points at stated hours during the day.

Many of the visiting members and their friends will doubtless be interested in visiting the enormous plants of the Illinois Steel Company at South Chicago. The management of this company has offered to furnish guides to those who desire to go through the mills.

Messrs. Armour & Company, Swift & Company and Libby, McNeal & Libby have extended an invitation to the members of the American Medical Association to witness a demonstration of the government inspection of meat and killing of cattle. On Saturday morning, June 6, a special train of the South Side Elevated Railway will leave Congress Street station at 9 o'clock.

THE FOREIGN GUESTS.

Distinguished Medical Men Who Will Come from Abroad to Speak at Section Meetings.

The American Medical Association will be honored by the presence of a number of distinguished guests at the coming session. Many have already accepted invitations and below we give a list of the guests so far as now known:

Ernst Ferdinand Sauerbruch, professor of surgery at Marburg; Charles Edward Beevor of London; E. A. Schäfer, professor of physiology at the University of Edinburgh; Johannes Pfannenstiel, professor of obstetrics and gynecology at Kiel; August Martin, professor of gynecology at Greifswald, and Professors Brauer of Marburg, Chipault of Paris, and B. G. A. Moynihan, Leeds, Eng.

THE PROGRAM OF CLINICS.

Members of the Association to Have Great Clinical Opportunities.

During the week preceding and the two weeks following the session of the American Medical Association, public clinics will be given in all the larger hospitals and medical schools of Chicago. These will be free to the members of the Association.

The committee states that the program of the clinics is almost completed. It will contain the names and addresses of all hospitals and colleges in which clinics are to be held, together with directions for reaching them. For each day there will be a list of clinics in every department of medicine and surgery, giving place and hour and name of instructor for each clinic, so that visitors may choose either according to subjects or according to instructors.

Hospitals having small amphitheaters will issue tickets, which may be obtained at headquarters, in order that clinics may not be uncomfortably crowded. A number of clinics will be conducted in various hospitals at the same hours, which will make it possible for every one who desires to do clinical work during this period to obtain ample facilities in whatever department he may be especially interested.

On June 2, 3, 4 and 5 there will be no clinics or demonstrations in any of these institutions in order that there may be nothing to take members away from the various scientific sections. This will insure a local as well as a general audience for those who have prepared papers. Practitioners from many parts of the country have already arranged to spend two or three weeks in Chicago in connection with the coming meeting.

Programs will be obtainable at all hospitals and colleges on and after Monday, May 25. During the meeting of the Association these programs may be obtained at the Bureau of Information. After May 15 and before the meeting, copies will be mailed on application to the chairman of the Committee on Clinics, Dr. Albert J. Ochsner, 710 Sedgwick Street, Chicago.

St. Louis Clinics.

For the benefit of members of the Association who may be in St. Louis at that time a series of lectures and clinics will be held. These exercises will be conducted under the auspices of the Medical Department of Washington University, and will commence Tuesday, May 26, and continue until Monday, June 1. The schedule of lectures and clinics follows:

Tuesday, May 26.

Obstetric Clinic, by Professor Schwarz, at Washington University Hospital, from 9 to 11 a. m.

Medical Clinic, by Clinic Professor Brookes, at O'Fallon Dispensary, from 11 a. m. to 12 m.

Clinic on Diseases of the Nose and Throat, by Clinic Professor Sluder, at O'Fallon Dispensary, from 2 to 3 p. m.

Proctologic Clinic, by Clinic Professor Dixon, at Washington University Hospital, from 2 to 4 p. m.

Orthopedic Clinic, by Dr. Hoffman, at O'Fallon Dispensary, from 3 to 4 p. m.

Wednesday, May 27.

Surgical Clinic, by Professor Mudd, at St. Luke's Hospital, from 9 a. m. to 12 m.

Surgical Clinic, by Professor Bartlett, at St. Anthony's Hospital, from 9 a. m. to 12 m.

Uranalytic Demonstration, by Professor Warren, at College Building, from 1 to 2 p. m.

Otologic Clinic, by Professor Shapleigh, at the O'Fallon Dispensary, from 2 to 3 p. m.

Anatomic Demonstrations, illustrated with the epidiascope, by Professor Terry, at College Building, from 3 to 4 p. m.

Physiology and Surgery of the Blood Vessels, with Demonstrations by Professor Guthrie, at College Building, from 4 to 5 p. m.

Thursday, May 28.

Gynecologic Clinic, by Professor Glasgow, at St. Louis Mullanphy Hospital, from 9 to 10 a. m.

Medical Clinic, by Prof. Ellsworth Smith, at St. Louis Mullanphy Hospital, from 10 to 11 a. m.

Medical Clinic, by Professor Steer, at St. Louis Mullanphy Hospital, from 11 a. m. to 12 m.

Surgical Clinic, by Professor Carson, at St. Louis Mullanphy Hospital, from 12 m. to 1 p. m.

Dermatologic Clinic, by Professor Grindon, at St. Louis Mullanphy Hospital, from 1 to 2 p. m.

Ophthalmologic Clinic, by Clinic Prof. A. E. Ewing, Clinic Lecturer W. A. Shoemaker, Clinic Lecturer J. W. Charles, Instructors J. H. Gross and N. M. Semple, and Dr. J. F. Shoemaker, at O'Fallon Dispensary, from 3 to 5 p. m.

Friday, May 29.

Gynecologic Clinic, by Clinic Professor Crossen, at Washington University Hospital, from 9 to 11 a. m.

Medical Clinic, by Professor Fischel and Clinic Prof. A. E. Taussig, at Washington University Hospital, from 11 a. m. to 1 p. m.

Otologic Clinic, by Prof. H. N. Spencer, at Washington University Hospital, from 1 to 2 p. m.

Surgical Clinic, by Professor Tuholske, at Washington University Hospital, from 2 to 4 p. m.

Neurologic Clinic, by Clinic Prof. Given Campbell, at Washington University Hospital, from 4 to 5 p. m.

Saturday, May 30.

Clinics by Professor Saunders, Clinic Professor Zahorsky and Drs. A. Levy and W. L. Johnson, at Bethesda Home, from 9 a. m. to 12 m.

Surgical Clinic, by Professor Bartlett, at St. Anthony's Hospital, from 9 a. m. to 12 m.

Orthopedic Clinic, by Dr. Allison, at Martha Parsons Hospital, from 2 to 4 p. m.

Monday, June 1.

Surgical Clinic, by Professor Tuholske, at Jewish Hospital, from 9 a. m. to 12 m.

Surgical Clinic, by Professor Mudd, at St. Luke's Hospital, from 9 to 11 a. m.

Clinic on Pulmonary and Cardiac Diseases, by Clinic Professor Behrens, from 2 to 3 p. m.

Rhinologic Clinic, by Dr. Creveling, at Washington University Hospital, from 2 to 3 p. m.

Ophthalmologic Clinic, by Clinic Professor Wolfner and Dr. Wiener, at Washington University Hospital, from 3 to 4 p. m.

THE SCIENTIFIC EXHIBIT.

Announcement of Plans for the Scientific Exhibit at Chicago Session in June.

The patronage of the Scientific Exhibit at the Chicago session of the American Medical Association will come largely

Fig. 1.—A panoramic view of Chicago from the water-front, looking west, showing some of the buildings on Michigan Avenue.

from the cities of the Mississippi and Ohio valleys. There will, of course, be a few devoted to the great cause who will send exhibits from distant points. The magnificent contributions made by the laboratories and museums of the east at the Boston and Atlantic City sessions will be difficult to equal. We have faith, however, in the energy and progressiveness of the men in the middle west to hold up the high standard set by the east. Our hope that the Chicago session will have a successful exhibit is still further supported by the fact that a number of persons from remote parts of the country have announced their intention to participate.

It is desired at this time to call especial attention to some new features in the exhibit which should appeal particularly to sanitarians and research workers.

A gold medal will be awarded for the best tuberculosis exhibit. Competing exhibits will be graded, however, on compactness consistent with elucidation of the whole tuberculosis problem.

The exhibit idea for instructing the public is perhaps the most practical and widely useful method thus far employed. It must have impressed every practical mind that tuberculosis exhibits thus far offered to the public have been large, cumbersome and expensive to maintain. The aim of the committee is to secure a model small exhibit, which at the same time is comprehensive. Such should be easily portable and adapted to installation in public libraries, railway stations and similar public places. Public health departments would find in such a compact exhibit a most valuable means of disseminating knowledge concerning this great sanitary question. A number have already signified their intention to participate in this contest, and it is not too much to hope that a satisfactory working model will be secured for the guidance of sanitarians.

Another gold medal will be offered for the best research exhibit.

All correspondence relating to this subject as well as demonstrations (lantern, gross or microscopic) should be directed to Dr. E. R. LeCount, Rush Medical College, Chicago.

Gross specimens will be demonstrated by a corps of competent assistants under the direction of Dr. LeCount. The visitors will be taken systematically in small groups around the collection, the demonstrator calling attention to salient points of specimens. The plan is greatly preferable to putting trust in labels. It insures the teaching of a practical lesson to the observer.

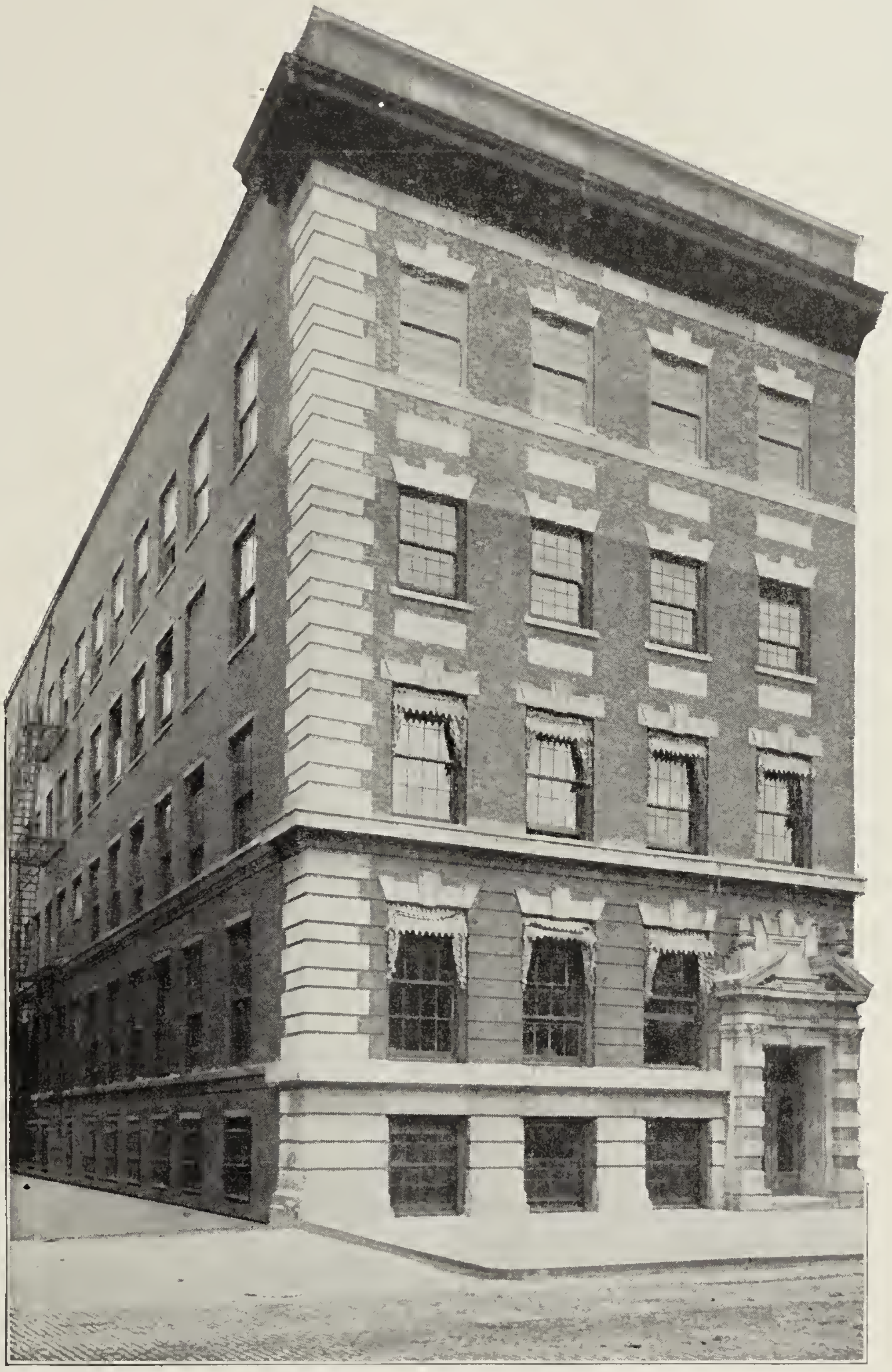


Fig. 2.—The American Medical Association's Building, located at 103 Dearborn Avenue. In this building are the editorial and business offices and the printing plant of The Journal.

Of interest, certainly, to exhibitors, will be the announcement that very handsome certificates of honor will be granted to a few of those presenting exhibits of superior character. The committee on awards for medals and certificates will consist of three members of the Association of national standing whose judgment and fairness will not be questioned.

Correspondence concerning the tuberculosis exhibits should be addressed to the director, Dr. Frank B. Wynn, 311 Newton-Claypool Building, Indianapolis.

Frank B. Wynn,
Director,
W. M. Late Coplin,
E. R. LeCount,
Committee on Scientific Exhibit.

SECTION PROGRAMS.

The following is a partial list of titles of papers to be read before the various sections. The order here is not necessarily the order which will be followed in the Official Program. This Official Program will be similar to those issued in previous years, and will contain the final program of each section, with abstracts of the papers, lists of committees, programs of the General Meetings and of the meetings of the House of Delegates, lists of entertainments, map of Chicago, etc. To prevent misunderstandings and to protect the interests of advertisers, etc., it is here announced that this Official Program will contain no advertisements. It is copyrighted by the American Medical Association and will not be distributed before the session. A copy will be given to each member on registration.

SECTION ON PRACTICE OF MEDICINE.

Chairman, C. F. Hoover, Cleveland, Ohio; Secretary, Joseph L. Miller, Chicago.

Chairman's Address: Paroxysmal Hematuria. C. F. Hoover, Cleveland.

A Case of Syphilitic Infection of Fourteen Years' Duration with Protracted and Unusual Febrile Symptoms. Henry C. Buswell, Buffalo.

Endarteritic Gangrene in Early Life. David Riesman, Philadelphia.

Fig. 3.—The First Regiment Armory at Michigan Avenue and Sixteenth Street. In this building will be the Scientific and Commercial Exhibits; the Place of Registration, Information Bureau and Postoffice. Diagrams of the internal arrangement are given on page 1486.

Modification of Typhoid During Menstruation, and the Successive Menstrual Epochs; Treatment. Alfred Stengel, Phila.

The Pathology, Diagnosis and Treatment of So-called Hodgkin's Disease. Hugo A. Freund, Detroit.

Absolutely Irregular Hearts. A. W. Hewlett, San Francisco.

Factors in Estimation of Blood Pressure, the Tonometer of von Recklinghausen. Joseph Eichberg, Cincinnati.

Serotherapy of Meningitis. L. W. Ladd, Cleveland.

Experiments on a Salt Free Diet, with Especial Reference to Diabetes Mellitus. E. P. Joslin and H. W. Goodall, Boston.

Physics of Physical Signs. H. D. Arnold, Boston.

Diagnostic Value of Cutaneous and Conjunctival Tuberculin Reactions. W. Engelbach and J. W. Shankland, St. Louis.

Clinical Manifestations of Cardiovascular Disease. Frank A. Jones, Memphis, Tenn.

Disguised Starvation. Nathan Rosewater, Cleveland, Ohio.

Viscosity of the Blood in Its Clinical Application. George W. McCaskey, Fort Wayne, Ind.

Causes of High Arterial Tension. L. F. Bishop, New York.

Cardiac Aneurism, with Report of a Case Associated with Mediastino-Pericarditis. James B. McElroy, Memphis, Tenn.

Temporary Periods of Improvement in Pernicious Anemia. Walter L. Bierring, Iowa City, Iowa.

A Clinical Method of Determining the Chlorid Content of the Blood. Douglas Vander Hoof, Richmond, Va.

Clinical Aspects of Certain Mediastinal Tumors. Frank Smithies, Ann Arbor, Mich.

The Influence on Practice of Recent Studies of the Circulation. A. D. Hirschfelder, Baltimore.

An Epidemic of Trichiniasis. S. Marx White, Minneapolis.

The Clinical Value of the Quantitative Estimation of Pepsin, C. B. Farr and E. H. Goodman, Philadelphia.

Epidemic of Pellagra. R. H. Bellamy, Wilmington, N. C.

The Value of Nitrogen Insufflation into the Pleura in the Treatment of Severe Forms of Unilateral Pulmonary Tuberculosis. Ludolph Brauer, Marburg, Germany.

Phases of Duodenal Ulcer. C. Graham, Rochester, Minn.

Compensatory Diarrhea. Heinrich Stern, New York.

Tuberculin Therapy. H. B. Weaver, Asheville, N. C.

Symposium on Typhoid Fever.

Conditions Similating Perforation in Typhoid. David L. Edsall, Philadelphia.

Channels of Infection in Relation to Suppression of Typhoid. M. J. Rosenau, Washington, D. C.

Treatment of Typhoid. Thos. McCrae, Baltimore.

SECTION ON SURGERY AND ANATOMY.

Chairman, Rudolph Matas, New Orleans; Secretary, Willard Bartlett, St. Louis.

Symposium on Surgery of Vascular System.

Observations, Clinical and Experimental, on Occlusion of the Abdominal and Thoracic Aortas. W. S. Halsted, Baltimore.

Physiologic Aspects of Blood Vessel Surgery with Demonstrations. C. C. Guthrie, St. Louis.

Results of the Transplantation of Blood Vessels and Organs (Lantern Slides). A. Carrel, New York.

A Statistical Summary of the Surgical Treatment of Aneurism by the Intrasaccular Method (Endo-aneurismorraphy). Rudolph Matas, New Orleans.

Symposium on the Technic of Cranial Surgery.

The Surgery of the Base of the Skull. Professor Chipault, Paris, France.

Lantern Slide Demonstrations on Cranial Technic. Harvey Cushing, Baltimore; Frank Hartley, New York; C. H. Frazier, Philadelphia.

Intracranial Complications of Ear and Nose Diseases. J. F. McKernon and C. G. Coakley, New York.

Symposium on Artificial Respiration.

Artificial Respiration in Its Physiologic Aspects. Professor Schaefer, Edinburgh, Scotland.

Positive Pressure in the Surgery of the Chest. Professor Brauer, Marburg, Germany.

Negative Pressure in the Surgery of the Chest. Dr. Sauerbruch, Marburg, Germany.

Fig. 4.—The Coliseum, situated on Wabash Avenue, near Sixteenth Street. Here will be given the president's reception and ball, and the entertainment on Thursday evening. This structure, which has a floor space of over two acres and a seating capacity of 15,000, will be the meeting place of the Republican National Convention, which opens June 16, 1908.

Artificial Intrapulmonary Positive Pressure. Experimental Applications in Surgery of the Lung. Samuel Robinson, Boston; N. W. Green, New York.

Local Applications in Surgery. James E. Moore Minneapolis.

Atavism in Facial Contours (Lantern). V. P. Blair, St. Louis.

Bier's Hyperemia. J. F. Binnie, Kansas City, Mo.

Observations on the Thyroid and Parathyroid. Herman Tuholske, St. Louis.

The Surgical Importance of Cervical Ribs. John B. Roberts, Philadelphia.

A Study of Anterior Poliomyelitis, with an Analysis of 647 Cases, from the Children's Hospital, Boston. R. W. Lovett, Boston.

A Successful Ligation of the Innominate Artery, with Presentation of Patient. William Britt Burns, Memphis, Tenn.

Surgery of the Upper Abdomen. B. G. A. Moynihan, Leeds, England.

The Diagnosis at Operation Between Chronic Ulcer and Cancer of the Stomach. F. B. Lund, Boston.

Ulcer of the Duodenum. William J. Mayo, Rochester, Minn.

The Surgical Diseases of the Pancreas. John B. Deaver, Philadelphia.

Pancreatitis in Its Relation to Gallstone Disease. W. D. Haggard, Nashville, Tenn.

The Cause of Death in High Intestinal Obstruction, as Demonstrated by Surgical Experimentation. J. W. D. Maury, New York.

Intestinal Anastomosis. Presentation of a New, Simple and Aseptic Method. Frank B. Walker, Detroit.

A Report on a Series of Abdominal Gunshot Wounds. Cunningham Wilson, Birmingham, Ala.

Invagination of Limited Annular Gangrene of the Small Bowel, versus Resection. J. E Summers, Omaha.

Gas Cysts of the Intestine. J. M. T. Finney, Baltimore.

Fig. 5.—A view of State Street in the shopping district.

The Reports of a Case of Chronic Peritonitis with Complete Obstruction Caused by Numerous Transverse Constrictions of a Previously Undescribed Character Throughout the Intestine. Miles F. Porter, Ft. Wayne, Ind.

The Effects of Normal and Abnormal Variations in Peristalsis on Peritoneal Absorption. J. L. Yates, Milwaukee.

My Present Position on Appendix Questions. Robert T. Morris, New York.

A Case of Acute Diverticulitis of the Sigmoid Operated on Before Rupture Had Taken Place. George Emerson Brewer, New York.

Cancer of the Rectum. Deductions Derived from One Hundred Personal Experiences in Extirpation of the Rectum and Sigmoid. James P. Tuttle, New York.

Enterovesical Fistula, with Especial Reference to Its Surgical Treatment. F. W. Parham and Joseph Hume, New Orleans.

A New and Rapid Method of Perineal Drainage in Suprapubic Cystotomy. Joseph Ransohoff, Cincinnati.

The Preservation of Anatomic Dissections with Permanent Color of Muscles, Vessels and Organs by a New Method. Preliminary Note. Edmond Souchon, New Orleans.

Demonstration of Patients Operated on for Cleft Palate. T. W. Brophy, Chicago.

Abstracted Report of the Anesthesia Commission. Chairman, J. G. Mumford, Boston.

Some New Facts Regarding Calculi and Tumors of the Bladder. Carl Beck, New York.

SECTION ON PATHOLOGY AND PHYSIOLOGY.

Chairman, W. B. Cannon, Boston; Secretary, M. J. Rosenau, Washington, D. C.

Chairman's Address. Walter B. Cannon, Boston.

A Critic of Some of the More Recent Work and Ideas on Nutrition. L. Breisacher, Detroit.

Some Observations on (a) Growth of Hen, (b) Egg Production, (c) Weight of Eggs, (d) Fertility of Eggs, and (e) Size of Chicks After Extirpation and Transplantation of Ovaries in Chickens. C. C. Guthrie, St. Louis.

Experiments Toward a Physiologically Isotonic Solution of Salts. Herman M. Adler, Boston.

Chloroform Necrosis of the Liver. H. Gideon Wells, Chicago.

Safeguards of the Heart. Henry Sewall, Denver.

Some New Statistics on Blood Plates and Some New Practical Points on Counting Them. George T. Kemp, with the collaboration of C. W. Yeek and Carl Ten Broeck, Urbana, Ill.

The Cleavage of Bacterial Proteids by Exposure to Direct Sunlight. Victor C. Vaughan, Ann Arbor.

Anaphylaxis Induced by Bacterial Proteids. D. H. Bergey, Philadelphia.

Therapeutic Immunization in Mixed Infections. A. P. Ohlmacher, Detroit.

Serum Diagnosis of Syphilis. William J. Butler, Chicago.

Histoplasma Capsulatum. Samuel T. Darling, Ancon, Panama.

Some Phases of Mycotic Diseases. L. H. Pammel, Ames, Iowa.

Demonstration of Diseased Conditions of the Appendix. E. R. Le Count, Chicago.

Symposium on Typhoid.

Treatment of Typhoid. Thomas McCrae, Baltimore.

Symptoms Resembling Perforation in Typhoid. D. L. Edsall, Philadelphia.

Typhoid Bacillus Carriers. William H. Park, New York.

The Value of Blood Cultures. Francis W. Peabody, Boston.

The Metabolism of Typhoid Fever. P. A. Shaffer, New York.

The Channels of Infection, with Special Reference to Suppression of Typhoid Fever. M. J. Rosenau, Washington.

The Alleged Urinary Manifestations of Disease of the Pancreas. J. Henry Schroeder, Cincinnati.

Some Observations on the Diuretic Action of Adrenalin and the Active Principle of the Pituitary Gland. E. M. Houghton, Detroit.

Further Results in Suprarenal Transplantation. F. C. Busch, Buffalo.

The Nature and Cause of Edema. Martin H. Fischer, Livermore, Cal.

Some New Points in the Physiology of Lymph and Lymph Formation. A. J. Carlson, Chicago.

Multiple Hernias of the Cerebrum and Cerebellum Due to Intracranial Pressure (second communication). S. Burt Wolbach, Boston.

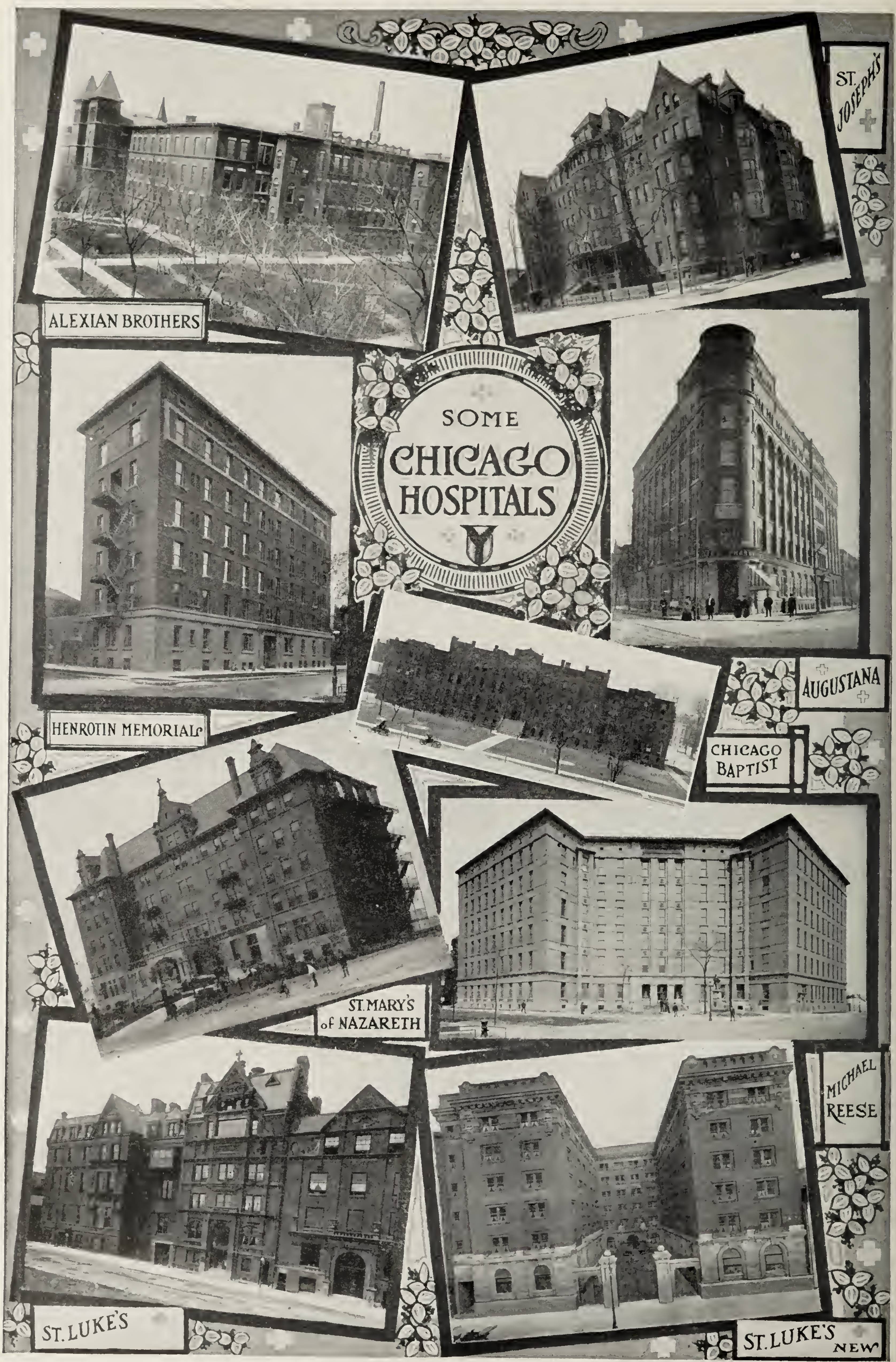
Joint Meeting with Scientific Section.

How Is the Activity of Phagocytes Affected by Electrolytes, by Non-Electrolytes and Changes in Osmotic Tension? Oliver Harry Brown, Mount Vernon, Mo.

Physio-Mechanical Causes of Pathologic Conditions. R. C. Falconer, Lexington, Ky.

Some Points on the Relation of the Intestinal Flora to Peptic Ulcer. Fenton B. Turck, Chicago.

Tubercle Bacilli in Sputum of Acute Colds, with Disappearance of Bacilli During Convalescence. L. Napoleon Boston, Philadelphia.



SOME CHICAGO HOSPITALS

ALEXIAN BROTHERS

ST. JOSEPH'S

HENROTIN MEMORIAL

AUGUSTANA

CHICAGO BAPTIST

ST. MARY'S of NAZARETH

MICHAEL REESE

ST. LUKE'S

ST. LUKE'S NEW

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

Chairman, Walter B. Dorsett, St. Louis; Secretary, W. P. Manton, Detroit.

Chairman's Address: Criminal Abortion in Its Broadest Sense. Walter B. Dorsett, St. Louis.

Three Procedures for Entering the Abdominal Cavity: the Vaginal, the Vertical Abdominal and the Pfannenstiel; the Indications for, and Their Relative Advantages and Disadvantages. E. E. Montgomery, Philadelphia.

The Preparation and After-treatment of Abdominal Section. Henry T. Byford, Chicago.

The Care of Patients After Abdominal Section, with Especial Reference to the Period of Time They Should be Kept Recumbent. C. C. Frederick, Buffalo.

A Study of the After Condition of Median Abdominal Wounds Healing Primarily, Which Were Closed in Layers by Absorbable Sutures; with Special Reference to the Strength of Union of the Fascia and the Uncertainty of the Staying Qualities of Ordinary Catgut. Le Roy Broun, New York.

Abdominal Cervical Cesarean Section. Johannes Pfannenstiel, Kiel, Germany.

Cesarean Section, with Report of Two Cases. J. M. Trigg, Shawnee, Okla.

Vaginal Cesarean Section and Its Place in Obstetric Surgery. Report of Five Cases. Reuben Peterson, Ann Arbor.

Some Experiences with Extrauterine Pregnancy and Report of Cases. H. E. Hayd, Buffalo.

Ruptured Tubal Pregnancy. When Shall We Operate? Hunter Robb, Cleveland.

Obstetric, Septic and Anesthetic Toxemias. H. G. Wetherill, Denver.

Diphtheritic Genital Infection Simulating Puerperal Fever. William Cuthbertson, Chicago.

Genital Tuberculosis. A. Martin, Griefswold, Germany.

The Development of Malignancy in Operation Wounds. I. S. Stone, Washington.

The Serum Treatment of Carcinoma. S. Strauss, New York.

Uterus and Stomach; Their Anatomic, Physiologic and Pathologic Relationship. Fred J. Taussig, St. Louis.

Acute Dilatation of the Stomach as a Postoperative Complication in Gynecologic Surgery. Lewis S. McMurtry, Louisville.

Bowel Complications Following Gynecologic and Obstetric Operations. Channing W. Barrett, Chicago.

The Expectant Treatment of Ureteral Calculus, Its Indications and Results. Charles Lester Leonard, Philadelphia.

The Treatment of Ureteral and Renal Pelvic Inflammation by Means of Antiseptic Injections. Edgar Garceau, Boston.

The Corset for Movable Kidney and Associated Visceral Ptoses. A. E. Gallant, New York.

The Suture; Its Place in Surgery. Henry O. Marcy, Boston.

The Female Perineum from a Physiologic Standpoint. J. Riddle Goffe, New York.

The Treatment of Uterine Fibromyomata Associated with Marked Anemia. Benjamin R. Schenck, Detroit.

The Conservative Surgeon and the Symptomless Uterine Fibroid. Thomas B. Eastman, Indianapolis.

The Non-surgical Treatment of Uterine Displacements. H. J. Boldt, New York.

The Advisability of Prompt Evacuation of the Uterus in the Treatment of Eclampsia. Henry D. Fry, Washington.

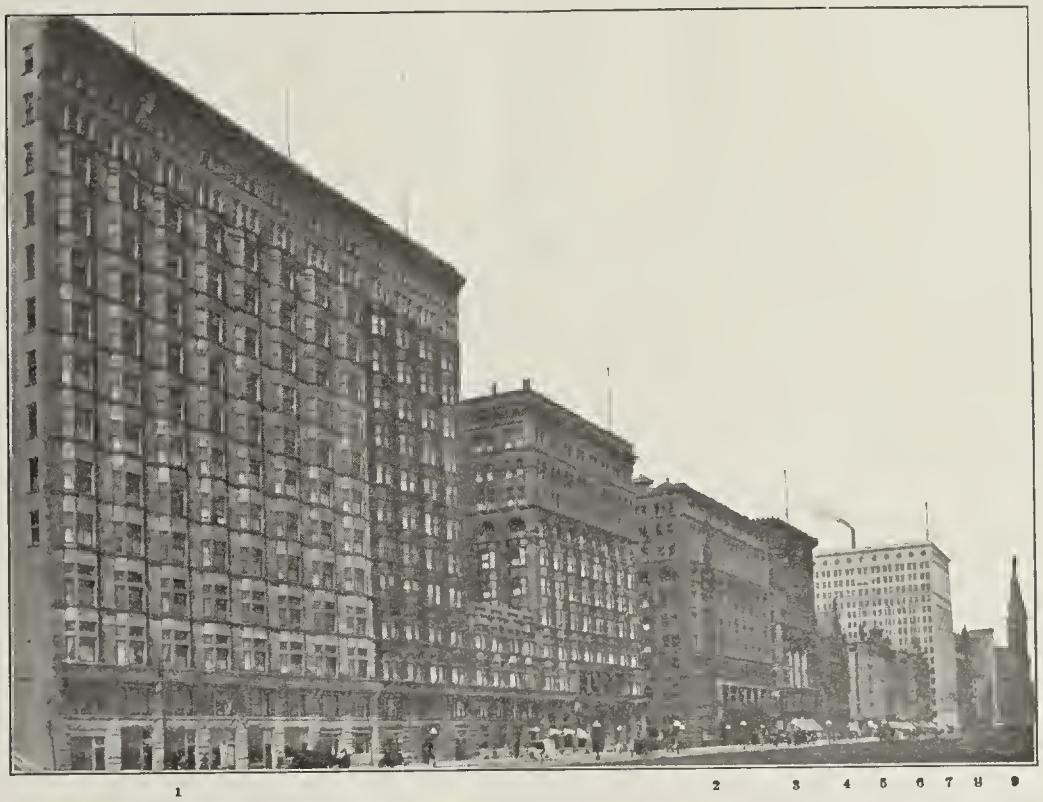


Fig. 7.—Michigan Avenue, looking north. 1, Auditorium Annex; 2, Auditorium Hotel; 3, Fine Arts Building; 4, Chicago Club; 5, Victoria Hotel; 6, Stratford Hotel; 7, Railway Exchange Building (the seventeen-story, light colored structure); 8, Orchestra Hall, built by popular subscription for the Theodore Thomas Orchestra; 9, the Montgomery Ward Building (with tower).

Report of a Case of Traumatic Rupture of the Uterus and Bladder During Labor at Full Term. Hysterectomy, Repair of Bladder, Recovery. John Young Brown and Percey H. Swahlan, St. Louis.

Abnormal Secretion from Mammary Glands in Non-pregnant Women. George Gellhorn, St. Louis.

The Menopause. Daniel H. Craig, Boston.

Ablatio Placentæ. (Premature Detachment of the Normally Situated Placenta.) Rudolph Wieser Holmes, Chicago.

Prolapse of the Rectum and Sigmoid Flexure Following Hysterectomy. L. J. Hirschman, Detroit.

The Adjustable Canvas Chair as an Aid in the Murphy Treatment of Diffuse Suppurative Peritonitis. D. Todd Gilliam, Columbus, Ohio.

SECTION ON OPHTHALMOLOGY.

Chairman, William H. Wilder, Chicago; Secretary, Albert E. Bulson, Jr., Fort Wayne, Ind.

Chairman's Address. William H. Wilder, Chicago.

Address by Special Invitation. Developmental Deformities of the Crystalline Lens. E. Treacher Collins, London, Eng.

A Further Contribution to the Possible Relationship of Autointoxication to Certain Diseases of the Cornea and Uveal Tract. (Special Investigation.) G. E. de Schweinitz and Charles A. Fife, Philadelphia.

The Eye as a Contributory Factor in Tuberculosis. F. P. Lewis, Buffalo.

The Calmette Ocular Reaction to Tuberculin. H. C. Parker, Indianapolis.

Ocular Complications of Pregnancy. (Special Investigation.) Hiram Woods, Baltimore.

The Relation of Ocular and Cardiovascular Disease. Melville Black, Denver.

Unilateral Voluntary Nystagmus, with Report of a Case. Walter L. Pyle, Philadelphia.

Zonular Opacity of the Cornea. F. C. Heath, Indianapolis.

Diffuse Interstitial Keratitis in Acquired Syphilis. A. E. Davis, New York City.

Opacification of the Cornea Following Cataract Extraction. Vard H. Hulen, San Francisco.

The Surgical Treatment of Orbital Complications in Disease of the Nasal Accessory Sinuses. Arnold Knapp, New York City.

An Infrequent Type of Optic Nerve Atrophy. H. F. Hansell, Philadelphia.

Some Clinical Aspects of Lenticular Astigmatism. Edgar S. Thomson, New York City.

A Study of One Hundred Refraction Cases in Indians Fresh from the Plains. Clarence Porter Jones, Newport News, Va.

The Association of Lens Opacity with Normal and Pathologic Blood Pressures. D. W. Greene, Dayton, Ohio.

The Treatment of Some Forms of Lens Displacement Other Than Those of Traumatic Origin. L. D. Brose, Evansville, Ind.

History of Iridotomy. Knife Needle vs. Scissors. Description of Author's V-Shaped Method. S. L. Ziegler, Philadelphia.

Miotics vs. Iridectomy in the Treatment of Simple Chronic Glaucoma. An Analytical Study of Sixty-five Cases Treated by Miotics Over a Series of Years. (Special Investigation.) W. C. Posey, Philadelphia.

A Better Prognosis in Penetrating Wounds of the Eyeball. J. A. Donovan, Butte, Mont.

The Treatment of Strictures of the Nasal Duct with Lead Styles. H. Moulton, Fort Smith, Ark.

Imperforation of the Lachrymonasal Duct in the Newborn and Its Clinical Manifestations. William Zentmeyer, Philadelphia.

Principles Underlying the Operative Treatment of Strabismus. (Special Investigation.) Edward Jackson, Denver.

Motais Operation for Ptosis. Henry Dickson Bruns, New Orleans.

The Treatment of Recurrent Pterygium. H. Gifford, Omaha.

The Relation of So-called Ophthalmic Migraine to Epilepsy. A. A. Hubbell, Buffalo.

Restoration of the Conjunctival Cul-de-Sac for the Insertion of an Artificial Eye. M. Wiener, St. Louis.

Palliative Operations for Choked Disc. William G. Spiller, Philadelphia.

Decompression Operations, with Especial Reference to Changes in the Eye Grounds. Harvey Cushing and James G. Bordley, Baltimore.

The Optic Nerve Changes in Multiple Sclerosis, with Remarks on the Causation of Non-toxic Retrobulbar Neuritis in General. Ward A. Holden, New York City.

Migraine: An Occupation Neurosis. G. L. Walton, Boston.

Differential Diagnosis of Affections of the Optic Nerve. Harry Friedenwald, Baltimore.

[The last five papers will be presented in the joint session with the Section on Nervous and Mental Diseases.]

A Contribution to the Study of Streptococcic Infections of the Adenoid in Adults. Alice G. Bryant, Boston.

Joint Session with Section on Surgery.

Intracranial Complications of Ear Disease. James F. McKernon, New York City.

Intracranial Complications of Nasal Disease. C. G. Coakley, New York City.

Symposium on Correction of Nasal Deformities,

John O. Roe, Rochester, N. Y.
Joseph C. Beck, Chicago.

Submucous Resection of the Lateral Nasal Wall in Chronic Empyema of the Antrum, Ethmoid and Sphenoid. R. Bishop Canfield, Ann Arbor, Mich.

A Study of the Sphenoidal Sinus. Joseph A. Gibson, Buffalo.

The Present Status of the Radical Operation for Empyema of the Sphenoid Sinus, with Demonstration of a New Instrument. Ross H. Skillern, Philadelphia.

The Treatment of Hypertrophic Rhinitis (Hay Fever), Especially with Reference to Injections with Alcohol. Otto G. Stein, Chicago.

Facio-Hypoglossal Anastomosis. George F. Cott, Buffalo, N. Y.

Ear Symptoms of Cardiovascular Disease. Louis F. Bishop, New York City.

Middle Ear Sclerosis, or Atrophic Middle Ear Catarrh. W. Sohier Bryant, New York City.

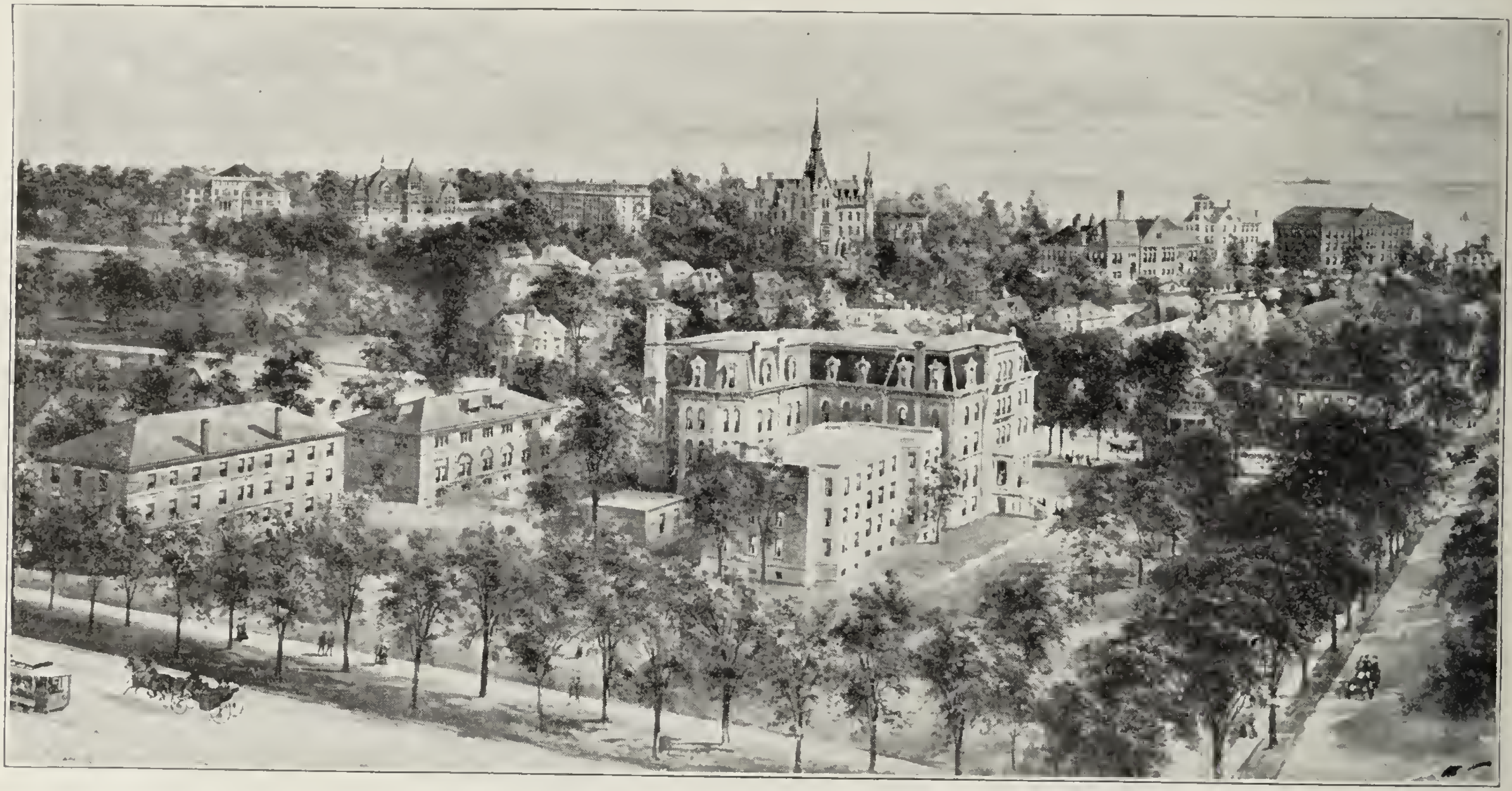


Fig. 8.—The liberal arts and theological departments of Northwestern University, with Lake Michigan on the eastern horizon. The building occupying the center of the photograph is a girls' dormitory, Willard Hall; to the northwest of it is the School of Music. Directly west of the latter is another dormitory for girls, Chapin Hall. The building in the background to the extreme left of the picture is Lunt Library; the next two buildings to the right are, in order, Memorial Hall and Heck Hall of the Garrett Biblical Institute. The building with the spires is University Hall, containing recitation halls and offices; closely contiguous to it (and appearing in the picture as part of it) is the School of Oratory. The structure, to the rear of which rises a smoke stack, is Science Hall, with the Old College lying to the east of it. The substantial building in the background on the extreme right is Fisk Hall, preparatory school. In the middle distance to the extreme right, and almost hidden by foliage, is another girls' dormitory, Pierson Hall. The professional departments are in the business center of Chicago and on the south side.

SECTION ON LARYNGOLOGY AND OTOLOGY.

Chairman, H. W. Loeb, St. Louis; Secretary, W. Sohier Bryant, New York City.

Chairman's Address. H. W. Loeb, St. Louis.

Symposium. Differential Diagnosis of Luetic, Tuberculous and Malignant Diseases of the Larynx.

Histologic Diagnosis. D. Braden Kyle, Philadelphia.

Laryngoscopic Diagnosis. Chevalier Jackson, Pittsburg.

Systemic Tests. John W. Boyce, Pittsburg.

Laryngeal Manifestations Occurring in Locomotor Ataxia and Multiple Sclerosis. Wolff Freudenthal, New York City.

Tonsillectomy in Children Under Ether Anesthesia. A Hospital Operation. Edwin Pynchon, Chicago.

Laryngeal Manifestations Occurring in Locomotor Ataxia

Diagnosis of Functional Ear Disease. Hermann Stolte, Milwaukee, Wis.

Analgesia of the Nasal Mucous Membrane as a Prognosis in the Treatment of So-called Dry Catarrhal Deafness. Dunbar Roy, Atlanta, Ga.

Middle Ear Surgery. Philip Hammond, Boston.

Meato-Mastoid Operation for Chronic Mastoiditis. William L. Ballenger, Chicago.

Resection of the Labyrinth and Their Significance in the Diagnosis of Suppurative Labyrinthitis. George E. Davis, New York City.

A Case of Acute Mania Following Ligation of the Jugular for Otitic Symptoms. Eugene A. Crockett, Boston.

Session Devoted to Presentation of Specimens, Instruments, etc.

The following are to contribute to the anatomic and pathologic exhibit:

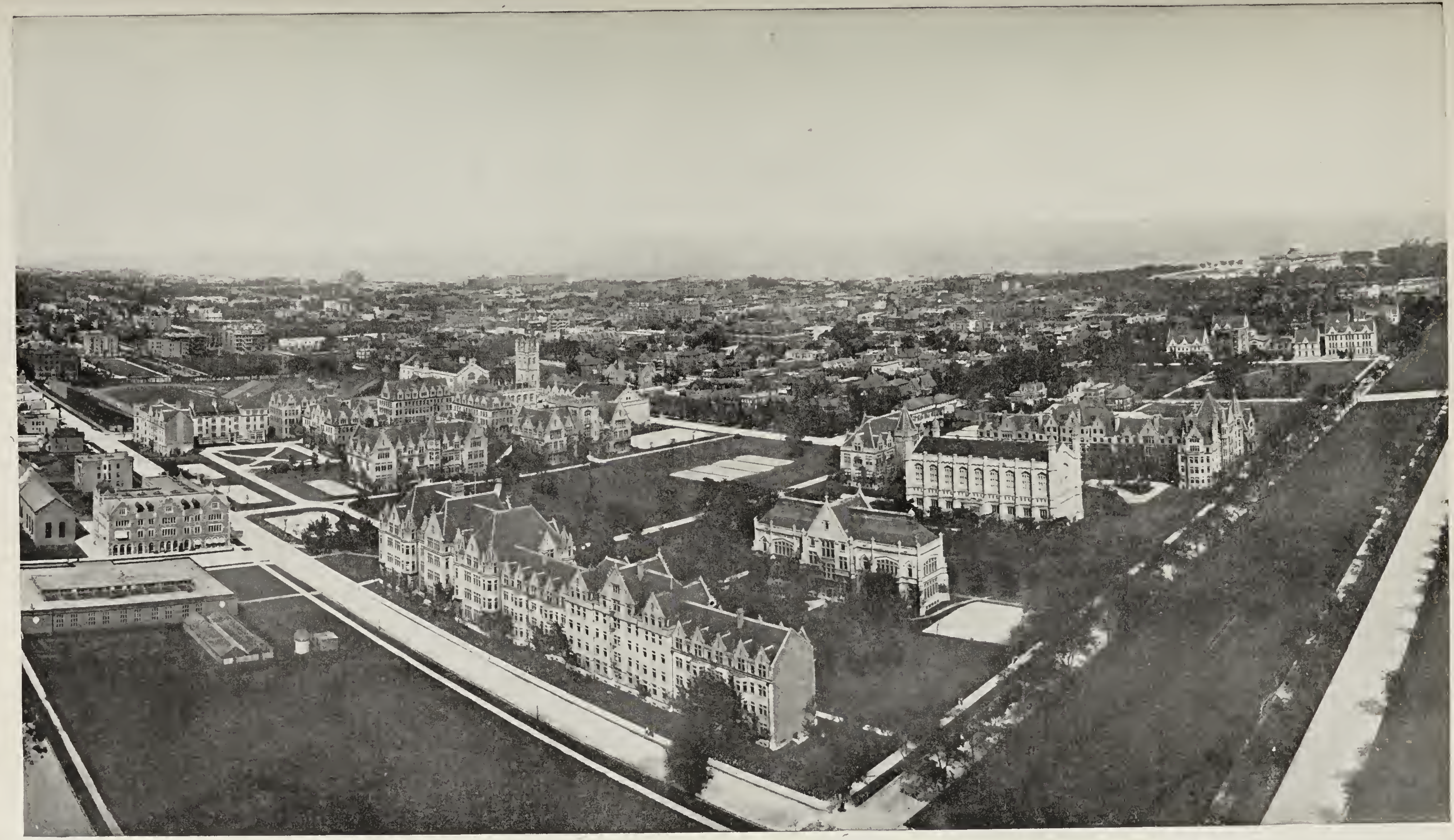


Fig. 9.—A general view of the University of Chicago and its surroundings. The photograph here reproduced was taken from a balloon as it floated over the Midway Plaisance, with the camera pointing northeast. Beginning in the foreground, the buildings lying at right angles to the street which stretches away to the right are: Men's Dormitory and Cobb Lecture Hall, then Haskell Museum, next the Law Building (Walker Geological Museum to the northeast of Law Building), next the Women's Residence Halls, and two blocks beyond, the Emmons Blaine Hall (School of Education) and the Manual Training Building. The Mitchell Tower in the middle distance, a little to the left of the center of the view, rises above Hutchinson Hall, the Reynolds Club and Mandel Assembly Hall. To the west are the Hull Biological Laboratories, and toward the foreground are seen the Kent Chemical Laboratory and the Ryerson Physical Laboratory. The large building north of the tower is the Bartlett Gymnasium, to the west of which lies the athletic ground, Marshall Field. The buildings on the corner south of the Field are Hitchcock and Snell Halls, dormitories for men. Other buildings of the professional departments are in the business center and the west side of Chicago.

The distance from the corner in the extreme foreground to the lake is about one mile. On the horizon is Lake Michigan on the shore of which in this view is Jackson Park. The domed building in the far distance on the extreme right is the Field Museum, which originally was the Fine Arts Building of the World's Columbian Exposition of 1893.

Frank Allport, Chicago. Some pathologic, microscopic and anatomic specimens from the special pathologic and anatomic laboratory of the Eye and Ear Department of the Northwestern University Medical School.

Emil Amberg, Detroit. Extended sinus thrombosis, complicating chronic suppurative otitis media with extradural and subdural and brain abscess. Operation, Autopsy. Specimens.

M. H. Cryer, Philadelphia. Specimens showing the variations of the frontal sinuses and their outlets. Variations in sphenoidal and maxillary sinuses. Demonstration of use of the spiral osteotome in craniotomy.

Fig. 10.—The Federal Building. This building occupies one block, being bounded by Jackson Boulevard, Clark, Adams and Dearborn Streets; it was erected at a cost of over four and one-half million dollars, and contains the main postoffice (there are fifty branch offices in the city), the subtreasury and various other government departments.

M. C. Findley, Grant's Pass, Ore.

Hal Foster, Kansas City, Mo. Specimen of large mixofibroma.

Otto T. Freer, Chicago. 1. Nasal septum showing a marked crest-shaped deflection following the superior border of the vomer. 2. Section of head showing outer wall of nasal fossa. 3. Pernasal forceps for the removal of adenoid vegetations through the nose.

H. Friedenwald, Baltimore. Two series of sections of the adult head.

J. Holinger, Chicago, Specimens.

Emil Mayer, New York City. Plates from Prof. Onodi's specimens.

Kaspar Pischel, San Francisco. 1. Demonstrations of method of using collodion as a dressing after nasal operations. 2. A tongue holder for tonsil operations under general anesthesia.

L. F. Page, Indianapolis. Specimens of carcinoma of the larynx.

A. E. Prince, Springfield, Ill. A simplified operation for frontal sinus obliteration.

G. E. Shambaugh, Chicago. Histologic preparations.

W. H. Steers, Brooklyn.

F. C. Todd, Minneapolis. Improved adenoid curette.

C. F. Welty, San Francisco. 1. Foreign body removed from larynx. 2. Tonsils removed in capsule. 3. Photographs.

SECTION ON HYGIENE AND SANITARY SCIENCE.

Chairman, Colonel W. C. Gorgas, U. S. A., Ancon, Panama; Secretary, S. T. Armstrong, New York.

Chairman's Address. Col. W. C. Gorgas, U. S. A., Ancon, Panama.

Measures to Prevent Malaria on the Isthmus of Panama. Henry R. Carter, U. S. P. H. & M.-H. S., Ancon, Panama.

Mosquito Work and Yellow Fever. J. H. White, U. S. P. H. & M.-H. S., New Orleans.

Mosquito Extermination in the Tropics. J. A. Le Prince, Ancon, Panama.

Tropical Sanitation. V. G. Heiser, U. S. P. H. & M.-H. S., Manila, P. I.

Symposium on the Necessity for Uniformity in Vital Statistics.

J. N. Hurty, Indianapolis.
E. J. Lutz, Kansas City, Kan.
M. O. Heckard, Chicago.

Prophylaxis and Management of Leprosy. L. E. Cofer, U. S. P. H. & M.-H. Service, Honolulu.

Municipal Sanitation. Charles V. Chapin, Providence, R. I.

Milk as a Carrier of Infection. John W. Trash, U. S. P. H. & M.-H. Service.

The Necessity of Obtaining Negative Cultures from All the Inmates Before Disinfecting a House for Diphtheria. Myer Solis-Cohen, Philadelphia.

The Ocular Tuberculin Reaction as a Means of Diagnosis and Control. Frank Smithies, Ann Arbor.

Early Diagnosis of Consumption as a Measure of Control. Especially the Relation of Tuberculin Thereto. W. A. Evans, Chicago.

The Control of Smallpox. H. M. Bracken, St. Paul.

The Responsibility of Municipalities in the Ohio Valley for the Epidemics of Typhoid Fever. W. Forest Dutton, Pittsburg.

Choleriform Diarrhea of Cold Weather—Winter Cholera. O. C. Breitenbach, Escanaba, Michigan.

Prophylaxis in Communicable Diseases. M. J. Rosenau, U. S. P. H. & M.-H. Service, Washington.

Examination to Establish Whether a Gonorrhea is Cured. F. C. Valentine, New York.

Fig. 11.—The Chicago Public Library, located at Michigan Avenue and Washington and Randolph Streets. The interior of this building is magnificently finished in marble and expensive mosaics. It contains over 300,000 volumes and has an aggregate annual circulation of nearly three million volumes.

SECTION ON DISEASES OF CHILDREN.

Chairman, Edwin E. Graham, Philadelphia; Secretary, Samuel J. Walker, Chicago.

Chairman's Address: Infant Mortality. Edwin E. Graham, Philadelphia.

Hemorrhage of the Suprarenal Capsules in the Newly Born, with Report of Two Cases Due to Infection. Jennings C. Litzenberg and S. Marx White, Minneapolis.

Hemorrhages of the New-Born. Henry E. Tuley, Louisville.

Cerebellar Symptoms in Hydrocephalus, with a Pathologic Report of a Case Associated with Syringomyelia. John H. W. Rhein, Philadelphia.

Circulatory Disturbances in Diphtheria. John Howland, New York City.

The Spasmodic Disorders of the Respiratory Tract in Children. Charles G. Kerley, New York.

Chronologic and Anatomic Age. Thomas Morgan Rotch, Boston.

The Clinical Value of Blood Examination in Children. Louis Fischer, New York City.

A Study of the Anemias of Infancy. John Lovett Morse, Boston.

Opsonic Work in Children, with Special Reference to the Gonococcus. F. S. Churchill and A. C. Soper, Chicago.

The Vaccine and Serum Treatment of Gonorrhea in Female Children. William J. Butler and J. P. Long, Chicago.

Hydrotherapy in Scarlatina, with Special Reference to Tub Baths at Water Teperature of 90 F. for Relief of Nervous Symptoms in Early Stages of the Disease. D. S. Hanson, Cleveland, Ohio.

An Epidemic of Hemorrhagic Nephritis Following Scarlet Fever. C. F. Wahrer, Fort Madison, Iowa.

The Development of the Infantile Stomach. D. E. English, Mill Burn, N. J.

A Study of the Quantity and Quality of Breast Milk During the First Two Weeks of the Puerperium. Effa V. Davis, Chicago.

The Problem of Breast Feeding. J. Ross Snyder, Birmingham, Ala.

The Character of the Stools in Infancy as Related to the Intestinal Findings. J. H. Mason Knox, Jr., Baltimore.

Studies in Infantile Indigestion. Alfred Friedlander, Cincinnati.

A Summer Camp for Treatment of Sick Babies. Walter Graham Murphy, Hartford, Conn.

Adaptation of the Fresh Air Treatment of Tuberculosis to Pediatric Practice. Alexander McAlister, Camden, N. J.

The Ideal Intestinal Antiseptic in Diseases of Children. G. E. Robbins, Chillicothe, Ohio.

Hyperpyrexia in Children: Causes and Treatment. Philip Marvel, Atlantic City.

Paralytic Dementia in Childhood, with Report of a Case and the Brain Changes. Arthur W. Fairbanks, Boston.

A Consideration of Some Fallacious Standards Employed in Artificial Infant Feeding. Godfrey Roger Pisek, New York City.

Fig. 12.—The Freight Subway. This tunnel system, which is fifty feet below the surface of the city streets, is used to transport, by means of electric cars, freight and mail between the various railway freight depots and the large commercial houses. Over forty-five miles of this system are in operation, passing beneath the Chicago River at eleven points.

The Use of Whey in Infant Feeding. Henry L. K. Shaw, Albany, N. Y.

Present Status of Buttermilk in Infant Feeding. H. Lowenburg, Philadelphia.

Feeding of Fat. A. Jacobi, New York.

High Fat Percentages in Infant Feeding, Their Causes and Effects. Thomas S. Southworth, New York City.

The Prephysical Signs of Tuberculosis. W. C. Hollopeter, Philadelphia.

Rachitic Erosions of the Permanent Teeth Associated with Visual Defects. I. A. Abt, Chicago.

The Ambulatory Treatment of Pneumonia in Infants and Young Children. T. W. Kilmer, New York.

Curative Effect of Rest in Children, with Persistent Loss of Appetite. Irving M. Snow, Buffalo.

SECTION ON NERVOUS AND MENTAL DISEASES.

Chairman, T. H. Weisenburg, Philadelphia; Secretary, W. A. Jones, Minneapolis.

Chairman's Address. T. H. Weisenburg, Philadelphia.

Associated Movements. Charles E. Beevor, London, England. Discussion opened by Charles K. Mills, Philadelphia.

Epidemic Infantile Paralysis. M. Allen Starr, New York City.

Fig. 13.—Scene on the Chicago River. Since the completion of the Chicago Drainage Canal the current of this river has been reversed and its waters, instead of flowing to the Atlantic by way of the Great Lakes and the St. Lawrence, now empty into the Gulf of Mexico.

The Cortical Centers for Taste and Smell, Illustrated by the Study of a Case of Brain Tumor with Necropsy. Charles K. Mills, Philadelphia.

A Case of Cerebellar Tumor. Wharton Sinkler, Philadelphia.

Traumatic Cervical Myelomalacia. Report of a Case with Necropsy. Carl D. Camp, Ann Arbor, Mich.

Myotonia Atrophica. J. Ramsay Hunt, New York.

The Symptom-Complex of Central Neuritis. Isadore H. Coriat, Boston.

Significance of Pupillary Changes in Tabes. Edward D. Fisher, New York.

Cerebral Thrombosis, Venous and Arterial: A Clinical, Pathologic and Experimental Study. D. J. McCarthy and Milton K. Meyers, Philadelphia.

Disease of the Cerebral Vessels with Its Problems in Diagnosis. W. A. Jones, M.D., Minneapolis, Minn.

A Study of Certain Nutritional Phenomena of Hysteria. James J. Putnam, Boston.

Certain Affections in Children Commonly Classed as Hysteria. William N. Bullard, Boston.

A Study of Three Cases of Hysterical Ocular Phenomena Studied from the Standpoint of Dissociation. Sidney I. Schwab, St. Louis.

A Study of the Eye in Mental Defectives. L. Pierce Clark and Martin Cohen, New York.

Injuries of Cranial Nerves from Fractures of the Skull. John J. Thomas, Boston.

Cerebral Inhibition, as Illustrated in General Pathologic Conditions in the Nervous System. H. A. Tomlinson, St. Peter, Minn.

Hemorrhage into the Ventricles; Its Relation to Convulsions and Rigidity in Apoplectiform Hemiplegia. Alfred Reginald Allen, Philadelphia.

Experiments in Psycho-galvanic Reactions from Co-conscious (Subconscious) Ideas in a Case of Multiple Personality. Morton Prince, Boston, and Frederick Peterson, New York.

Elements of Psychiatric Prognosis. F. X. Dercum, Philadelphia.

Some Disorders of Attention and Their Treatment. Howell T. Pershing, Denver.

Pathologic Report of the Nervous System in a Case of Spondylose Rhizomelique. John H. W. Rhein, Philadelphia.

Traumatic Disfigurement, Depression, Suicidal Attempts, Delusions of Negation: Bronchiectatic Abscesses of Lungs, Abscesses of Brain, Chronic Meningitis. E. E. Southard and J. B. Ayer, Jr., Boston.

Cerebral Rheumatism. Herman H. Hoppe, Cincinnati.

Two Cases of Multiple Neuritis. Philip Zenner, Cincinnati.

The Attitude of Neurologists Toward Electrotherapy. Frank R. Fry, St. Louis.

The Respiratory Signs of Chorea Minor. William W. Graves, St. Louis.

Insanities Caused by Acute and Chronic Intoxications with Opium and Cocain; a Study of 171 Cases. Alfred Gordon, Philadelphia.

The Wild Duck. A Study in Psychopathology. Smith Ely Jelliffe, New York.

Psychotherapy. M. A. Bliss, St. Louis.

Fig. 14.—The Lincoln Statue and its approach. This statue, the work of St. Gaudens, and one of his most noted pieces, stands at the south entrance to Lincoln Park.

Neuromuscular Co-ordinations Having Educational Value. Luther H. Gulick, New York.

The Use of Physical Measures in the Therapeutics of the Nervous System. William Benham Snow, New York.

Röntgeneology in Neurology. Mihran K. Kassabian, Philadelphia.

Joint Session with Section on Ophthalmology.

Palliative Operations for Choked Discs. William G. Spiller, Philadelphia, and Harvey Cushing, Baltimore.

Fig. 15.—The Linné Statue, another of the numerous pieces of statuary to be found in Lincoln Park.

Optic Nerve Changes in Multiple Sclerosis. Ward A. Holden, New York City.

Migraine—an Occupation Neurosis. George L. Walton, Boston.

Differential Diagnosis of Morbid Conditions of the Optic Nerve. Harry Friedenwald, Baltimore.

An Infrequent Type of Optic Nerve Atrophy. H. F. Hansell, Phila.

The Relation of So-called Ophthalmic Migrains to Epilepsy. A. A. Hubbell, Buffalo.

SECTION ON STOMATOLOGY.

Chairman, E. A. Bogue, New York; Secretary, Eugene S. Talbot, Chicago.

Chairman's Address. E. A. Bogue, New York.

Dental Education. M. L. Rhein, New York.

Pathology as Taught in Dental Schools. L. G. Noel, Nashville, Tenn.

State Reciprocity in Dental Practice Licensing. Adelbert H. Peck, Chicago.

Some Practical Considerations Concerning Inflammation. James E. Power, Providence, R. I.

Interstitial Gingivitis. Edward C. Briggs, Boston.

Prophylaxis of the Mouth. M. H. Fletcher, Cincinnati.

Etiology of Face, Nose, Jaw and Tooth Deformities. Eugene S. Talbot, Chicago.

Bone Pathology of Tooth Movement. Eugene S. Talbot, Chicago.

The Influence on the Nose by Widening the Palatal Arch. Lee Wallace Dean, Iowa City.

The Relation between Deviation of the Nasal Septum and Dental and Jaw Deformities from the Rhinologist's Standpoint. Nelson M. Black, Milwaukee.

Diagnostic Value of Microscopical Examinations During Operations on Pathological Tissue. Vida A. Latham, Chicago.

The Surgery of Harelip and Cleft Palate. George V. I. Brown, Milwaukee.

Fig. 16.—Group commemorating the Fort Dearborn Massacre. This stands at Calumet Avenue and Eighteenth Street, near the famous massacre tree.

Tumors Involving the Alveolar Process. Stewart L. McCurdy, Pittsburg.

Some of the Diseases of the Salivary Glands and Their Ducts. Thomas L. Gilmer, Chicago.

Treatment of Mandibular Fractures. Robert T. Oliver, West Point, N. Y.

Peripheral Causes of Facial Pains, Including Tic Douloureux. Morris I. Schamberg, New York.

Nitrous Oxid and Oxygen Anesthesia in Dental and General Surgery. Fred K. Ream, Chicago.

[All dentists are cordially invited to attend the meetings.]

SECTION ON CUTANEOUS MEDICINE AND SURGERY.

Chairman, M. B. Hartzell, Philadelphia; Secretary, M. L. Heidingsfeld, Cincinnati.

Tuesday, June 2—2 p. m.

Chairman's Address: The Nature and Causes of Eczema. M. B. Hartzell, Philadelphia.

Nutritive and Neurotic Disturbances of the Hair. L. D. Bulkley and H. H. Janeway, New York City.

A Deceptive Case of Leprosy. Charles J. White and O. Richardson, Boston.

X-Ray Uses, Dangers and Abuses. W. S. Gottheil, New York City.

The Treatment of Epithelioma by the Roentgen Rays. G. E. Pfahler, Philadelphia.

Increasing Tendency to Recognize a Systemic Etiology and Systemic Treatment of Skin Disease. The Old and New in Cutaneous Therapy. Ludwig Weiss, New York City.

Wednesday, June 3—2 p. m.

Lantern Session.

Pemphigus, a Study of Some Cases Personally Observed. J. M. Winfield, Brooklyn.

Pemphigus Foliaceous and Its Status Among the Bullous Dermatoses. W. T. Corlett, Cleveland.

The Pathology of Pemphigus Foliaceous. Oscar T. Schultz, Cleveland.

A Case of Acnitis (Barthélemy), or Acne Agminata (Crocker). J. F. Schamberg, Philadelphia.

Some Unusual Forms of Epithelioma of the Skin. J. A. Fordyce, New York City.

A Further Contribution to the Histopathology of Epidermolysis Bullosa. M. F. Engman and M. H. Hook, St. Louis.

Paraffin Prosthesis. A Further Contribution on Its Histopathology. M. L. Heidingsfeld, Cincinnati.

Multiple Hemorrhage Sarcoma (Kaposi). David Lieberthal, Chicago.

Thursday, June 4—2 p. m.

Exhibition of Clinical Cases. Joseph Zeisler, Chicago.

The Pigmentations of the Mucous Membrane of the Mouth. H. G. Anthony, Chicago.

Erythema Figurata Perstans. Grover W. Wende, Buffalo.

Cheilitis Exfoliativa. M. L. Ravitch, Louisville, Ky.

Fig. 17.—Wesley Hospital, which is contiguous to, and connected with Northwestern University Medical School.

Mercurial Treatment for Late Manifestations of Syphilis. Herman G. Klotz, New York City.

The Influence of the Discovery of the Pale Spirochete on the Treatment of Syphilis. W. F. Breakey, Ann Arbor.

The Relation of the Character of the Syphilitic Initial Lesion to the Secondary Constitutional Period. A. Ravogli, Cincinnati.

SECTION ON PHARMACOLOGY AND THERAPEUTICS.

Chairman, M. H. Fussell, Philadelphia; Secretary, C. S. N. Hallberg, Chicago.

Chairman's Address: Simplicity in Prescribing. M. H. Fussell, Philadelphia.

Address of Chairman of Delegation from American Pharmaceutical Association. Joseph P. Remington, Philadelphia.

Report of Secretary. C. S. N. Hallberg, Chicago.

Trend of Pharmacology and Therapeutics in Relation to Chemical Research. W. J. K. Kline, Greensburg, Pa.

Osteopathic versus Drug Treatment. M. Clayton Thrush, Phila.

Work Cure. Addison Thayer, Portland, Me.

Physiologic Assay of Some Commonly Used Drugs. Charles W. Edmunds, Ann Arbor, Mich.

Sodium Cacodylate: Its Therapeutic Uses. Frank Billings, Chicago.

Arsenic in the Treatment of Diseases of the Skin. Milton B. Hartzell, Philadelphia.

The Specific Chemical Therapy of Trypanosomiases and Spirilloses. Benjamin T. Terry, New York.

Organotherapy. Reid Hunt, Washington, D. C.

General and Topical Applications in Advanced Laryngeal Tuberculosis. J. Solis-Cohen, Philadelphia.

Pneumotherapy in Pulmonary Tuberculosis. S. Solis-Cohen, Philadelphia.

The Use of Digitalis in Pneumonia. Thos. F. Reilly, New York.

The Effects of Quebracho on the Respiration. H. C. Wood, Jr., Philadelphia.

Tincture Strophanthus and Strophanthin, with Especial Reference to Dosage. R. A. Hatcher, New York.

Joint Session with the Section on Hygiene and Sanitary Science.

Prophylaxis of Communicable Diseases:

From the Viewpoint of the Practitioner. David Edsall, Philadelphia.

Fig. 18.—Mercy Hospital, also connected with Northwestern University Medical School. A handsome new addition to the hospital is in course of construction, which, when completed, will add much to the usefulness of the institution.

From the Viewpoint of the Health Officer: Herman Biggs, New York.

From the Viewpoint of the Hygienist. M. J. Rosenau, Washington, D. C.

The Pharmacopeia as the Standard for Medical Prescribing. A. Torald Sollmann, Cleveland.

Fig. 19.—The Presbyterian Hospital, located at West Congress and Wood Streets, connected with Rush Medical College.

The Need of a More Intimate Knowledge of U. S. Pharmacopeia and National Formulary. James M. Anders, Phila.

The Pharmacopeia as a Legal Standard. H. W. Wiley, Washington, D. C.

The Sufficiency of the Official Drugs and Preparations in the Medicinal Treatment of Disease. Oliver T. Osborne, New Haven, Conn.

Responsibility of the Medical Profession for the Use of Nostrums. C. F. Wahrer, Fort Madison, Iowa.

Pharmacology of Isopral. Torald Sollmann, Cleveland, Ohio.

CHICAGO

A BRIEF DESCRIPTION OF CHICAGO AND ITS POINTS OF INTEREST.

ROBERT T. GILLMORE, M.D.
Secretary Chicago Medical Society.

The future of Chicago, which now has a population of over 2,200,000, was prophesied by La Salle in 1671, when he stated that "this is the lowest point on the divide between the two great valleys of the St. Lawrence and the Mississippi. The boundless regions of all the West must send their products to the East through this point. Everything invites action. The typical man who will grow up here must be an enterprising man. This will be the gate of empire, this the seat of commerce." It has fulfilled its destiny in outranking in rapidity of growth any other city in the United States.

This territory was first invaded in 1673 by the French traders, who recognized its geographical advantages as a distributing center. The beginning of a continuous settlement dates back to 1777, when an Indian trader, Jean Baptiste, a native of San Domingo, built a house on the north bank of the Chicago River. In 1803 this house was sold to John Kinzie, who was the first American settler. The following year Fort Dearborn was built on the south bank of the Chicago River, at a point now the site of William Hoyt's wholesale grocery store, at the foot of River Street. The occupants of the fort, as they were retreating along the shores of Lake Michigan, were massacred by the Indians. A bronze monument marks the spot at Eighteenth Street and the Lake Front, having been erected near the famous massacre tree. This monument, designed by Carl Rohl Smith, was presented to the city by George M. Pullman on June 22, 1893.

In 1830 Chicago was a hamlet of log houses with about 100 people, and was incorporated as a city in 1837, with a population of 4,000 and an area of 2½ square miles. The great fire occurred Oct. 8, 1871, devastating 3¼ square miles of the business and residence districts and destroying property to the extent of $187,000,000. With the characteristic energy of the Middle West and the assistance of this country and Europe, it was speedily restored.

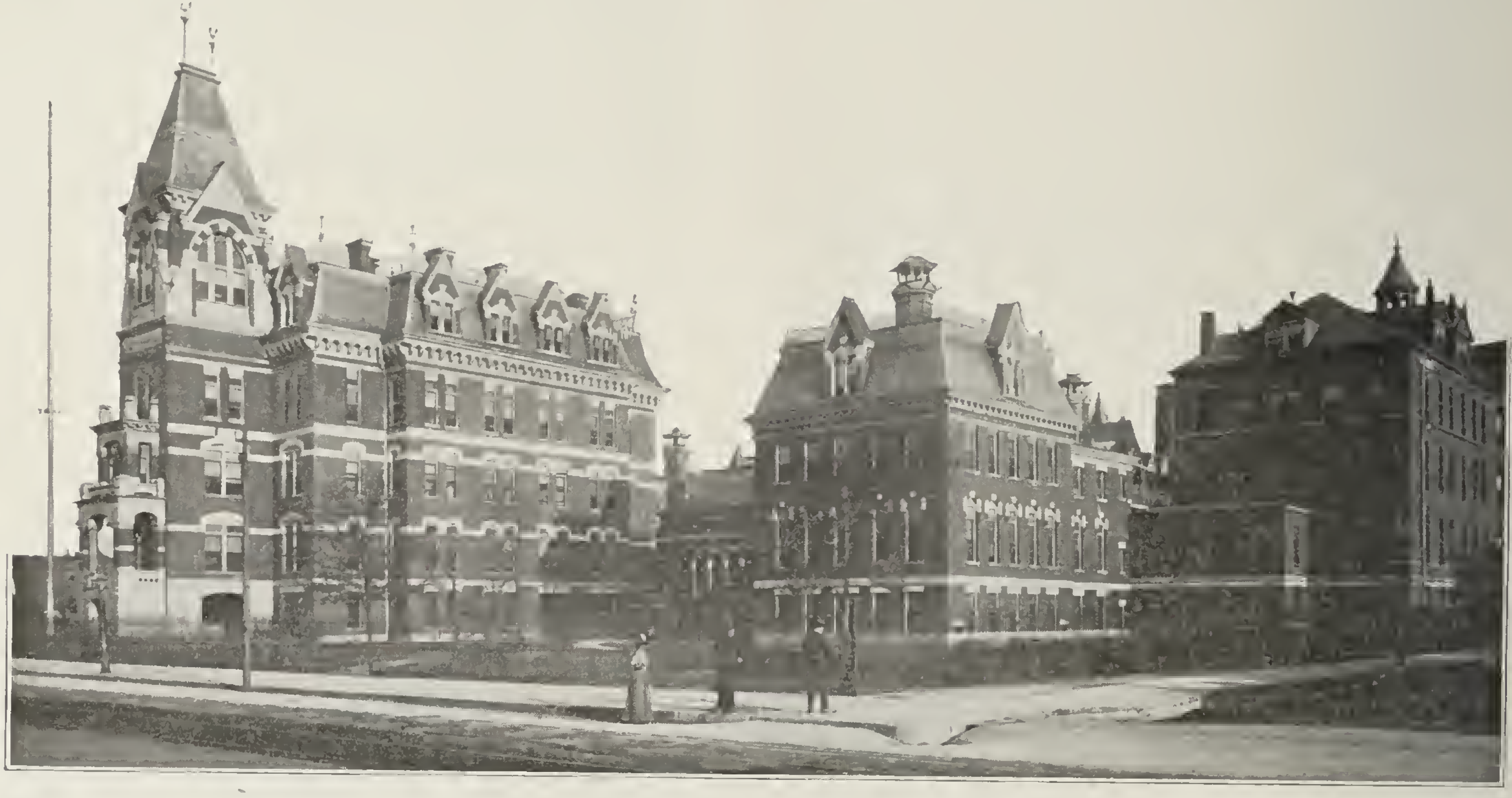


Fig. 20.—Cook County Hospital. This hospital, the largest in the state, is located on a twelve-acre site at Harrison and Wood streets. Its present capacity is over 1,200 beds, and during the past fiscal year over 26,000 patients were admitted. The attending staff is selected by competitive examination irrespective of school of practice; the house staff consists of 48 internes, selected by competitive examination. The hospital is under the direction of the Board of County Commissioners.

MEETING PLACES.

The First Regiment Armory, situated at the corner of Sixteenth Street and Michigan Avenue, will contain the scientific and commercial exhibits, the place of registration, postoffice and bureau of information. It is convenient to all the large hotels and the chairman of the committee on hotels will have a representative at headquarters to direct those who have not previously made reservations. The twelve sections will be housed in quiet, suitable quarters, extending as far south as Twenty-second Street and along Michigan Avenue and the Lake Front as far north as Congress Street, all within a short distance of the headquarters of the Association.

At the Coliseum, located on the south side on Wabash Avenue between Fourteenth and Sixteenth Streets, two blocks from the First Regiment Armory, will be held the President's reception and ball and the musical program. The area of the building is two acres, with a seating capacity of 15,000. It will be the scene of the National Republican Convention, which meets June 14, 1908.

CHICAGO AS A MEDICAL CENTER.

The Memorial Institute for Infectious Diseases, located at 762 West Harrison Street, was founded in 1902, for the purpose of original research in acute infectious diseases and for the advancement of scientific medicine. It publishes an endowed medical journal and in addition supports ten independent investigators.

Chicago has a number of medical schools; the three largest are Rush Medical College, Northwestern University Medical School and the College of Physicians and Surgeons. Rush Medical College is affiliated with the University of Chicago and its department of medicine is situated on the corner of Harrison and Wood Streets, and can be conveniently reached by the Metropolitan Elevated Railroad or by the Harrison Street electric car line. Rush Medical College is one of the oldest institutions of the Northwest, having been founded by Daniel Brainerd in 1837.

The Northwestern University Medical School became affiliated with the Northwestern University at Evanston in 1870. It is located at Twenty-fourth and Dearborn Streets, and can be reached by the South Side Elevated Railroad, and also by the State Street electric car line. Established in 1859 as the Lind University by Dr. Hosmer A. Johnson and reorganized in 1864 as the Chicago Medical College, it was one of the first schools to inaugurate a graded course in medical instruction.

The College of Physicians and Surgeons, located at West Harrison Street, across from the County Hospital, is the medical department of the University of Illinois, located at Urbana, Ill. It was founded in 1882 by a group of physicians, t the head of which was A. Reeves Jackson.

The Postgraduate Medical School was founded in 1888. ts hospital contains 65 beds, and with the other hospitals affiliated with it the staff has at its command 400 beds. The teaching is almost exclusively clinical, in conjunction with laboratory, chemical, pathologic, anatomic and experimental work on animals. The Illinois Postgraduate Medical School s another institution doing advanced work. It is situated in the "medical center" at 819 West Harrison Street, and has a diversified schedule of medical and surgical clinics. The Chicago Policlinic was founded by Dr. Truman W. Miller in 1886. It is located at 174 Chicago Avenue, and also gives advanced courses in medicine to practitioners, and is the pioneer postgraduate school of the West. The members of the staff of the Policlinic are affiliated with nearly every other hospital in the city and the students are admitted to their several clinics.

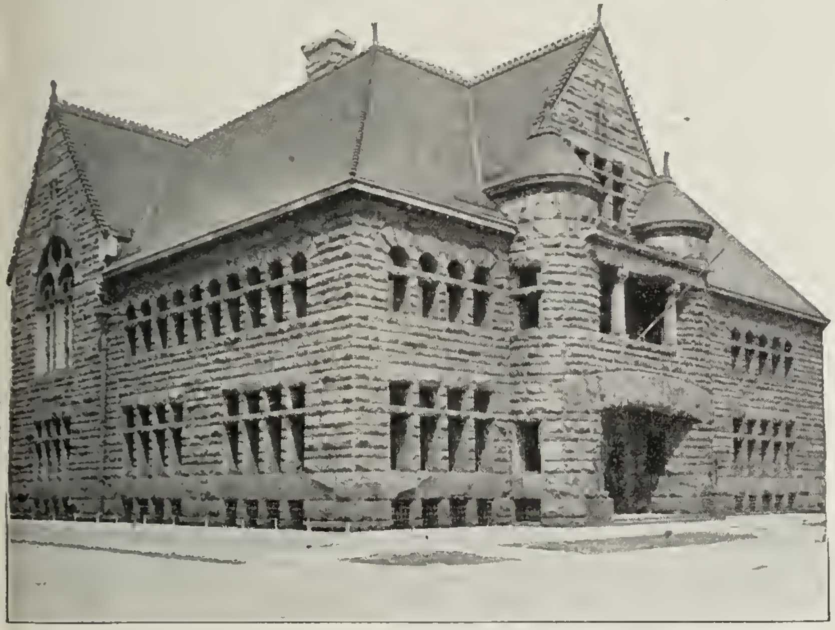


Fig. 21.—The Chicago Historical Society's Building, located at the corner of Dearborn Avenue and Ontario Street. This substantial structure is a repository of matter relating to the history of Chicago and the Northwest. In addition to numerous interesting historical relics, it contains over 40,000 volumes.

Of the many other medical colleges in the city several do high grade and creditable work. Others, unfortunately, are colleges of which Chicago has little cause to be proud.

THE HOSPITALS OF CHICAGO.

Chicago is well equipped with modern hospitals, some eighty in number, some of the larger of which are affiliated with medical schools, and the clinical material is available for teaching purposes.

Cook County Hospital was established in 1866 and occupies a site of 12 acres on the corner of Harrison and Wood Streets. The general design of the present building was adopted by the Board of Commissioners in 1875. Since then additions have been built from time to time, the last building erected being the hospital for tuberculosis, which was completed in 1906. Cook County Hospital contains about 1,240 beds, and during the last fiscal year 26,118 patients were admitted. The hospital is under the direction of the Board of County Commissioners and the attending staff is selected by competitive examination, held by the Civil Service Commission of Cook County, Illinois, irrespective of the school of practice. The house staff consists of forty-eight internes, appointed for eighteen months by competitive examination held by the attending staff and under the control of the Cook County Civil Service Commission.

The Illinois Charitable Eye and Ear Infirmary is located at the corner of Adams and Peoria Streets. It was founded in May, 1858, by a number of physicians under the leadership of the late Dr. E. L. Holmes, and was known at that time as the Chicago Charitable Eye and Ear Infirmary. The object of this institution is to furnish medical and surgical treatment to eye and ear patients who are indigent residents of the State of Illinois. The infirmary can accommodate about 200 house patients and about 12,000 out-patients are treated annually.

CHICAGO AS AN EDUCATIONAL CENTER.

Among the institutions representing higher education are the Chicago University, Northwestern University, Lewis Institute and Armour Institute.

The University of Chicago was founded July 1, 1891, by John D. Rockefeller. The first president was the late William Rainey Harper, and he was succeeded by the present incumbent, Harry Pratt Judson. The institution occupies a campus about 95 acres in extent, exclusive of the observatory at Lake Geneva, Wis. The faculty numbers 350. In addition to the work of the colleges corresponding to the usual American four-year course, there are special courses offered in affiliation with Rush Medical College, the Divinity School, the Ogden Graduate School of Science and the Graduate Schools of Arts and Literature. The published results of research done by students and instructors is recognized among scientists as of great value. This university attempts also to bring its opportunities to non-resident students through the lecture and correspondence study departments of the University Extension Division.

Northwestern University was founded in 1851, and is presided over by Abram Winegardner Harris. The College of Liberal Arts, the School of Engineering, the School of Music, the School of Oratory, the Evanston Academy and Garrett Biblical Institute are located on the lake shore at Evanston. In the University Building at Lake and Dearborn Streets, Chicago, are the Schools of Law, Pharmacy and Dentistry. The Medical School, previously mentioned, is at Twenty-fourth and Dearborn Streets. The university proper, although 12 miles north of Chicago, is but twenty minutes' distant by the Chicago and Northwestern Railway. The campus is said to be one of the most beautiful in America. The clinics of the Dental School are among the largest in the world; the Gary Collection of the Law Library is unequaled; the laboratories of the Pharmacy School are exceptional. The medical school is distinctive for its clinical facilities and affiliated hospitals.

The John Crerar Library was founded in 1894 and is temporarily located on the sixth floor of the Marshall Field Building, at the northwest corner of Wabash Avenue and Washington Street. Owing to its central location it is especially valuable to the medical profession for research work. The library has at present 215,144 volumes, of which 46,260 are medical, including the famous Senn Collection of 10,689 volumes and 14,501 pamphlets. A fund of $1,000,000 has been set aside to construct a suitable home for the library.

The Newberry Library is located on the north side at Walton Place, between Clark Street and Dearborn Avenue. It is the site of the famous Ogden house, which was the only house in that district not destroyed by the great fire of 1871. The cost of the building was about $500,000, and the library contains 192,440 volumes and 44,542 pamphlets.

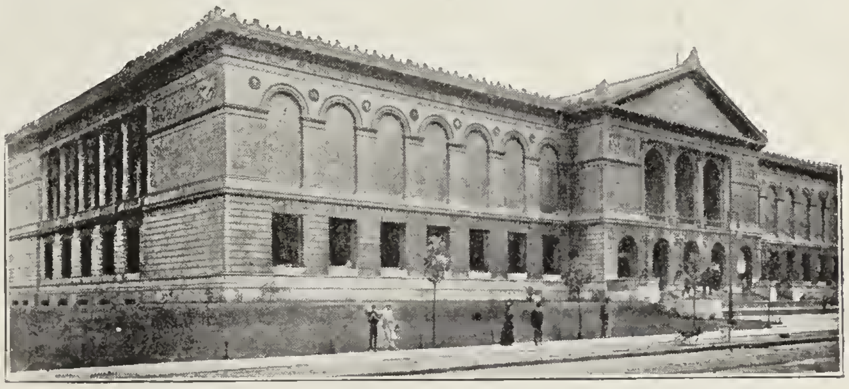


Fig. 22.—The Art Institute on the Lake Front at the foot of Adams Street. It is the property of the city and contains many masterpieces of art, both modern and classical. It is open free to the public on Wednesdays, Saturdays and Sundays.

The Chicago Public Library, located at Michigan Avenue and Washington and Randolph Streets, occupies a fireproof building three stories in height, which was erected in 1897 at a cost of $2,000,000. The style of architecture is Grecian and the exterior is of Bedford limestone. The interior decoration of the building compares favorably with that of any of the European buildings. The main staircase to the delivery room is decorated with Carrara marble, and the delivery room itself is surmounted by a very beautiful stained-glass dome. The library contains about 310,000 books, and in addition to the central library it has a system of forty branch distributing stations, and also conducts a number of branch libraries in different parts of the city, one of which is the famous T. B. Blackstone Memorial Branch Library, located at Lake Avenue and Forty-ninth Street.

The Chicago Historical Society, whose building is at the corner of Ontario Street and Dearborn Avenue, was founded in 1876 for the purpose of collecting and preserving materials of history and to spread historical information, especially concerning the northwestern states. The library contains many valuable manuscripts of the time of the Continental Congress and Constitutional Convention and papers relating to the French régime by La Salle, Joliet and Allouez, and early writings of settlers and explorers of the Middle West.

The Field Columbian Museum is an outcome of the World's Fair of 1893. It is picturesquely located on the banks of a lagoon in Jackson Park in the old Fine Arts Building of the exposition. It contains many valuable exhibits, especially in geology, anthropology, botany and zoology. It contains a library of 50,000 volumes and a herbarium of 260,000 sheets. It is open without charge for admission on Saturdays and Sundays, and can be reached by the Illinois Central Railroad, the Fifty-fifth Street branch of the Cottage Grove Avenue line or the South Side Elevated.

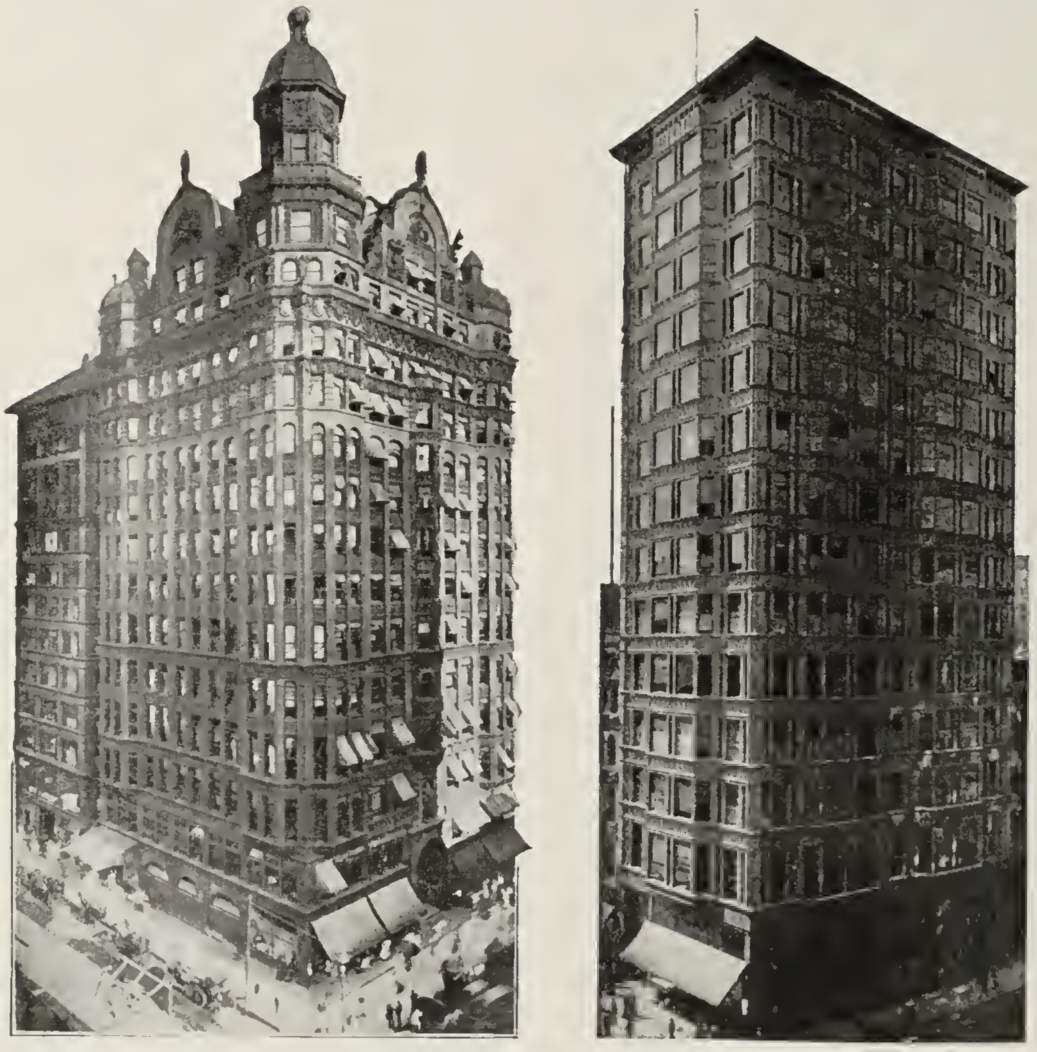


Fig. 23.—The Venetian Building (on the extreme left), the Columbus Memorial Building and (on the right) the Reliance Building. In these three office buildings located, respectively, on the southeast and southwest corners of State and Washington streets, in the heart of the down town district, nearly 800 physicians have their offices.

PLACES OF INTEREST.

The Art Institute of Chicago was established in 1879, and occupies a handsome building on the Lake Front opposite Adams Street. It is built of Bedford limestone in the Italian Renaissance style, at a cost of $648,000. In it are many valuable works of art donated by citizens of Chicago, among which are some by Rembrandt, Rubens, Van Dyck, Holbein, Hobbima, Teniers and many others, besides numerous modern works by foreign artists. It has some creditable originals in marble as well as many reproductions of famous pieces of statuary. The Ryerson Library, which has 3,500 volumes devoted to the subject of art, is to be found here. One of the interesting features of the institute is a large art school, which is attended by 4,000 students annually. Its curriculum includes drawing, painting, sculpturing, newspaper illustrating and decorative designing, under a corps of 60 instructors and teachers. The Art Institute will be open free to the members of the American Medical Association during the week of their meeting in June. On Thursday, June 4, a reception is to be given from 2 to 5, to which the members of the Association are cordially invited.

Chicago has the finest boulevard and park system in the world, made up of three divisions—the South Park, Lincoln Park and West Side systems. The boulevard system is 75 miles in length. The South Park system begins at the river and extends south on Michigan Avenue, to Grand Boulevard, where it terminates at Fifty-first Street in Washington Park. At this entrance to the park stands the Washington Equestrian Statue, which is a replica of one erected in Paris by the Daughters of the American Revolution. Washington Park is a part of the South Park system, and contains a conservatory. Besides the great extent of fine lawns, it has in the eastern part some exterior landscape gardening which is well worth seeing.

Passing from Washington Park east along the Midway Plaisance toward the lake, we find Jackson Park, which covers an area of over 500 acres, and was the site of the World's Fair of 1893. At the southeast corner of the park there is the yachting harbor of the Jackson Park Yacht Club, and varieties of pleasure boats are to be seen there. In this same harbor are the reproductions of the three caravels in which Columbus made his famous voyage of discovery to America, and near the harbor is the reproduction of the Convent La Rabida of Spain, at which Columbus was received by Queen Isabella before starting on his voyage. This building is used during the summer months as a sanitarium for sick babies.

The Lincoln Park system begins at the foot of Rush Street, the Lake Shore drive leading directly to this park. Lincoln Park is noted for its zoological gardens, in which may be found a very creditable menagerie. The horticultural display and the building of the Academy of Science are the other interesting features, as well as the monuments, among which is the famous Lincoln Statue by St. Gaudens. There is an open-air sanitarium for sick babies in this park. It is only open during the day, however; mothers must take their babies home at night.

Going west from Washington park, Garfield Boulevard leads directly to the West Side parks, among which are McKinley, Humboldt, Douglas and Garfield. In McKinley Park stands the McKinley monument, in bronze, designed by Charles Mulligan of Chicago, and erected in 1903.

All the parks connected with the Boulevard system are the playgrounds of the people, and in the summer time the park commissioners provide band concerts, tennis courts, golf links and baseball grounds, besides the lagoons in the various parks which are utilized for boating. During the winter months skating and tobogganing furnish amusement.

Chicago has twenty first-class theaters, most of which are in the down-town district. It has also four amusement parks which are open during the summer months: White City and Sans Souci on the south side, Riverview and Ravinia on the north side.

The Chicago Sanitary and Drainage Canal extends from Chicago to Lockport, Ill., a distance of 28 miles, and is 220 feet wide and 30 feet deep. It is no exaggeration to say that this is one of the greatest artificial waterways ever constructed, its cost being $56,000,000. Some idea of the magnitude of this project may be realized when one considers that the excavated material, if deposited in Lake Michigan in 40 feet of water, would make an island one mile square 12 feet above the water line. The main object of the canal is to improve the water supply of Chicago. The canal also furnishes one of the largest power plants in the country, capable of a development of 40,000 horse-power. It is in operation and furnishes light to the city as well as heat and power to factories which are located along its banks.

The Chicago freight subway is a tunnel 50 feet below the surface of the ground, 14 feet wide and 12 feet high. The dirt excavated in making it was transported to the Lake Front, where it was utilized in filling in the lake shore and making the site for a new park. The subway is, in fact, a miniature underground city with electric car service. The transportation of freight and mail from the various railways, depots and the larger stores has been greatly facilitated by its use. The tunnel is also used for the conduits of an automatic telephone system as well as for telegraph and electric wires.

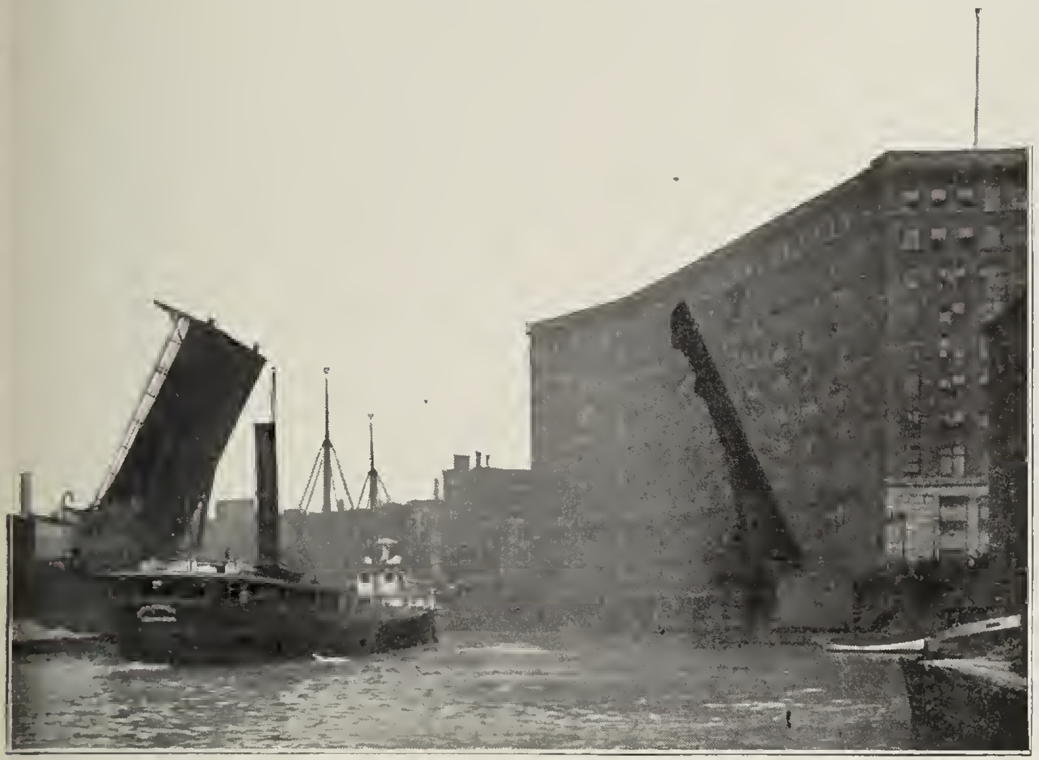


Fig. 24.—The State Street Bascule Bridge. This is one of the numerous links connecting the north and the south sides.

The Illinois Steel Company's plant, located at South Chicago, is one of the largest steel mills in the world, employing about 12,000 men. The value of the plant is roughly estimated at $200,000,000. The raw material is transported from the mines by specially constructed steamers 600 feet long, built and owned by the company. The blast furnaces are working night and day, and every night the southern sky line of Chicago is illuminated by the reflection from the plant. The management has extended to all the members of the Association a cordial invitation to visit the steel mills, where a guide will be furnished. Visitors will be directed by the information bureau as to the best way to reach South Chicago.

HULL HOUSE.

The complexities of city life have necessitated the founding of social settlements of which Hull House is an example. Hull House was established in September, 1889, in a cosmopolitan quarter of Chicago. It is situated on the west side, at the corner of Polk and Halsted Streets, and is easily reached by the Halsted Street cars. The Halsted Street station of the Metropolitan Elevated is two blocks to the north. The public are invited to visit the house on Saturday, but special arrangements may be made by mail or telephone to have visitors admitted on other days. Nine thousand people come to the house each week during the winter months, as members of a club or a class or as parts of an audience, or in search of help of various kinds. The institution, which is open to the public, includes reception rooms, class and club rooms, a music school building, a studio, a theater, a gymnasium, a woman's club building, a museum and a boys' club. The last two are of special interest to strangers.

The Chicago River, which divides the city into the north, south and west sides, while it has increased the shipping facilities of the city, has at the same time presented one of the most difficult propositions in the way of traffic from one side of the city to the other. In an effort to solve this difficulty a number of bridges have been devised, of the bascule and swing types, as well as a unique lift bridge at Halsted Street.

THE STOCK YARDS.

The Union Stock Yards, established in 1864, are located between Thirty-ninth and Forty-seventh Streets, running east and west from Halsted Street to Center Avenue, covering in all an area of 640 acres. These yards, known among stockmen as the world's greatest live-stock market, have their entrance at Forty-first and Halsted Streets, and may be reached by the South Side Elevated Railroad or by the State Street electric car line by transferring on Fifty-first or Forty-third Street.

Chicago's supremacy in the live-stock industry is demonstrated by the fact that its live-stock receipts are more than half of all the markets in America, or 60 per cent. of the total live-stock receipts of the country. The total annual receipts of all kinds of stock in 1907 were 15,240,000 and the valuation $319,202,239. This is largely due to the fact that Chicago is a natural trade center, and the facilities for transportation are unexcelled, there being thirty-five trunk lines entering the city, with a mileage of 100,000. In addition to this might be mentioned the advantages of shipping on the Great Lakes and canals contiguous to Chicago. Besides the export meat business, Chicago consumes 600,000 head of stock annually.

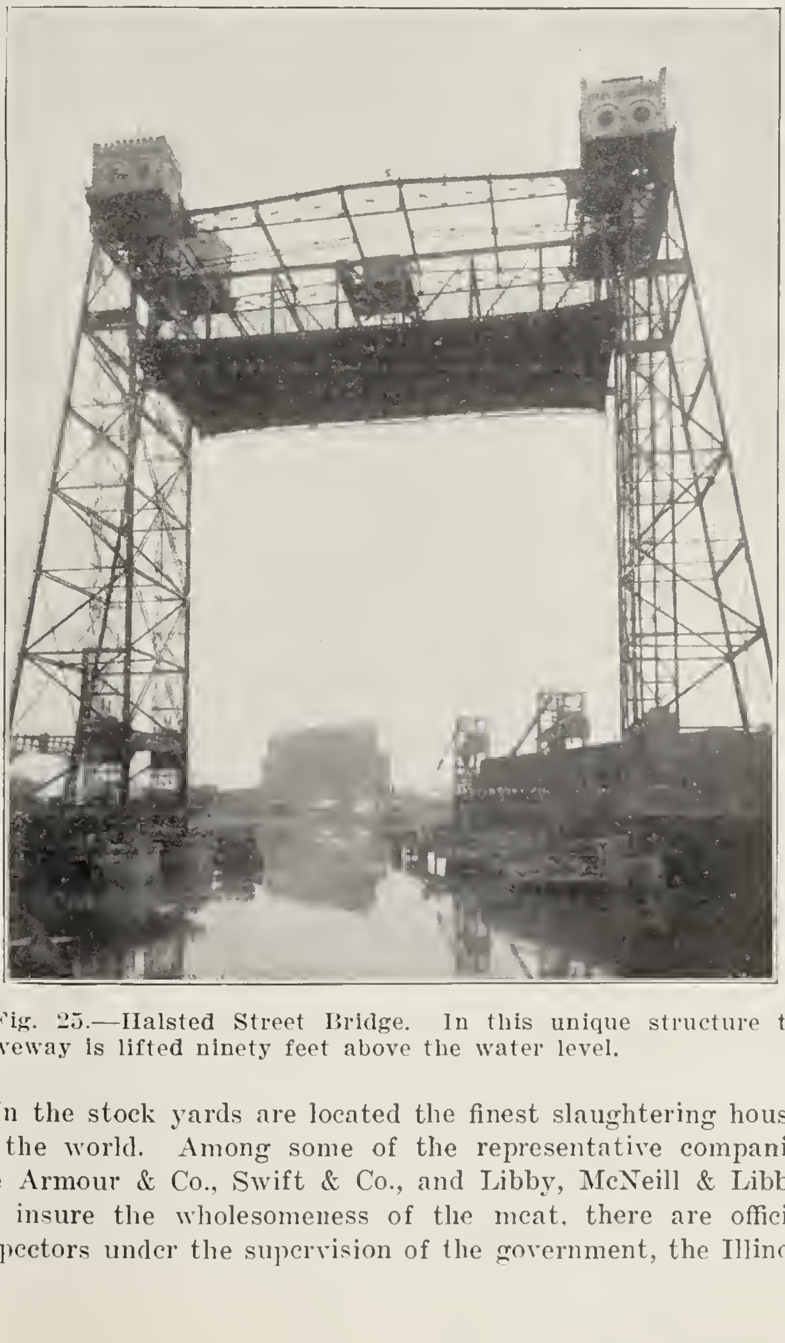


Fig. 25.—Halsted Street Bridge. In this unique structure the driveway is lifted ninety feet above the water level.

In the stock yards are located the finest slaughtering houses in the world. Among some of the representative companies are Armour & Co., Swift & Co., and Libby, McNeill & Libby. To insure the wholesomeness of the meat, there are official inspectors under the supervision of the government, the Illinois

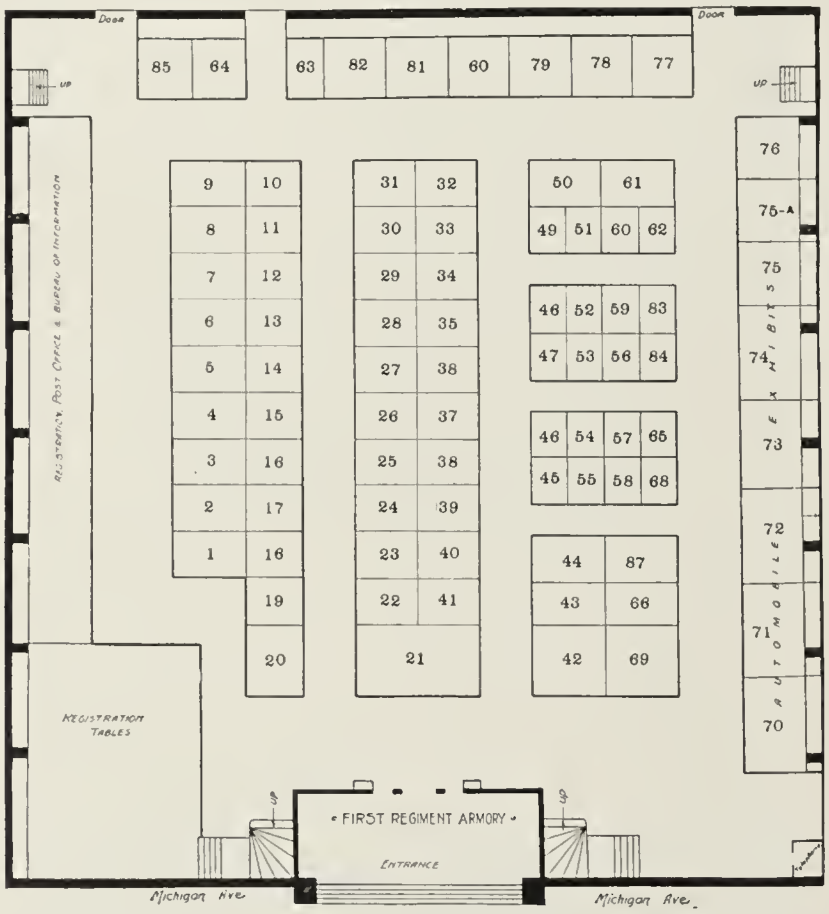
State Board of Live Stock Commissioners and the City Health Department. The government, under Dr. Bennett, chief inspector of the United States Board of Animal Industry, has a system of inspection to control meat that is intended for interstate commerce and export. Illinois is protected by the State Board of Live Stock Commissioners and Chicago by the Health Department. Under the government's system of inspection, all meat that comes in on the hoof is examined before killing, and before meat can be shipped it must bear the government certificate or stamp.

A cordial invitation is extended by Armour & Co., Swift & Co., and Libby, McNeill & Libby, to members of the American Medical Association and their wives to visit the yards. Arrangements have been made to show the system of government inspection and the details of killing and preserving meats at the different plants. The South Side Elevated will run a special train from the Congress Street station on Saturday morning, June 6, at 9 a. m., which will go directly to the plants, and on which there will be no charge for transportation.

THE COMMERCIAL EXHIBIT.

The Exposition of Instruments, Apparatus, Remedial Agents, Literature and Physicians' Supplies at Chicago.

There are probably but few physicians attending medical meetings who fail to visit, and derive pleasure from visiting, the commercial exhibits that have become such an interesting feature of these gatherings. There is something stimulating in seeing the best products of the best firms shown to the best advantage. The surgeon enjoys seeing and handling the finely finished products of the surgical instrument makers' art; the internist gets satisfaction from the examination of high-grade pharmaceuticals, and all medical men enjoy looking over the choice collections of books that are to be found at these exhibits. With the increased interest taken by the profession in more modern means of locomotion, the automobile and carriage exhibits, which will have a section of the exhibit hall set apart for them, may be counted on to attract no little attention.

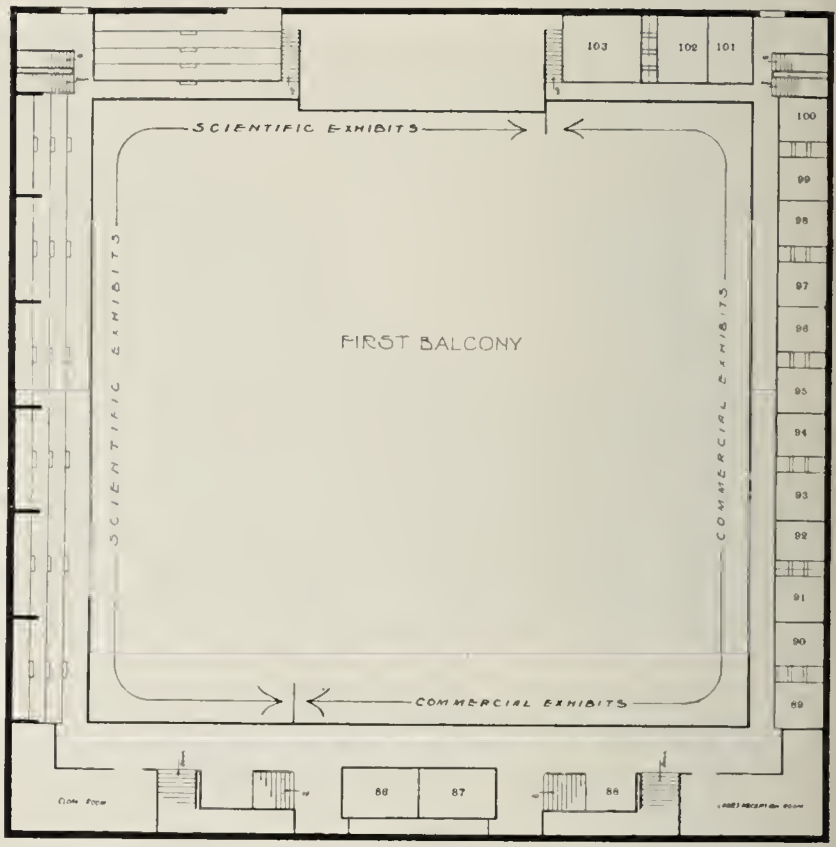

Door
Door
Up
Up
Registration, Post Office & Bureau of Information
Registration Tables
First Regiment Armory
Entrance
Michigan Ave
Michigan Ave
Automobiles
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 75-A 76 77 78 79 80 81 82 83 84 85

The Commercial Exhibit will be under the direct supervision of the officers of the American Medical Association, and the aim has been to make the exhibition excel in quality rather than in size. The exposition will be held in the First Regiment Armory, which is situated at the corner of Michigan Avenue and Sixteenth Street. This building is a handsome and substantial structure, having on the main floor alone over half an acre of floor space. The main floor will be devoted to the commercial exhibits, the Registration Department, Postoffice and the Bureau of Information. The first balcony will have not only part of the commercial exhibit, but the scientific exhibit, the cloak room and the ladies' reception room.

We mention below most of the firms that will be represented at this exhibit.

Albosol Light Company, Philadelphia.—Space 12.

This firm will exhibit and demonstrate its neutral diagnostic light albosol, which, it is claimed, projects an intense white light of about 150 candle-power. It will also show a new and larger size 200 candle-power light, which burns continuously for more than four hours. The valuable feature claimed for these lights is that they are always ready, and there is no deterioration when not in use. The property of the light is such that it shows true color values. Both lights are adjustable to any position, and are carried in compact cases.



Dr. H. M. Alexander & Company, Marietta, Pa.—Space 61.

The Alexander biologic laboratories will have an extensive exhibit of diphtheria antitoxin, vaccine virus and tuberculins. The immunizing principle of diphtheria antitoxin in the pure state will be compared with the eliminated products from unrefined antitoxin. The recent tuberculins, including the ones for the ophthalmic and cutaneous diagnostic tests, will be on exhibition. The whole exhibit signifies the possibilities of scientific application of biologic knowledge.

W. D. Allison Company, Indianapolis, Ind.—Spaces 28 and 35.

This firm's exhibit of operating and examining tables, instrument, medicine and combination cabinets will show the wonderful progress made in the scientific care exercised by the modern physician in his office practice. Experience has proved the great value that systematic handling of office work has in the care of patients, and this company will show appliances to meet every need of all lines of practice. Experts trained in the handling and the uses of these appliances will be in charge of the exhibit.

Ambulatory Pneumatic Splint Manufacturing Company, Chicago.—Space 55.

The application and use of adjustable pneumatic splints for the various fractures of the lower and upper limbs will be demonstrated by this firm. These splints are claimed to be of practical scientific value, as they are said to afford an ideal, simple, accurate and effective way of setting and holding a fractured limb, whether the patient is treated in or out of bed. These splints will be shown with the patient lying down and walking about, and undoubtedly will attract the attention of everyone who has to do with fractures of the leg, thigh, hip, humerus and forearm.

D. Appleton & Company, New York City.—Space 23.

Among the recent publications that will be shown by this firm are Kelly's "Medical Gynecology," for which 5,000 orders were booked before the date of publication; Foote's "Minor Surgery," another very recent success, more than 5,000 copies having been sold in less than six months; Pusey's "Dermatology" and Babcock's "Diseases of the Lungs," together with a recent monograph by E. L. Keyes, Jr., on "Syphilis."

The Arlington Chemical Company, Yonkers, N. Y.—Space 68.

This company, in addition to an exhibit of its preparation, Liquid Peptonoids, will present to each physician visiting its exhibit a unique and handsome souvenir. The firm's representatives in charge will give a hearty welcome to physicians and will gladly furnish information regarding its products.

Armour & Company, Chicago.—Space 69.

The exhibit of this firm will consist, of course, of the organotherapeutic agents. In addition to the products such as pepsin, pancreatin, thyroids, extract of red bone marrow, suprarenalin and other suprarenal preparations, there will be shown lecithol, which is claimed to be a palatable preparation of the organic phosphorus compound lecithin. Trypsin, also, will be among this firm's exhibited products.

Baker Electric Company, Hartford, Conn.—Space 13.

This company will have on exhibition an entirely new type of static machine. The revolving plates of this machine are made of a patent fibrous material, while the stationary plates are of glass. The manufacturers claim for these fibrous plates the property of high insulation and guarantee them not to warp, crack or scale. They will also exhibit the new self-cleaning Baker nebulizer.

Battle Creek Sanitarium, Battle Creek, Mich.—Space 7.

By means of enlarged photographs the Battle Creek Sanitarium will present a pictorial representation of the various features and departments of the system of physiologic therapeutics which the institution has developed.

Bausch & Lomb Optical Company, Rochester, N. Y.—Space 30.

To the physician who is interested in scientific apparatus and the various instrumental aids to diagnosis this firm's exhibit will prove an attraction. Microscopes, microtomes, centrifuges, incubators, blood apparatus and the numerous other instruments which the modern physician considers essential, will be shown and demonstrated. That great time saver in urinalysis, the centrifuge, will be displayed in a variety of types and styles.

Frank S. Betz Company, Hammond, Ind.—Spaces, 50, 51 and 60.

This firm will have a general display of surgical instruments and a very full line of hospital appliances and electrical apparatus. In addition there will be shown two different kinds of coils besides the Pope galvanic, faradic and sinusoidal cabinet which is said to possess the unique advantage of giving, at the will of the operator, any current that can be obtained from any other battery. The various forms of phototherapeutic lamps will be shown, including the violet ray and the Finsen light.

Edward G. Binz Company, Los Angeles, Cal.—Space 54.

This firm will emphasize by its exhibit the scientific manner in which they claim to distil the oil of eucalyptus. It will illustrate the entire process, showing the natural leaf, branches of the tree, and every step in the evolution from the crude oil to the refined product. The firm's product, euca-mul, made from eucalyptus oil, as well as its eucaloids, which are five minim capsules of the oil, will, of course, be on exhibition.

C. F. Birtman Company, Chicago.—Space 34.

This firm will exhibit a full line of its enamel-coated combination type of static machines which are arranged to be operated by hand or motor power. There will also be shown *x*-ray coils arranged for both the alternating and direct currents, as well as a number of vibrators. Switchboards of marble for galvanic, faradic and sinusoidal currents will be displayed and attention will be called to the firm's international ozonator machine.

P. Blakiston's Son & Company, Philadelphia.—Space 6.

Special attention will be called by this firm to Rodman's "Diseases of the Breast with Special Reference to Cancer." This is said to be the first monograph on the subject by an American surgeon since Gross' work, published twenty-five years ago. Rodman's book is claimed to be of special value as it presents in book form many points of interest by a surgeon whose skill commands attention. Other works of interest will be the second volume of Morris' "Anatomy," Sabin's "Lymphatics," and the third volume of Hardesty's "Nervous System," as well as the fifth volume of Jacobson's "Surgical Anatomy."

Borden's Condensed Milk Company, New York.—Space 103.

This firm exhibits its malted milk, a food product said to be prepared by an improved process whereby all the nutritive elements of the richest, full cream cows' milk and strengthening cereals are scientifically combined. It is manufactured under the best sanitary conditions, is perfectly soluble, and will keep in any climate.

Bramhall, Deane Company, Chicago.—Space 90.

This firm will exhibit sterilizing apparatus for use in hospitals and physicians' offices. The dressings sterilizers are equipped with Deane's self-sealing doors which have no catch or fastening, but which will always maintain a steam-tight joint. The covers of the water sterilizers are equipped with similar doors. Attention will be called to a hydraulic lifting device in connection with the basin sterilizers put out by the firm.

Burroughs Wellcome & Company, New York City.—Space 33.

This firm will display a full line of its Tabloid and Soloid brand of pharmaceuticals. It will also show the analytic and bacteriologic test cases as well as a number of surgical sundries. The B. W. & Co. aseptic glass hypodermic syringe, an instrument that is separable into three parts, will be brought to the attention of visitors.

G. W. Carnrick Company, New York City.—Space 49.

The products of this firm, antithermoline and trypsogen, will be exhibited and descriptive reading matter distributed to physicians. Members of the Association will receive also an appropriate and useful souvenir. The method of packing the preparation, antithermoline, will be brought to the attention of visitors.

Chicago Medical Book Company, Chicago.—Space 4.

This firm is the Chicago agent for Osler's "Modern Medicine," and it will display this most valuable work. The book is a combination of the efforts of some of the best writers and authorities in this country and England, under the editorship of Dr. Osler. A representative display of the latest and best books of all the publishers also will be made.

A. C. Clark & Company, Chicago.—Space 65.

This firm's exhibit will consist of various types of fountain spittoons, including one with a revolving inner bowl and two types with stationary bowls. A novel spittoon, for use where running water is not available, will attract attention. This instrument is called a reservoir and is arranged in such a way that it does not require to be cleaned after each patient. A nitrous oxid gas apparatus, and a tongue depressor which also acts as a saliva ejector, will be among the various articles exhibited.

Clark & Roberts Company, Indianapolis, Ind.—Space 44.

This exhibit will consist of a complete line of surgical furniture for physicians' offices and for hospitals. It is claimed to be especially high grade and all of the articles are designed for well-equipped offices and hospitals. Besides being made in accordance with the latest scientific principles they are designed for thorough asepsis. The finish on the goods and the great care taken with the enameling are two features on which this firm places special stress.

Cleveland Press, Chicago.—Space 83.

"Standard medical books exclusively" is the slogan adopted by this firm. Its exhibit is readily accessible to visitors, who will be made welcome and given every opportunity to examine thoroughly the popular and finely issued books of this young publishing house. In addition to calling attention to special works for which the firm stands sponsor, there will be a general display of its publications.

James B. Clow & Sons, Chicago.—Spaces 86 and 87.

This firm has for the primary object in its display the acquainting of the pnysician with the great advances that have been made in apparatus for the administration of treatments in hydrotherapy. There will also be shown some of the latest sanitary fixtures adapted to modern hospital use. Various specimens of this firm's adamantose ware will be exhibited and its properties and advantages explained to visitors.

F. A. Davis Company, Philadelphia.—Space 62.

The exhibit of this firm will contain several new publications of importance. Among them may be mentioned the second volume of Dr. Sajous' work on the "Internal Secretions and Principles of Medicine." The new second edition of Gilliam's "Practical Gynecology," containing an index of regional symptoms, and the new second revised edition of Ott's "Physiology," which has been greatly enlarged, will also be shown, together with Brewer's "Personal Hygiene in Tropical and Semi-Tropical Countries," just issued.

Deimel Linen Mesh Company, New York City.—Space 67.

This company, which was incorporated in 1895 to exploit the fabric invented by Dr. H. L. Deimel, will show all weights and styles of underwear for men, women and children. By a special process of manufacture a soft, warm and porous fabric has been evolved, called "Linen Mesh," which is worn throughout the world. The exhibit will doubtless attract not only the visiting physicians but their wives.

DeVilbiss Manufacturing Company, Toledo, Ohio.—Space 39.

The use of the atomizer and nebulizer in the treatment of diseases of the nose and throat has become very general. How best to accomplish the frequent and thorough cleansing of the mucous surfaces and how to apply the soothing lotion for the assistance of Nature, has been for years past and is now the study of this exhibitor. Every doctor, whether specialist or general practitioner, will doubtless be interested in this company's exhibit.

Electro-Surgical Instrument Company, Rochester, N. Y.—Space 10.

This firm will show a large variety of electrically lighted instruments, cystoscopes, auriscopes, socket current controllers, wall-plates, etc. Especially instructive will be the latest improvements in the Jackson instruments for tracheo-bronchoscopy, esophagoscopy and gastroscopy, all of which are made exclusively by this company. An ingenious device will be shown in the socket cautery transformer, which enables the operator to do cautery work and to light diagnostic lamps with the alternating current, directly from the socket.

Fairchild Brothers & Foster, New York City.—Space 40.

Preparations of the gastric and pancreatic juices will make up the special exhibit of this firm. To physicians interested in the subject of the clinical application of the digestive ferments, this exhibit should prove of great interest. This, too, whether such preparations are to be used as therapeutic agents directly, or in the preparation of foods for the sick, or in the modification of cows' milk to approximate human milk.

Joseph C. Ferguson, Jr., Philadelphia.—Spaces 52 and 59.

This firm, which makes a specialty of the manufacture of eye, ear, nose and throat instruments and supplies, promises to have an interesting exhibit. The particular claim made by J. C. Ferguson is the fact that only instruments of the highest grade and the latest and most improved models will be shown. Specialists in the branches indicated will undoubtedly find much of interest in the display.

Globe Manufacturing Company, Battle Creek, Mich.—Space 63.

This firm will exhibit its complete line of nebulizers and its automatic motor pump for auto tires, vacuum and compressed air supply. The main feature of the exhibit will be a scientific demonstration of vapor vibration in the treatment of diseases of the ear, nose, throat and lungs. By this method it is claimed that any desired medicament may be applied in vapor form under pressure directly to the affected parts with a vibratory action; Dr. Dunlap, the originator of the method, will give the demonstration.

H. W. Gossard Company, Chicago.—Space 88.

This firm will exhibit two styles of corsets, the Gossard and L'Irresistible, both of which have the feature specially brought out by the company—that of lacing in front. The important point to which attention is called is the fact that the lower edge of the Gossard corset reaches the pelvis and distributes the pressure upward from that point giving abdominal support. The fact that these corsets are claimed to produce the same effect as an abdominal binder without making the patient appear unsightly should make them very popular.

F. A. Hardy & Company, Chicago.—Spaces 47, 53, 58 and 64.

Here will be found all the latest and newest designs in surgical instruments and surgical specialties for the eye, ear, nose and throat. The special ophthalmometers made by this firm will be exhibited, as well as its patented illuminating apparatus and other ophthalmologic goods. The dynamometer, a new instrument not previously exhibited, for testing and exercising the muscles of the eye, will be there for demonstration.

Horlick's Malted Milk Company, Racine, Wis.—Spaces 2 and 3.

The exhibit of malt and milk foods of this firm, known as malted milk and malted milk lunch tablets, always attracts attention, since dietetic problems are incessantly forcing themselves on the busy practitioner. Horlick's malted milk in the form of an ice cream, etc., indicates a method of furnishing nutrition and refrigeration to the patient which is said to have received hearty commendation.

W. T. Keener & Company, Chicago.—Space 43.

An important line of new medical books will be shown by this company. Among the more important are Green's "Encyclopedia and Dictionary of Medicine," edited by J. W. Ballantyne, in ten volumes, seven of which are ready, and Carl von Noorden's "Metabolism, the Physiology and Pathology, with its Application to Practical Medicine," which is now complete in three volumes. This firm is the Chicago agent for the W. B. Saunders Company of Philadelphia, and American agent for a number of the leading English publishers.

Kelley-Koett Manufacturing Company, Covington, Ky.—Space 89.

At the exhibit of this firm the Grosse Flamme *x*-ray coil of latest model will be shown and demonstrated by its inventor. There will also be shown for the first time the firm's new compression diaphragm table which embodies many novel features, among which may be mentioned a simple but very accurate means for the localization of foreign bodies in the eye or any part of the human body, and an automatic method for making correct stereoskiagrams without additional apparatus.

The Kryptok Company, Chicago.—Space 66.

This company will exhibit its new fused bifocal lenses. These lenses, under the copyrighted name, "Kryptok," are the original bifocal lenses made by the fusing process. The firm will show the lenses in various stages of manufacture, from the rough slabs of crown glass and the moulded discs of flint glass to the polished finished product. The interest that has been manifested in this type of bifocals will doubtless be reflected in the attention given to this exhibit.

Lea & Febiger, Philadelphia.—Space 9.

Medical literature in every branch will be well represented by this firm, the successors to Lea Brothers & Company. Of particular interest to physicians will be Osler's "Modern Medicine," four volumes now being ready out of the seven which will constitute a complete and authoritative working library reflecting the world's latest knowledge. Similarly the "System of Gynecology, Obstetrics and Pediatrics" covers that group of cognate subjects, but in one volume to each. The long list of other practical works and medical text-books will make the exhibit a most interesting one.

J. B. Lippincott Company, Philadelphia.—Spaces 1, 18 and 19.

A special feature of this firm's exhibit will be a display of the original water-color drawings, many life-size, made direct from the cadaver, for the purpose of illustrating Piersol's "Human Anatomy." Such important works as Pfaundler and Schlossmann's "Diseases of Children," Ortner's "Treatment of Internal Diseases," and Fuch's "Ophthalmology," which have just been published, will be on view. Several important medical books that are scheduled for early publication will also be shown to the profession.

The Malt-Diastase Company, New York City.—Space 11.

This firm makes a specialty of diastasic and unfermented malt products for medicinal and dietetic purposes. It will have on exhibition assayed malt products for medicinal use, that is, its preparations maltzyme and its combinations. The firm's representatives will be pleased to give information relative to the methods of assay employed in the standardization of maltzyme and, in particular, those used in measuring the hydrolytic power of the amylolytic malt enzymes.

McCray Refrigerator Company, Kendallville, Ind.—Space 56.

An exhibit which will attract attention is that of the McCray refrigerators. Extensive advertising of high-class refrigerators has done much to educate the public against cheap zinc-lined "ice boxes." The particular feature of this firm's refrigerators, aside from their thorough construction and insulation, is the system of air circulation, which provides a strong circulating movement of pure cold air throughout the refrigerator. This current of air keeps the refrigerator free from odor and in a sanitary condition at all times.

McIntosh Battery and Optical Company, Chicago.—Space 78.

A most complete line of galvanic and faradic wall cabinets, alternating current rectifiers and other accessories will be shown in the McIntosh Company's exhibit. A new cautery transformer for direct current will also be one of the specialties receiving attention as well as a very popular type of cautery converter for the alternating current. These appliances will be demonstrated in full working order, enabling the physician to see them in actual operation.

Mellin's Food Company, Boston.—Space 79.

At this exhibit the special feature that will interest physicians is the new publication of the company, the "Mellin's Food Method of Percentage Feeding." This is a book of about 200 pages and it contains tables, with directions for preparing top milks, bottom milks, creams and whey from whole milks, with their analyses; also nearly 500 diet formulas, with analyses and caloric values.

The William Meyer Company, Chicago.—Space 85.

The exhibit of this firm, which is promised to be exceptionally attractive, will consist of a complete line of *x*-ray apparatus, resonators, *x*-ray tubes, galvanic and faradic batteries and plates, cautery apparatus, therapeutic lamps and electrically lighted instruments. Attention also will be called to its rectifiers for the alternating current.

E. B. Meyrowitz, New York City.—Space 38.

There will be exhibited here everything required by the specialist in the diagnosis, treatment and surgery of the eye, ear, nose and throat. The firm will show also an ophthalmometer, several perimeters, Stevens' instruments for testing the ocular muscles, color perception tests as used for railroad and marine service work, and a complete line of operating instruments for the eye, ear, nose and throat. *X*-ray and high-frequency apparatus, which this firm manufactures in a separate department, will be exhibited here also.

Modern Medicine Company, Battle Creek, Mich.—Space 22.

Arc, incandescent and Finsen type therapeutic lamps will be demonstrated at the exhibit of this firm, and an electric light cabinet of the type used in the Battle Creek Sanitarium will be in operation. Electric heating pads, electric blanket packs and the Kellogg douche apparatus, as well as other modern appliances, will be shown.

C. V. Mosby Book and Publishing Company, St. Louis.—Space 84.

One of the most popular and pleasing books put out by this firm, Crossen's "Diagnosis and Treatment of Diseases of Women," will be brought to the fore in this exhibit. This book, which is just off the press, is claimed to be especially adapted to the needs of the general practitioner. Monroe's "Suggestive Therapeutics" is another new book of this firm's which will be brought to the attention of physicians visiting this exhibit. There will also be a general display of medical books.

V. Mueller & Company, Chicago.—Spaces 45 and 46.

The surgical instrument exhibit to be made by this firm will prove interesting to specialists in every branch of surgery. Practical ideas materialized and instruments of the latest construction will be shown. The firm calls special attention to the grade of instruments it manufactures and emphasizes the fact that it is doing its best to cooperate with surgeons by producing instruments in which quality comes before price.

H. K. Mulford Company.—Space 20.

The process of the manufacture of antitoxin by the new method, which separates the antitoxic bearing globulin from the inert serum, will form part of the exhibit of this firm. There will also be an exhibit of bacterial vaccines made according to the method of Sir A. E. Wright, including Koch's tuberculins, both old and new, and their method of preparation; also demonstrations of the preparation of smallpox vaccine. Charts and apparatus will be shown illustrating the subject.

Phœnix Leather Manufacturing Company, Chicago.—Space 57.

A complete line of physicians' leather goods will be shown by this firm. It will comprise such articles as medicine cases, pocket vial cases, instrument cases, emergency, obstetric and surgical bags. Many styles not previously exhibited will be displayed and the firm's representative will be on hand to give any information required.

Rebman Company, New York City.—Space 5.

The high quality of the illustrations, in addition to the subject matter, is a specialty of this firm of medical book publishers and importers. It will show many standard medical books finely illustrated with wood cuts in many colors and lithographs of superior quality and excellence. Special illustrations of the typical surgical diseases will be shown, as well as many standard books on electrotherapy and phototherapy.

Sanitas Food Company, Battle Creek, Mich.—Space 41.

This firm will show the foods used in the Battle Creek diet system. The standardized glutens and nearly fifty other special food preparations, each of which is designed to meet therapeutic indications in various acute and chronic diseases, will be on exhibit. These products will undoubtedly attract the attention of visitors.

W. B. Saunders Company, Philadelphia.—Space 21.

This firm will have an unusually attractive exhibit at the double space just facing the entrance, where its publications may be examined at leisure. Of the new books issued by the Saunders Company during the past year the following are of particular interest: Volumes II and III of Keen's "Surgery." Bandler's "Medical Gynecology," the work on "Bier's Hyperemic Treatment," by Dr. Willy Meyer and Prof. Dr. Victor Schmieden, Campbell's "Surgical Anatomy," Cullen's "Uterine Adenomyoma," Greene and Brooks' work on "Genitourinary Diseases and the Kidney," and others. Advance sheets and illustrations of books in preparation will also be shown.

Scanlan-Morris Company, Madison, Wis.—Spaces 14 and 15.

This company will display its "White Line" of porcelain enamel operating room and office furniture. Great stress is laid on the fact that this porcelain enamel has all the aseptic possibilities of glass, with the additional advantage of being practically indestructible. In connection with this exhibit the Hettinger Bros. Manufacturing Company of Kansas City, Mo., will display a line of surgical instruments, new electric cystoscopic instruments and a high grade of leather goods.

Scheidel-Western X-Ray Coil Company, Chicago.—Spaces 31 and 32.

This firm will exhibit a number of complete *x*-ray and high frequency equipments, among them being this year's model radiographic special compression diaphragm and table. It will also show a new portable *x*-ray equipment for both alternating and direct current. A white enameled hospital outfit will attract attention.

Shelton Electric Company, Chicago.—Space 37.

This firm, which manufactures the Shelton vibrator is preparing a very elaborate booth. It will show some fifteen different makes of electrically driven vibrator apparatuses. The combination of high frequency electricity, combined with vibration, will be one of great interest as it opens a new field in electrotherapeutics. The Shelton vibrators, having taken the grand prize in Paris this year, attract unusual attention.

Schieffelin & Company, New York City.—Space 42.

This firm, in exhibiting the products of the Lederle antitoxin laboratories, will show the various steps in the process of refining and concentrating the serum. A plaster cast of the vaccinated area of a heifer, illustrating the development of the vesicles and their decline after the removal of the virus, will be one of the exhibits. The firm also will have a general display of its pharmaceutical products.

Smith, Kline & French Company, Philadelphia.—Space 24.

This company will have an exhibit of Eskay's Albumenized Food, together with the cereals and raw materials that are used in its manufacture. It will also have demonstration tubes showing the manner in which the food modifies fresh cows' milk when the latter is brought into contact with gastric juice. Literature regarding the food will be furnished, and a useful souvenir presented to each physician visiting the exhibit.

Spear-Marshall Company, Chicago.—Space 77.

The leucodescent therapeutic lamp which this firm exhibits will, on account of the new features that have been added to the equipment, be an object of interest. This apparatus, it is claimed, is now recognized as a necessary part of every practitioner's armamentarium. Its therapeutic effects and the principles underlying them, will be explained by those in charge of the exhibit. Physicians attending the meeting will doubtless avail themselves of the opportunity to investigate this apparatus.

Truax, Greene & Company, Chicago.—Spaces 27 and 36.

This exhibit, occupying a central position in the hall between the two main aisles, promises to be a most interesting one. A complete line of surgical instruments of standard patterns and many of the later special patterns will be displayed here in attractive form, each line being arranged under its own special classification. The drug department of the firm will have on hand a full line of pharmaceutical preparations of its manufacture.

Victor Electric Company, Chicago.—Spaces 80, 81 and 82.

This firm is providing for a very complete exhibit of its electrotherapeutic apparatus. Among other new electrotherapeutic instruments it will display a line of combination high frequency and *x*-ray equipments. A comparatively small *x*-ray outfit will be one of the novelties shown. The firm intends to demonstrate that as good fluoroscopic vision can be had and as good skiagrams taken with this comparatively small and moderately priced outfit as with the most expensive *x*-ray coils.

R. V. Wagner Company, Chicago.—Space 29.

This company will exhibit its new model mica plate high-tension electric generator, the Wagner *x*-ray compression diaphragm and shield, the new universal wall plate, the Wagner adjustable focus tube for coil and static machine, the Wagner ionizer on stand, the most approved forms of high-frequency electrodes, and electrotherapeutic accessories for wall plates and static machines. The firm will also show some remarkable skiagrams taken by means of its electric high-tension generator.

Henry K. Wampole & Company, Philadelphia.—Spaces 25 and 26.

What is promised to be one of the handsomest displays in the commercial exhibit will be made by this firm, which will show a very full line of standard pharmaceutical products and illustrate the process of manufacture. The mechanical efficiency of the firm's methods will thus be made a matter of demonstration.

Walsh Window Tent Company, Morris, Ill.—Space 100.

A demonstration will be given by this firm of the latest improvements in the methods for obtaining fresh air at night in extreme cold weather. There is a demand on the part of many physicians for something better than the outdoor porch or open windows at night. The Walsh window tent is one of the few attempts made to solve this question. The benefit claimed for the tent is that it saves the energy which in a cold room would go to fight the cold. The tent can be made adjustable to any window or bed.

Welch Grape Juice Company, Westfield, N. Y.—Space 8.

This firm will demonstrate the value of its product by serving grape juice gratis to the visiting physicians. The claim of absolute purity is made for this product, which is manufactured from the unfermented juice of choice Concord grapes. This booth, with its display of grapes and vines, promises to be one of the most artistic in the hall.

William Wood & Company, New York City.—Spaces 16 and 17.

One of the important exhibits made by this firm will be Bryant and Buck's "American Practice of Surgery," said to be one of the most complete expositions of modern American surgery published. An "Index of Treatment," edited by Hutchison, Collier and Coleman in one large volume, will also call for a share of attention. A timely book describing the modern diagnosis and treatment of consumption is Pottenger's "Pulmonary Tuberculosis." Numerous standard text-books and monographs will have their place in this exhibit.

The Year Book Publishers, Chicago.—Space 48.

The Practical Medicine Series of Year Books, which will form the exhibit of this firm, is said to cover all the departments of medical and surgical practice, presenting each year the advances in the different lines together with the current opinion of professional leaders on both the new and the old as given in the medical periodicals of the year. Ten volumes are issued each year, the several volumes appearing at about monthly intervals and treating of different specialties, so that each volume is complete for the year on the subject treated. The books are 12mo in size, with a total of about 3,200 pages, of which about 1,250 pages are devoted to general medicine and surgery.

AUTOMOBILES AND CARRIAGES.

This Exhibit Will be Found in Booths 70 to 76 Inclusive, Along the North Wall of the Main Floor.

The Bendix Company, Chicago.—Space 72.

This firm's four-cylinder, high-wheel cars equipped with its patent twin friction system, will be explained and demonstrated to all interested doctors. A mechanical expert will be in attendance at the booth and the company will have a demonstration car outside of the building. The company also has arranged for visiting doctors to go to the factory if they want to see cars in the actual course of construction. The Bendix as a successful four-cylinder high-wheel car embodies many new and exclusive features.

Buick Motor Company, Chicago.—Space 74.

This firm's physicians' car was brought out late in the season of 1907, and has proved so popular that the company is making a number of the combination coupé runabouts. This car has 22 h.-p. engines, a 91-inch wheel base and 30-inch wheels, fitted with a highly finished coupé, which affords comfort in all kinds of weather, and is simple and easy to control.

Cadillac Automobiles.—Space 73.

This company intends exhibiting two styles of its physicians' special cars. One is its 10 h.-p. runabout, the other a coupé mounted on practically the same chassis. The latter type was designed especially for physicians' use, in order to meet the demand for an enclosed car that would be suitable alike in pleasant weather as well as affording ample protection in cold and disagreeable weather.

Heinzelman Brothers Carriage Company, Belleville, Ill.—Space 75A.

There are a great many shelter-top carriages put on the market of various styles, curtain doors, glass doors, swinging doors, etc. As it is a very difficult matter to select a buggy from photographs or catalogues, this firm will have on exhibition two of its most popular styles, the "No. 17 coupé" and the "No. 23 Dreadnaught." There will be an attendant in charge to demonstrate and explain the many admirable features of its products and present a souvenir to each one who calls.

Holsman Automobile Company, Chicago.—Space 70.

The display of the Holsman automobiles promises to be very interesting. Physicians who desire to get to their patients and back to their offices again with the minimum amount of labor, loss of time and expense will doubtless be anxious to examine these cars carefully. The Holsman people say that over half of their machines are in use by country physicians, to whom the solid rubber tires and high wheels are almost a necessity.

J. V. Lindsley & Company, Chicago.—Space 75.

The Lindsley car which this firm will show is made in three models of runabouts and one model of surrey and combination surrey and runabout. The models shown will have many new exclusive Lindsley features. All parts which go to make up these cars will be shown so that purchasers may see for themselves the quality of each and every component part. One of the inducements offered to purchasers of these cars is the company's guarantee that the car will prove satisfactory under the buyer's own local conditions.

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Original Articles

PARAVERTEBRAL TRIANGLE OF DULNESS (GROCCO'S SIGN)

IN A CASE OF ABDOMINAL MULTILOCULAR CYSTADENOMA.*

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In various conditions complicated with collections of fluid in the pleural sacs, the clinical observations of Grocco,[1] Baduel and Siciliano,[2] Rauchfuss,[3] Thayer and Fabyan,[4] Ewart,[5] Morison[6] and others, have established the constancy of an area of percussion dulness, roughly triangular in outline, lying along the spine, on the opposite side to that on which the fluid is found. This paravertebral triangular area of dulness appears to have a distinct value as a point in differential diagnosis between conditions of pulmonary consolidation, mediastinal growths, etc., and conditions, associated with pleural effusion. It has even been suggested[7] that the paravertebral triangle of dulness is pathognomonic of the ordinary type of pleural effusion. Recently, however, attention has been called to the fact that triangular areas of dulness may be percussed along the spine in affections where the thorax is not the seat of the pathologic process. Ewart[5] now admits that in cases of ascites, Grocco's sign may be present, and Beall[8] cites a case of subphrenic abscess, on the right side where "there was an easily definable paravertebral triangle on the left." He suggests that the sign may occasionally be expected in other subphrenic conditions, such as tumors and cysts of the liver, abscesses, etc.

The patient furnishing the material for this report exhibited the unusual findings of an encapsulated collection of fluid, apparently wholly within an abdominal tumor, that was in no way intimately connected with the diaphragm or organs lying adjacent to the diaphragm; there was a well-marked area of paravertebral dulness, but no demonstrable exudate in either pleural sac. Evacuation of some of the fluid from the abdominal tumor was accompanied by distinct changes in the area of paravertebral dulness. Removal of the tumor mass promptly brought about the disappearance of the dulness lying to the left of the spine in the thoracic region. A few details of the clinical history of the case will suffice to bring out the interesting features.

Patient.—Mrs. A. N., aged 39, recently entered Professor Dock's clinic on account of an abdominal tumor, which had been present for more than fourteen months; weakness, loss of weight, abdominal pain of no distinct type and ascites (?).

History.—Thirteen years ago the right ovary was removed for an enlargement of the nature of which she is ignorant. Was married at 27; was never pregnant; still menstruates regularly. Shortly after ovarian operation, hernia developed at side of incision, and patient wears a stout truss. History otherwise negative.

July, 1906, a mass was noted in left hypochondrium. It grew rapidly larger, and in October, 1906, was tapped, and a large amount of fluid removed. Since that time she has been tapped fourteen times. At present the abdomen is as large as it ever was. Apart from the abdominal condition she has been in fair health.

Examination.—A rather cachectic woman of medium build. Thorax: Anterior, short, but fairly broad; expansion somewhat poor, but symmetrical; respirations shallow; no distinct Litten's sign on either side. Liver-lung border at fourth space in the mid-clavicular line; dulness in left axilla begins at the sixth space and continues downward into the abdomen; Traube's space dull. Auscultation: Negative, except for harsh vesicular breathing over both uppers. Heart: Apex beat in fourth i. c. s. about 5½ cm. beyond the left sternal edge. Sounds rather weak; no arrhythmia. Thorax: Posterior—Upper thoracic region negative. For percussion outlines of lower thorax see Figure 1. There were no percussion or auscultatory evidences of free fluid in either pleural sac. With the patient sitting on the edge of the bed and leaning forward a paravertebral area of dulness, somewhat triangular in shape, could readily be percussed to the left of the spine. It will be seen by consulting the figure that it was low for its breadth at the base. The spinal dulness extended from the eighth to the tenth dorsal spine, a distance of about 4 cm. At the level of the tenth rib the base extended to the left for a distance of about 6½ cm. from the midvertebral line. The hypothenuse of the "triangle" was rather markedly convex outward, the lower portion of the line descending somewhat abruptly to meet the base line. The limit of thoracic resonance to the left of the triangle was at the tenth space. On the right the liver dulness was made out at the ninth rib. This was about 1½ cm. below where the dulness on the spine began. The shape as well as the size of the paravertebral dull area was little influenced by changes in the patient's position. When the patient leaned forward, with the head on the knees, the triangle was somewhat more sharply defined; sitting erect or leaning backward produced a rather smaller area of dulness; leaning to the right produced no perceptible alterations. Lying on the left side brought out more marked spinal dulness, but no changes in the base line of the triangle. Auscultation: No breath sounds could be made out over the paravertebral dull area; to the left of the triangle the breath sounds were somewhat harsher than at points of the lung above or to the left in the axilla. There were no alterations in the voice transmission.

Abdomen: Markedly globular; bulged in the flanks and rose abruptly from the base of the xyphoid. Was rather fuller in the left upper quadrant than the right, the fulness continuing upward beneath the lower ribs. The abdomen measured at the level of the tenth ribs, 102 cm.; at the level of the iliac crests (about level of navel, also) 106 cm.; from navel to pubis, 17 cm.; from navel to base of xyphoid, 32 cm. On palpation a large, smooth, rather globular mass could be made out filling the lower three-fourths of the abdomen and extending upward to the left more than the right. There was distinct fluctuation at any part of the abdomen, but more at the level of the navel. Stomach: Inflation revealed slight displacement to the right and downward. Colon: Very capacious in the ascending and descending portions. The transverse portion was displaced upward.

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* From the Clinic of Internal Medicine of Professor George Dock.

[1] Riv. crit. di clin. med. Firenze, Nos. 13 and 14, 1902.

[2] Ibid., 1904.

[3] Deutsch. Arch. f. klin. med., 1906, lxxxix, 186, 219.

[4] Am. Jour. Med. Sciences, January, 1907.

[5] Lancet, Lond., 1907, ii, 49, 189.

[6] Lancet, Lond., 1907, ii, 112.

[7] Ewart: Progr. Med., 1907, ix, 40.

[8] The Journal A. M. A., Dec. 28, 1907, p. 2148

Progress of Case.—The patient was tapped by Professor Dock two days after entering the hospital, and eleven and one-half liters of slightly opalescent fluid were removed. Examination of the back after tapping showed dulness as in Figure 2. There was dulness on the spine at the level of the ninth and tenth vertebræ. The base of the triangle to the left measured about 2½ cm. The percussion and auscultation of the adjacent lungs were negative. A large mass, of distinctly cystic feel, could be made out definitely in the abdomen. The patient was transferred to the gynecologic clinic and Prof. Reuben Peterson removed an enormous multilocular cystadenoma. Examination of the back four days after operation revealed absolutely no evidences of paravertebral dulness on either side. The liver was at the ninth rib in the right midscapular line. The lower limit of thoracic resonance to the left was at the tenth rib, and continued inward to the spine.

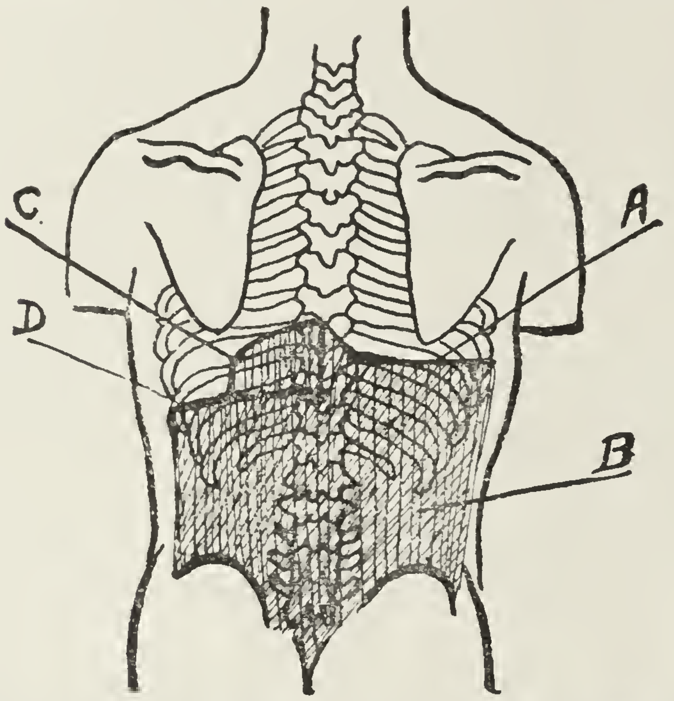

Fig. 1.—Outlines of percussion dulness. A, upper limit of liver; B, flatness in flanks and lumbosacral regions; D, lower border of thoracic resonance on left; C, paravertebral dulness, base 6½ cm.; vertical spinal dulness, about 4¼ cm.

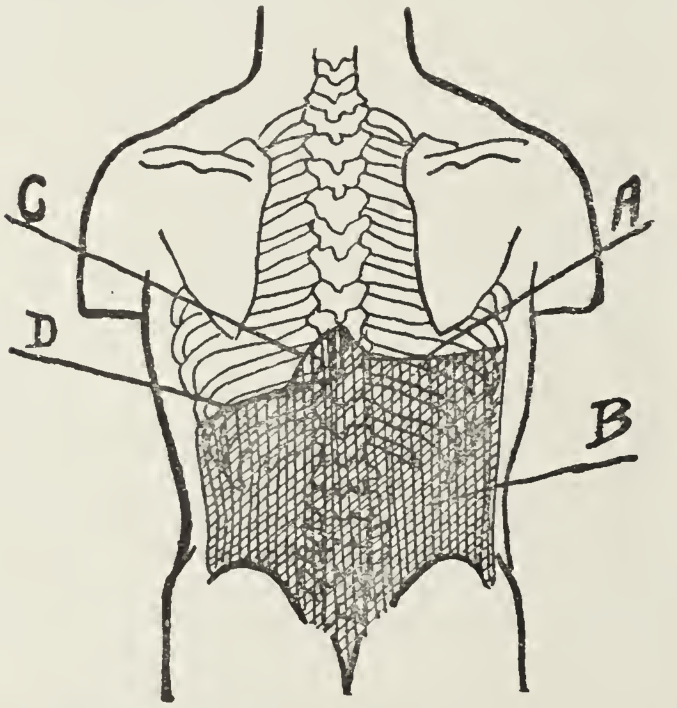

Fig. 2.—Outlines of percussion dulness one hour after tapping (11.5 liters fluid removed). A, upper limit of liver; B, flatness in flanks and lumbosacral region; D, lower limit of thoracic resonance; C, small triangular area of paravertebral dulness; base 2½ cm.; vertical spinal dulness about 3 cm.

The cause of the paravertebral dulness in this case appears to be due primarily to the presence of the large, cystic, abdominal neoplasm. Just in what manner this new growth produced the changes in the thorax can only be conjectured. It would seem that in cases where paravertebral dulness exists from causes that are extrathoracic, something more than mere displacement of the mediastinal tissues (as suggested by Baduel and Siciliano[2] in explanation of Grocco's triangle) must take place. In the case herewith described, the positions of the heart, liver and spleen, together with the absent Litten's sign on both sides, certainly point to a rather marked upward displacement of the diaphragm. It might be suggested that on account of the support offered the diaphragm by the liver on the right side, locally, the diaphragm was pushed upward to a greater extent to the left. In this manner one might fancy that some displacement of the mediastinal tissues took place, and that the lung on the left was pushed from the spine. One must not forget, however, that displacement upward and to the left of the liver itself could produce paravertebral dulness. The prompt disappearance of the dulness to the left, after extirpation of the tumor, enables one to rule out secondary growths in the mediastinal tissues or in the lung, and also speaks against the possibility of an unrecognized pleural effusion.

THE DIFFERENTIATION OF BACILLUS COLI COMMUNIS FROM ALLIED SPECIES IN WATER.*

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It is not the purpose of this report to deal with the old and controversial question of the significance of *Bacillus coli communis* as an indication of pollution in drinking water, nor to go into details upon the typical or atypical biologic characteristics of the organism; but especially to determine a constant biologic feature by which it can be differentiated with certainty from the allied species of the colon group. It is common knowledge that *B. coli communis* presents such extensive variations that often cultures isolated from water and reported as identical with this micro-organism will, if studied more closely, be found to have very little or no relation at all with it. The hypothesis that the acceptance of such variations in *B. coli communis* is responsible for the unsatisfactory results often obtained in the bacteriologic examination of drinking water has been the basis for undertaking the following studies.

I believe *B. coli communis,* like *B. typhus, B. diphtheriæ, B. anthracis,* etc., is a single micro-organism, not a group; and if its biologic and morphologic features are sufficiently studied, is not to be confused with others. It is true that sometimes an atypical reaction is seen, but this irregularity if carefully inquired into will be found to depend, not on the colon bacillus itself, but on the condition in which it has been placed. The colon bacillus is commonly regarded as an acid-producing micro-organism. The reaction, however, depends entirely on the presence of sugar in the culture media; and in plain neutral bouillon the reaction of the culture will be alkaline.

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* Reported from the Pennsylvania State Department of Health Laboratory, University of Pennsylvania.

A. PRODUCTION OF INDOL.

This depends on the presence of a proteid substance, peptone for instance. In such a medium, moreover, the presence of sugar inhibits the production of indol, which will be manifested only after the sugar has been exhausted by the colon bacillus. Further, under anaërobic conditions and by cultivating the organism on special media containing phenol, nitrates, etc., the production of indol may be inhibited or completely abolished; and, following the ordinary technic, by using a 1 per cent. peptone bouillon Lembke, Roux, Widal, Malvoz, Vallet, Dunham, and others, have reported cultures not producing indol, but otherwise typical of *B. coli communis*. Morris, however, by employing a 5 per cent. peptone bouillon and making his test after from ten to twenty days, obtained positive indol reactions from the same cultures. It is probably due to such variations that our literature on the organism in question is full of such classifications as "strong indol-producing colon bacilli," or marked "distinct," "weak," "faint" and finally "negative" indol-producing types. Such classifications seem to me the result of too precipitate conclusions from superficial observations. They are presumed to depend on variations in the organism when in reality they are the result of variations in the medium of cultivation and the technic employed.

Much to my surprise, I have often observed a positive indol reaction in sterile meat sugar-free bouillon, and a close study of the subject has convinced me that the practice of preparatory fermentation of the meat-juice with *B. coli communis,* as recommended by Smith and followed by leading bacteriologists abroad and in this country, can not be too strongly condemned. This preliminary fermentation with the colon bacillus for from eighteen to twenty-four hours (and by neglect often forty-eight or more hours) is sufficiently protracted for the production of more or less indol, which then remains in the medium. The sterilization I found to be without effect in this reaction, as the medium thus fermented gave typical reactions before and after exposure not only of thirty minutes to 100 C., but also after from twenty to thirty pounds steam pressure exposure for half an hour. To this, doubtless is due our new literature on "indol-positive typhoid cultures." In this laboratory I employ a strong saccharolytic organism, isolated from water, producing from 80 to 100 per cent. of gas in from eighteen to twenty-four hours, rapidly exhausting all sugars, and failing in the most careful test to produce indol. With the medium thus prepared I have never obtained the slightest trace of indol in any typhoid cultures which I have examined: and it is my belief that no true typhoid organisms can produce indol and that no true *B. coli communis* ever fails to show the reaction of Salkowsky.

B. NON-LIQUEFACTION OF GELATIN.

Almost every bacteriologist is of the opinion that a liquefying organism does not belong to the colon group, and that of *B. coli communis* never liquefies gelatin. It is not the question of liquefaction or no liquefaction which I wish to discuss, but rather the conditions under which such an important reaction is tested. The procedure recommended by the American Medical Association includes incubation at from 20 to 22 C. and the use of medium of from 1 to 1.5 per cent. acidity, both of which I have found unsatisfactory, not because *B. coli communis* will be affected by the reaction of 1.5 per cent. acidity, but because the proteolytic fermentation proceeds better and more quickly in most cases in alkaline or neutral medium and takes place best at 37 C. As a routine procedure in the laboratory, I use neutral gelatin and incubate at 37 C. for from forty-eight hours to four days. The tube is placed in ice water to harden the gelatin and then examined for liquefaction or non-liquefaction of the medium. The method has given far better results, and what is of most importance, it is the only way to eliminate gelatin-liquefying growths which at from 20 to 22 C. in the acid gelatin do not produce proteolysis and are often mistaken for *B. coli communis.*

The classification of cholera spirilla into species, causing rapid, slow, slight and very slight liquefaction, I believe to be only a matter of reaction of the medium and temperature of incubation. In case of a number of laboratory cultures as well as six others isolated from the Schuylkill River, tested after growth in neutral gelatin at 37 C. for from forty-eight hours to four days, the liquefaction was complete; but it was only partial when the organisms were kept in other cultural conditions.

C. AMOUNT OF GAS.

It is regarded as characteristic of *B. coli communis* that there should be produced from 50 to 75 per cent. volume of gas in the closed arm of the fermentation tube in from twenty-four to forty-eight hours (of which the relation of hydrogen to carbon dioxid is represented by the formula $H : CO_2 : : 2 : 1$ also that the fermentation is usually completed in twenty-four hours at 37 C. I have observed, however, cultures of *B. coli communis* recently isolated from water producing no gas at all in twenty-four hours and after forty-eight hours at 37 C. only 15 per cent. The relation of hydrogen to carbon dioxid just mentioned may be regarded as correct, but it is by no means constant and reliable, a formula $H : CO_2 : : 3 : 2$ being even more frequently obtained, and formulas such as 3 : 1 or 4 : 1 or even higher may be observed according to the time at which examination is made. If cultures are closely observed it will be noticed that after twenty-four hours, when the gas formation is stopped, a gradual reabsorption of the carbon dioxid by the medium takes place, and the result gives an apparent excess of hydrogen. Further, when the sodium hydroxid solution is added to absorb the carbon dioxid a partial vacuum is produced and should the mouth of the fermentation tube be imperfectly closed by the thumb or by a rubber stopper, access of air is permitted and the results may fail to show any carbon dioxid at all. It is possible, therefore, from conditions in which the culture is placed or from failure in the technic to obtain a typical colon bacillus gas formation from an organism which under more careful observation would show the contrary.

The above features are presented in order to show that the irregularities obtained in cultures are not due to different types of the colon bacillus, but to the conditions under which the culture is grown, or to imperfect technic, and to indicate that the organism should be regarded as essentially a monotype bacillus and not as a group.

DIFFERENTIATION REACTION.

With this view in mind, an attempt was made to find some reactions to serve as constant and reliable means of differentiation. After a series of tests, it was found that if, in each of a number of tests, about 0.25 c.c. to 0.5 c.c. of a forty-eight hour culture of various organisms on 1 per cent. dextrose bouillon was rapidly boiled in about 5 c.c. of a 10 per cent. solution of sodium hydrate, there will appear immediately after boiling a clear yellowish-lemon color in the tubes of *B. coli communis* (similar reaction is obtained also with the uninoculated control 1 per cent. dextrose bouillon); while in others, as an indication of the absence of this micro-organism, the solution will remain clear and colorless, taking on a slight pinkish color after five or ten minutes; this reaction I have arbitrarily called Test 1.

In another and independent observation conducted in other cultures isolated also from water, I found that if about 1 c.c. of a 10 per cent. solution of sodium hydrate and then about 1 c.c. of a 50 per cent. solution of sulphuric acid be added to the cultures, some tubes will remain colorless, while others will take on a purple reddish coloration either at once or within a few minutes. Closer study of this reaction showed this to be positive as soon as a growth was apparent in the medium, even as early as four or five hours incubation at 37 C. in neutral bouillon; and further investigation indicated that this purple coloration with sodium hydrate and sulphuric acid was characteristic of the *B. coli communis* cultures (Test 2).

This test shows the color reaction on the addition of acid and its disappearance when alkali is added in excess; this is a direct reverse of the color reaction of Test 1—in which the color is discharged by acid and reserved by alkali. The color in Test 2 is not produced in the presence of sugar. It is apparently related to the presence of indol or some indigo deriviation. Test 1 seems to depend on the biologic action of the bacteria on the sugar, while Test 2 depends on the action of the *B. coli communis* on proteid substance; and the striking and ready production of these color reactions aid materially in facilitating the differentiation of bacillus coli. Further study is in progress to determine the nature of these reactions.

ACTION OF THE COLON BACILLUS ON SUGAR.

It was deemed desirable to avoid experimenting in this connection with the different kinds of sugars, as dextrose, lactose, saccharose, fructose or mannite, etc., since while such study undeniably is of scientific interest, the multiplication of these sugar-media opens the chance of too ready and disastrous confusion of results; based on the fact that any saccharolytic micro-organisms having the power of splitting other sugars have, in my work, never failed to attack dextrose, my observations were made on cultures in media containing this sugar alone. *B. coli communis* was incubated in a 5 per cent. dextrose bouillon, and the culture daily examined polariscopically for the exhaustion of the sugar in the medium. It was found that the sugar after forty-eight hours remained the same as after twenty-four hours; in other words, that the bacillus showed but a weak sugar-splitting power, the saccharolytic action ceasing after twenty-four and sometimes after eighteen hours. With this fact in view, established by identical results in a number of experiments on the same line, it was thought well to make the same observations with other cultures which also possessed saccharolytic activity, but which gave atypical reactions for *B. coli communis.* From a number of such strains in the laboratory, one was selected and incubated in 5 per cent. dextrose bouillon and daily polariscopic examination pursued as in case of the true colon bacillus above mentioned. In this instance the sugar was found to be considerably diminished after from eighteen to twenty-four hours, and to have disappeared entirely from the medium in from two to three days at 37 C. The results in tabular form were as follows:

	Per cent.
Control sterile dextrose bouillon	1.17
Bacillus coli culture after 24 hours at 37 deg. C.	1.01
Bacillus coli culture after 48 hours at 37 deg. C.	1.01
Bacillus coli culture after 72 hours at 37 deg. C.	1.01
Allied species culture after 24 hours at 37 deg. C.	0.66
Allied species culture after 48 hours at 37 deg. C.	0.18
Allied species culture after 72 hours at 37 deg. C.	0.00

These results, indicating the more complete saccharolytic ability of this allied species than that of *B. coli communis,* gives a constant feature of the various species in the group of micro-organisms liable to be confused with the colon bacillus, another reliable differential test. In order to avoid the necessity for polariscopic examination of the cultures, a series of investigations, in which Fehling's solution was employed was pursued. The cultures as before were tested after twenty-four, forty-eight and seventy-two hours incubation at 37 C., the Fehling's solution was diluted with equal parts of water, as usually done in qualitative examinations of urine for sugar, and divided among a number of small test tubes, 1 c.c. being placed in each. To these the culture was added in increasing amounts, beginning with one, two, three, etc., drops up to 1 c.c.; and the mixture then boiled. The result was striking. The controls or non-incubated medium gave positive sugar reactions with one or two drops according to the percentage of sugar in the material; cultures of the colon bacillus gave positive reactions with about twice the amount added as in case of the controls—two or three drops; while the allied species failed to show reduction of the copper even after the addition of as much as 1 c.c. of the culture. Often tests were conducted with different proportions of dextrose in the medium, from 0.1 per cent. to 5 per cent. dextrose bouillon and, after forty-eight hours' incubation at 37 C., the differentiation was the most typical.

These findings have been confirmed in routine examination of a great number of cultures obtained from water and other sources during the past three years during my connection with the Filtration Bureau of Philadelphia and later with the State Department of Health Laboratory in the University of Pennsylvania Pathological Laboratory; cultures answered fairly to the characteristics of *B. coli communis,* in no case showing exhaustion of the sugar save in a few exceptions which on further investigation proved to be impure.

In view of such results, I have tentatively proposed for that group of organisms which present characteristics similar to that of *B. coli communis,* but not corresponding completely to this organism and which are commonly spoken of collectively as the "colon group," the substitution of the name "the saccharolytic group," the name being based on the splitting action manifested by them for dextrose. The leading features of this saccharolytic group may be said to consist of their powerful action on dextrose, their usual failure to produce indol and their tendency to cause liquefaction of gelatin. In the group, however, are a few individual types which fail to liquefy gelatin and a few which will produce indol. The separation of such examples may, however, be definitely made by the colorless to pinkish color reaction of Test 1, or by the absence of the purple reddish color reaction of Test 2, as above described, and by the test of their exhaustion of sugar from a 1 per cent. dextrose bouillon medium after incubation for forty-eight hours at 37 C. (Test 3).

Being convinced of the importance of this strong sugar reaction of the saccharolytic group and its absence in case of the colon bacillus, an investigation was made to determine the actual explanation of the difference thus manifested. Two suppositions were considered: First, that *B. coli communis* may possess slower actions on the sugar; or second, that it produces some substance which inhibits the saccharolysis which would otherwise proceed as in the saccharolytic group. Both types of organisms begin to form gas at about the same time, but the colon bacillus produces gas more slowly than the group of allied species and its gas production ceases after from twenty-four to forty-eight hours. The saccharolytic group, on the contrary, after beginning about the same time as the colon bacillus to produce gas, continue more rapidly and do not cease until the sugar is entirely exhausted, the duration varying with the percentage of sugar in the medium. At the same time it was found that the acidity of the medium was greater with the colon bacillus, which produced from 3 to 5 per cent. in forty-eight hours; while the saccharolytic group produced only from 1 to 3 per cent. in the same period. This difference suggested that the greater acidity of the medium in case of the colon bacillus may exert an inhibitive influence on the further action of the organism on the sugar. By adding a few grains of sterile calcium carbonate to the cultures after the fermentation had stopped and absorption had begun, with the effect of neutralizing the media, it was found in confirmation of this supposition that more gas is evolved and the sugar further diminished (even to exhaustion). As suggested by Dr. Smith, the acidity of the culture was found to be due to the presence of lactic acid.

Before concluding I would like to point out briefly that, in view of the apparent variations of *B. coli communis*, Booker recognizes seven varieties of organisms of the colon group resembling the colon bacillus morphologically and biologically (but with no especial mention of the production of indol): that Gilbert describes five types: (a) non-motile but otherwise typical colon bacillus, (b) non-productive of indol, but otherwise typical colon bacillus, (c) non-fermenting lactose, but otherwise typical colon bacillus, (d) non-motile and non-fermenting lactose, but otherwise typical colon bacillus, (e) non-motile non-fermenting lactose, non-productive of indol, but otherwise typical colon bacillus; that Fremlin regarded fermentation of dextrose and coagulation of milk as the most reliable indication of *B. coli communis;* that others regard the fermentation of dextrose alone as sufficient evidence of the identity of this bacillus. It is remarkable to note the elasticity of colon bacillus as disguised at present under the name of "the colon group." This elasticity is due, however, to the general conception of the colon group, a term used to cover all bacteria from the true *B. coli communis* to the *B. typhosus,* and the failure of many observers to realize the individuality of the various members of the chain. Careful controlling of all colon-like organisms with the two-color and sugar-exhaustion tests will serve to limit names, and it is with the hope of establishing a clear identity of this important indication of sewage pollution that these methods are offered.

CONCLUSIONS.

From the above I believe the following conclusions to be logical:

1. The saccharolytic group, as its name implies, represents not only one but different kinds of micro-organisms commonly found in nature, especially in water, characterized by its predominating action in splitting dextrose.

2. The constant occurrence of this group in water may prove to be a factor in itself which may shed a new light on our vital problems of the bacteriology of water.

3. The *B. coli communis* must not be confounded with the colon group, which I name "saccharolytic group," holding that this group should have no relation to the colon bacillus.

4. Since the saccharolytic group is shown to be more closely related to what at present is regarded as the colon group, the substitution of "saccharolytic group" for "colon group" is more comprehensible, and I hope will aid considerably, not only in relieving the confusion which the colon group presents, but especially in establishing the colon bacillus as a distinct type of micro-organism and not an indefinite chain of them, as it is considered at present.

5. *B. coli communis,* in addition to the recognized characteristics, will be positive to Test 2 and negative to Tests 1 and 3 (that is, it will fail to exhaust the sugar in 1 per cent. dextrose bouillon at 37 C. in forty-eight hours), while contrary to this the saccharolytic group may in many ways present characteristics of the colon bacillus, but will always be negative to Test 2 and positive to Test 1 and Test 3 (that is, it will exhaust the sugar in forty-eight hours at 37 C. in 1 per cent. dextrose bouillon).

6. *B. coli* should be discarded as an agent for exhausting the sugar in the meat juice and one of the saccharolytic group should be used instead.

I desire to extend my appreciation and most sincere thanks to Dr. Samuel G. Dixon, commissioner of health of Pennsylvania, for his valuable criticisms on this paper; to Dr. Allen J. Smith, professor of pathology, and Dr. John Marshall, professor of chemistry of the University of Pennsylvania, for their personal interest and valuable suggestions, and to Dr. Herbert Fox, chief of the laboratories, for his valuable assistance during the progress of this work.

PSYCHOTHERAPY, WITH SOME OF ITS RESULTS.*

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In the term psychotherapy I include all forms of mental treatment, whether accompanied by hypnosis or without. The hypnotic state is not primarily the result desired, but the receptive condition induced by that state, in order that the curative suggestion given may be accepted without interference from the objective self. Hypnosis of itself without suggestion never accomplished anything, the forceful directions given the patient during the responsive state of hypnosis achieve the results.

There is a great deal of discussion at present as to the relative value of so-called hynotic treatment and suggestive or psychic treatment without hypnosis, the discussors apparently losing sight of the fact that in all the various methods of mental therapy it is the same underlying principle—suggestion, or a command to the subconscious mind, and acting through the same brain—that produces the desired effect. The modern teaching that we must treat the patient and not the disease only must be rigidly applied in mental therapeutics. Therefore, the individual determines, in a great degree, whether the method used is the form of psychic treatment of which Dubois has written so entertainingly, and which he chooses to call "persuasion" rather than suggestion, or whether the analytical method or the state of hypnosis in one of its many phases, is best employed. There are many people who are "persuadable" or "suggestible" in the waking state, and for those it is entirely unnecessary to produce hypnosis, but there are equally as many who are so deeply possessed by their own beliefs and opinions regarding their physical condition, that no amount of persuasion or suggestion during the normal consciousness will affect their autosuggestions. Something depends also on the nature of the trouble for which relief is sought, for there are certain conditions that can not be gotten rid of except under hypnosis.

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The induction of the hypnotic condition is valuable in these cases because of the heightened receptivity produced and the passive condition of the patient's autosuggestions, which in the waking state frequently entirely overcome any curative suggestions from the physician.

Very often, however, it is impossible to say whether the patient is in a state of hypnosis or not, the only evidence being the sensation of calmness and well-being following treatment, and the prompt relief of the pain or other symptoms. Obviously, the physician does not experiment with the individual to find out the depth of the sleep; the entire time being occupied by vigorous suggestions toward the relief of his condition.

The patient's evidence is of no value because of the widespread idea that unless amnesia is present he is not affected and, according to European authorities, including Bernheim, Forel and Moll, although 95 per cent. of all people are hypnotizable, only 13 per cent. are amnesic on waking. In my practice only about 10 per cent. of my patients experienced loss of memory, the others all declaring that they heard everything and were conscious of their surroundings, but, as several expressed it, did not care to exert themselves and felt that to do anything was too great an effort.

That the suggestible state, in greater or less degree, is inherent and producible in the majority of people I think admits of no argument. Indeed, the authorities already quoted agree that the physician who can not influence 90 per cent. of his patients is not competent to criticise psychotherapy. While my own percentage does not run quite so high as that, my failures, I am persuaded, have been due to faulty technic or lack of patience on my part. And this, I believe, is the greatest difficulty with many American physicians, who make a spasmodic attempt to use suggestive treatment, meet perhaps at first with indifferent success, and then cast the whole subject aside as valueless. Some have gone so far as to assert that the treatment may be applicable to Europeans, but can not be used successfully with our high-strung, intelligent American people. It is apparent that this statement is made without proof or adequate ground for the opinion.

Where are the physicians in this country of equal standing with those of Europe who have devoted themselves to the practice of hypnotic or psychic treatment and who have any reliable statistics that they can produce? An occasional sporadic case which has been treated by every possible method unsuccessfully before suggestion is tried, as a last resort, and which perhaps does not show immediate response, is certainly not sufficient evidence on which to base an opinion as to the suggestibility of the American people.

In my experience with suggestive therapy during the past six years, and during the last two, its exclusive practice, I have found that the most intelligent Americans yield more readily to mental treatment than the foreign-born clinic patients.

There is no question, however, but that there is as much variability in the suggestibility of individuals as there is in their varying temperaments and characters. When physicians study the effect of mental conceptions on the body, and apply themselves as earnestly and as enthusiastically with the treatment by mental methods as they do in experimenting with a new drug or serum, they will be in position to state definitely the relative suggestibility of our own countrymen.

My method of treatment is based on that of Bernheim and Leibault, and I follow very much on the plan of Bramwell in that I always give my intelligent patients a preliminary explanation of what I expect, the probable sensations they will experience the first time, and the fact that sleep, as generally understood, is not necessary in order to experience the benefit of the treatment.

There are two distinct types of patients; the one who is afraid he will go to sleep, and the other who is afraid he will not. Both of these have to be met and dealt with accordingly. The former after a few simple explanations usually lose this feeling. The latter class are perhaps a little more difficult because as a rule they have fixed ideas as to the only way in which they can be helped, and if they are not conscious of being asleep and amnesic they will declare that they are not influenced at all, and by their own strong autosuggestion in many cases will counteract the physican's influence.

In a few of these cases, when reason could not be used, I have employed hypnotic drugs for their quieting influence and to heighten the verbal suggestion. In all I have used these drugs about six times, giving either bromid or paraldehyd. The results have been favorable in all the cases except one insomniac patient, and in that case I could neither influence the patient with drugs or without, and apparently made no impression of any kind.

It is not wise to use drug therapy at the same time as suggestive therapy, for the divided attention of the patient seems to weaken the suggestive effect, and for that reason I never combine the two unless it is especially indicated, or is merely the prescribing of a simple tonic, the effect of which I explain to the patient.

Without dealing any further in generalities I wish to present three definite cases drawn from my own practice which illustrate the success that has been obtained by the use of this method of treatment. In presenting these cases I desire to direct attention to the fact that all possible physical means of treatment had been tried over a long period of time without results.

It is often stated by the opponents of psychotherapy that "other means" will relieve the condition, and, therefore, there is no need to resort to this method. But the facts are that hypnotic and psychic treatment have made their way only through the failure of the "other means." Even now there are few physicians practicing psychic therapy whose patients have not exhausted every method known to the pharmacopeia and often surgery besides, before coming to them.

I have no desire to thrust forward any claim for suggestive therapy being a panacea or specific for even all functional diseases or all so-called incurables, but merely to call attention to the fact that many obscure conditions and functional diseases are cured by this means, and no physician has done his whole duty by his patients who allows them to drift out of his influence and often into the hands of self-styled "healers" of various cults, without having recourse to psychic therapy in competent medical hands.

CASE 1.—Psychasthenia of strongly obsessive type. This patient first consulted a prominent New York neurologist a year previous to coming under my observation. Some months later he was seen by Dr. Charles L. Dana, examined by him, and kept under his care for a time. Dr. Dana then referred him to me with the above diagnosis. He consulted me on Nov. 28, 1906. The history is as follows:

Patient.—Male, aged 28, college graduate, analytical chemist by profession, had never had any physical illness except a catarrhal condition of the middle ear resulting in slight deafness six years previous.

Family History.—No alcoholism or insanity. Father is a well-balanced, intellectual man, free from any nervous trouble. Mother has had slight headaches and occasional fits of depression. There are four brothers and one sister in the family. Of the brothers, three of them are suffering from nervous breakdown.

Personal History.—The condition of my patient can best be briefly described by giving his own analysis of himself, written to me just before he presented himself for treatment:

"A young man at 28 finds himself a prey to his morbid feelings and emotions. Is unable to concentrate his thoughts on anything except himself and his incompetency. The most trivial act, such as posting a letter or dressing himself, is a great effort and is thought over and dreaded before he can force himself to perform it.

"He is still working, but knows he can not continue much longer, and is in constant fear of losing his position. Has no ideals or normal emotions. Would not care if his mother died to-night. Would forget it the next day. Is absolutely selfish and self-absorbed. Is oversensitive and self-conscious, a slight deafness accentuating this natural tendency. When compelled to go among people is in agony and imagines every one is criticising and noticing him.

"Has no bad habits or sexual perversions as yet, but is constantly haunted by the dread of them and feels that he can not resist much longer. His will is weak and he cares nothing for others' most sacred feelings. He is wretched himself and a detriment to others, and ought to be put out of the way, but is too weak morally to do it himself, although suicide is a constant thought. This condition has gone on for years, ever since leaving college, constantly increasing in severity until the present time, when he feels that insanity is the logical outcome, if not already present."

Examination.—This young man presented himself at my office three days after writing this letter. He was in a tense, highly nervous state, very depressed and hopeless over himself. The neurologic examination showed nothing abnormal except slightly exaggerated deep reflexes. He was insistent over the necessity of being placed absolutely under hypnosis. He was convinced that Dubois' psychic treatment, of which he had read, would be of no use to him, and was in the greatest fear that he could not be put to sleep.

Treatment.—Owing to his agitation and intense anxiety I was very doubtful of being able to induce the hypnotic condition, and realizing that the failure to do so at this first attempt would probably deepen his fear and increase the difficulty, I gave him 30 grains of paraldehyd just prior to commencing hypnotic suggestion. He passed into a perfectly quiet restful state, was able to respond to my questions, but was entirely passive unless forced to answer. He was given vigorous suggestions for over half an hour, was left in this condition for about two and one-half hours, and then awakened. He expressed himself as feeling calmed and refreshed. On all subsequent visits the drug was omitted, but he was quite suggestible and slept quietly for over two hours each time. This treatment was continued three times a week for the first month, then twice a week for the next month. After that he came irregularly, when he felt the need. This resulted in about three visits in the third month.

Result.—At the end of the second month he told me that he was able to concentrate his mind on his work, and it had never been so satisfactory before; that he was now able to control his thoughts, and that his different attitude and appearance had been commented on by many of his friends. I saw him once during the summer and he stated that he was entirely free from morbid thoughts and felt perfectly normal for the first time in years. He is now engaged to be married and is leading a perfectly normal life.

CASE 2.—Idiopathic insomina.

Patient.—R. E., male, aged 37, writer by profession, consulted me Jan. 6, 1907. Family history was negative.

Personal History.—He gave a history of sleeplessness dating back seven years. He had never had any trouble of this kind until he occupied a position as night editor of a daily paper. During this period his heaviest work occurred between 2 and 5 o'clock in the morning. He was a poor sleeper during the day, and finally gave up the position on account of this inability to sleep soundly during the day and because of his nervous, exhausted state. He found, however, that he could no longer sleep at night, although he would occasionally fall asleep on first retiring, but never slept more than an hour and then remained awake until after 4, when he would obtain another short sleep until 6 o'clock, at which time his business necessitated his rising. He commenced to take various hypnotic drugs, and had run through the usual list; he was on veronal when I saw him and was taking 20 grains about every third night.

Examination.—In appearance this man was very pale, thin and anemic. He had dark heavy circles under his eyes and looked strained and worn and was mentally despondent and depressed. The physical examination revealed nothing abnormal. He was greatly troubled with severe constipation, which had been present many years, and every day took an enema or a laxative drug.

Treatment.—This patient, on beginning treatment, was instructed to cease taking laxatives, because, as a rule, the restoration of the normal bowel function is most easily affected by suggestion, and the confidence of the patient is gained if he can see some immediate result of the mental therapy. He was treated three times a week for four weeks, but at no time was he deeply asleep and none of the phenomena of hypnosis was present, although sleep suggestion was always given. The suggestions were directed not only toward the relief of the insomnia, but also for constipation.

Result.—He commenced at once to have a normal daily movement of the bowels. The first night after suggestion had been given he slept for seven hours, the second night for five. He also slept well the night of the second visit, but the following night was a poor one. After the third treatment he again had two good nights, only waking once or twice and going to sleep again. During all this time he was entirely without drugs. During the balance of the month he had three poor nights. The rest of the time he was sleeping normally. His constipation was entirely relieved. He reported to me five weeks after his discharge that he had thirty consecutive nights normal sleep. I have since heard from him and he has remained entirely free from his old trouble.

CASE 3.—Spasmodic stricture of the esophagus.

Patient.—F. B., male, aged 32, an electrician, consulted me March 16, 1906. Family history was negative.

Personal History.—Previous to his illness he had been a bicycle pacemaker for three years. He had always been well up to time of onset of present illness, which occurred when he was 20 years old. The attack was sudden. He had been feeling nervous and exhausted for two or three days. The spasm of pharynx and esophagus occurred first while attempting to eat a piece of bread and was accompanied by regurgitation and vomiting and by a sensation of violent choking. These attacks occurred whenever he attempted to eat solid food, and he went to the Massachusetts General Hospital for several weeks. He left there without benefit and drifted from place to place for some years. The condition persisted and grew worse so that the attacks came without the provocation of solid food and he now lived entirely on liquids. In the hospital at Rochester, where he spent several weeks, the relaxation and contraction of the muscles produced a rhythmical sound like the ticking of a watch, so that he was nicknamed the human Waterbury watch. From Rochester he returned to New York City and spent the last five years here, during which time he has visited most of the clinics and is known to many physicians.

For many years he carried with him a rubber catheter which he has been in the habit of pushing down the esophagus to relieve the contraction sufficiently to permit the outflow of the contents of the stomach when the spasm would be relaxed. The patient is unable to lie down to sleep at night, the lying posture inducing an attack, and for a year and a half the only sleep he has obtained has been while sitting in a chair.

Examination.—This patient was referred to me in March, 1906, by a physician to whom he had gone for relief during one of the severer attacks. At that time he presented all the appearances of malnutrition and loss of nervous control. He was emaciated—weight, 120 pounds—there was trembling in his limbs, and he alternately wept and smiled in a meaningless way.

He had a rapid pulse and seemed constantly in the act of swallowing. There was clonic contraction of the pharyngeal and laryngeal muscles which threw the thyroid cartilages forward into great prominence. The muscles on each side of the neck were tense and stood out markedly. Examination of the nervous system was negative except for exaggerated reflexes. No sensory disturbances were present and the cranial nerves were normal.

Description of Attack.—During an attack the spasm commenced in the pharynx and descended down the esophagus until the stomach was reached when a violent contraction of the upper abdominal muscles took place, forcing the contents of the stomach upward. Occasionally the stomach contents would be forced through the pharyngeal stricture, but usually the catheter was used by the patient to force an opening. When the spasm was induced by attempting to swallow a solid, the bit of food was grasped firmly by the muscles and held so that without recourse to mechanical means the irritating substance could neither be forced down nor brought back and the catheter was again used for this purpose.

Treatment and Result.—From the history and appearance and absence of symptoms of organic disease I made a diagnosis of esophagismus, and proceeded to treat him by suggestion during hypnosis. His report after the first treatment was that he had gone from my office and eaten heartily of eggs and toast and that he experienced no contraction or difficulty in swallowing. He had gone to bed that night, slept soundly and was feeling much better. The second treatment was given four days later with an equally favorable report. In all he had at this time five seances covering a period of three weeks. In this time he had a return of the attacks on three different occasions. His sleep had become normal, however, and he was eating regularly solid food.

At this time I lost sight of him for a period of seven weeks, when he returned with the report that the spasms had returned during the last two weeks, although not so severely as formerly. He had been living a very irregular life, working all night and sleeping in the day. This time I treated him on the same lines, but treated him every day for the first week and twice during the second week. At the end of that time he was feeling entirely well again and eating regularly without difficulty.

He disappeared once more, but I received a note from him two months later, stating that he had no further trouble and was well. I did not hear from him again until a few weeks ago, when he called at my office with the report that he had been entirely well ever since and could eat anything he chose without any recurrence of the spasm. His voice had deepened and his weight had increased to 139 pounds.

THE TREATMENT OF TYPHOID FEVER.

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With the possible exception of tuberculosis, there is probably no disease which has been more widely discussed than typhoid fever. The discovery of its cause and modes of distribution, placing it in the list of preventable diseases, furnishes one of the most fascinating chapters in the history of medicine. The pathologic changes found are probably more widely known by the profession and the laity than those of any other disease, but there is still a great difference of opinion as to its treatment.

What are the indications for treatment? Rest for an inflamed or ulcerated tissue is a law in surgery. It applies as well to an inflamed or ulcerated tissue due to the specific poison of typhoid fever as it does to an ulcer of the stomach. The mere fact that the treatment is in the sphere of internal medicine does not justify the physician in ignoring surgical principles.

FOOD AND DIET.

Inflammation and ulceration mean deranged functional activity or its total abolition. Under these conditions frequent feeding is as illogical as it would be in acute gastritis or in ulcer of the stomach. To feed an adult in health every two hours from three to five weeks would impair the digestion of almost any one. To insist on it in typhoid, in the presence of an already impaired digestive process, with the bowel in a condition ranging from catarrhal inflammation to ulceration seems like setting at defiance surgery's first law.

The rapid emaciation in this disease is not due to lack of food, but to failure to digest and assimilate that which is taken. Lack of appetite and diarrhea are Nature's protest against its presence, her appeal that the doctor give the parts rest. When the most easily digested food fails, wholly or in part, of digestion, the fearfully and wonderfully constructed diet lists worked out by some leaders in the profession are not only an insult to the diseased bowel, but to the intelligence of the profession.

It has been urged that the diet should possess sufficient caloric value to compensate for the loss of weight due to the fever, a theory which ignores the fact that the area of food absorption is the very part affected by the typhoid process. An increase in the amount of food taken in typhoid fever no more insures the utilization of its calorie value than would the forced stoking of a defective furnace insure the utilization of the calorie value of the fuel used. Howell says: "It is not what we eat, but what we digest and absorb that is nutritious to the body."

In typhoid fever the ability to digest and absorb food should be our guide, not the amount of tissue waste. We should get rid of the débris before beginning to rebuild. An increased amount of food over that possible to assimilate adds fuel to the fire, and is much like attempting to place a new roof on a house while it is still burning. Is it not reasonable to believe that an excess of food may defeat the object for which it is given? It furnishes much more culture field for the growth of other bacteria in the bowel, increased fermentation, still greater disturbance of function and a decreased absorption.

REST.

While the profession is a unit in prescribing rest for a typhoid patient, it is far from being a unit in specifying how complete it shall be or how best it can be obtained. It should mean rest for all the body, not a part of it; rest for the brain, heart, liver, kidneys and digestive tract. These are the parts that bear the brunt of the fight. Rest to the arms, legs and trunk is assured, once the patient takes to his bed. Rest for the brain demands freedom from visitors, a minimum amount of house furnishings to suggest hallucinations and delusions, and the services of a nurse who has an accurate conception of the relative value of speech and silence.

There are people who feel that they must see every one of their friends who are ill. Too many of them derive a morbid pleasure from the recital of cases that have resulted disastrously, and the greater the disaster the more acute the pleasure in its recital. Their conception of a bird of paradise seems to be a croaking raven and the more it croaks the greater their admiration becomes.

"Sitting up at night" with a patient desperately ill is one of the customs of "the good old days" now happily almost obsolete. A delirious patient, a hot stuffy room, a stinking kerosene lamp, and a half-dozen neighborhood gossips sitting 'round conversing in rasping whispers, making mental notes in order that they may be able later on to accurately describe just how hard the patient died, furnishes the stage setting for a miniature hell on earth.

Rest for the digestive tract means a minimum amount of food to handle. Rest for the liver and kidneys, a minimum amount of functional activity. Rest for the heart, the absence of drugs, especially alcoholic ones, that paralyze its muscle, or by dilating the vessels and reducing their tone greatly increase the total area of the circulation.

USE OF ALCOHOL.

A question of vital importance in the management of this disease, and one on which the profession is divided, is the use of alcohol as a stimulant or as a food. Kerr, in his article on "Alcoholism and Drug Habit," says:

> Alcohol is an irritable narcotic paralysant . . . the first effect is vascular relaxation . . . vasomotor paralysis causing reduction of the nervous control over the vessels, the dilatation extending through the vascular system to the brain . . . the first stage is one of paralysis. The vasomotor nerves have been paralyzed, their capacity has been reduced, their vigilance relaxed . . . it is the most powerful waster of inhibitory force . . . it is conveyed to the brain through the circulation. By paralysis of the vasomotor nerves, control over the vessels is relaxed, causing their dilatation with an increased supply of blood to the brain. The result is temporary functional, cerebral excitement. The vascular contractility having been reduced by the alcoholic vasomotor paresis, the increased blood supply can not be sent back from the brain rapidly enough, and a block of the circulation occurs which impedes a renewed supply of freshly aerated blood. This is the period of depression, weariness and dulness. By its direct poisoning action, by its lessening and vitiating the blood supply to the brain and nervous centers, secondary poisons are retained in the blood.

In all inflammatory processes the vasomotor system is in a state of paralysis more or less profound. Is it logical in typhoid fever, where this condition obtains throughout the course of the disease, to accentuate that condition by the administration of alcohol at regular intervals? Since discontinuing its use in all cases at all stages of the disease, delirium has almost disappeared as one of its clinical symptoms. Is it unreasonable to infer that this symptom in the past may have been a manifestation of alcohol? That it does not stimulate the heart muscle is proved by Richardson, who demonstrated in his experiments that it caused over 12,000 extra heart beats in twenty-four hours. The fear of death through heart failure is based on very poor clinical evidence. Death from heart exhaustion in an uncomplicated case of typhoid fever is almost unknown, and when occurring because of some complication must not be attributed to the typhoid poison, but to the complication.

Occurring in a case receiving the so-called stimulating treatment by regular doses of alcohol, in the absence of hemorrhage, perforation or the inflammation of some important organ, it does not seem unreasonable to attribute heart failure in such a case to the paralyzing action of alcohol.

During the so-called crisis, when convalescence is about to be established, when the vasomotor system is beginning to regain control, and when restoration of the diseased tissues to the normal is a natural sequence, this must be delayed if the vasomotor paralysis is continued artificially by the use of alcohol.

Leucocytosis is not present unless due to a complication. On the contrary, the number of leucocytes is below the normal. The importance of the leucocyte in combating inflammatory conditions is recognized by all. Recently it has been claimed that alcohol paralyzes the leucocyte. If this is true, the physician who administers alcohol in this disease is paralyzing his best friend. Another symptom that has practically been eliminated from the clinical history of typhoid fever by the withdrawal of alcohol, is vomiting. When its local irritant action on the gastric mucous membrane and the delay in digestion which its presence causes is considered, the absence of this symptom is readily explained. When we recall its local irritant action on the liver and kidneys in health, it is unreasonable to believe that it can accomplish anything but harm if given when their cells are in a state of parenchymatous degeneration caused by the poison of typhoid.

Elimination of the products of retrograde metamorphosis is one of the cardinal indications in this disease. Any treatment that not only loses sight of this indication, but positively places an obstacle in its way, jeopardizes the life of the patient.

Its local irritant action on the gastric mucous membrane, the delay in the digestion of other food that its presence causes, its paralyzing action on the vasomotor system and on the heart muscle, its tendency to produce delirium and vomiting, and the embarrassment of function which its presence causes to the excretory organs, form a group of objections which can not be charged against any other article of diet liable to be used in typhoid. The possibility of exchanging a typhoid fever for a chronic alcoholism should be borne in mind.

The tendency in this disease is to recovery. It is self-limited and dangerous to life almost wholly because of the multiplicity of its complications. If we were able to eliminate hemorrhage, perforation and the inflammation of important organs, typhoid fever would practically be without a mortality rate.

Almost every physician has his own way of treating the disease. Almost every drug in the pharmacopeia and a good working majority of those out of it has been lauded as a specific in its treatment. The great majority of patients would get well if they never received a dose of medicine. It is a matter of history that the great majority recovered when it was popular to bleed to syncope and push mercury to salivation. Much of the medication practiced is made necessary by the attending physician's mistakes in feeding, or attempts at stimulation. Very often he is called on to neutralize conditions of his own creating. Polypharmacy is not only dangerous but reprehensible. The physician who writes a new prescription every time he visits a patient belongs to the kindergarten class in therapeutics. In a disease requiring from three to five weeks to run its course, a diet and a line of medication, based on an accurate knowledge of the pathology and of the action of the medicine used, should be adopted and no change made, unless indicated by some complication.

THE SICK ROOM.

The room should be free from pictures and bric-à-brac and should be well lighted. At night a dim light brings out objects in the room with an indistinctness that favors the production of hallucinations. I have had a patient complain of a face that was frequently appearing from behind a picture that hung on the wall near the foot of the bed. This hallucination promptly disappeared when the picture was removed. At night I have seen patients in a state of terror quickly quiet down after turning on a bright light.

In Saint Mary's Hospital there was a young German with typhoid. There had been no delirium and the fever was running a favorable course. One night when the lights were low he left his cot, ran to a window and plunged head first from the fourth floor, disemboweling himself on the iron fence below. Since my own attack I am able to understand something of the terrors that drive patients to throw themselves from their rooms. These instances illustrate the necessity of having a nurse on guard at all times. I believe that the increase in the fever at night, while partially explaining the greater tendency to delirium at that time, does not entirely explain it, and that the indistinctness with which objects are seen in a dimly lighted room is a contributing factor of very decided importance.

FEEDING.

In my wards in Saint Mary's Hospital where the great majority of the cases to be reported have been treated, milk has been practically the only food used. It has been given in half-pint meals, not oftener than once in four hours, and only four times in one day. At rare intervals it has been deemed expedient to change to malted milk or albumin water, and occasionally the addition of an equal quantity of some carbonated water has made the milk more digestible. This diet has been continued until the temperature has not gone above the normal for seven days. The only exception to this plan has been when an afternoon temperature above normal has been regarded as due to lack of food. After that period clear soups, soft boiled eggs and custards are added gradually, and their effect is closely watched. If no bad effects are noted, vegetables free from tough fibers, bread and butter and meats are added, and the patient brought back to a full diet in the course of ten days or two weeks.

He is allowed to sit up on the tenth or twelfth day for fifteen minutes, and the time each succeeding day allowed out of bed is double that of the preceding day until all of his time when not sleeping is put in about the ward out of bed.

ROUTINE MEDICATION.

The routine medication used in all cases has been one-tenth grain doses of the acetate of lead, dissolved in a teaspoonful of water, given every two hours. It is not my purpose to claim any specific action for this drug in typhoid. I believe that its action is purely that of an intestinal antiseptic; that it limits fermentation; almost wholly eliminates meteorism and diarrhea and in doing these thing encourages digestion and absorption of food and places the bowel in the best possible condition for recovery. The possibility of inducing lead poisoning by the frequent repetition of small doses over a considerable period of time was not lost sight of. In no case did any symptom arise indicating its poisonous action. When the diarrhea was obstinate the dose was increased to a tenth, every hour, and such changes as seemed indicated were made in the diet. It has been our custom to continue its use until convalescence was assured.

No attempt has been made to reduce the fever unless it reached 103 F. The routine treatment has been the administration of acetanilid in two-grain doses, repeated often enough to bring the temperature below that point. In only one case was its use contraindicated by cyanosis. In the great majority of cases its beneficial action has been noted by a fall in temperature and a slowing of the pulse rate. Occasionally cold water injections into the bowel have been resorted to and always with gratifying results. Cold sponging was used at rare intervals. In no case was a patient placed in a cold bath. Until some method of treatment is discovered that will be to the typhoid bacillus what quinin is to the malarial parasite, attempts at intestinal antisepsis having for their object the destruction of the bacillus will fail of accomplishment.

The exact value of treatment with bacterial vaccines guided by the opsonic index has not been determined. There are many obstacles to be overcome before this method of treatment can be adopted, even if later investigation establishes its value.

In treating cases complicated by hemorrhage, the physician has an ally in Nature he can neither afford to ignore nor embarrass. A considerable loss of blood is quickly followed by reduced temperature and lowered blood pressure, the last named condition being Nature's first step in repairing the break in the vessel wall by favoring the formation of a protecting clot. At this stage all methods pursued with the object of increasing blood pressure or the volume of blood encourage more bleeding. Heart stimulants and hypodermoclysis are logical methods of treatment in cases of hemorrhage where the bleeding vessel has been tied; they are as positively contraindicated in cases where the only hope of no more hemorrhage is based on the retention of the clot in the ruptured vessel wall.

Experimentally, it has been demonstrated that the presence of soluble calcium salts is essential to the coagulation of the blood. This has given rise to the calcium chlorid treatment in cases of hemorrhage. Calcium chlorid is administered in ten-grain doses, repeated every hour or two, and continued for several days after all hemorrhage has ceased. Absolute rest and the withholding of all food and water for at least twelve hours is imperative. Occasionally a case has seemed to need some stimulation because of irregular heart action, profound prostration or subsultus tendinum. In these cases strychnin, in doses ranging from 1/100 to 1/60 of a grain, has been given and repeated every hour until the desired effect is produced, and then discontinued. In no case has alcohol been used. I believe it contraindicated at all stages of the disease. If the fever be controlled, the diet limited and made to suit the individual case, and the administration of medicine reduced to a minimum, stimulation will seldom be necessary.

Severe headache has yielded in a number of cases to hypodermic injections of ergot. It probably acts by decreasing the caliber of the blood vessels in the brain, thereby relieving congestion.

Vomiting usually means irritating food or medicine or the local irritant action of alcohol. When present the physician should discontinue the offending substance. The most effective treatment is complete rest of the stomach for from twelve to twenty-four hours.

Excessive diarrhea usually means the presence in the bowel of undigested food or of an excess of food. In either case the indications are for a change of diet, either in form or quantity, and a gentle cathartic to rid the bowel of the offending material. Opiates are contraindicated not only because they retain this irritating material in the bowel, but because they check secretion and embarrass the excretory organs. Paralyzing with opium a bowel favors the retention of accumulated material and is not aiding Nature. Opiates, while they temporarily decrease the number of movements, add to the load to be carried. Diarrhea is Nature's method of ridding herself of this irritant material and the aid offered in the cases reported has been small doses of castor oil, a teaspoonful, or from a fifth to a half grain of calomel.

In pleurisy and pneumonia, numerous dry cups applied over the chest, and frequently repeated, relieve the pain more quickly than morphin, and have none of the disadvantages attending the use of that drug. Two cases, one in hospital, the other in private practice, in which a lobar pneumonia was followed by a perforation of the bowel, have caused me to view with great anxiety the development of pneumonia as a complication. Were they simply coincident or does pneumonia render perforation more liable to occur?

The liability of a pleuritic effusion to become purulent or of a latent pulmonary tuberculosis to become active should not be lost sight of. Patients profoundly under the influence of the poison may not complain of a pleuritic pain. A disturbed pulse respiratory rate has in the majority of cases pointed the way to a correct diagnosis.

Inflammation of the parotid in the majority of cases means a neglected mouth. Frequent washing with normal salt solution and a daily scrubbing of the tongue with a tooth brush will do much toward avoiding this complication. Pilocarpin, 1/40 to 1/20 of a grain, repeated often enough to start the secretions and induce gentle perspiration, has prevented suppuration in some cases. When pus has formed, delay means sepsis, a free incision provides drainage.

Perforation demands an immediate operation.

The total number of cases treated was 303. One hundred and twenty-two of these cases were under my care. During my absence from service the same treatment was carried out in 104 cases by Dr. Francis Kramer and in 48 by Dr. Frank Swing. Twelve are from the private practice of Dr. O. R. Mickletlnvaite, of Portsmouth, Ohio; ten from the private practice of Dr. Walter Greiss, and eight from the private practice of Dr. Frank Cain, both of Cincinnati.

In 217 cases where the records of the ages were kept, 22 were under 10 years of age, 71 between 10 and 20, 86 between 20 and 30, 29 between 30 and 40, and 9 over 40.

In 156 cases where a record was made of the length of illness before admission, the average duration was nine and one-half days.

The average duration of fever after admission is based on the number of days in the hospital before the temperature remained normal throughout the twenty-four hours. In cases of relapse, the fever has been considered as continuous, even though a number of days of normal temperature preceded the onset of the relapse, up to the time of recovery from the relapse. A considerable number of cases were admitted late in the disease, the temperature reaching normal in a few days. In one case the patient had worked as a shoemaker until the day preceding his admission and with his fever on the decline. He had an enlarged spleen and profuse eruption, gave the history of an attack of typhoid fever, and his blood gave a positive Widal. In 176 cases where the records had been kept, the average duration of fever, after entering the hospital, was a fraction over eighteen days. In 212 cases where the result of Widal tests made was kept, 204 were positive and eight were negative. One of the negative cases had hemorrhages, and all of them had enlarged spleens and the rose spots.

The Widal test was rarely of any value in arriving at a correct diagnosis, as the enlarged spleen and rose spots were nearly always present before a positive Widal could be obtained. In several instances, where the report was positive, it led to mistakes in diagnosis. A positive Widal in a case of fever simulating typhoid, in the absence of rose spots, should suggest the possibility of tuberculosis. The presence or absence of headache, sleeplessness, pharyngitis, dry yellow palms and albuminuria are valuable aids in arriving at a correct conclusion. In searching for rose spots, the back and extremities should be examined. In one case a single rose spot on the thigh established the correct diagnosis after four physicians had practically agreed that the case was one of meningitis. Too much value must not be placed on any one symptom. The most valuable sign of all is the eruption.

In 174 cases in which the fever charts were available for inspection, the highest temperature reached in three cases was 100 F. In six cases it was between 100 and 101; in 21 it was between 101 and 102; in 45 it was between 103 and 104; in 65 it was between 104 and 105; in 28 cases it was between 105 and 106; in two cases it reached 107 (both patients died), and in one case it reached 108, caused by malaria as a complication. This patient recovered. In one case the temperature reached 106 on three different occasions, and fourteen times went to 105.

In 171 cases the pulse rate reached 120, or more, in 32 cases; it was between 100 and 120 in 79 cases, and below 100 in 60 cases.

COMPLICATIONS.

In 303 cases the complications were as follows: Relapses, 31 cases; hemorrhages, 8; perforation of bowel, 2; inflammation of both parotids, 5, and two of these had pneumonia, and one of them a relapse; one case had a diaphragmatic pleurisy; two were confirmed alcoholics and had pneumonia, and one of these a perforation; furuncles and abscesses, 8; purulent otitis media, 3; carbuncle, 1; rupture of left rectus abdominalis muscle, 1; endocarditis, 1; meningitis, 1; phlebitis, 1; malaria, 1; acute nephritis, 1; ischio rectal abscess, 1.

One of Dr. Francis Kramer's cases[1] illustrates graphically what a typhoid patient may have in the way of complications and still recover. Five days after admission he had a hemorrhage, and during the six days that bleeding continued he had, in all, twenty-nine bloody stools. Three days later the left parotid became inflamed and went on to suppuration. Shortly after that the right parotid inflamed but did not suppurate. Nine days after the involvement of the parotids, facial erysipelas developed. Two weeks later convalescence was established and the patient recovered.

One of the most interesting cases was seen in consultation with Dr. Frank Cain. This patient had profuse hemorrhages from the bowels and vomited a large amount of bright red blood. Later he had a relapse, and after a tedious convalescence extending over several months fully recovered. I believe that this was one of those rare cases in which there was a typhoid ulcer in the stomach.

In 303 cases there were seven deaths, a mortality of 2.3 per cent. Six of these deaths occurred on my service, one under the care of Dr. Francis Kramer. One patient jumped from the fourth floor and was disemboweled on the iron fence in front of the hospital. Death No. 2 occurred in an alcoholic who developed pneumonia and later a perforation. No operation was allowed. No postmortem was made.

Case 3 was admitted Oct. 14, 1906. The most prominent symptom was violent paroxysmal cough. October 17, after a violent fit of coughing, the patient complained of severe pain over the left lower portion of the rectus abdominalis. At the point of pain there was marked bulging during cough, and the spot was soft and tender to the touch and tympanitic on percussion. A diagnosis of a rupture of the rectus muscle was made. October 18 this area became ecchymotic, and by October 23 the ecchymosis had spread down over the pubic region and on the following day had invaded the skin about the umbilicus. October 25 blebs appeared over the right hip, some containing blood, others seropurulent fluid. October 26 blebs appeared over the lower part of the sacrum and the left hip containing blood. October 27 they became purulent and numerous deep abscesses developed in the subcutaneous tissues of the buttocks. Several of these communicated and a large quantity of pus was evacuated by incision and the cavities healed.

The typhoid terminated by crisis on the seventeenth day, the temperature falling from 103.2 F. to normal in two days. After five days of normal temperature the fever rose sharply to 103.2 F. From this time on the fever was irregular, but not high. The pulse was not rapid and fell to 64. The clinical picture was one of a low grade of sepsis. There were no chills, but sweating was a prominent symptom and the face was flushed. Pain in the left hip and thigh gave the patient great discomfort. The appetite was poor, there was diarrhea and profound mental and physical depression. At the point of rupture of the rectus there had been no special change. It was not tender, and the ends of the ruptured muscle could be distinctly felt. The area bulged on coughing and no fluctuation could be detected. Four physicians called in consultation advised against any local surgical interference. The patient died December 22.

On postmortem the space between the ends of the ruptured muscle was found to contain pus, the sheath of the muscle forming the cavity. The history of the case with the postmortem finding hardly renders it necessary to point out the imperative necessity of using the aspirator needle in cases where pus is suspected, even though physical signs are negative.

Case 4 had a hemorrhage on the thirteenth day in the hospital. It was not severe and did not recur. Five days later the temperature suddenly rose from nearly normal to 107 and the patient died. No postmortem was allowed, and the history as I was able to obtain it from the nurse and interne failed to indicate the complication causing death.

The fifth patient to die entered the hospital on the eleventh day of his illness, complaining of severe pain in the region of the spleen, which was enlarged. Rose spots were present. A friction sound was heard with respiratory movements below the heart. The abdomen was tender and tympanitic, but not board-like, and the liver dulness was normal. The possibility of perforation was entertained, but the diagnosis was not made. On the fifth day the temperature rose to 107 and the patient died next day, with a temperature of 101. A postmortem revealed a very large spleen, typhoid ulceration of the intestines and a right-sided diaphragmatic pleurisy. There was no perforation.

The sixth death was due to pneumonia in a confirmed alcoholic. In the seventh, meningitis was the cause of death. The Widal was positive, spleen and mesenteric glands enlarged, and rose spots present, but the bowel was normal.

INTRANASAL DRAINAGE OF THE FRONTAL SINUS.

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The attention of the profession is once more called to my operation for intranasal drainage of the frontal sinus, for the purpose of making its merits more generally known, and of pointing out some modifications in instruments and technic that make it applicable to a larger number of cases, and that guard it from the dangers that have been pointed out by more or less friendly theoretic critics. In the beginning, however, I wish to say that the operation, as described by me in 1904, has proved itself one of the most satisfactory surgical measures that I have ever known. In no case, so far as I know, has the operation itself ever caused any untoward symptoms, although one case of meningitis developed immediately following the too forcible injection of a weak solution of peroxid of hydrogen, eight days after the operation, in a patient with extreme atrophy of all the intranasal bones. In most of these operations a cure of the disease has been effected, apparently with much less inconvenience and discomfort than would have attended other measures employed for the same purpose.

This operation is not applicable in all patients with suppuration of the frontal sinus, for there is now and then one in whom the probe can not be passed through the nasofrontal duct, but I believe this occurs in less than 5 per cent. of all cases. This latter statement will seem improbable to some who have frequently failed in attempts to pass a probe or canula into the frontal sinus, but I hope to explain the difficulties of this procedure and the means for overcoming them.

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[1] Lancet-Clinic, Cincin., July 6, 1907

Notwithstanding the anatomic irregularities of the nasofrontal duct, and the remote possibility, in exceptional cases, of opening through the posterior wall of the frontal sinus, or laterally into the space just above the cribriform plate of the ethmoid bone (which the French term the fossa ethmoidalis), I still believe that is as safe as any other method of draining the frontal sinus. I believe that, with the modifications here described, it is the safest and best operation for the purpose that has yet been devised, in from 96 to 98 per cent. of all cases of persons suffering from empyema of the frontal sinus; but for the remaining 3 to 5 per cent. some other method should be selected.

In order to make this paper intelligible, it will be necessary to repeat the description of instruments and technic, but as this will reach many who have not seen the former papers, and as some modifications have been made, reiteration seems pardonable.

For fifteen years there was under my care a lady suffering with suppuration of the frontal sinus, who would not submit to an external operation. I gave the subject much thought and finally had made several instruments, which I tried on the cadaver before obtaining a type that met the indications. I finally operated on her with the pilot burr that has since been used on all my other cases, but the gold drainage tube was not employed at first. The enlarged canal nearly closed in six weeks, so that the operation had to be repeated. A gold tube was then inserted, of the same pattern as now used. She wore this tube for over three and one-half years, although she did not need it for the last three years, as the canal would have remained free without it. Some time after suppuration had ceased, this patient took a severe cold which extended to the frontal sinus and as a result there again occurred a purulent discharge which, however, ceased shortly after her recovery from the acute rhinitis.

The instruments employed at this operation were the same that are now used in ordinary cases.

INSTRUMENTS.

The instruments needed for the operation include a pilot with detachable handle, pilot-burr, shield, packer, applicator, and for special cases a pilot-burr and guard of different form, and a gold, self-retaining drainage tube. Syringes and a small silver Eustachian catheter are used for anesthetizing and in the after treatment.

Pilot.—The pilots (or probes) are three or four in number, 14.5 cm. in length, of varying sizes at their distal ends (Fig. 1). They are made of steel (though I sometimes use brass spring wire); the stem of the pilot is 1.2 mm. in diameter, which is the proper size to fit the detachable handle. This portion of the pilot is not malleable. On the distal end of the pilot is a small knob, somewhat larger than the pilot immediately back of it. About 3.5 cm. of the distal portion of the pilot is reduced in size in the different pilots from 0.9 to 0.6 mm. This portion is moderately malleable so that it may be given any desirable curve. The pilot is attached to the detachable handle at an angle of about 45 degrees. It has been found desirable to keep one of the larger of these pilots at a fixed (or normal) curve corresponding to that of the applicator packer and gold tube, but any of the others are bent, as desired, to correspond to the nasofrontal ducts of various subjects. The pilots are usually given the normal curve, about 45 degrees (Fig. 1), varying from that to a curve of about 90 degrees, but sometimes even a greater curve than this may be needed.

Slightly longer or shorter pilots may be used in cases where we wish the burr to pass upward a lesser or greater distance. For this purpose, I generally use a piece of brass spring wire cut to any desired length.

Pilot-burr.—This instrument consists of a burr, with a hole about 2 mm. in diameter through its axis, attached by a hollow wire cable to a steel tube of the same size as the cable (Fig. 2).

The proximal end of this tube is closed and from its center extends the shank for attachment to the dental chuck through which the burr is driven by an electric or other motor, such as is commonly used by rhinologists. (A carpenter's breast drill may be used instead, if a motor is not at hand, but when this is used a special device is desirable for connecting it with the flexible cable to which the chuck is attached; otherwise there is danger of bending the shaft of the cable where the attachment is made.) The burr of this instrument is 6 mm. long and 6 mm. in diameter. It is cut so that it rapidly feeds forward. It is firmly brazed to the wire cable. The wire cable, made of two closely coiled steel wire cables, one within the other, is about 5 mm. in diameter and 6 cm. in length. At its proximal end it is firmly brazed to the steel tube.

The steel tube is the same size as the cable. It is 7 cm. in length, and at its proximal end it is continuous with the shank, 4 cm. in length, by which it is attached to the chuck. At the proximal end of the steel tube is a small lateral hole for cleansing. A modified burr is described below.

Shield.—The spiral tube-shield is of proper size and length to slip over the tube and flexible cable of the pilot burr, to prevent the latter from injuring the Schneiderian membrane when the burr is in operation (Fig. 2). It is made of a thin band of steel. This instrument is also used for holding the drainage tube in position while the applicator is being withdrawn.

Packer.—This is essentially a uterine packer bent to the "normal curve" so that it can be introduced through the enlarged canal to the floor of the frontal sinus (Fig. 3). It is about 5.5 mm. in external diameter, and 20 cm. in length.

Applicator.—This is made from aluminum wire 3.8 mm. in diameter. Its distal end is bent to the normal curve and its handle is just at the right distance from this end to allow the spiral shield, when passed over the applicator, to slip down the proper distance, to act as a check for the drainage tube, when it is placed over the end of the applicator for introduction.

Modified Burr.—Owing to the possible danger of cutting through the tabula interna while enlarging the nasofrontal duct with the pilot-burr, I have had made a modified burr and a guard by which the operation may be done with absolute safety so far as this factor is concerned (Fig. 4). This burr is only 5.5 mm. in diameter, and its blades are so made that it will not feed forward as fast as the regular burr; furthermore, it would not cut the dura if it, by any chance, came in contact with it. This form was necessary to prevent the burr from catching the guard when in use; otherwise this is the same as the original burr.

Guard.—The guard for this burr is made of steel, with an unyielding handle, properly curved, to facilitate introduction. This burr does not work so smoothly as the original type, therefore it is not used, except when we fear that the axis of the nasofrontal duct is abnormally close (i. e., less than 3 mm.) to the dura mater; but in such cases it works satisfactorily and absolutely prevents cutting too far backward. Similar guards may be used to prevent cutting laterally into the fossa ethmoidalis.

Through the courtesy of Drs. Geo. E. Shambaugh and J. Gordon Wilson, of the University of Chicago, I have examined several preparations, which, added to my own specimens, make 50 subjects that I have studied with reference to the danger of perforating the tabula interna, or of cutting laterally into the fossa ethmoidalis. There were two cases in which there would have been a possible danger of injuring the internal table by my operation, though in neither was the danger very marked, and in both I believe it would have been entirely obviated by drawing the burr forward, as shown in Figure 6. In one of these same cases there would also have been the possible danger of cutting into the fossa ethmoidalis, which illustrates the necessity for carefully taken radiographs. In another specimen the fossa ethmoidalis and the cribriform plate were depressed nearly a centimeter below the usual location, in such a position that one would almost certainly open into the brain cavity in making an opening from the frontal sinus into the nose during the external operation, or by Halle's operation; but in this particular case there would have been no danger from my operation.

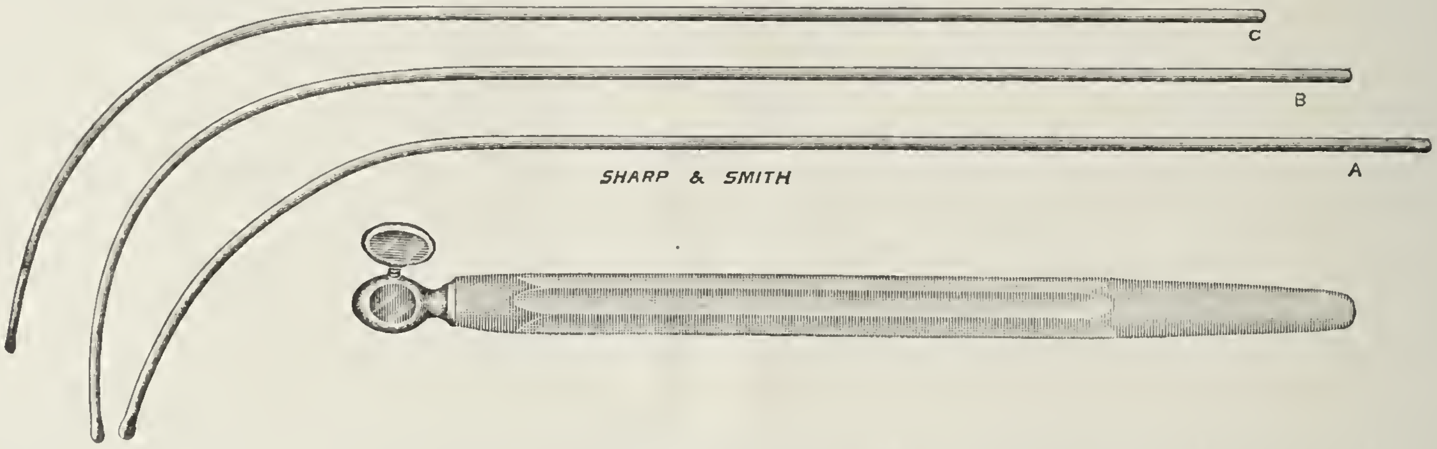

Fig. 1.—Pilots and handle. (Full size.) A, normal curve; B, curve of 90 degrees; C, curve of about 85 degrees.

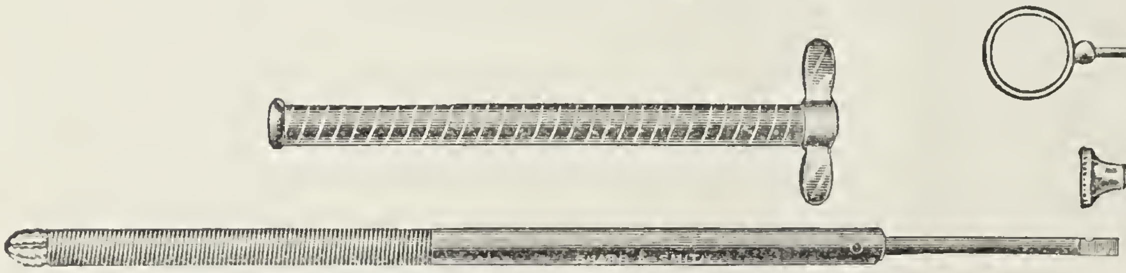

Fig. 2.—Pilot-burr and flexible tube shield. Three-fifths actual size.

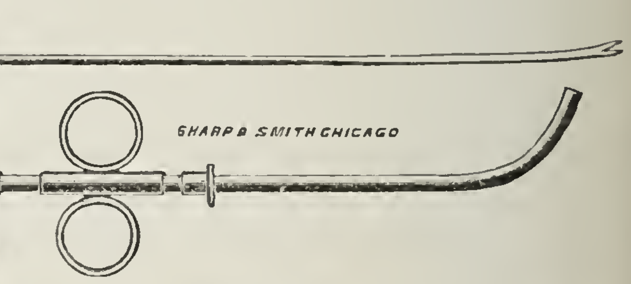

Fig. 3.—Packer. One-third actual size.

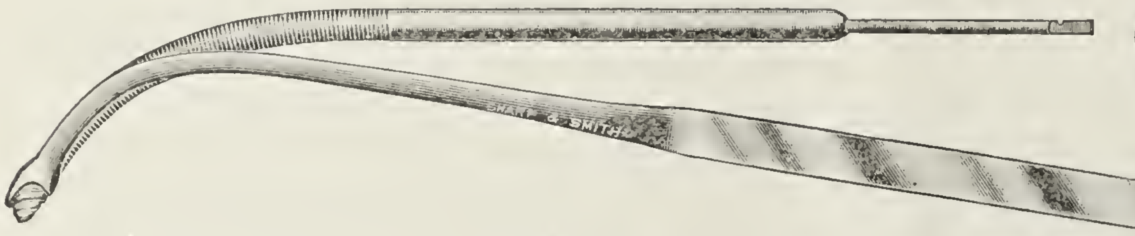

Figure 4.

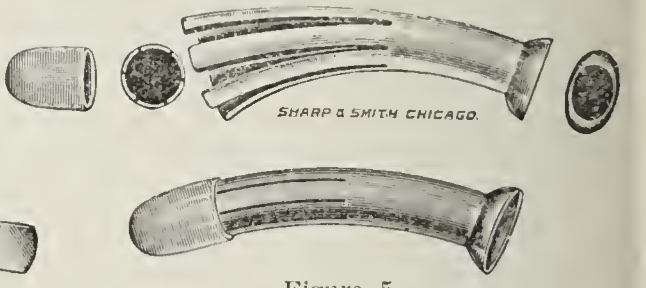

Figure 5.

Fig. 4.—Modified pilot-burr (three-fifths actual size) with the guard on it ready for introduction into naris. The guard is in position for the cutting to begin. In operating the handle of the guard is gradually brought down to the lower angle of the nostril and the distal end is at the same time pushed upward and forward until the burr cuts its way into the frontal sinus. Care should be taken that the feeding in of the burr is left wholly to the pressure made by this guard.

Fig. 5.—Gold drainage tube (actual size). The lower cut shows the tube with the gelatin capsule over the end. The upper cut shows the tube with size and shape of cup-shaped end at right. Size of tube at left, and gelatin capsule to the left of this.

In two of the fifty cases there were no sinuses on either side. In two, the sinus was absent on one side, and in three others it was very small on one side with a fair-sized sinus on the other side. In several, there were peculiar arrangements of the fronto-ethmoidal cells in relation to the sinus. In one there was a partial sinus on one side which had no wall to separate it from a very large sinus on the other side, and in one, there were enormous communicating sinuses on both sides, obliteration of which, had it been possible, would have caused a hideous deformity of the whole frontal region.

Another method of preventing the burr from cutting too far backward is to fasten a ligature, by a clove hitch, to the distal end of the spiral-tube-shield, and prevent it from slipping by applying around it a narrow strip of rubber adhesive plaster (Fig. 6). When the burr, with this shield over it, is passed in over the pilot, so that it presses against the lower opening of the nasofrontal duct, traction is made on the ligature, which draws the pilot forward. The traction is maintained while the burr is cutting its way along the canal, and as a result, the burr cuts as far forward as possible.

Drainage Tube.—This is made of spring gold, with a cup-shaped lower extremity and flaring springs at the upper end made by sawing down the sides of the tube so as to make six equal sections. The tube has the curve shown (Fig. 5), which is the same as that of the end of the applicator and packer. It is 2.6 to 3 cm. long, and 6 mm. in its external diameter, and about 5.5 mm. internal diameter. The cup-shaped lower end of the tube is 6.5 mm. wide and 1 cm. long. The upper end of the tube is cut down 1.7 cm. in six places so as to leave sections about 3 mm. wide, the distal ends of which are turned in so as to make a blunt end that will not irritate the frontal sinus. It is essential that this tube be made of spring gold so that it will be self-retaining, and it is desirable to have the walls of the tube as thin as possible.

Syringe for Anesthetizing.—A hypodermic or other small syringe, with a slender silver nozzle, from 1.5 mm. to 2 mm. in diameter and 10 cm. in length, is needed for anesthetizing the parts. The stem of the plunger of this syringe should be threaded and fitted with a small, milled wheel that will enable the operator easily to regulate the quantity of the anesthetic solution (¼ to ½ minim) that is injected each time. A wire is passed through the silver nozzle, and it is curved before the anesthetic is applied to the same form as the pilot.

For the after treatment of the case a medium sized silver Eustachian catheter, and a two-ounce rubber bulb, with about eighteen inches of rubber tube attached, are desirable for cleansing; also a small rubber bulb, with a capacity of not more than one or two drams for medication. These should both be supplied with hard rubber connections that fit the end of the Eustachian catheter. The Eustachian catheter should be given the "normal curve," the same as the pilot, in order that it may readily be passed into the drainage tube, which in all cases has the same curve. The catheter is marked by wrapping a narrow strip of adhesive plaster about it so the patient may know the proper distance it should be passed into the nostril in order to reach the end of the gold tube. When this is done the patients have very little difficulty in finding the cup-shaped end of the tube and passing the catheter into it. The tube being of metal renders it easy for the patient, by the sense of touch, to know when the catheter is in the right position.

DIAGNOSIS.

The diagnosis is made from the purulent discharge usually from one side, supraorbital pain commonly mistaken for neuralgia, which often occurs in the middle of the forenoon and disappears after two or three hours, tenderness of the supraorbital plate, a marked shadow on transillumination or use of the *x*-ray and aspiration of pus from the frontal sinus, or blowing it out by insufflation of air through a canula that has been introduced through the nasofrontal duct.

In introducing the canula or probe, if the anterior end of the middle turbinated body has not been removed, the parts should be anesthetized thoroughly, and then with Killian's long-bladed speculum, the middle meatus should be opened, the turbinal being pressed against the septum. The probe or canula should usually have a curve of about 55 or 60 degrees, and in some cases even 90 to 100 degrees will be found better.

With a good light the end of the probe is introduced through the hiatus semilunaris into the infundibulum, just back of the processus uncinatus and in front of the bulla ethmoidalis. From this point the probe passes upward and forward, as stated above, and is likely, at the same time, to pass outward at an angle of about 30 degrees to the perpendicular plane of the septum, into a blind pouch at the upper end of the infundibulum, or into an ethmoidal cell. It should then be withdrawn about 5 to 8 mm. and turned a little more inward, where we hope to find the orifice of the nasofrontal duct. When it slips into this duct, it usually passes upward and outward at an angle of about 20 degrees, to the septum. When the probe enters the duct, its stem is carried downward and inward to the lower inner angle of the nostril, and the distal end is very gently pressed upward and forward into the frontal sinus, where it should be felt by the patient near the inner end of the eyebrow. With the probes that I use, the distal end, when in the frontal sinus, is usually from 8 to 10 cm. (3⅛ to 4 inches) within the inferior inner angle of the nostril. If it is a centimeter less than this, I suspect that the probe has passed into an ethmoid cell or into the cul-de-sac of the infundibulum. The passage of the probe is greatly facilitated when there is much swelling, especially in acute cases, by anesthetizing the nasofrontal duct, as far as we can reach it, with a small canula, by injecting, four or five times, about one-third of a minim of a 20 per cent. solution of cocain in a 1 to 1000 solution of suprarenalin, which reduces the swelling and thus enlarges the canal. In some cases, I have been obliged, even after reduction of the swelling, to use the smallest of my probes, which is only 0.6 mm. in diameter.

As a factor of safety, before operating, we should determine the relation of the nasofrontal duct to the tabula interna and the cribriform plate of the ethmoid, by passing a probe into the sinus and viewing it there with the fluoroscope, and also by taking *x*-ray negatives from squarely in front, and laterally parallel to the plane of the forehead.

I have found the fluoroscope especially useful for this purpose in the lateral position, for by slightly turning the head slowly back and forth, and by moving the probe while inspecting the shadows, I have, in some cases, been able to get a much better idea of the relations than by the *x*-ray negative, which is sometimes very misleading as shown in Figure 8, where the canal was normal and yet the shadow of the probe made it appear about a centimeter back of the tabula interna in the brain.

In making the negatives it will not do to trust the placing of the patient even to a skilful operator, unless he has had experience in this particular kind of work.

We have obtained the best results in the front view by having the patient's forehead and nose rest on the plate; and in the lateral view by placing the affected side on the plate, truing the forehead with a right angle, one limb of which rests on the plate and the other against the forehead, making sure that the plane of the frontal bone is perpendicular to the plate, and at the same time that the rays from the *x*-ray tube are also perpendicular to the plate. By using both the photographic negative and the fluoroscope when the probe is in position, we may be very confident of the location of the nasofrontal duct.

OPERATION.

I have operated on most of my patients at my office, and have allowed them to go to their homes, sometimes in distant states, within a day or two. This course has been attended by no bad results; but it would doubtless be better to operate at a hospital, so that the patient could be kept quietly in bed for a day or two afterward. The anterior end of the middle turbinated body should be removed and the naris cleared of polypi or other obstructions before the operation on the sinus is attempted. This may be done immediately before the operation on the sinus or several weeks previously. The latter plan is best, when time permits, because it allows time for healing of this part of the wound, and in some instances it permits healing of the frontal sinus without operating to enlarge the nasofrontal duct.

Cocain is used as the anesthetic, in most cases, but when the patient is very nervous, or if for any other reason it appears desirable, chlorid of ethyl is administered when everything is ready after the probe has been introduced, and its effects remain long enough to complete the operation. I now use for the local anesthetic 20 per cent. of cocain hydrochlorate in a solution of 1 to 1000 of suprarenalin, applying it to the frontal sinus through the long silver nozzle of a syringe. About one-third of a minim is applied every ninety seconds, five or six times. The solution finds its way down beside the canula, and thus the whole tract becomes anesthetized and exsanguinated. A weaker solution is generally used sparingly in the naris before the manipulations are begun.

Not infrequently difficulty will be experienced in passing the probe or canula through the nasofrontal duct, but, judging from Dr. Coakley's statements, and from my own experience, this can be accomplished in nearly all cases by gentle manipulation and patience, coupled with the use of cocain and suprarenalin.

I have done this operation on two or three patients with perfect success, where I was unable to pass the probe into the frontal sinus before the operation was begun. In these cases the probe passed into a frontoethmoidal cell or the cul-de-sac of the infundibulum, and I was unable to get it into the nasofrontal duct, but I ran the burr in about a centimeter over the pilot, thus enlarging the opening and cutting away the sides of the infundibulum and adjoining cells, and then I had no difficulty in entering the nasofrontal duct.

In twenty-eight successive patients with suppuration of the frontal sinus I have found no case of chronic empyema in which I could not pass the probe, although I failed in two acute cases, but I believe I would have succeeded in these cases if I had removed the anterior end of the middle turbinated body; and in one of these cases I think I could have succeeded without this if I had given it more time.

In one cadaver operated on I found a frontal sinus about 8 to 10 mm. in its vertical and lateral diameters and only about 2 to 3 mm. in its anteroposterior diameter. The probe went in such a short distance that I thought it was not in the frontal sinus, but when I opened the sinus from without I found that it was. On the opposite side, in the same subject, the frontal sinus was about twice as large as this one, with a large frontoethmoid cell extending up behind it, into which the probe passed. The opening into the frontal sinus was at right angles to the axis of this cell through the wall of bone between it and the frontal sinus, in such a position that it was a physical impossibility to pass any probe into it from the nasal cavity; but even in this case, I believe, the frontal sinus would have been opened if I had employed the same method adopted in the difficult cases just referred to.

Before beginning the operation all instruments are sterilized, the spiral tube shield is slipped over the burr, and the burr attached to the chuck of a dental engine. The spring ends of the drainage tube are bent back so as to make its open end about a centimeter in diameter. and then they are gently pressed together and enclosed in a No. 2 gelatin capsule. This is then dipped into melted paraffin, melting at about 110 degrees, whereby it is covered by a thin film that will prevent it from dissolving in the fluids in the nose for about five minutes after its introduction. Unless covered in this way, the capsule would soften in about twenty seconds, which would not be quite time enough for the introduction of the tube.

As soon as the patient is properly anesthetized, and the pilot probe introduced, the handle is removed from the pilot (or probe), the hollow burr is slipped on over it and carried up to the lower orifice of the nasofrontal duct, the shield being pushed up with it so that the mucous membrane of the naris will not be injured by the rapid revolutions of the flexible cable.

The electric current is now turned on, and the burr is gently pressed upward. It usually cuts its way into the frontal sinus in two or three seconds. I usually draw it back and press it up again two or three times to make sure that the canal is perfectly free, then withdraw it and the pilot.

The patient must now be cautioned not to blow the nose for three or four days because of the danger of causing emphysema about the eyelids, as in other cases where the ethmoid cells have been opened.

If it has been necessary to use a pilot with more than the normal curve, one with the normal curve is now introduced, and the burr is passed in again to insure a proper curve of the canal to fit the gold drainage tube. The naris should next be mopped thoroughly with vaselin on a swab of cotton. The packer is then introduced well into the enlarged canal, and through it the frontal sinus is packed with a strip of one-inch sterile gauze saturated with a 20 per cent. solution of chlorid of zinc. This is allowed to remain about five minutes. The packer is then drawn out about a centimeter so as to bring its end as nearly as possible to the lower end of the enlarged canal, and the gauze is then withdrawn, through it, thus cauterizing the whole length of the wound but avoiding any cauterization of the mucous lining of the naris.

The spiral tube shield is next passed over the stem of the applicator, and then the gold drainage tube is slipped on the end of the instrument and introduced into the enlarged drainage canal (Fig. 9). The spiral tube shield is pushed up against the lower end of the gold tube to hold it in position, the applicator is withdrawn and the operation is finished.

If the drainage tube does not pass in easily it must result either from the burr not having been carried into the frontal sinus or else from the pilot having had a curve different from the normal. In either case the tube should be withdrawn and the burr passed in again over a pilot of normal curve. I have sometimes packed the naris afterward with gauze to prevent possible bleeding, but I do not think this necessary, and it is objectionable if not needed. I have in no case seen bleeding of more than an ounce of blood during or following the operation, and usually there are not more than two or three drams.

The patient is directed to keep the nostril on the operated side closed with a pledget of cotton for three or four days. In some cases I have blown orthoform through the tube into the frontal sinus, but in one case the tube through which it was blown fitted so accurately into the lower end of the drainage canal that the insufflation caused emphysema of the eyelids with the naturally resulting pain and subsequent black and blue discoloration; therefore, I now caution against insufflation of anything into the frontal sinus after the operation.

The mucous membrane is likely to swell more or less for several days, and therefore I give the patient about 100 grains of powder, to be gently insufflated into the nostril, in one or two-grain doses, three or four times a day, for the purpose of reducing the swelling and permitting more thorough cleansing of the naris and frontal sinus. This powder contains 3 per cent. of cocain, 1.5 per cent. of biborate and the same amount of bicarbonate of soda, 25 per cent. of iodol or of thymolis iodidum (aristol) and sugar of milk, q. s. This amount of powder is sufficient. Because of the contained cocain I supply it to the patient to avoid the possibility of its repetition.

As a wash for the frontal sinus, to be used once a day, I order either a strong solution of boric acid or the following: Thymol, 4 grains; sodium bicarbonate, sodium biborate, sodium salicylate, sodium chlorid, 2 drams of each. Use an even teaspoonful in a glass of warm water. I do not consider this important, except to insure that the gold tube does not become clogged with dried mucus. I think that it is desirable to wash the cavity less frequently as the case progresses toward recovery. Unless suppuration ceases very soon I have the patient apply, after the wash, about half a dram of a 10 to 20 per cent. solution of argyrol. This is done through the Eustachian catheter by means of the small rubber bulb. The patient at the time should lie on the back, with the head hanging off the side of the couch so that the solution will remain in the sinus for five minutes.

After two or three days following the operation it will not ordinarily be necessary to see the patient at all until the time arrives for the removal of the gold tube. I place this time at about four months, although there is no objection to allowing the tube to remain much longer if it keeps its place. In two or three of my cases the tube has gradually worked down about a centimeter in five or six months, apparently from repeated slight displacements by sneezing. To remove the tube a little cocain may be injected through it and allowed to run down beside it, or chlorid of ethyl may be given; then the end is seized with forceps, and it is withdrawn easily.

Some have thought that the drainage canal established by this operation is not large enough for thorough drainage of the frontal sinus; on the contrary, experience shows that it is ample. Some think that a suppurating frontal sinus must be curetted in order to get healing. Experience shows that this is not usually the case. Some have urged that this operation permits reinfection and that it would be better to obliterate the sinus to prevent this. Except in extremely rare cases, I do not think it wise or desirable to obliterate the frontal sinus, and the history of my cases shows that reinfection rarely occurs, and that when it does the suppuration soon ceases. Given free drainage, the frontal sinus will heal even more promptly than the maxillary sinus after empyema. Reinfection will undoubtedly occur in some cases if the patient takes a "severe cold," but as the drainage remains free it will disappear soon after the inflammation of the nasal mucous membrane heals. Usually the pain over the eye ceases shortly after the operation, but if the patient should afterward at times have supraorbital neuralgia, this must not be taken as a sign that the sinus has not healed.

I once cured a long standing empyema of the frontal sinus by treating it for about six weeks through the natural duct with solutions of protargol. There was never suppuration or even mucous discharges from it afterward during the seven years that the patient lived, yet all of this time he was subject to more or less supraorbital neuralgia. I think that in any instance we are justified in pronouncing the patient cured when all purulent and mucous discharge ceases.

REPORT OF CASES.

Case 1.—D. T., aged 50; suppuration of the frontal sinus and antrum for fifteen or sixteen years. The gold drainage tube was not inserted at the first operation. About six weeks later the drainage canal had so far closed with bony deposit that I could only introduce a small probe. I then ran the burr in again and put in the drainage tube. For a time the cavity was washed daily and a 4 per cent. protargol solution was used afterward. She progressed slowly until there was complete cessation of the secretion of pus. Forty-two months afterward the tube was removed. The sinus was in a perfectly healthy condition.

Case 2.—C. M. J., aged 30, suppuration of frontal sinus for eight weeks, associated with some disease of the nose which the physician in charge stated had caused a large amount of granulation tissue that he had removed from time to time. I operated Sept. 27, 1904, and obtained thorough drainage, but when I saw the patient three or four days later, I discovered that the nasal trouble was malignant. The patient died from extension of the carcinoma about four weeks afterward.

Case 3.—D. C. J., aged 32; suppuration of frontal sinus and one antrum of ten years' duration. Operated Oct. 1, 1907, and obtained perfect drainage. The patient returned to his home in a distant state the same day. A month later his physician reported that there was no more discharge from the sinus and that he had no inconvenience whatever from the tube.

Case 4.—W. A. E., aged 42; suppuration of the frontal sinus for over ten years; non-suppurative inflammation of the antrum; nasal mucous polypi. Operated Oct. 16, 1906, removing polypi in the forenoon, and in the afternoon operated on frontal sinus. Patient returned the next day to his home. At the end of eight months the tube had worked down about 1.5 cm. and I removed it. There was still a very little discharge, but this would increase in cold or stormy weather.

Case 5.—Z. W. L., aged 35; suppuration of frontal sinus of twelve years' duration. Operated on March 12, 1907. Four months later tube had worked down about a centimeter, and I removed it. The canal was lined with smooth mucous membrane. There was little or no discharge from the sinus.

Case 6.—H. C., aged 24, suppuration of frontal and sphenoid sinus and antrum of over a year's duration. Operated May 4, 1906; removed the tube in four months. The canal was lined with a smooth mucous membrane, and there was no discharge from the sinus. Later the patient reported that on taking cold there was some mucous discharge from the sinus which would last a few days only.

Case 7.—S. X., operated on May, 1906, for suppuration of frontal sinus of long standing. There was extensive specific destruction of bony structures of nose. Operation established perfect drainage, but have not heard from patient since.

Case 8.—L. N., aged 25; suppuration of frontal sinus and antrum with profuse discharge of pus from the nose. Operated March 4, 1904; established free drainage from the frontal sinus, but the suppuration continued. About eight months after the operation there was still profuse discharge, although the drainage canal from the frontal sinus was full size. A radical operation could not be done at that time, and later another surgeon did an external operation; but four months later there continued to be discharge near the inner end of the eyebrow, and profuse discharge from the nares. She was under the care of another surgeon for several weeks, with little or no improvement, but then disappeared. This is the only patient I have seen who was under observation for more than six weeks in whom there was not a practical cure of the disease. In this one, I believe that a Killian operation ought to be performed.

Case 9.—M. E. A., aged 43; suppuration of frontal sinus and antrum of Highmore for three years. A small opening had been made through the inferior meatus into the antrum some months before I saw the patient. Operated Jan. 7, 1907; the patient went to his home in a distant state the following day. About seven weeks later he could not wash out the frontal sinus and was brought back to me. The tube was occluded with dry mucus, which was removed. Five months after the operation the discharge had ceased, the tube had gradually worked down by this time and was taken out.

Case 10.—G. H., aged 22; suppuration of frontal sinus for three years. Operated on Feb. 25, 1907. She wore the tube for seven months, and there was a little mucus discharge from the sinus, but no pus. The drainage canal was smooth and of full size so that there was perfect drainage from the frontal sinus.

Case 11.—U. C., aged 33; suppuration of both frontal sinuses for about three years, with probable suppuration of both antra of Highmore and extensive atrophy of all intranasal bones, except the septum; operated Feb. 21, 1907. Obtained thorough drainage, and the operation was satisfactory in every respect. As there was very free drainage, the sinus was washed out gently with a weak solution of peroxid of hydrogen, in a nearly saturated solution of boracic acid, every day for over a week; then, as there was still a good deal of purulent discharge from the sinus, it was thought that all parts of the cavity were not being reached by the wash; consequently the solution was thrown in with extra force. The patient immediately complained of severe pain in the outer part of the sinus and in the temple, and this was immediately followed by large quantities of thick foam which welled out of the tube. The cavity was immediately washed with sterile water, but the pain continued, and meningitis developed, which terminated unfavorably in forty-eight hours. In this case it is probable that the atrophy of bony tissue had extended to the walls of the sinus, and that there was a deep narrow recess far back under the orbital plate filled with desiccated pus. The same wash that was used in this case had been used in several previous cases, but we have not employed it since.

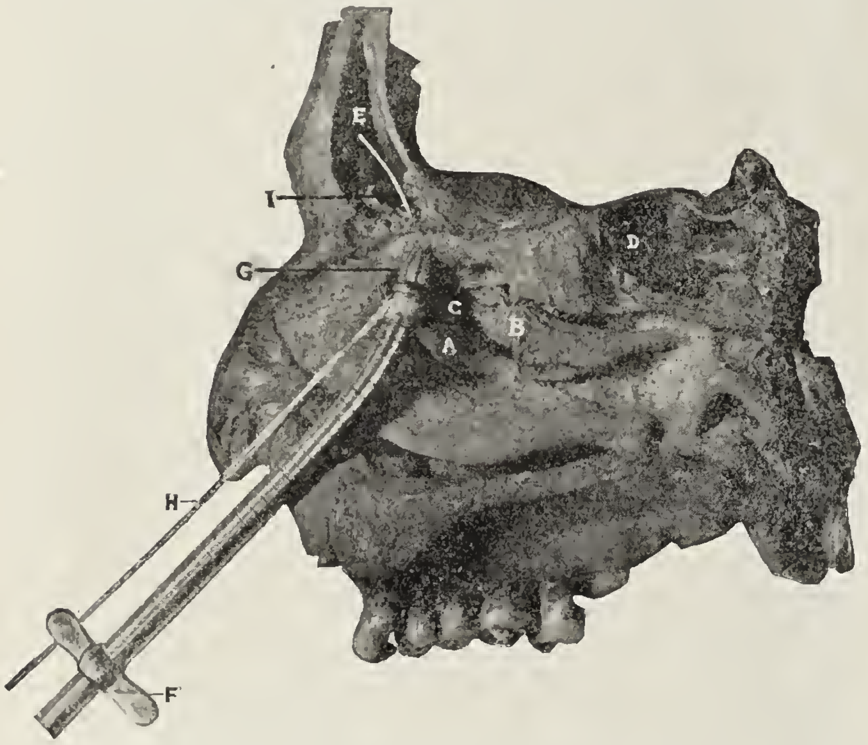

Fig. 6.—Pilot-burr in position for operation, with ligature attached to distal end of shield for drawing the burr forward while it passes up the probe into the frontal sinus. The middle turbinated body has been removed. A. Processus uncinatus. B. Bulla ethmoidalis. C. Infundibulum. D. Sphenoidal sinus. E. Frontal sinus. F. Spiral-tube-shield covering pilot-burr as in operation. G. Burr ready to begin drilling. H. Ligature fastened to distal end of shield for pulling burr and pilot forward. I. Pilot.

Case 12.—M. F., aged 32; suppuration of frontal sinus, of fifteen years' duration; empyema of one antrum. Operated Feb. 21, 1907, without difficulty; no bleeding, perfect drainage. The day following the operation on the sinus I made a large opening through the inferior meatus into the maxillary sinus. October 15 there was still some discharge from the nose, and he could not wash out the frontal sinus very well. It is probable that the frontal sinus has practically healed, but that the antrum is still discharging.

Case 13.—H. J. D., aged 25; suppuration of frontal sinus for several years, also empyema of maxillary sinus on same side. Operated on frontal sinus Oct. 4, 1906, and made a large opening into the antrum through the inferior meatus at the same sitting. The operation was thoroughly successful. The tube came out in five months, but the drainage remains perfectly free. The antrum has healed and there is very little discharge from the frontal sinus, although something comes occasionally and he washes it out about once a week with peroxid of hydrogen and a solution of boric acid.

Case 14.—E. L., aged 51; suppuration of frontal sinus of nineteen months' duration; also empyema of antrum of Highmore. Operated on frontal sinus June 15, 1905, and later made a large opening through the inferior meatus into the antrum. At the end of six months, when I removed the tube, there was very slight discharge from the cavity. Two months later the nares was in a perfectly healthy condition.

Case 15.—C. A. D., aged 45; suppuration of frontal sinus of two years' duration. Operated July 25, 1907. Ten weeks later there was still a slight, opalescent mucus discharge from the sinus, but he was slowly and steadily progressing to a cure.

Case 16.—M. W. R., aged 30; suppuration of frontal sinus of ten days' duration. Operated on August 12, 1907. Two months' later patient reported that the sinus was perfectly well.

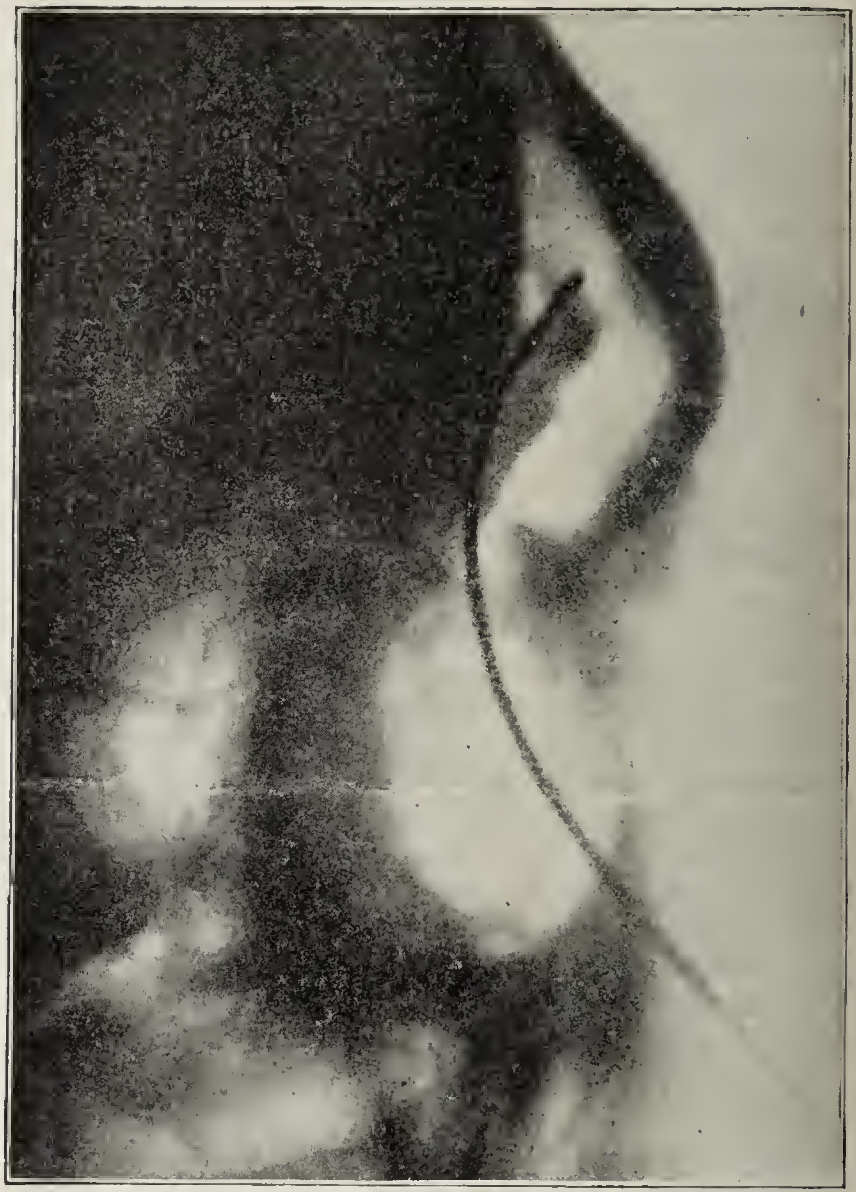

Fig. 7.—Radiograph showing probe in frontal sinus, lateral view.

Case 17.—M. T., aged 41; this patient had an external operation on the sinus. The external wound had healed but had broken out again. Suppuration continued and drainage from the nose was very imperfect. I operated April 3, 1905. There was a complete cure in a few weeks. I removed the tube at the end of seven months. There had been no discharge for several months.

Case 18.—B. H. G., aged 25; suppuration of frontal sinus of two years' duration, although there had been eight or nine remissions in the severity of the symptoms during that time. Operated May 27, 1907. The operation was satisfactory in every respect. October 21 I removed the tube. He had seen almost no discharge on washing out the cavity since the first two weeks following the operation, and had been practically well ever since.

Case 19.—M. P. R., aged 42; suppuration of frontal sinus for fifteen or sixteen years; also suppuration of antrum of

Highmore for at least nine years. Operated April 6, 1904, and allowed him to go home the next day. The tube was removed eight months after the operation. Eleven months after the operation the drainage canal was free, with no pus from the frontal sinus, but still some from the antrum.

CASE 20.—C. S. C., aged 37; suppuration of frontal sinus of about two years' duration; also a great deal of gastric disturbance and frequent vomiting for a year and a half, apparently due to swallowing the pus. Operated on March 22, 1906. The gastric symptoms were completely relieved two or three days after the operation. Suppuration from the frontal sinus had entirely ceased about four months after the operation. The tube was removed about nine months after the operation. Thirteen months after the operation the nares were in perfect condition. In this, as in one other case, Nature had provided a valve-like membrane which partially closed the opening during inspiration or blowing of the nose, but which did not interfere with its full size for drainage.

CASE 21.—P. T. E., aged 29; suppuration of frontal sinus of several months' duration. An external operation had been made six months before, but suppuration continued. Operated June 19, 1907, and at the same time opened the sinus again externally. Obtained perfect drainage, which had not been present before. A few days later there was sharp inflammation above the orbit which also involved the opposite side. The symptoms were so severe and obstinate that in spite of his denial we suspected syphilis, which he finally confessed. We placed him on potassium iodid and he improved rapidly. Seven months after the operation, there was very little, if any, discharge from the frontal sinus, and the other symptoms had disappeared.*

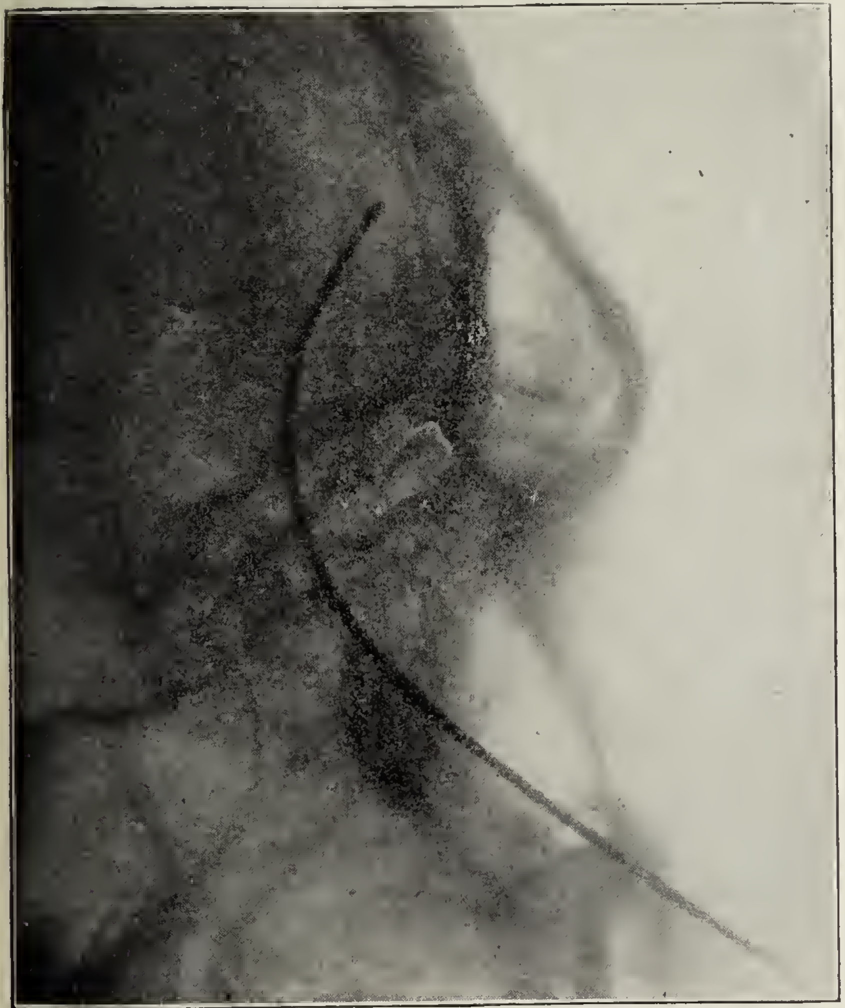

Fig. 8.—Radiograph showing probe in frontal sinus, but having the appearance of being far behind it in the brain. It was demonstrated by the fluoroscope that the probe was in the frontal sinus. After the operation another radiograph was taken showing the tube in position. It also appeared back of the frontal sinus, though it was known to be placed correctly. This illustrates the importance of having the head in the right position when the radiographs are taken, and shows how easily one may be misled by the shadows.

CONCLUSIONS.

The series of cases that I have presented contains a few that were not heard from afterward or that for other reasons could not be used in estimating the ultimate value of the operation, but in every case the operation itself was done without any unfavorable result, and in every instance it established free drainage. Analyzing all the cases that could fairly be considered, I believe that the following conclusions are justifiable:

This operation leaves no scar, whereas the scar from the external operation often causes a very serious deformity and one which can not be remedied safely by injections of paraffin, because this procedure sometimes causes sloughing; it has been followed by malignant keloid-like growths in several instances, and by death in some cases.

This operation usually incapacitates the patient for only one or two days.

This operation is generally done under local anesthesia, a general anesthetic being used only in rare cases, and then chlorid or ethyl or some other agent that will cause anesthesia for only two or three minutes is sufficient.

This operation can be done in from 95 to 98 per cent. of all chronic cases, and in the majority of acute cases, provided the anterior end of the middle turbinated body has first been removed.

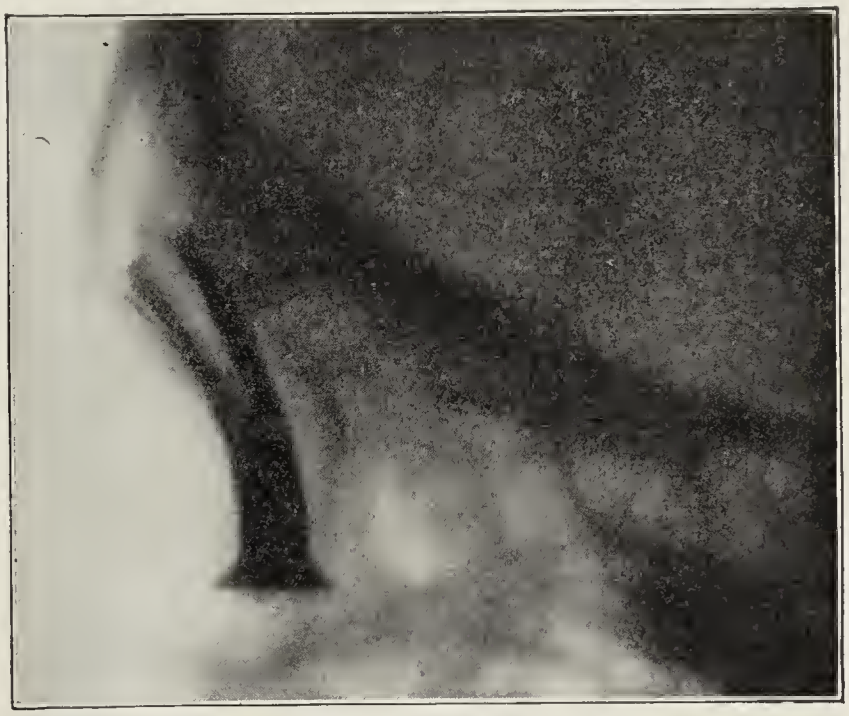

Fig. 9.—Radiograph showing drainage tube in position: lateral view.

The middle turbinated body should be removed in practically all cases of frontal sinuitis, whether suppurating or not, in order to insure free drainage, which of itself is often sufficient to cause a cure.

As a factor of safety, the fluoroscope and x-ray negatives should generally be used, with the probe in position in the frontal sinus in order to assure the surgeon of the relation of the nasofrontal duct to the surrounding parts.

In many cases suppuration of the antrum of Highmore is associated with empyema of the frontal sinus, and in all such free drainage must be established from the antrum, preferably through the inferior meatus into the naris.

Suppuration of the ethmoid cells is frequently associated with frontal sinuitis, but this operation will open the adjoining cells sufficiently in the majority of cases. Suppurating cells not opened by it should be given free drainage by the usual methods.

Experience has shown that the drainage established by this method is ample.

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* I have operated on one more patient since this paper was written, with the most satisfactory results.

Frequent washing out of the frontal sinus after the operation is not desirable in most cases, although for a time it should be washed at least once daily to prevent the tube from becoming closed by desiccated secretions.

Washing out of the frontal sinus with peroxid of hydrogen, even in weak solutions, is unsafe, even where there is very free drainage.

One of the most efficient remedies for checking the suppuration is a 10 to 20 per cent. solution of argyrol.

Reinfection may occur with attacks of severe cold in the head, but the suppuration soon ceases because the free drainage is permanent.

I believe this operation is as safe as any other that has thus far been described for the treatment of suppuration of the frontal sinus. It is very doubtful whether the burr used in this operation could cut the dura in any case, no matter how it was applied against it. Exposure of the dura in the frontal sinus would seem no more dangerous than that occurring in operations for suppuration of the mastoid, in a large percentage of which this exposure occurs.

This operation will surely establish free drainage, even in cases of empyema in which it may not be sufficient to effect a cure. In cases that do not greatly improve within a few weeks the frontal sinus should be opened externally and cleaned out. The enlarged drainage canal resulting from the intranasal opening of the sinus would allow free drainage into the nose and would lessen the danger from the external operation.

Healing is apparently as rapid after this as after any other operation on the frontal sinus. Probably 95 per cent. of all suitable cases will practically recover within from two weeks to six months.

I believe that an operation for intranasal drainage should be first chosen in practically all cases of empyema of the frontal sinus, and I believe that the operation I have described for this purpose is the easiest, both for the patient and the surgeon, and the safest of any of the operations thus far described.

34 Washington Street.

PRACTICAL CYSTOSCOPY: ITS SCOPE AND LIMITATIONS.

WITH A REVIEW OF THE PROMINENT CYSTOSCOPES OF THE PRESENT DAY.*

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The cystoscope has been so thoroughly identified with the progress made in genitourinary surgery during the past decade that it is not without good reason that the chief measure of that progress has been ascribed to this instrument.

Without going into the history of the subject, it may be said that practical, useful, modern cystoscopy had its beginning in the period of 1875-78, when Nitze presented his early models of cystoscopes. While the stamp of this parent stock is still evident in the instruments of the present day, there has been gratifying evolution from the heavy, complicated and cumbersome instruments of large caliber, hot lamps and unreliable cooling apparatus of that time, to the light and graceful ones, of wonderful precision and wide application, of to-day; instruments provided with brilliant lamps that do no burn, and with means for maintaining a clear field fo observation and work.

Ureteral catheterization, in connection with cystoscopy, may be divided into two periods of development namely, previous to about 1900, and since that time While in the ten or fifteen years previous to 1900, catheterizing cystoscopes had been submitted by Brenner (Fig. 1), Casper (Fig. 2), Albarran, and Nitze (Fig 3), it can not be said that their use was attended with the success afforded by simple cystoscopy up to that time In the hands of experts, attempts at catheterization gave only a modicum of success, something like 30 to 50 per cent., leaving failure stamped on too large a proportion of cases to admit this to the standing of a reliable procedure. The apparatus and methods of Pawlik and of Kelly were applicable only to females, and though admirable, were restricted in their sphere of usefulness.

During the year or two previous to 1900, the production, in this country, of the low-tension, cold electric lamp, led to a revolution in cystoscopes that has rendered them more practical and useful to the profession, and simplified ureteral catheterization to a like degree. From the 30 or 50 per cent. of successes, the best of that period, the more modern instruments have given from 75 to 90 per cent. of successes, enabling many of those, even, who do not make a specialty of this work to avail themselves of its great advantages.

American ingenuity deserves a full meed of credit for the great progress thus recorded. Tilden Brown first demonstrated the feasibility of the double-barreled catheterizing instrument (Fig. 4), permitting synchronous catheterization of both ureters at the one sitting.[1] His instrument utilized water as a distending medium. The air-cystoscope (Fig. 5) which I introduced in 1900 at the meeting of the American Association of Genitourinary Surgeons,[2] although not adding much to bladder inspection, contributed largely to the reliability of ureteral catheterization by eliminating the impediments then incidental to water distension and imperfect lens systems, etc. Bierhoff's modification of Nitze's catheterizing cystoscope (Fig. 6) represents, probably, the best model of the Nitze type of cystoscope. It permits the withdrawal of the cystoscope from the bladder after double catheterization, without twisting the catheters in the way required by the European instruments, that adopt the indirect mode of catheterization.

CHARACTERISTICS OF CYSTOSCOPES.

The several European cystoscopes, excepting the Brenner, have accomplished the following objects: (a) A good right-angle view; and (b). catheterization of the ureters by the indirect method. They are the particular objects fulfilled by Albarran's, Casper's, and Nitze's newer catheterizing cystoscopes. Another form of the Nitze cystoscope, non-catheterizing, furnishes a good retrospective view for observing the prostate and vesical neck.

An interesting and ingenious cystoscope devised by Schlagintweit (Fig. 7) furnishes a retrospective view by means of a movable lens, which when drawn within the shaft (Fig. 7A), gives a right-angle view, but when pushed out on the side of the shaft (Fig. 7B), gives the full retrospective view. While admitting the completeness of the retrospective view thus obtained, and the ingenuity of the mechanism employed, the posibility of disarrangement of the mechanism and "hang- ng" of the lens in its eccentric position, causing diffi- ulty of extraction, etc., must occur to the conservative perator.

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* Read by invitation before the Buffalo (N. Y.) Academy of Medicine, Jan. 7, 1908.

[1] Jour. Cutan. and Genitourinary Dis., 1900, p. 418.

[2] Id., 1900, p. 420.

In 1904, with this objection in mind, I obtained a ery satisfactory retrospective view in a retrograde cyst- scope. This was obtained by facing a hemispherical lobular lens backward, so as to gather in the rays of ight coming from the direction of the operator himself; n other words, the vesical neck and prostate, after the ntroduction of the cystoscope into the bladder. This s the same principle, applied in the Otis examining ystoscope (which is non-catheterizing, and presents nly the right-angle and retrospective views), and it as also been incorporated into my later, universal ystoscope.

The European catheterizing cystoscopes, with the ex- eption of the Brenner, have usually employed the in- irect method of approaching the ureteral openings Albarran, Nitze, Casper); whereas, most of the Ameri- an instruments (both air and water medium) have em- loyed the direct method, after the Brenner type.

ELATIVE ADVANTAGES OF DIRECT AND INDIRECT CATHETERIZATION.

For cystoscopy, only, the right-angle lens probably hows a greater proportion of the interior of the bladder than does the straight-view lens; but, as a matter of fact, neither one shows the whole of the interior of the rgan: The right-angle lens can not show straight head toward the lower, posterior wall, nor can the traight-view lens show sidewise or retrospectively; and pathologic process or growth situated at either point ay readily escape detection by the lens that is inappro- riate for exposing that locality. So neither the ne nor the other of these two types of instrument ful- ils the natural and necessary demands of complete ystoscopy.

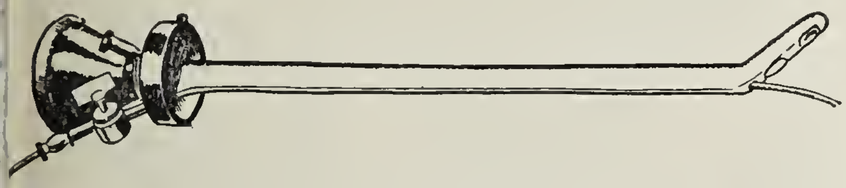
Fig. 1.—Brenner's catheterizing cystoscope.

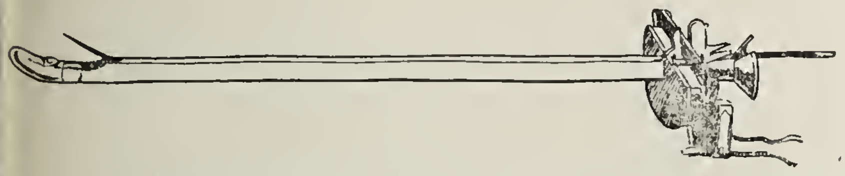
Fig. 2.—Casper's catheterizing cystoscope.

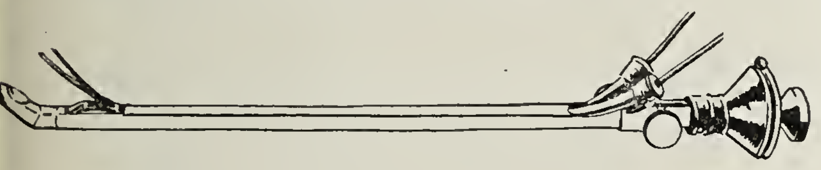
Fig. 3.—Nitze's catheterizing cystoscope.

The preference between the two types of instrument, he direct and indirect, for ureter catheterization, is also proper subject for discussion. Under ordinary con- itions and with normal bladders, the ureter openings re to be reached by either method, although there is his difference between them: In catheterizing by the irect method, the heel of the cystoscope is brought lmost against the ureter opening (Fig. 8). The cathe- er passes out of its channel directly into the ureter pening, with scarcely any space to bridge over or prove a source of uncertainty and difficulty. When the indirect method is employed, the catheter emerges from the concavity of the cystoscope, a point which can not be brought against or even very close to the ureter opening; hence, more or less space must be bridged before the catheter reaches the opening (Fig. 9). A soft or flexible catheter is not the steadiest material one could desire under such circumstances. Another element of uncertainty is added in the movable lever for controlling the direction of the catheter. This is Albarran's device, now used on all cystoscopes that catheterize by the indirect method. From these considerations, it is probable that more skill and practice are required to execute harmoniously the several maneuvers incident to carrying out the indirect method than is true of the direct method. Abnormal conditions may alter the verdict.

Ordinarily, by elevating the outer end of the direct-view cystoscope, there is no difficulty in bringing the ureter openings into view for catheterization (Fig. 8), but occasionally a "precipitate" bladder is met with (Fig. 9), in which the ureter orifices are placed below a jutting prostate and outside of the field of vision of the direct-view lens. Under such circumstances, the indirect method is much more appropriate, and may, in fact, readily overcome the difficulty, or may be the only practicable route to the ureteral openings. It is again apparent, therefore, that one type of instrument alone can not meet the requirements of all the varying conditions encountered in the clinic.

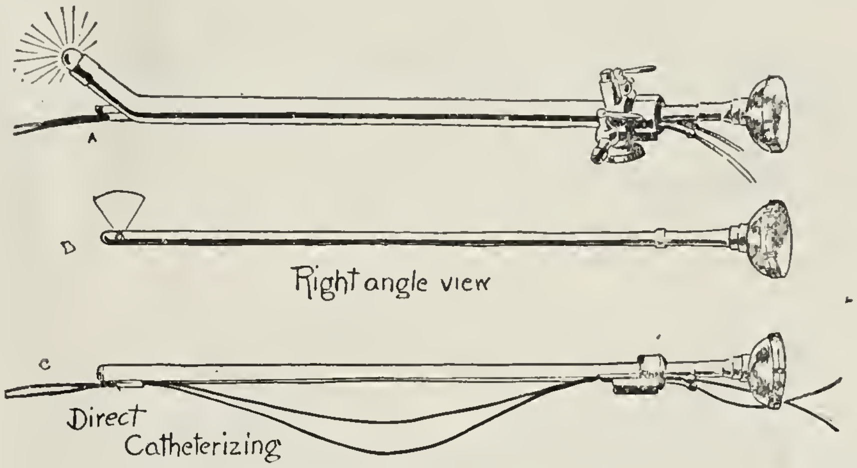

Fig. 4.—Tilden Brown's double-barreled catheterizing cystoscope, permitting synchronous catheterization of both ureters at one sitting.

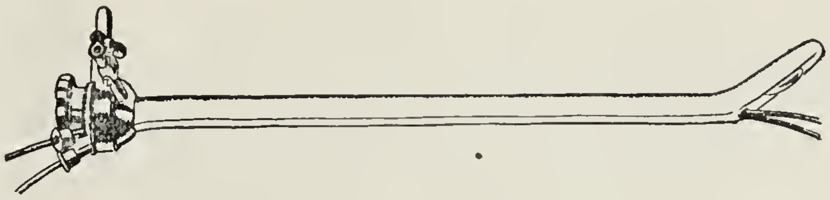
Fig. 5.—Bransford Lewis' air cystoscope.

AIR AND WATER AS DISTENDING MEDIA.

There has been much discussion as to whether air or water is the better medium for bladder distension in cystoscopy. My own views on the subject have undergone considerable change in the past few years, influenced, largely, by overcoming some of the difficulties that were formerly connected with the use of water in this capacity.

It can not be denied that water is the medium most suited to the bladder, and the one to which it has been accustomed all its life, so to speak; while air is distinctly irritating and very disagreeable to the bladder, although not dangerous, as has been claimed by some of our German confrères. Moreover, water is the better medium for exhibiting papillomatous or fimbriated growths in the bladder. It floats their filmy strands in full and natural view before the eye, while air causes them to collapse in a mass against the bladder wall.

It is evident, therefore, that in ordinary cystoscopy and ureteral catheterization, if the difficulty due to hemorrhage and pus clouding the distending medium can be overcome, water is decidedly the medium of choice. This difficulty has been overcome. The universal cystoscope permits of rapid and effective change of fluid, even during the work of the operator. The large lumen of the sheath, through which the exchange of fluids is made, amply takes care of this feature. Consequently, for these two purposes, cystoscopy and ureter catheterization, air inflation has been practically discarded by me.

With respect to operative cystoscopy, however, other factors have a bearing and lead to a different conclusion. Then, it is not so much a question of the comfort of the patient (which can be taken care of by some form of anesthesia) as it is expediency in attaining the object to be accomplished, the removal of a growth by a snare; the extraction of a calculus from the lower end of a ureter; the dilatation or cutting of a strictured ureteral orifice, etc. Hemorrhage, sufficient to interfere, is much more liable to occur in connection with such manipulations as these than in connection with simple cystoscopy or ureter catheterization.

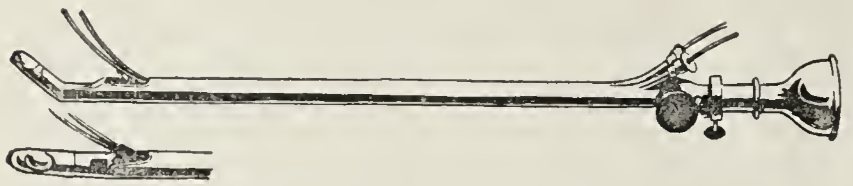

Fig. 6.—Bierhoff's modification of the Nitze catheterizing cystoscope.

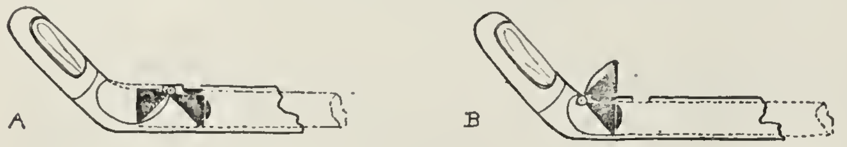

Fig. 7.—Schlagintweit's cystoscope. A, right angle view. B, full retrospective view.

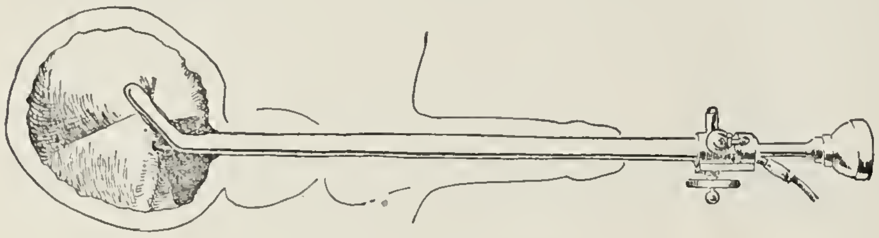

Fig. 8.—Direct ureter catheterization.

For these reasons, air is the medium employed with my operative cystoscope, while water is used altogether with the universal cystoscope.

A UNIVERSAL CYSTOSCOPE.

Impressed with the shortcomings of the cystoscopic armamentarium, overlapping here and proving deficient there; the disappointments involving my own early instruments, as well, I began, about four years ago, the endeavor to develop a cystoscope that would embrace in a single instrument the several features demanded for effective and comprehensive cystoscopy, together with ureteral catheterization; embodying, also, means for adequate irrigation and rapid exchange of fluids. Practical use of the instrument (Fig. 10) during the past two years has proved that the following purposes have been amply fulfilled by it:

(1) Direct, forward view; (2) right-angle (lateral) view; (3) retrospective view; (4) double, synchronous catheterization of the ureters by the direct method; (5) the same, by the indirect method;[3] and, finally, (6) an irrigation feature so satisfactory that it is commonly employed in preference to a catheter for washing out the bladder preliminary to cystoscopy; and, as previously mentioned, irrigation can be carried on during the working of the operator.

In the production of the instrument, the inestimable value of simplicity and freedom from complications has been constantly kept in mind. Problems of reliable insulation, of setting the cold lamp to best advantage, of protecting it from possible breakage, especially while within the bladder, and yet exposing its rays to both the convex and concave aspects, for illumination of the whole interior of the bladder; of reducing the outside caliber of the sheath to the minimum selected (No. 23, French), and yet permitting its carrying large enough telescopes to provide plenty of light and wide fields of vision—have engaged attention.

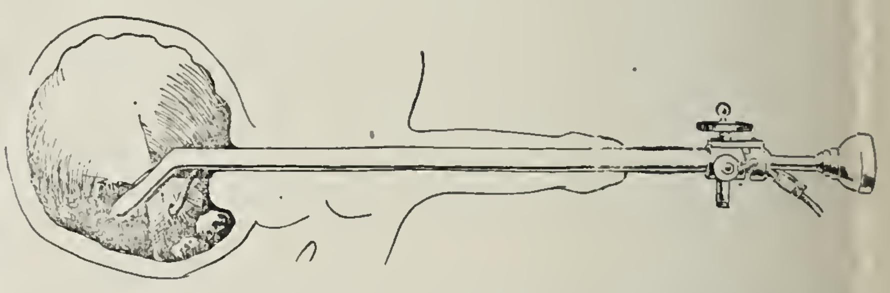

Fig. 9.—Indirect ureter catheterization.

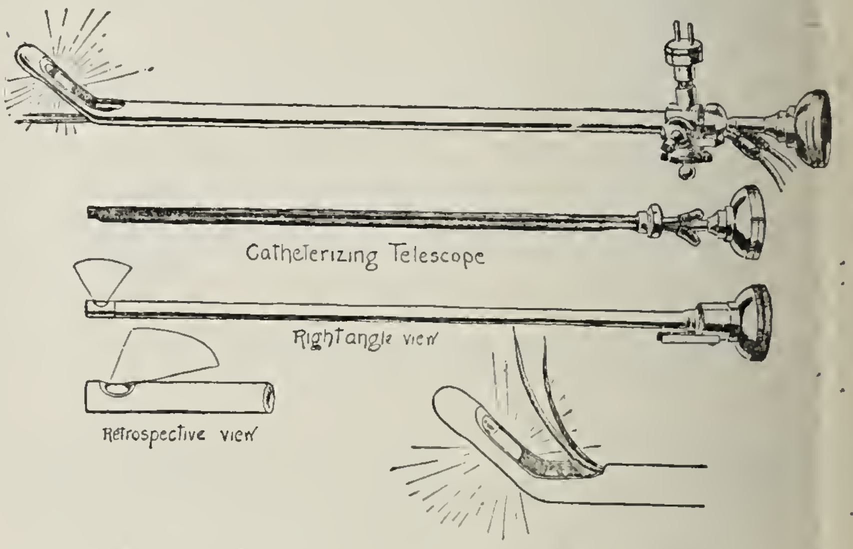

Fig. 10.—Bransford Lewis' universal cystoscope.

DESCRIPTION OF THE UNIVERSAL CYSTOSCOPE.

Employing an idea first submitted by Boisseau du Rocher[4] in 1890, a service sheath was utilized to carry an insulated wire, with a cold lamp in its beak. As it was contemplated to view every point in the bladder with this instrument, the beak was fenestrated on its concave and convex surfaces, the lamp being set base upward and bulb pointing downward, shedding its best illumination in the directions most needed.

The ocular and catheterizing apparatus is embodied in telescopes that are passed freely through the sheath, so that, after the sheath is once inserted into the bladder, it remains there until all manipulations are ended, the exchanges of telescopes being made thereafter, with the sheath in place, and without the patient's noticing it. The sheath is the irrigating channel already alluded to. Water is injected through it either directly or through one of the cocks at its side.

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[3] Details and working model completed, but not yet on the market.

[4] Ann. d. mal. d. org. génito-urin., 1890, 1892, 1894.

While two different telescopes for the lateral and retrospective views are provided, experience has shown that the lenses embrace such a wide field that both views may be combined in the one telescope, which is both right-angle and retrospective. The same lens is also used with the indirect catheterizing telescope (Fig. (10). The direct catheterizing telescope supplies a good direct view, besides its catheterizing feature, and may be used for simple cystoscopy without catheterization, the catheter tubes being plugged at their outer ends to prevent the escape of the distending fluid through them. A larger, direct lens is furnished without the catheterizing feature.

TECHNIC OF CYSTOSCOPY AND URETERAL CATHETERIZATION.

It is probable that, with a good and efficient cystoscope, the greatest source of trouble or difficulty in cystoscopy arises from insufficient anesthesia. But that is not to be interpreted as meaning that general anesthesia is frequently necessary. On the contrary, general anesthesia is very seldom found to be necessary for either cystoscopy or ureteral catheterization, local anesthesia, when properly and adequately administered, sufficing for the vast majority of all cases. In a number of cases it is not necessary to use even a local anesthetic, although I deem it undesirable and injudicious to subject a patient to a painful experience when it can be made a comfortable one without adding to the risk of the procedure.

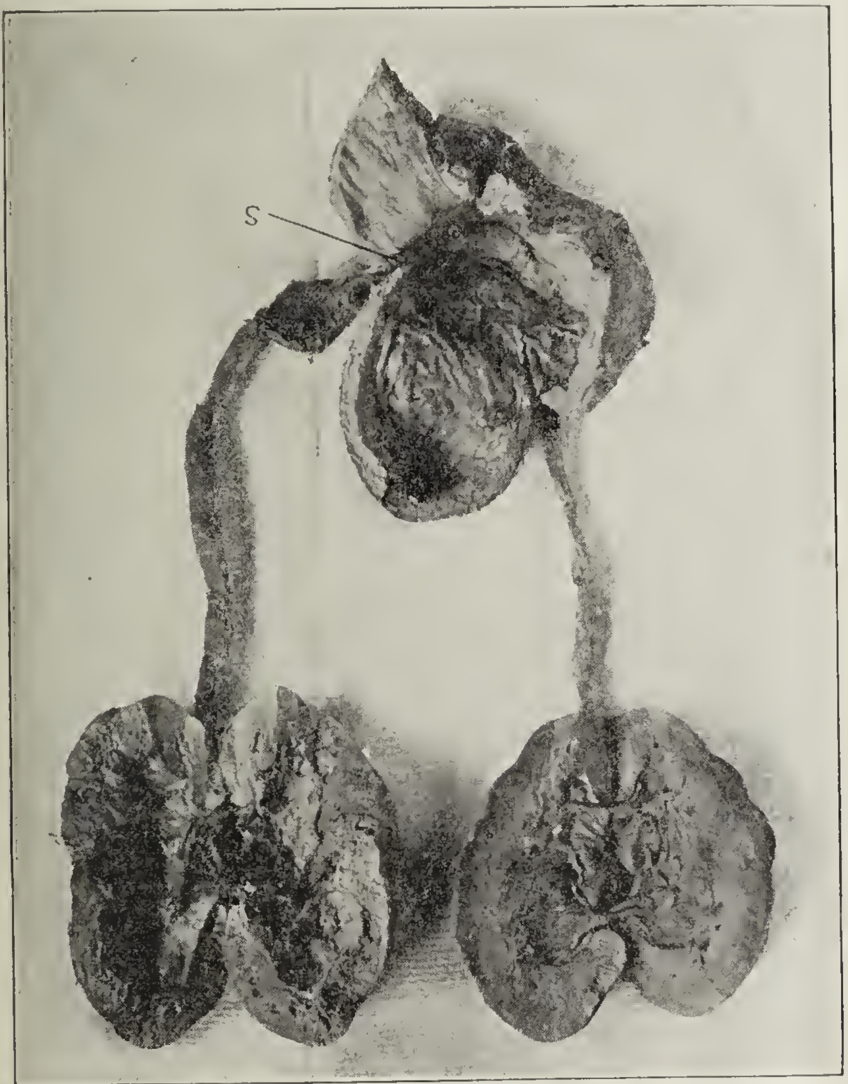

Fig. 11.—Postmortem specimen, showing a ureteral stricture which caused a dilated ureter, with subsequent destruction of the kidney, uremia and death of patient.

During the past two years I have practically discarded cocain in my work of this kind. I now secure local anesthesia by the use of alypin tablets, deposited at the points of election by means of my urethral tablet depositor (Fig. 13). These tablets are made of appropriate size by the Schieffelin Company and contain 1⅛ grains of the drug each. In applying them the following plan is adopted: The patient first empties the bladder, or it is emptied for him by catheter, and washed with boric solution and again emptied. The depositor is inserted as far as the posterior urethra (the anterior urethra does not usually require anesthesia), where it is held while the obturator is withdrawn; a tablet is dropped into the depositor and shoved into the urethra by means of the obturator. After macerating in the mucus of the urethra a minute or so the tablet becomes a soft mass, which is then smeared over the adjacent membrane by to-and-fro motion of the depositor. Precise information can be obtained as to the disappearance of sensitiveness by inquiry of the patient. From two to four tablets may be used, according to necessity, in the individual case, and manipulations should not be begun until acute sensitiveness is reduced.

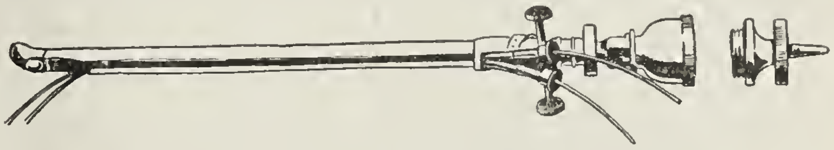

Fig. 12.—Freudenberg's catheterizing cystoscope.

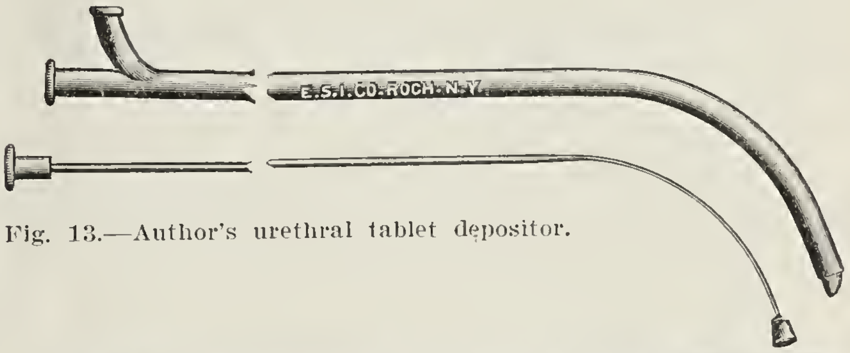

Fig. 13.—Author's urethral tablet depositor.

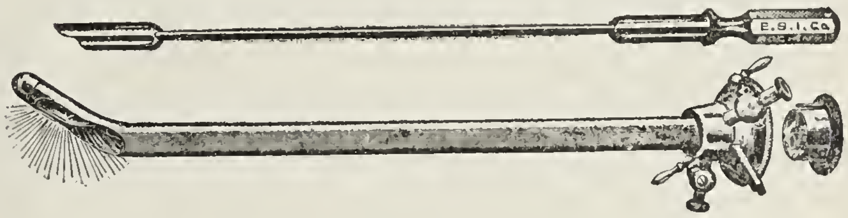

Fig. 14.—Bransford Lewis' operative cystoscope.

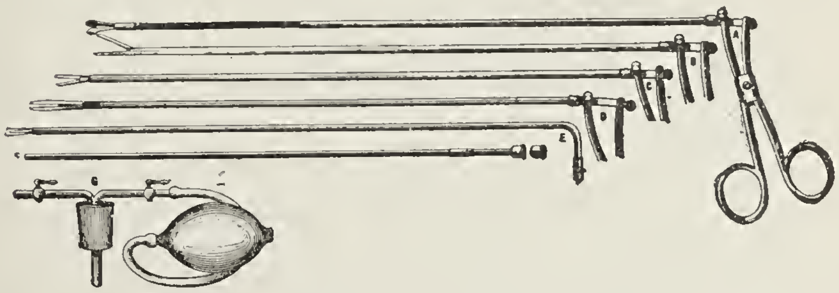

Fig. 15.—The accessories to Dr. Lewis' operative cystoscope.

POSTURE.

While several different positions are employed by different operators, I prefer the dorsal, with the legs supported by knee-crutches. With an extremely sensitive or a contracted bladder it is often of service to relieve the pressure of the fluid from the most sensitive area, the neck, by moderate pelvic elevation. Flexion of the thighs on the abdomen relaxes abdominal pressure and resistance, under similar circumstances.

After preliminary adjustment and turning off of the light the cystoscope is introduced into the bladder, five or six ounces of clear, warm water are injected through the sheath and allowed to flow out again. This is repeated as often as is necessary to clean the bladder, six or eight ounces being left in for distension. The telescope first selected is run through the sheath, the light turned on and the observation is made. The cystoscope is moved about freely and turned on its axis, no danger coming from touching the walls of the bladder with a lamp that is only moderately warm. On finishing with the telescope first used, it is replaced by another in the manner previously mentioned, and thus the entire inner surface of the bladder, including the neck and prostatic outgrowths, tumors, calculi, etc., come within the observation of the investigator.

If, however. it is the intention to catheterize the ureters, too much time must not be spent in looking at the bladder before proceeding to the catheterization; the disappearance of anesthetic effect may be followed by resistance or bladder contractions that disarrange and hide the ureteral openings, possibly impeding or defeating the catheterization until renewed anesthesia is secured. The catheterization itself is accomplished in the manner usually described, there being nothing peculiar to this instrument, except that either the direct or the indirect method may be used. In order to insure their remaining within the ureters on the withdrawal of the cystoscope it is advisable to push the catheters from six to eight inches up into the canals, but when a ureter stone or a stricture is suspected they are sent up as far as the kidney pelves.

The urine drainage that ensues is steady and measured if the eye of the catheter is within the pelvis, but interrupted or comes in successive jets if lower down in the ureter. It is thus influenced by the peristaltic contractions of the ureter.

Some hemorrhage may become manifest in the urine drained if the catheter is roughly introduced or is pressed too far into the pelvis. When this is casual, and without material bearing on the diagnostic evidence, the red blood cells may quickly be cleared from the urine by adding acetic acid to the slide on which the sediment is placed. This not only removes the red cells, but clears up the nuclei of pus and renders the epithelium distinct.

MODE OF WITHDRAWING THE CYSTOSCOPE AND LEAVING THE CATHETERS IN PLACE.

(A) After direct catheterization; (B) after indirect catheterization.

(A) The water that distends the bladder is first allowed to escape through one of the cocks; the light is turned off and the cord disconnected. While feeding the catheters into the channels the cystoscope is, at the same time, drawn outward; when the beak end emerges from the meatus the catheters are grasped at that point and held while the instrument is being removed. Another mode is to withdraw the catheterizing telescope from the sheath until the catheters are exposed just beneath the shoulder, near the ocular end; there they are grasped and held while the telescope is removed, after which the sheath is in turn removed.

(B) After indirect catheterization the mode of removal is essentially the same, except that the cystoscope must be turned on its axis before withdrawal to bring the concavity forward in harmony with the natural curve of the urethra. This brings about crossing of the catheters within the bladder, and the extraction is not accomplished as easily as after the use of the direct mode; nevertheless, by care and practice it is accomplished. If found impossible in a given case the drainage may be secured before removal of the cystoscope.

Under ordinary circumstances cystoscopy and ureteral catheterization may be carried out in a well-equipped office, the patient suffering practically no pain and experiencing no ill effects afterward. It has been thought by some that bladder segregation of the urine is a simpler and less painful procedure. My own estimate, made after use of both methods, is that segregation, in addition to being of little reliability in diagnosis and of none in therapy, is really more arduous and painful than is ureteral catheterization and removal of the cystoscope.

LIMITATIONS OF CYSTOSCOPY.

Like every other surgical procedure, cystoscopy has its limitations. It can not be used, for instance, where there are urethral strictures too narrow to permit of the introduction of a cystoscope; although, of course, this is a matter in which the caliber of the cystoscope has a bearing. I have one cystoscope, caliber 18, French, which passes through a pretty small urethra. The caliber of the universal cystoscope is 23, French. The calibers of late European cystoscopes, as advertised in the latest catalogues of European makers, are, respectively, Nitze, 25; Kollman, 26; Wossidlo, 25, French. Large prostates sometimes render the introduction of a cystoscope difficult, but it is very unusual that cystoscopy is prevented for this reason.

It has been taught that the use of the cystoscope should be avoided in cases of urinary tuberculosis; that such instrumentation is liable to increase the seriousness of the situation. My experience leads me to believe that this is purely *a priori* reasoning, and, moreover, incorrect. Dr. Willy Meyer[5] expresses a similar belief. I have observed many cases of urinary tuberculosis in which, whether because of the cystoscopic and other local measures repeatedly made use of, or in spite of them, their progress has been that of extremely gratifying improvement or even definite recovery. And this to a degree of frequency that would not be expected from the older writings advocating the "expectant" or do-nothing plans. In tuberculous pyelitis, besides ureteral lavages with boric or other mild antiseptic solutions, I have injected iodoform oil through the catheters directly into the pelves and ureters, with beneficial effect. I can not agree that urinary tuberculosis proscribes the use, to a reasonable extent, of the cystoscope.

The limitations that were formerly imposed on the cystoscope by active hemorrhage have been practically removed in the manner already described. Since the universal cystoscope has been at my disposal I have not met with a case of vesical or ureteral hemorrhage sufficiently active to prevent its satisfactory use, either for cystoscopy or ureteral catheterization, although we have made use of it in carcinomatous cases, in which a continuous stream of blood was plainly visible, coming from some point within the bladder.

Objection has from time to time been made to ureteral catheterization on the ground of supposed danger of carrying infection from the bladder up into the ureters or pelves. Ground for this objection has been denied by all writers who have had large experience in this work. Considering the great number of instances in which ureteral catheterization is being carried out all the time, if there were any material evidence in support of the claim it would have been brought forward long since.

Pain has been done away with as militating against cystoscopy, as indicated in previous remarks. It is taken care of, if excessive, by either local, spinal or general anesthesia.

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[5] New York Med. Jour., April 27, 1907.

Contracted bladder is not now so great a hindrance to cystoscopy as it formerly was. With two ounces of fluid, or even one ounce, sufficient space is given to make some use of the direct-view telescope, and possibly, also, of the indirect, in certain cases; and the cold lamp does not involve the danger of burning, even with so little fluid. Besides, the newer, wide-angle lenses do not require the distance for focusing that was formerly necessary to include a good field of vision.

AN OPERATIVE CYSTOSCOPE.

In connection with this subject it may not be amiss to present an instrument which as yet has not become widely familiar to the profession, although I have been making use of it since 1902-03, when the first model was completed for me. I refer to my operative cystoscope (Fig. 14). A detailed report of work with it was made before the Mississippi Valley Medical Association, Oct. 11, 1904.[6]

While it is possible that water might be used as a distending medium for it, I have always used air, for the reasons already indicated. This instrument is mainly a straight tube, without lens system, an ocular window serving to retain the air in the bladder, and at the same time permitting the passage of the several operative instruments through the small perforation at its lower edge. Air is pumped in through a cock, by means of a double rubber bulb, and warmed air is obtained by sucking it from above an alcohol flame. In the newest model a small channel runs along the lower wall of the cystoscope to take up, by aspiration, the excess of fluid that may collect in the bladder, this tube being connected with a vacuum bottle by rubber tubing. This excess fluid is also taken care of by posture, the patient being placed in a position of exaggerated pelvic elevation or in the knee-chest position.

The appurtenances supplied with the instrument are: Alligator forceps for intra-vesical work; flexible and inflexible forceps for ureter work; scissors; dilators of different kinds; probes, sounds, bougies, catheters, electrodes, for ureter work; knife, cautery and platinum loop, etc.

While this instrument has not so wide a scope nor so frequent application as the universal cystoscope, it, nevertheless, has a definite position in vesical and ureteral work that is highly desirable. With its assistance and without the necessity of opening the bladder to direct attack, small foreign bodies, calculi etc., may be removed; strictured ureter openings are cut or dilated with as definite precision as when the same measures are accomplished in the urethra; calculi, hung in ureteral orifices, are capable of removal by means of the forceps that are manipulated under the definite observation of the operator. The flexible ureter forceps, probably the most difficult of the appurtenances to perfect, is capable of passing one or two inches up into a ureter, where it may be opened and closed in the endeavor to grasp a stone that may be incarcerated there.

Granted that this operative set may not always accomplish all that could be wished of it, it will fulfil the objects required for a number of cases at least. It has already done that for me. And failure with it does not leave the patient any worse off than before, nor interfere with the adoption then of the radical, cutting operation, that may prove necessary. Numerous instances are reported in which the bladder has been opened to effect the removal of a stone projecting from a ureteral orifice; others in which the same radical measure has been undertaken to permit access to a strictured ureter opening. I believe it would be a rare exception in which these objects could not be accomplished with this instrument and its appurtenances, without resorting to such radical preliminaries. Figure 11 shows a postmortem specimen of a ureteral stricture, which had produced a dilated ureter, pelvis and destruction of the kidney, uremia and death, all of which might have been obviated had the patient submitted to investigation and treatment before he was *in extremis;* but that was the state in which he entered the hospital, dying immediately afterward. The merest incision of the narrowed orifice, made through the cystoscope before the serious involvement of the kidneys, would probably have given him a number of years of life, if it had not reclaimed him to health.

In cheering contrast to this is presented the *x*-ray demonstration, following catheterization of the ureters with catheters containing lead-wire stylets, of an individual possessing three independent ureters,[7] two of them healthy, the third infected with gonococci, the source of a recurrent gonorrhea for over five years, notwithstanding his active pursuit of relief at the hands of many practitioners during that time. Through the means mentioned, the anatomic anomaly was demonstrated; the physiologic phenomenon of supplying three different urines by one individual (differing in specific gravity and other physical characteristics), was proved; and through medicated lavage of the infected ureter, the source of infection was removed, and the patient permanently relieved. He has since married and has been healthy for over two years.

In further contrast to the lethal outcome of ureteral stricture, so graphically depicted in the postmortem specimen (Fig. 11), I would briefly mention the case of a female patient who was reduced from health to invalidism by recurrent attacks of ureteral colic, which became so severe as to require morphia and energetic sedative means. Cystoscopy led directly to the diagnosis of stricture of the right ureter, the contraction involving the lower end of the channel. Nothing could at first be introduced, but repetition of endeavors with a variety of ureter probes and sounds finally gained access, which was followed by dilators, until this ureter outlet became as large as its companion and gave free escape to the urine. The first urine drained from the affected ureter contained much pus, some of it collected into clumps that, by plugging the narrowed outlet, had been as effective as calculi could have been for causing recurrent colics and loss of health. The outcome of such a condition, unrelieved, could only have been the destruction of the corresponding kidney, with ultimate involvement of the opposite one, whereas, the opening up of the channel by means of the operative cystoscope was followed by complete relief from suffering, the clearing of the urine and the regaining of health, weight and strength. She has been well and free from the attacks now for four years.

This case, and others that might be mentioned, are adduced not in justification of the cystoscope, but merely in illustration of the great service it is capable of rendering in the diagnosis and therapy of genitourinary affections. The cystoscope needs no justification at my hands. It has an established position in the esteem of the profession, from which it can not be dislodged. But, while a large proportion of the profession are availing themselves of its assistance in both of these capacities, it is probable that a larger proportion are still viewing it rather as an attractive toy—to be admired when exhibited, but of less practical utility than enthusiasts would have them believe. And we still occasionally hear the sage advice given to determine the presence or absence of stone in a suspected kidney by exploratory nephrotomy and renal palpation; or the same means is advised for determining which is the more affected of two tuberculous kidneys, calmly ignoring the fact that the information on such matters given by ureter catheterization, drainage and urinalysis, is far more valuable; indicating, not how a given kidney may feel, but, what is far more important, its functionating capacity.

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[6] Report on Operative Work in the Ureter through the Author's Catheterizing and Operative Cystoscopes, Lancet-Clinic, Cincin. March 4, 1905.

[7] Med. Rec., Oct. 6, 1906.

We still, sometimes, hear of the worse of two diseased kidneys being removed because the operator, neglecting ureter catheterization, has depended on symptomatology and exploratory palpation to guide him; when we know that the symptomatology of renal diseases is notoriously misleading, utterly failing in some cases of completely destroyed kidneys, or reversed in others, so that the painful symptoms abound on the healthier side and do not show on the side affected. These and other well known vagaries of renal symptomatology should prevent undue reliance being placed on it; and, at the same time, impel us to resort to complete and full physical examination in all such cases, the most important feature of which is the use of the cystoscope and ureteral catheterization.

SCOPE OF URETERAL CATHETERIZATION.

As indicative of the large sphere of usefulness and the wide range of information given by ureteral catheterization, alone, excluding that furnished by the cystoscopic views in the bladder, I may quote from a previous paper on the subject[8] as follows:

The purposes of ureteral catheterization are two-fold, for diagnosis and for treatment.

For Diagnosis.—(A) To locate the origin of pus, blood, tuberculous products or bacilli, the various pyogenic infections, abnormally desquamated epithelium, etc., as to whether they come from (1) the bladder, (2) the right ureter, (3) the left ureter, (4) the right kidney, (5) the left kidney, (6) the right or (7) the left peri-renal space, communicating with the corresponding kidney or ureter.

(B) To recognize and locate obstructive conditions in the right or left ureter from (1) stricture, (2) stone, (3) adjacent tumor, (4) bend or kink in the ureter from movable or dislocated kidney, (5) valvular junction of the ureter with its pelvis.

(C) To determine (1) the number of kidneys present; (2) if only one, which is absent.

(D) To determine the number of ureters present.

(E) To determine the functional activity of each kidney separately and relatively, with respect to its excretion of urea, albumin, quantity of urine, the specific gravity, etc.

(F) To determine the size and capacity of each kidney-pelvis, with respect to (1) hydronephrosis, (2) pyonephrosis, (3) total obliteration of secreting tissue.

(G) If there be kidney disease present, to determine (1) if only one kidney is affected or both; (2) if only one, which is the affected one; (3) if both, which is the one more affected; (4) if removal of the worse one be advisable, is the other one able to carry on kidney functionation sufficiently; (5) if removal of one be advisable and the other is capable of supporting life, will the operation remove the infection from the body, removing the possibility of dissemination or recontamination?

For Treatment.—(A) To enlarge narrowings or strictures at (1) the ureter openings, or (2) in the channels at any point; (3) by facilitating drainage through the increased ureter-caliber thus obtained, to assist in the improvement of pyelitis or pyonephrosis, unilateral or bilateral.

(B) To irrigate and medicate (1) the ureters, (2) the kidney-pelves, of one or both sides.

(C) To assist, by anesthetizing, lubricating or enlarging a ureteral orifice, the passage through it of a calculus or plug of pus, blood, etc.

(D) To use the ureter, after it is catheterized, as a guide in certain abdominal and pelvic operations.

(E) By prolonged catheterization and drainage of a ureter, to facilitate the cure of ureteral fistula.

DIAGNOSIS OF URETERAL CALCULI.

We often hear discussions on the respective merits of ureteral catheterization and radiography for determining the diagnosis of stone at some point in the ureter or pelvis. Impartial analysis of the conditions prevailing leads to the belief that the two methods should go hand-in-hand, each being complementary to the other, and neither being used to the exclusion of the other. Radiographs may show shadows from phleboliths, enteroliths or other foreign substances in the line of the ureters, so that it is always incumbent on the operator to determine by catheterization whether such a foreign body be within the ureter or not, and also whether it is causing renal disturbance, as attested by the urine drawn from the same source. On the other hand, a catheter meets with an obstruction in the ureter of a urinary patient, and it often requires the interpretation of the radiogram to determine whether the obstruction be from stone or kink or other cause. Such radiograms should be taken with the catheters in the ureters and loaded with fuse-wire, as suggested by Kolischer and Schmidt.

PHYSICIANS, SURGEONS AND CYSTOSCOPES.

While it can not be expected that every one who practices medicine or surgery must adopt the cystoscope into his personal use, devoting the time necessary to become skilled in its use, the same thing might be said with respect to the ophthalmoscope, the stethoscope or other appliances pertaining to special fields of work. As physicians and surgeons, we can not avoid the responsibility of securing the benefits of all such means to our patients, either by personal application or through others especially skilled in their use. It is gratifying to know that in our progressive country, and in this progressive age, there is hardly a town of any size to be found in which there is not a cystoscopist of sufficient ability and skill to give the service desired. The full force of this remark may not appear unless we review the instances, unfortunately not few in number, in which patients have drifted from bad to worse in urinary afflictions, soothed along, from month to month, on diuretics and "urinary tonics," so-called, nothing of real merit being done either in the way of diagnosis or therapy, "because," as the doctor naively explains, "I haven't any cystoscope, and wouldn't know how to use it if I had one." And the patient's opportunity for reclamation to health is wasted on such flimsy grounds! I now have under observation (I can offer them nothing better) four cases of carcinoma of the bladder, in which symptoms of the trouble had existed from three to five years before any definite plan for diagnosis or treatment was adopted. Each was fed on internal medicines and urinary "soothing syrups" until the condition became inoperable and plainly beyond the reach of any material aid.

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[8] Ureter Catheterism: Its Purposes and Practicability, Ann. Surg., January, 1903.

1050 Century Building.

HARE-LIP AND CLEFT PALATE.

ALEXANDER HUGH FERGUSON, M.D.
CHICAGO.

A common deformity the surgeon is called on to correct is hare-lip, and not infrequently hare-lip and cleft palate are combined. While the operation to correct hare-lip is comparatively simple, so far as technic is concerned, much depends on carrying out the few necessary details with great precision and care. In cleft palate the conditions vary so much that it is impossible to make use of any one procedure that has been devised to correct this deformity in all cases. The case must be studied carefully and then the surgeon must decide which operation is the most suitable one to employ.

To make clear a few principles involved in both these operations I shall consider the two conditions separately.

HARE-LIP.

Clinical Varieties.—The defect may be (1) unilateral; (2) bilateral; (3) median; (4) complicated by cleft palate, single or double; and (5) later, where the fissure extends up to the eye, etc.

Time to Operate.—In uncomplicated cases of hare-lip, no matter what the nature of the defect, the operation should be done soon after birth, on the same day, if possible. The impaired prehensile powers of the infant prevent its taking nourishment properly, and thus lead to malnutrition and non-development. If the infant is too feeble to permit of an operation, a competent nurse should be placed in charge, one who understands feeding and diet, so that the operation can be done inside of two or three weeks, under favorable conditions. It is also wise to defer operation until after the period of dentition. For this reason parents should be urged to have the operation done before the teeth begin to erupt, but if dentition has begun, then wait until the teeth have erupted.

When the hare-lip is complicated by cleft palate the time for repairing the lip must depend on the degree and kind of bone deformity present. Surgeons are not in accord on this point. My own practice is to restore the normal shape of the alveolar processes first, and at the end of a week to operate on the lip. I find that when the lip is sutured over a premaxilla that was wired to the superior maxillæ, and in the cleft between them, a week previously, great strength and protection is given the bony framework, and the tendency for the premaxilla to become loosened is overcome.

Principles Involved.—Although cheiloplasty is a minor operation, it is essential, as stated before, to observe carefully certain fundamental principles. These involve (1) denudation, (2) coaptation, (3) retention, (4) conformation, and (5) cleanliness. The edges of the cleft must be freshened without removing any tissue, so as to leave broad surfaces which favor more accurate coaptation. This is done best by making flaps from the edges of the cleft, swinging them backward, and then coapting them. Economy of tissue is to be aimed at in all procedures carried out to remedy congenital defects. The broader the surfaces for coaptation, the more certainly will primary union take place. Coaptation must be perfect, and retention by sutures accurate and without tension.

The objective point should be the formation of a normal upper lip, so as to obliterate even the suggestion of the pre-existing deformity. The nature of the deformity often is such that this object is defeated, but the surgeon should exercise his ingenuity to the utmost so as to do the best he can under the circumstances.

While absolute surgical cleanliness can not be attained in operations on the lip, the results are best when asepsis and antisepsis are carried out rigidly.

THE FENGER OPERATION.

The late Dr. Christian Fenger devised a most excellent operation for hare-lip,[1] the principles of which I carry out in my practice. These are: (1) The removal of no tissue; (2) the approximation of wider raw surfaces than in the older operations; (3) the application of three rows of sutures, (a) skin, (b) mucous membrane, and (c) tension sutures.

The incision, in both single and double cases, was made at the junction of the skin and mucous membrane, imitating in this particular the flap-splitting perineorrhaphy of Lawson Tait. The two flaps are made to turn posteriorly and coaptation of the raw surfaces is accomplished by means of retention and skin sutures (Figs. 1 and 2). Dr. Fenger always used silk for all his sutures, but I prefer horsehair for the skin and retention sutures, using for the latter two hairs in each suture. Fenger also applied a strip of adhesive plaster, extending from ear to ear, to relieve tension. If there is any doubt as to whether or not there is tension, it is best to separate the lip from its attachments on each side until tension is relieved. I do this by thrusting a sharp periosteal elevator or a pair of scissors through a small incision under the lip, close to the gum, at a little distance from other wounds, and then elevating the cheek from the bone.

In addition to these measures I employ oxid of zinc adhesive plaster as follows: Take a strip of plaster one inch wide and about twelve inches long, place the center of the strip beneath the chin, pull firmly on both ends, allow the plaster to adhere to both cheeks well back, and then cross the plaster over the nose on to the forehead. Where the plaster passes over each eye, roll the strip on itself into a cord. This effectually prevents tension on the sutures, even when the child is crying. The line of incision should never be sealed either with collodion or plaster.

THE NOSTRIL.

It is exceedingly difficult, but none the less essential, for cosmetic purposes, to construct a normal nostril. To do this one must do an osteotomy on the side opposite the cleft. To make the deficient nostril of the same size as its fellow, it is a good plan to insert into the nostril a sound of the same size as the naris and then suture the nostril over this. If the cartilage of the nose is supported, make multiple submucous sections of the cartilage and plug the nostril with medicated gauze wrapped around a soft rubber catheter. This is left in place until the cartilage has united, or until the contour of the nose is restored. In some cases I have found it necessary to support the nasal septum at its base, shifting it to the desired size. The crux of the entire procedure is the restoration of the bony framework by an osteotomy.

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[1] THE JOURNAL A. M. A., Aug. 1, 1891, p. 176.

CLEFT PALATE.

Clinical Varieties.—The clinical varieties of cleft palate are (1) incomplete, (a) bifid uvula, (b) bifid soft palate, (c) partial cleft of the posterior border of the hard palate, and (d) fissure of the alveolar process and anterior border of the hard palate; (2) complete, (a) single, and (b) double; (3) complicated with hare-lip, single or double.

A cleft-palate operation is a major operation, and for that reason it should seldom be performed at the same time as a hare-lip operation. The younger the patient the graver the operation. In the case of extensive clefts it is not advisable to close the entire cleft at one sitting, but defects always should be repaired before the child begins to talk. The result is best when the operation is done at a very early age. Any plastic work that offers a chance of success is justifiable.

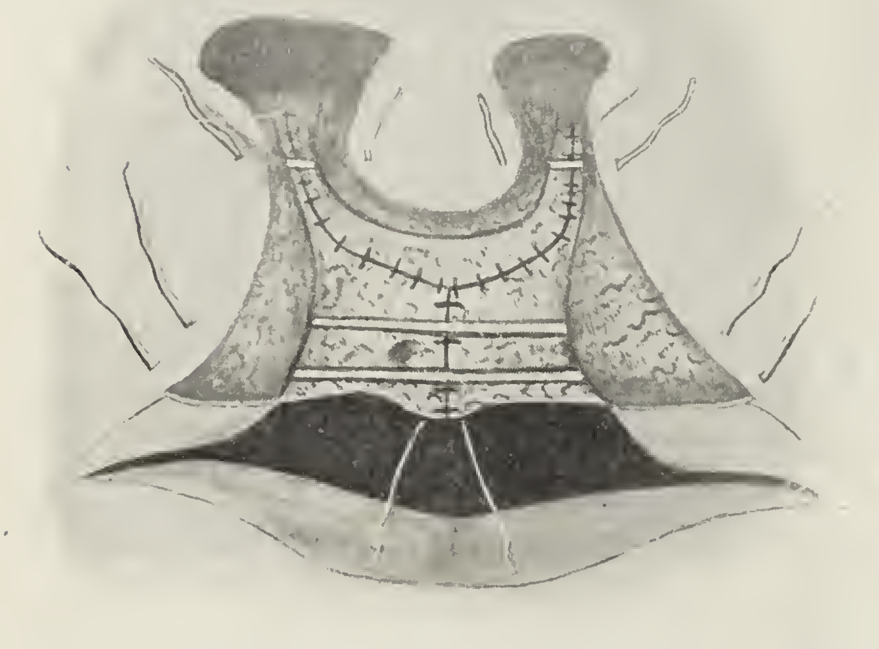

Fig. 1.—Author's hare-lip operation, showing inner sutures and retention sutures in place; skin sutures ready for tying.

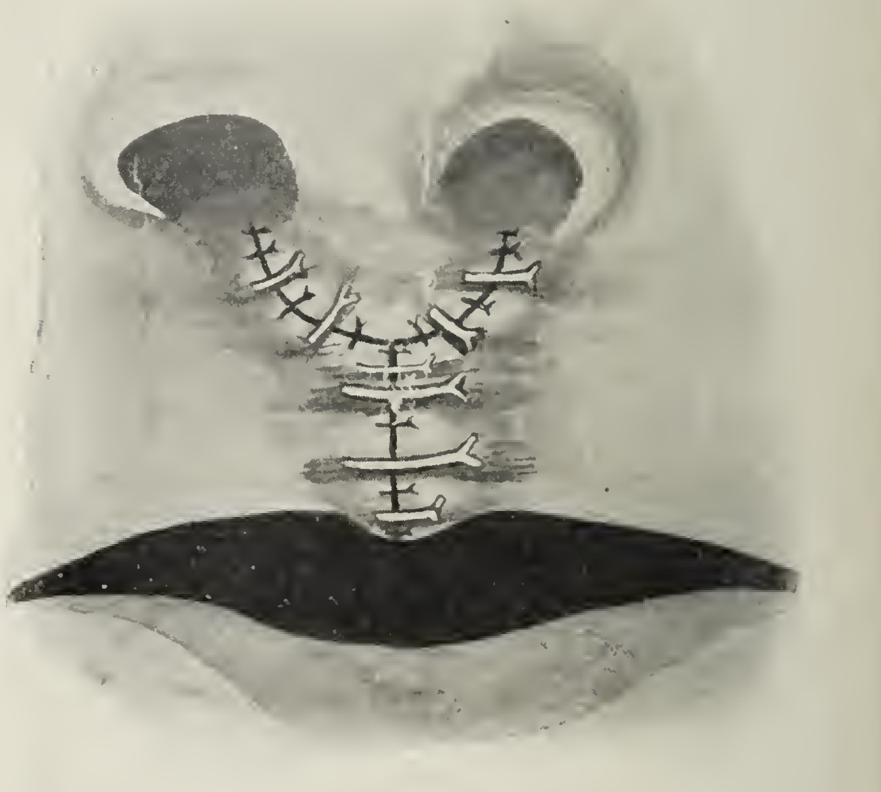

Fig. 2.—Author's hare-lip operation; all sutures tied and operation completed.

The earlier the deformity is rectified the less defective will be the speech, but the surgeon must never guarantee that nasal intonation will be prevented or cured. In infants a few weeks old the mouth is small, the tissues are friable, and there is a tendency for the flaps to slough. As in the case of hare-lip, and for even greater reasons, because of the greater severity of the operation, the child should be perfectly well before any operation is undertaken. If there are present either adenoids, enlarged tonsils or any other pathologic conditions these should be removed. The day before the operation a dose of castor oil and a few doses of strychnin should be given. Irrigating the mouth with antiseptic lotions for several days before the operation is contraindicated.

CROWDING PROCEDURES.

If the cleft is wider than half an inch, no attempt should be made to close it at the first sitting, but one or more crowding operations must be done to lessen the width of the cleft. In this case Langenbeck incisions are made, and gauze is packed firmly into the wounds and beneath the periosteum, so as to crowd the soft structures of the palate toward the center. The gauze is left in place until it begins to loosen, after a week or more, when a second packing may be inserted, but usually this is not necessary, for at this time sufficient granulation tissue is formed to hold the soft tissues in their new position.

This crowding process is most suited for cases in which there is a Norman rather than a Gothic arch—where the segments of the palate are horizontal. In such cases the flaps are short, and with the older methods great traction is necessary to bring the pared edges in apposition. To this fact may be ascribed the numerous failures in cleft-palate operations. When the bony edge of each segment is not well covered by mucous membrane, even though the cleft is narrow, a crowding operation must be done before an attempt is made to close the cleft. The more vertical the slope of the palatal segments the more favorable is the cause for operation by old methods.

AUTHOR'S OPERATION. A.

It is unnecessary at this time to enter into the details of an operation which I perform in certain cases and which was published some years ago.[2] I described the method of dealing with the os incisivum, also called the premaxilla, and the ethmo-vomerine septum. It is very essential to deal carefully and properly with these two structures, because much of the success of the operation depends on this step. I have performed this operation in several hundred cases with unvarying success.

The operation I described then is not a flap-splitting, but a flap-formation operation, the flaps carrying with them two narrow strips of firm, strong, buccal mucous membrane of the palate. These flaps are held in position by means of sutures inserted on the upper surface. An ideal protecting roof to the raw surfaces beneath them is afforded, and the nasal mucopurulent discharge is shed off to either side. The results obtained by this operation are vastly better than those obtained by the Roux-Warren method. I have had only one primary failure. No tissue is removed, and the danger from sepsis is minimized by turning the flaps upward and by inserting a gauze packing.

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[2] The Journal A. M. A., May 19, 1900.

AUTHOR'S OPERATION. B.

As stated before, the operation must be selected for the case, and not *vice versa*. To meet this condition, I have employed an operation with much success in cases where the roof of the mouth is like a Gothic arch—where the palate segments extend upward into the cleft in a more or less oblique manner, and where the cleft extends into one nostril. Two mucoperiosteal flaps are liberated—one from the inner or nasal segment, and the other from the outer or oral segment. These flaps are overlapped, bringing the two raw surfaces in contact, and holding them in position by two rows of interrupted silk sutures. This operation is suitable at all ages.

A mucoperiosteal flap (Fig. 3) is taken from the nasal septum and inner segment of the hard palate, commencing as high in the nose as possible, and liberating it from above downward to a point where it is hinged to the hard palate along the border of the teeth. Extend this incision in the under surface of this segment of the soft palate and uvula, so as to cause the completed dissection to form one large flap from the hard and soft palates. The second flap (Fig. 3) is formed from the outer segment by making an incision along the teeth down to the bone, and with a periosteal elevator detaching a mucoperiosteal flap until it is hinged by the mucous membrane along the inner border of the bone segment.

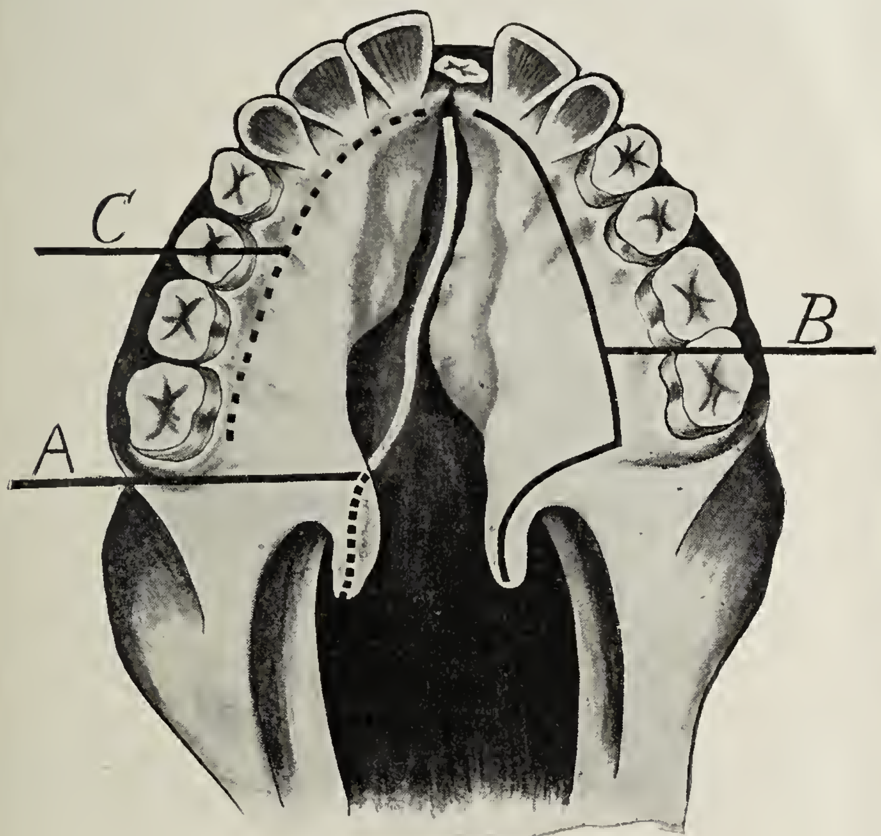

Fig. 3.—Author's cleft-palate operation for selected cases. A, line of incision through mucous membrane and periosteum on the nasal septum; B, same on the oral aspect of the hard palate on one side; C, point to which mucoperiosteum is raised.

The soft palate and uvula segment on this side are then split along the anterior surface. The mucous membrane of the first flap faces downward, while that of the second flap faces upward, so that raw surface is placed to raw surface, the flaps being held in position by two rows of sutures (Fig. 4). The roof of the mouth is thus converted into a Norman arch.

In all the cases in which this operation was done, the speech (if the patient was old enough to talk) was improved. In order to benefit speech further, and to lessen the nasal twang, the patient should either begin to learn another language and forget the mother tongue (Ochsner), or be placed in charge of a teacher who has made a special study of this class of cases, one, for instance, who instructs deaf and dumb children (Owen).

DAVIES-COLLEY OPERATION.

In 1890, Davies-Colley published his method of operating in cases of cleft palate by forming mucoperiosteal flaps. In 1894 he published another paper on the same subject, but extended the method to include clefts of the soft palate. Figure 5, AB, represents an incision at the junction of the hard and soft palates, close to the last molar tooth, passing to the bone of the hard palate and through the soft palate. The mucoperiosteum is raised from the posterior half of the hard palate and all the soft structures are crowded inward. It is my practice to pack this wound with iodoform or similar gauze. This incision passes through the tensor palati muscle on the oral and the levator palati on the nasal aspect of the palate. I consider it necessary to cut the levator muscle only in exceptional cases.

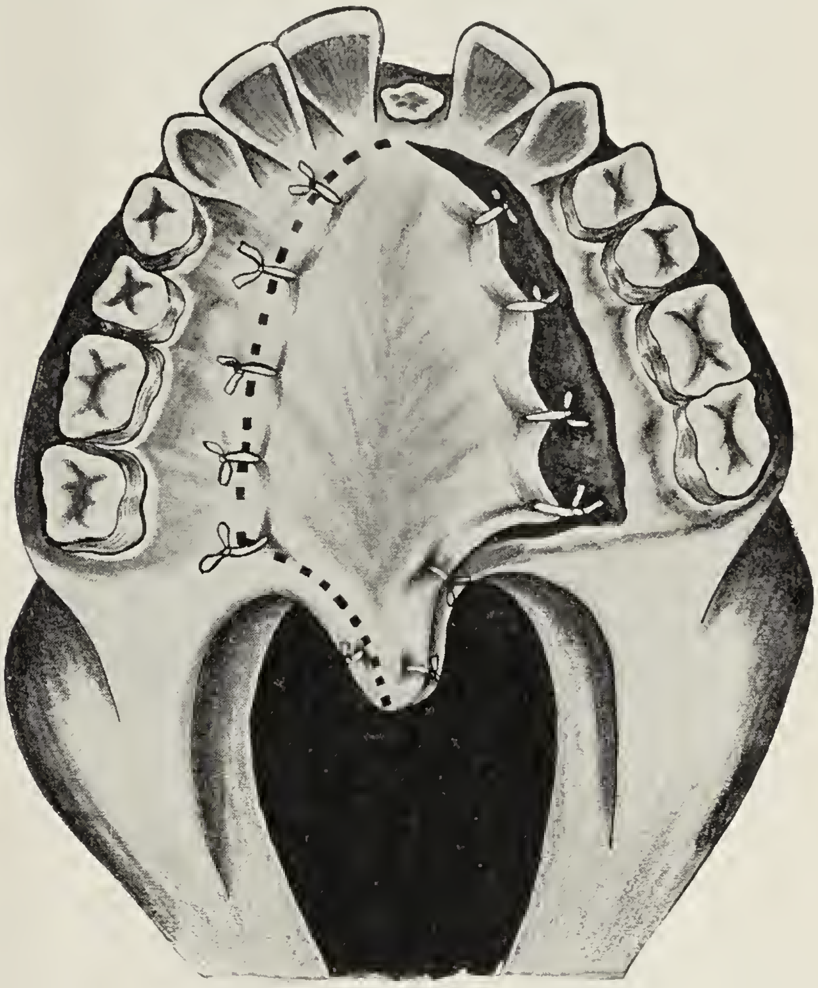

Fig. 4.—Author's cleft-palate operation; imbrication of the mucoperiosteal flaps and of flaps of the soft palate.

Figure 5, CD, is the line of incision on the same side, situated about a quarter of an inch from the margin of the cleft, and extending the full length of the cleft, but, as the knife approaches the soft palate, the incision is made to converge to the edge of the cleft, care being taken not to penetrate the soft palate while splitting it. The mucoperiosteum internal to this incision is forced from the bone by means of a periosteal elevator until it remains attached by the soft tissue which covers the margin of the cleft.

When the soft tissues over the border of the cleft in the hard palate are very thin, I prefer to use a chisel along the margin of the hard palate rather than to penetrate the soft tissues, cutting through the bone close to the thin margin, thus allowing a strip of bone to go with the flap. Figure 5, EFG, marks out the large flap that is to be raised from the bone to bridge the cleft, and the mucoperiosteal flap that is to be turned over to meet its fellow on the opposite side.

The next step consists in suturing these three flaps in place (Figs. 6 and 7). This uranostaphylorrhaphy is suitable for wide clefts. It is also applicable to secondary operations but is not suitable to every case of cleft-palate. The saving of tissue and the large extent of raw surface for coaptation are commendable features. Davies-Colley never knew the flap to slough. In 1896 I operated on an infant, 1 month old, by this method, and I am sorry to say that the large flap died. Davies-Colley did not employ the method in the case of young children, but I have done so, even in infants, and with excellent results.

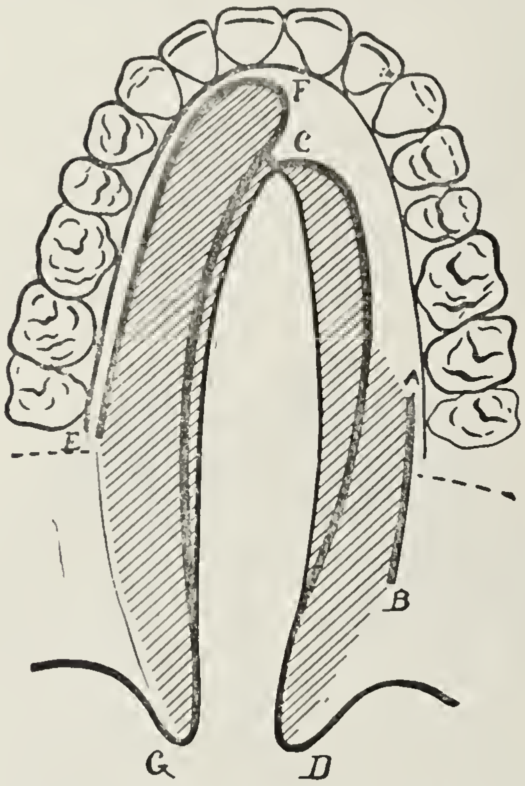

Fig. 5.—Davies-Colley operation for cleft palate. AB, incision for cutting tensor palati muscle; CD, incision for mucoperiosteal flap; EFG, incision for two mucoperiosteal flaps.

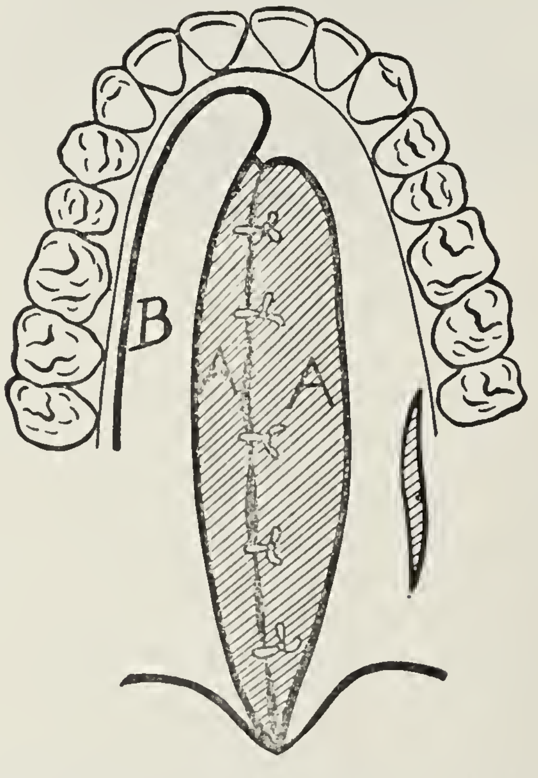

Fig. 6.—Davies-Colley cleft-palate operation. A, A, two flaps of hard and soft palate; B, tongue-like flap.

LANE'S OPERATION.

In 1905 Mr. W. A. Lane published his mucoperiosteal flap method, which is similar to the flap method I published in 1902.[3] The similarity is in the imbrication of large mucoperiosteal flaps. In cases of very wide clefts in the newborn, Lane does not hesitate to include in the flaps the mucoperiosteum of the alveolus and the mucous membrane of the cheek. This I have not done where it is most applicable, that is, in infants. In the case of a young man, 27 years old, I removed decayed teeth from the upper jaw, all except the incisors. It then occurred to me to bite off the entire alveolar process from which the teeth had been removed, with the object of eventually borrowing the tissues from this locality, as Lane recommended in the case of infants. This furnished exactly the flap required to close a very large cleft.

In my opinion, however, any plastic operation on the soft structures, coextensive with the indications to close the cleft, is better than an operation on the bones. Mr. Lane operates by choice the day after birth. To illustrate his method, I have taken Figures 8 and 9 from his work. An incision is made along the entire outer aspect of the gum, as is shown by 1. Two incisions are made in the direction of 2, and two others along the free inner margins of the cleft. The flap included between 1 and 2 on either side is turned back, and the flaps between 1 and 2 and 3 are raised from before backward, care being taken not to separate their attachment and to avoid injuring the descending palatine vessels. These flaps are then displaced inward (Fig. 9), their opposing margins being sutured together and to the adjacent flap and, if possible, also to the septum. At a later period Mr. Lane closes the posterior portion of the cleft in the soft palate.

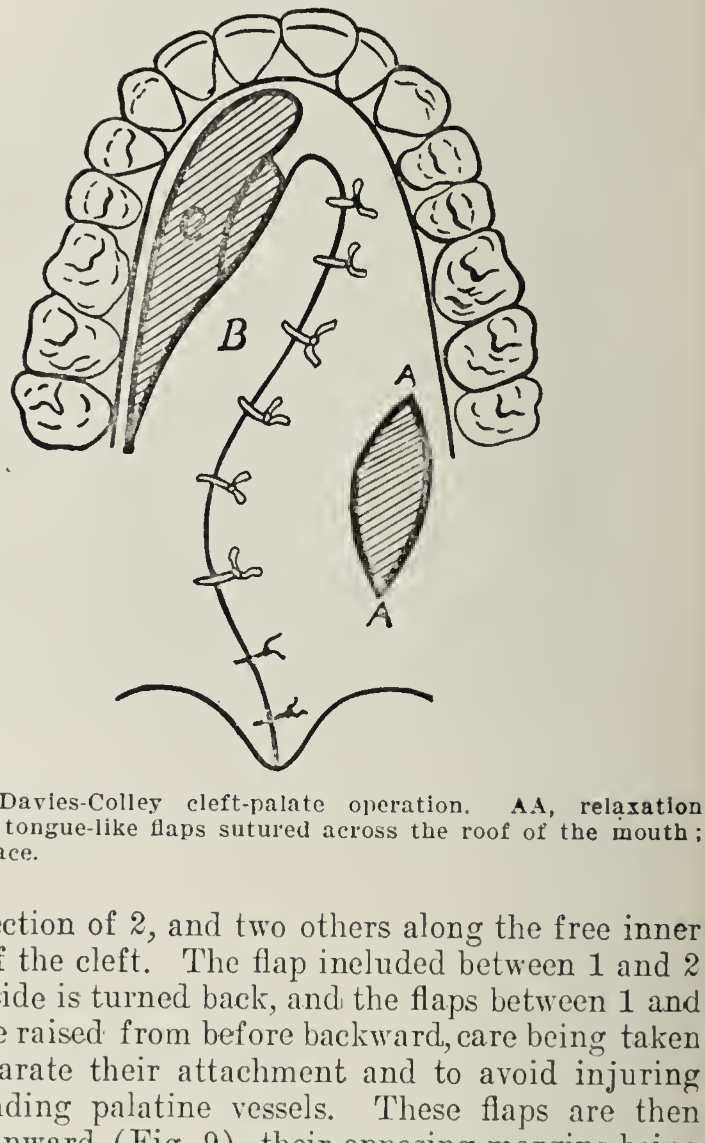

Fig. 7.—Davies-Colley cleft-palate operation. AA, relaxation incision; B, tongue-like flaps sutured across the roof of the mouth; C, raw surface.

THE BROPHY OPERATION.

Another well-known operation is that devised by Brophy, of Chicago. This operation consists in forcing together the two superior maxillæ by means of two stout silver wires, which are passed laterally through the jaws from one alveolar process to the other, and then fastened to lead plates. The approximation is effected by twisting the wires over the plates. If the bones do not come together easily, the malar process on each side is cut through. The edges of the cleft are vivified and coapted by means of fine silver wire. It is claimed that no tension is put on the soft palate when the sutures are tied. This is true. In cases of hare-lip and cleft palate, Brophy operates on the palate first.

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[3] Annals of Surgery, October, 1902.

Mr. Edmund Owen, of London, favors this operation. He says:[4] "Since becoming more fully acquainted with this method, I have adopted it, and, although I realize that its performance is not unattended with increased risk, I consider the advantages associated with it so great that the extra risk may be accepted unhesitatingly." Mr. Owen performed no less than six operations to secure perfect closure in a case of unilateral hare-lip and cleft palate. This is the class of cases in which I proceed as follows: (1) Osteotomy, (2) hare-lip operation in one week's time, (3) uranostaphylorrhaphy. The work is completed within two months after the child is born.

There is no doubt that Brophy's operation contracts the palate and brings the teeth of the upper jaw in contact with those of the lower jaw. Brophy says that if normal contact does not occur, the arch can be expanded and the deformity rectified. While in Brophy's operation the palatine attachments of the tensor palati and the levator palati are not interfered with in the least, still it has to be shown that the intonation is better than that obtained by other plastic operations.

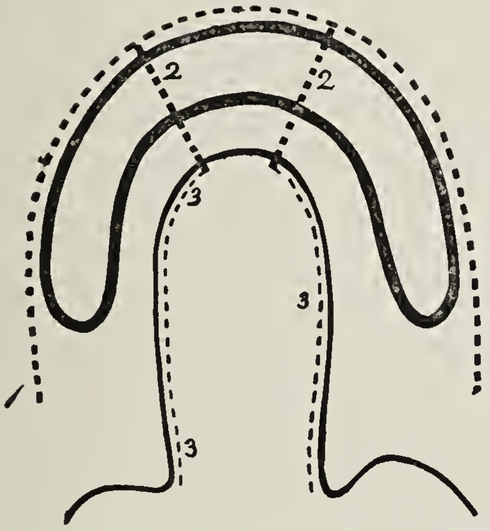

Fig. 8.—Lane's cleft-palate operation. 1, incision along gum margin; 2, incisions from 1 to edge of cleft; 3, incisions along inner free edge of cleft.

The objections to Brophy's operation are: (1) Shock, (2) sepsis, (3) contraction of the palate and the irregular contact of the teeth, (4) its limited application. It is only of use in the case of infants under 3 months of age. I have lost two patients by the Brophy operation.

Mr. James Barry states that of eleven patients operated on in this country of whom he had knowledge five died. Several surgeons favor the operation and report good results, with a low mortality. The claim made by Brophy that shock is less severe in the case of infants operated on soon after birth than at a later period in life may, I think, be explained not on a scientific or practical basis, but on the ground of Brophy's enthusiasm. How often have we seen the upper maxillæ severely fractured and even separated from the other bones by violence and not have any marked shock follow? Practical experience has shown that infants do not bear major operations well, and that the younger the person the greater the shock after traumatism.

CAUSES OF FAILURE.

Although very commonly vomiting, tearing out of the stitches, hemorrhage, swallowing solid food, allowing the infant to put its fingers into the mouth, and various diseases are recognized as causes of failure, the chief causes are: (1) tension, (2) unskilfulness and devitalizing the tissue by bruising, etc., (3) unsuitable local and constitutional conditions, (4) failure to select a suitable operation for the case, and (5) poor nursing.

When the soft palate is pared and sutured, as in the Roux-Warren staphylorrhaphy, it is put on great tension, and failures were common because of the stitches tearing through. Sir William Fergusson (1875) made the first marked improvement in the operation. To relieve the tension caused by the palatine muscles, he divided the levator palati, palato-pharyngei and palatoglossi muscles on both sides. This improvement was soon adopted by other surgeons. Agnew, of Philadelphia, in 1860, advocated cutting the tensor palati muscles close to the hammular process of the sphenoid bone, thus obtaining the necessary relaxation. Pollock, of London, did the same thing. If Fergusson had packed the wounds with iodoform gauze (not then in use) to prevent infection, many of the bad results noted would never have occurred.

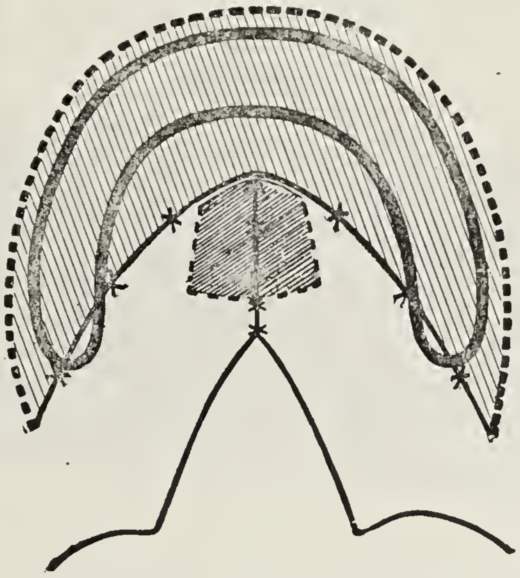

Fig. 9.—Lane's cleft-palate operation. Flaps brought down and approximated to close cleft.

RELIEF OF TENSION.

Garretson applied a horseshoe-shaped clamp to the jaws and forced them together. Brophy relieves tension in cases of uranostaphylorrhaphy by means of wires and plates, but when only a staphylorrhaphy is done lead plates are applied to the soft palate, with retention sutures. Langenbeck employed two lateral incisions, one on each side, close to the teeth, and encroaching sufficiently on the soft palate to relieve tension when the mucoperiosteum is raised from the bones. Billroth fractured the hammular processes and crowded the tendon of the tensor palati over to the middle.

When the cleft in the soft palate is not very wide, two or three sutures of medium-sized silver wire, inserted well beyond the edges, will relieve the tension. The retention sutures must penetrate the entire thickness of the palate. In overlapping the mucoperiosteal flaps, as in the Davies-Colley, Lane and my own operations, no other special provision is generally required. Dr. C. H. Mayo relieves the tension by means of adhesive tape passed around both mucoperiosteal flaps and fastened by tying thread around the overlapped ends of tape.

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[4] Medical Monograph Series, 1904, iv, p. 46.

As stated before, poor nursing is a fruitful cause of failure. As a rule, the mother is the worst nurse to place in charge of the patient. She is overcome by her sympathy for the patient, and rarely ever appreciates the necessity and importance of surgical cleanliness. For this reason the surgeon should insist on having the patient placed in a hospital where he can have full and complete control of everything bearing on his case.

Clinical Notes

A PORTABLE APPARATUS FOR EXTENSION AND FIXATION

WHILE APPLYING PLASTER-OF-PARIS DRESSINGS.

E. L. SANDERSON.
Interne and Ambulance Surgeon Charity Hospital.
NEW ORLEANS.

To broaden the field of usefulness of plaster-of-Paris splints, I have devised a portable apparatus for extension and fixation, which when closed forms an attractive carrying case, and is carried as easily as an ordinary heavy suit case, and which may be opened, extended and adjusted to any sized patient within five minutes' time. Within this closed case are carried plaster-of-Paris bandages, cotton wadding, plaster knife and shears, etc., for the largest cast.

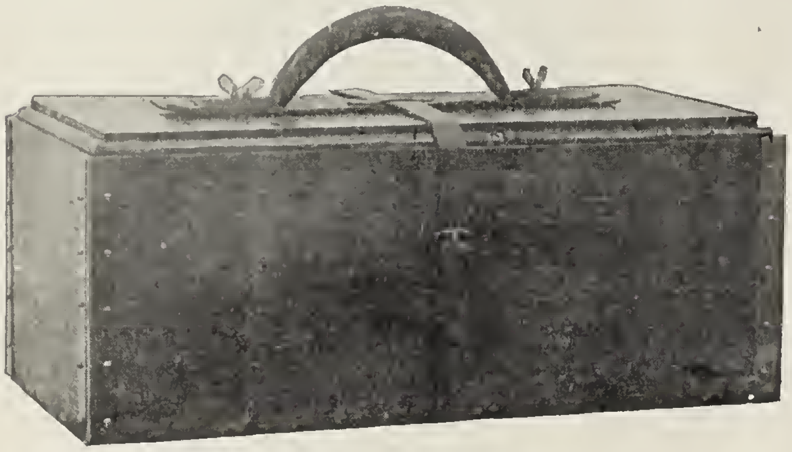


Fig. 1.—Apparatus closed as a carrying case.

The case is made of hard wood and measures 24 inches long, 12 inches wide and 10 inches high, and it is supplied with a stout detachable leather handle (Fig. 1). This box, except the bottom, is cut half in two and hinged across the top so that half the box leaves the bottom and folds upward and backward on the stationary half. The three up-turned 10x12-inch leaves, two half-sides and the end, are each folded outward until they fall within the same plane as the folded-back half cover to which they are hinged. In this position they are maintained by the bearings of their irreversible hinges. This gives a rest 12x12 inches for the shoulders and a 10x12-inch rest for each arm and one of the same size for the head. Each rest is well padded with felt and covered with leather (Fig. 2); these surfaces form the inside of the case when closed. On the true floor is a sliding floor guided by a slotted metal strip, which may be drawn out to any degree and made rigid by a thumb screw. Across this adjustable floor are two strong metal plates, one at center and the other near the end. On the center plate is screwed and brazed an upright piece of stout tubing about 8 inches long, into which telescopes a second piece of tubing, around which is brazed a thin metal plate to support the buttocks. A thumb screw allows this support to be raised or lowered at will. On the ends of these transverse plates are brazed four hexagon cuffs, through which two hexagonal tubes pass snugly, and which are supplied with small set screws to make the tubes stationary at any degree of extension desired. These 20-inch tubes are 1 inch in diameter, are of spring brass or steel, and diverge at the same angle as the limbs of a patient when in the most desirable position for the application of a splint. As the foot pieces become more widely separated as the tubes are extended, the angle does not have to be changed, but is suitable to all lengths of individuals..

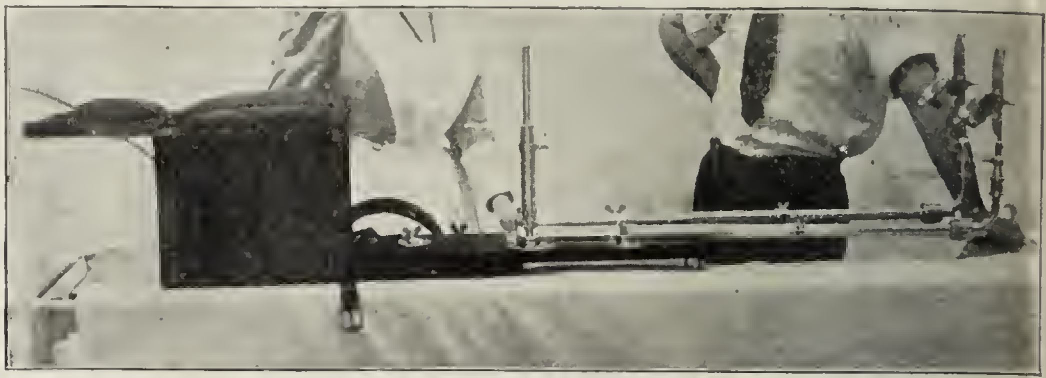


Fig. 2.—Apparatus ready for use.

On the distal ends of these tubes are screwed and brazed cuffs through which small set screws make fast the smaller 22-inch tubes which are telescoped by the larger ones. Within this second tube is telescoped a hexagonal steel rod, the distal two-thirds of which is threaded, and which is drawn out or in by the turning of a swiveled hand nut on the end of the smaller tube. On the end of this steel rod is screwed and brazed an ordinary pipe elbow, into the upright of which is screwed and brazed an 8-inch piece of stout tubing of small caliber. Into these upright tubes, which lean slightly outward, are telescoped 8-inch steel rods, on the ends of which the metal sandals are brazed. The are adjustable to any height by small set screws (Fig. 3).

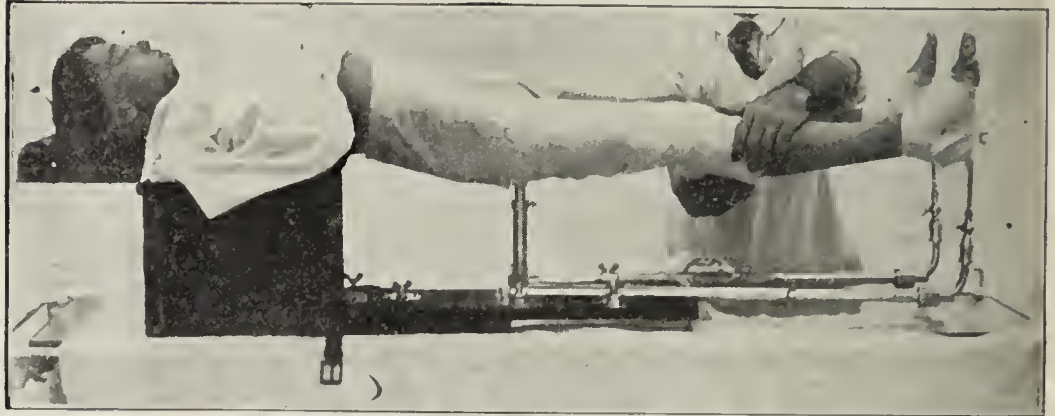


Fig. 3.—Patient in position and cotton batting being applied.

The advantages of this apparatus are many: For all varieties of fractures of the femora, hip dislocations or fracture of the vertebræ, and for Pott's disease, it is indispensable. In hospital work its superiority over the very desirable apparatus of Dr. Lorenz, which is practically the only successful device for this work ever used here, consists in its comparatively low cost, its elegant finish and appearance, convenience of being out of the way when not in use and its adaptability for plaster corset work, which is not the case with the Lorenz instrument. And last, and most important, is its transportability from plaster rooms to wards, dressing rooms, *x*-ray room or private homes.

This apparatus may be placed on an ordinary roller table, and the patient lifted from the bed into position and partially extended, which gives immediate relief from the pain in nearly all bone lesions. Then he is wheeled to the *x*-ray room, and the proper extension is applied under fluoroscopic observation; then to the plaster room and the cast is applied, and, if necessary, back to the ward until the cast is hard, giving the patient pain but once. In private practice its advantages need not be mentioned, as they are quite apparent.

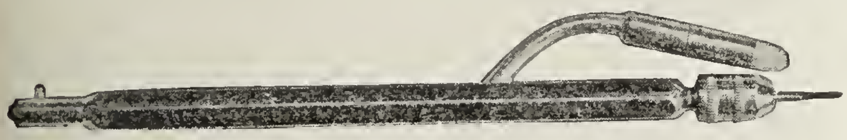
This device complete can be made by any good instrument-maker or by a good machinist, and costs about $70. This includes the best materials and all metal parts nickeled. There are no parts to wear or break, and when well made the apparatus is exceedingly handsome and forms an important adjunct to any surgeon's armamentarium.

AN ILLUMINATED EYE SPUD AND KNIFE NEEDLE.

ROBERT L. CARSON, M.D.
ROCHESTER, N. Y.

To remove a foreign body from the cornea with dexterity and without undue injury, particularly where the object is small, and difficult to see, one often requires three hands, one hand to hold the lids, another for the eye spud, and a third to condense the light on the eye. Every physician knows how difficult and awkward it is to hold a patient's lids and with the same hand try to condense the light on the cornea.

With the end in view of rendering this common operation easy of performance, I devised an instrument which does away with the need of an extra hand to condense the light on the cornea. Briefly, this is an instrument which combines the spud and light, consisting, as originally devised, of a handle about five inches in length, through which run the wires to a tiny incandescent condensing lamp at its end. A short distance from the end of the handle is a clamp into which is fastened a spud of sufficient length, and bent at such an angle as to bring its tip into the center of the circle of light thrown by the lamp.


Author's combined illuminated eye spud and knife needle.

Such an instrument was made in accordance with my idea and on my suggestion, but the manufacturers have since modified and somewhat improved it by reversing the position of the light and spud. As now made the spud is attached directly at the end of the handle, the light being thrown on the field at an angle through an arm thrown out from the side of the handle. This makes a somewhat better instrument by lessening the shadow thrown by the spud. The same instrument, with a knife needle in place of a spud, is admirably adapted to the performance of the operation for secondary cataract, where the illumination is of so great importance.

Special Article

VIENNA AFTER THIRTY-FOUR YEARS.

WILLIAM OSLER, M.D.
Regius Professor of Medicine at the University of Oxford.
OXFORD, ENGLAND.

I spent the first four months of 1874 here. I came from Berlin with Hutchinson, an Edinburgh man (Sir Charles F., who has recently died), and we lived together near the *Allgemeines Krankenhaus.* As illustrating the total blotting out of certain memories, particularly for places, I may mention that strolling to-day up the *Alserstrasse* I could not recall the street, much less the house, where we had lived for the four months. I found my way readily enough to the *Riedhoff*, where we were in the habit of dining, and where I first met my old friends, Fred Shattuck, E. H. Bradford, E. G. Cutler and Sabine of Boston. An extraordinary development has taken place in the city within thirty years, and I scarcely recognized the *Ringstrasse.* Then, only the foundations of the new university buildings and of the *Rathaus* had been begun. Now these, with the parliament house, the courts of justice, the twin museums of art and natural history and the new Bourg Theater, form a group of buildings unrivaled in any city.

THE GERMAN CONGRESS FOR INTERNAL MEDICINE.

The primary object of my visit was to attend the *Congress für Innere Medizin*, and I had the pleasure of having with me my old student and friend, Dr. Joseph H. Pratt of Boston. We reached Vienna in time for the preliminary Sunday evening social gathering in the *Kursalon* of the City Park. Here we found a greeting in true German fashion and a hearty welcome from the president, Professor Müller of Munich. The work of the congress began at sharp 9:30 on Monday morning with a discussion on the "Relation of the Diseases of the Female Generative Organs to Internal Maladies." Unfortunately, the large University Hall, in which the meeting was held, was most unsuitable. Though seated not very far away, Professor Rosthorn's remarks were almost inaudible. It is a miserable mistake in introducing a discussion on any subject to speak for more than half an hour, but to continue for an hour and a quarter is too much for human endurance, and a great many did not wait for Professor Lenhartz's discussion of the problem from the standpoint of internal medicine. Nothing new was brought out, and so far as I could gather, Professor Rosthorn took much the same ground as Clifford Allbutt in his well-known Goulstonian lectures dealing with the intimate relationship through the sympathetic nervous system of the generative functions with those of the other organs.

Quite an animated discussion followed, in which Stintzing, Turban, Klemperer and others took part. Dr. Singer read a most interesting paper on "Intestinal Diseases in the Climacteric," calling attention particularly to frequent hemorrhages which he had known to arouse suspicion of malignant disease.

In the evening the city fathers gave a magnificent banquet to the congress in the superb hall of the *Rathaus.* At three long tables were seated some 600 guests.

On Tuesday morning Professor Neisser of Breslau opened the discussion on the "Present Position of the Pathology and Therapy of Syphilis." This was a splendid address, delivered without notes, in a good clear voice, and the subject matter arranged in a most orderly manner. He dealt particularly with the three points brought out by recent investigations—Schaudinn's discovery of the spirochete, the discovery of Metchnikoff that apes could be infected, and the discovery of Schaudinn that the fluids of infected persons reacted specifically. He dealt very fully with his own experimental work in Java, much of which has appeared, but it was particularly interesting to hear the relation of the extraordinary influence of atoxyl on the infected animals. It acts as a specific and prevents the development of the spirochetes, so that if given soon the disease could be completely stopped, and later the animal reinfected. Neisser was followed by Professor Wassermann, who described with great clearness his studies on the specific reaction. We have now apparently a diagnostic means by which the presence of the disease may be definitely determined at a very early stage. As the reaction may be present before secondary symptoms appear, it will have a very important influence in early treatment. The general expression of opinion is very favorable to the method. Professor Finger spoke of it to me in the warmest terms. It persists after all clinical symptoms have disappeared, and a positive response in locomotor ataxia and in general paralysis clinches the question of the true syphilitic nature of these maladies. Both Neisser's and Wassermann's addresses were models.

One of the most important communications of the congress was from von Noorden's clinic. Two of his assistants have been carrying on researches on the "Mutual Relations of the Pancreas and Thyroid." For many years von Noorden has had the idea that there was some important mutual influence between these two organs. The remarkable fact comes out that in animals from which the thyroid gland has been removed it is impossible to produce diabetes by any of the known methods, not even by the Claude Bernard puncture of the medulla.

Of the third day of the congress I saw but little. Professor Schmidt of Halle introduced a discussion on "New Clinical Methods of Investigating the Functions of the Intestine," in which he went over his recent work very fully, most of which has already been referred to in The Journal.

DINNER TO THE CONGRESS.

At the dinner of the congress His threw out the interesting suggestion (apropos of the presence of Grünbaum and Trevelyan from Leeds, Pratt from Boston, Barr from Portland, Ore., and myself), that the time had come to have an International Congress for Internal Medicine. The physiologists, the laryngologists, the alienists and others have such gatherings, and there now exist in France, Germany and Italy, England and the United States special societies devoted to internal medicine. A congress once in four or five years would be most helpful. We should get to know each other and be able to appreciate better the work done in different countries. Professor Schultze of Bonn gave his usual humorous sketch of the proceedings of the congress, which was greatly appreciated. A ripple of excitement spread around the tables when it was noticed that the places in the orchestra of the pianist and the first violin had been taken by von Neusser and His. The members gathered around the elevated gallery and the distinguished artists were greeted with loud applause and had a vigorous encore.

THE VIENNA LIBRARIES.

Prof. Max Neuburger, whose name is so well known in association with Pagel as editor of the "*Handbuch der Geschichte der Medizin*," very kindly arranged to show me the points of interest in the Vienna libraries. I may mention, by the way, that Professor Neuburger's new work on the "History of Medicine," of which one volume has appeared, is being translated and will be published from the Oxford University Press. He expects to have Volume II completed this year, and we hope to issue the English edition complete in one volume within the next fifteen months. I was greatly interested to see the new home of the *Wiener medizinische Gesellschaft*, built under the presidency of Billroth, which combines features of a library, a club and meeting place. The auditorium is exceptionally well arranged with seats for 300, and there is a large gallery. The library now numbers more than 40,000 volumes and is very rich in current periodicals. The university library is one of the largest in the city, and the arrangement in it for the accommodation of the medical students seems to be excellent. At the time of our visit the section of the reading room assigned to them was nearly full. A room has been set aside in connection with the medical faculty for the collection of all the literature relating to the history of the school, for the collection of the works of all the famous old men connected with it, and a repository for pictures and instruments, etc., the whole to form a collection illustrating the evolution of the history of the medical department of the university. This example could very well be followed in all of our medical schools. It has been done to some extent at the University of Pennsylvania, as William Pepper III. has already made large collections for this purpose.

The *Hofbibliothek* is unusually rich in manuscripts and early printed books. I was anxious to see the copy of "Christianismi Restitutio" of Michael Servetus, 1553, in which for the first time the lesser circulation is described. This is one of the only two known copies in existence. The entire edition was confiscated, and the author, at the time a practitioner in the little town of Vienne, near Lyons, fled for his life to Geneva. Here his heterodoxy was quite as obnoxious to Calvin, into whose hands he fell, and he was burnt at the stake in the same year. The "Restitutio" is one of the rare books of the world. Only two of the 1,000 copies known to have been printed have survived. The one in the *Bibliothèque Nationale* originally belonged to Dr. Mead, and the history is fully given in an appendix in Willis' work, "Servetus and Calvin." The Vienna copy is in excellent preservation, beautifully bound, and states on the title page that it came from the library of a Transylvanian gentleman living in London. It fell into the hands of Count de Izek, who presented it to the emperor of Austria. It is a thick, small octavo of about 700 pages. The first one to give credit to Servetus for his discovery of the lesser circulation was Wotton, whose "Reflections Upon Learning, Ancient and Modern," 1694, is a most interesting book, for an introduction to which I have long been grateful to my friend, Dr. Norman Moore. The other work that I was most anxious to see was the famous manuscript of Dioscorides, prepared at the end of the fifth century for Julia, daughter of the Emperor Flavius. It is one of the great treasures of the library. Now to us in the West only a name, Dioscorides, an army surgeon of the time of Nero, fills a great place in the history of medicine, and is still an oracle in the Orient. He was not only a great botanist, but he was one of the first scientific students of pharmacology. Scores of fine editions of his work, with commentaries, were issued in the fifteenth and sixteenth centuries. Two years ago this Vienna manuscript was reproduced in *fac simile* at Leyden. Though very expensive, the two volumes costing $150, it is a work which all the larger libraries should get, and it is just the sort of present librarians should make our wealthy consultants feel it a privilege to give.

THE HOSPITALS.

I was surprised to hear Professor Müller say that he thought in hospital architecture Vienna led the world, and that there was here a group of architects who were adepts in all matters relating to hospital construction. I have come to his conclusion, on what may appear to be very hastily acquired data. It is not often that in the same day and in the same institution one passes from eighteenth to twentieth century conditions. Dr. Koessler took us to the old medical clinic, now in charge of von Neusser, where I found the old wards very much the same as I remember them in 1874. Except in minor details, not only Oppolzer and Skoda, but probably also Peter Frank and de Haen could return to the *Allgemeines Krankenhaus* and not be surprised by any very unfamiliar sights. There is the same extraordinary wealth of clinical material. I must say it was a surprise to see the old type of nurse; not, of course, that she is necessarily either unintelligent or inattentive. Indeed, as we passed a bed in which there was a new patient whom the junior assistant had not seen, he turned to one of the nurses, who in reply to his question said, "Yes, Herr ——— says she has mitral stenosis and insufficiency!" I was interested to see in the ward a case of Pick's disease, the pericardial pseudocirrhosis of the liver. The old question comes up here as to priority of description. In the special number of the *Wiener klinische Wochenschrift*, issued for the congress, Professor von Neusser describes it as "Morbus Bamberger." He states that in 1872 Bamberger described the condition as a special malady which he had already known for a long time and which up to that time had not been recognized in the literature. Certainly Pick deserves credit for having brought together all the known facts relating to a clinical condition to which very little attention had been given before his paper. I had a most interesting talk with Pick and Brauer and Wenckebach on the whole question, which is not one simply of pericardial adhesion. Wenckebach has helped to solve the problem in a recent number of Volkman's *Vorträge* in an article on the "Relation Between Respiration and Circulation." Brauer of Marburg, who is coming over to the session of the American Medical Association, will discuss the subject in connection with his operation of cardiolysis.

If anyone interested in hospitals—in every possible detail, construction, situation, general arrangements for the comfort of the patients, for the convenience of the students, for the advancement of science—if such an one wishes to have a Queen-of-Sheba sensation, let him visit the first group of the new buildings of the *Allgemeines Krankenhaus.* They have begun the rebuilding with the departments for women, and two of the three clinics, for midwifery and gynecology, are completed, one for Professor Schauta and the other for Professor Rosthorn, recently called from Heidelberg. About 10,000 deliveries a year take place in the three clinics, one of which is for midwives. The new clinics are exact duplicates of each other, and each has accommodation for about 200 patients. The buildings are of four stories, a central building with wings, built of brick and stucco, with spacious corridors, large windows, tiled floors and white oil-finished walls. Inside and out they form the most attractive hospital buildings that I have ever seen. But it is not so much this aspect that gives one that sinking of the heart of which the Queen of Sheba complained when Solomon showed his treasures—it is the organization and the completeness of the arrangements for teaching and for the scientific study of disease. One large floor is assigned to students, who all live in the building while attending the midwifery cases. Each clinic has its own laboratory, a special museum for teaching purposes, a library and a fully equipped small laboratory adjoining the gynecologic operating room, so that an opinion may be given immediately as to the nature of a growth. Down to the smallest detail every care has been taken to make these two clinics the most perfect of their kind, and if the hospital is completed on this elaborate plan it will, indeed, be worthy of the fame of the Vienna school and there will be nothing like it in Europe or America. The government foots the bills, and the total cost of the two buildings has been 9,000,000 kronen ($1,800,000).

Professor Schlesinger very kindly took us to the Franz Josef Hospital, also a new building, on a less elaborate scale but very complete in all its appointments. It is particularly well arranged for the acute infectious diseases, and the most elaborate precautions are taken to isolate and disinfect the patients. Professor Schlesinger is very popular with American students, and we found working in his wards Dr. George Cheyne Shattuck III. of Boston, and young Dr. Fischel of St. Louis, both of whom have for some months been acting as voluntary assistants. It was interesting to see two wards devoted entirely to erysipelas; as far as possible all the cases in the city are sent here. Connected with this hospital is a beautiful new children's department, built by Professor Schlesinger's father-in-law. It looked to be an admirable model for the new Harriet Lane Johnston's children's department at the Johns Hopkins Hospital. In the arrangement for isolating cases, in the simple and easily worked character of the wards, in the laboratory arrangements and in the special incubators for feeble babies the hospital seemed much in advance of anything I had ever seen.

The scientific laboratories of the medical school have been completely transformed. Dr. Fröhlich took us through Professor Meyer's Pharmacologic Institute and through the new physiologic laboratory and the anatomic department—such a contrast to the old days!

CRITICISM OF WORK OF CONGRESS.

The general impression one gets of the work of the congress is very favorable. Too much, perhaps, is attempted. There are too many papers, but the keenness of the men and the scientific interest are most stimulating. As I remarked about the congress two years ago in Munich, there is a strong tendency in internal medicine to-day toward physiologic and chemical problems. On the long list of papers, eighty-eight in number, there were only about five dealing with bacteriologic questions. An extraordinary number dealt with questions in physiologic pathology and presented the results of experimental work.

INFLUENCE OF VIENNA ON AMERICAN MEDICINE.

As a medical center Vienna has had a remarkable career and her influence, particularly on American medicine, has been very great. What was known as the first Vienna school in the eighteenth century was really a transference by van Swieten of the school of Boerhaave from Leyden. The new Vienna school, which we know, dates from Rokitansky and Skoda, who really made Vienna the successor of the great Paris school of the early days of the nineteenth century. But Vienna's influence on American medicine has not been so much through Skoda and Rokitansky as through the group of brilliant specialists—Hebra, Sigmund and Neumann in dermatology; Arlt and Jaeger in ophthalmology; Schnitzler and von Schrötter in laryngology; Gruber and Politzer in otology. These are the men who have been more than others responsible for the successful development of these specialties in the United States. Austria may well be proud of what Vienna's school has done for the world, and she still maintains a great reputation, though it can not be denied, I think, that the Æsculapian center has moved from the Danube to the Spree. But this is what has happened in all ages. Minerva Medica has never had her chief temples in any one country for more than a generation or two. For a long period at the Renaissance she dwelt in northern Italy, and from all parts of the world men flocked to Padua and to Bologna. Then for some reason of her own she went to Holland, where she set up her chief temple at Leyden with Boerhaave as her high priest. Uncertain for a time, she flitted here with Boerhaave's pupils, van Swieten and de Haen, and could she have come to terms about a temple, she doubtless would have stayed permanently in London, where she found in John Hunter a great high priest. In the first four decades of the nineteenth century she lived in France, where she built a glorious temple to which all flocked. Why she left Paris, who can say? but suddenly she appeared here, and Rokitansky and Skoda rebuilt for her the temple of the new Vienna school, but she did not stay long. She had never settled in northern Germany, for though she loves art and science she hates with a deadly hatred philosophy and all philosophical systems applied to her favorite study. Her stately Grecian shrines, her beautiful Alexandrian home, her noble Roman temples, were destroyed by philosophy. Not until she saw in Johannes Müller and in Rudolph Virchow true and loyal disciples did she move to Germany, where she stays in spite of the tempting offers from France, from Italy, from England and from Austria.

In an interview most graciously granted to me, as a votary of long standing, she expressed herself very well satisfied with her present home, where she has much honor and is everywhere appreciated. I boldly suggested that it was perhaps time to think of crossing the Atlantic and setting up her temple in the new world for a generation or two. I spoke of the many advantages, of the absence of tradition—here she visibly weakened, as she has suffered so much from this poison—the greater freedom, the enthusiasm, and then I spoke of missionary work. At these words she turned on me sharply and said: "That is not for me. We gods have but one motto—those that honor us we honor. Give me the temples, give me the priests, give me the true worship, the old Hippocratic service of the art and of the science of ministering to man, and I will come. By the eternal law under which we gods live I would have to come. I did not wish to leave Paris, where I was so happy and where I was served so faithfully by Bichat, by Laennec and by Louis"—and tears filled her eyes and her voice trembled with emotion—"but where the worshipers are the most devoted, not, mark you, where they are the most numerous; where the clouds of incense rise highest, there must my chief temple be, and to it from all quarters will the faithful flock. As it was in Greece, in Alexandria, in Rome, in northern Italy, in France, so it is now in Germany, and so it *may be* in the new world I long to see." Doubtless she will come, but not till the present crude organization of our medical clinics is changed, not until there is a fuller realization of internal medicine as a science as well as an art.

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[*For other information see second page following reading matter.*]

SATURDAY, MAY 9, 1908.

THE CARE OF THE INSANE.

Elsewhere in this issue will be found a review of a remarkable book,[1] which is, to use the reviewer's words, "a graphic picture of treatment, not only tactless, but positively harsh and brutal," and of "a state of affairs . . . which, it must be admitted, is duplicated to a great extent in a large majority of our public institutions for the insane." The picture is calculated to stir the public mind to its depths, and in this it will do good, irrespective of any question that may arise in the minds of some as to the completeness of the *restitutio ad integrum* implied in the title.

It is easy to explain, and so to palliate, so far at least as individuals are concerned, the deplorable errors of method depicted in the book and undoubtedly existent in fact. But that only renders all the graver the inevitable impeachment of the system that makes possible the need of such explanation and palliation.

Back of the whole trouble lies the too common defect of parsimony — parsimony not only in withholding money, but in cheap political methods which make office "worth while" through the systematic use of patronage as a perquisite—in providing the wherewithal for all public measures dealing with the state's greatest economic asset, its funded health. Of this parsimony the public itself is the direct cause, inasmuch as it fails persistently to realize how infinitely precious economically is that asset, and consequently how imperative is the adequate supply of a personnel adapted to its care. With the medical profession rests the responsibility for instructing the community in what direction to look for an assured and increasing income from this capitalization of the public health, what measures are best adapted to insure such income, and what justification is to be expected in increased value of the asset to offset the initial outlay and the expense of upkeep.

And from this responsibility it has not shrunk. An intelligent conception of what is due to the mentally afflicted of all kinds—not only to those for whose hopeless condition humanity demands the sympathetic care of their more fortunate fellows, but still more to those who by proper and judicious measures may in time be restored to economic efficiency and personal happiness—has been for years well established in the minds of the medical profession, and especially of that section of it that has made, and is making, this problem its special care. If the final word rested with them, if appointments from highest to lowest were not, as they are in many states, the shuffling of a political pack of cards, those employed in attendance on the insane would long ago have been selected, not from among farm hands and factory workers, untrained in the most elementary principles underlying the work they assume, and usually lacking, both by nature and training, those traits of mind and character that are before all else essential to a proper discharge of the duties; but rather from persons of more than average intelligence and great resourcefulness, of refinement, and, above all, of the sympathy that such mental qualifications commonly call forth in the presence of sorrow and suffering. Natural fitness, enhanced by special training, of mind, body and disposition, and such fitness alone, must be the primary qualification for all, not only for the superintendent and medical staff, but for every attendant that comes, in even the humblest capacity, into personal relations with the mentally afflicted.

But to render available such a field for selection, the position of attendant on the insane must offer advantages of environment, of mode of life, and of remuneration, far different from those now obtaining, and, above all, it must be removed entirely from the blighting miasma of political influence. So long as conditions continue as at present, it can hardly be expected to draw into this honorable service the class of persons desired or, indeed, any others than such as now jump at it because they welcome any change from their present lot as necessarily an advancement for them. In the transition from the days of Sairey Gamp to the present we have an object lesson in the nursing service as to what a change of conditions can effect in the personality and character of those who engage in it. A similar change in the service of attendance on the mentally afflicted would assuredly bring about a like result. There lies the path to the banishment of such horrors as are depicted in "A Mind That Found Itself."

HOME TREATMENT OF TUBERCULOSIS.

There is no doubt that the sanatorium treatment, with its opportunities for outdoor life, its temptations to eat heartily of suitable food, and the absolute regulation of habits of rest and sleep, is the ideal treatment for those afflicted with tuberculosis. But it will never be possible for the great majority of consumptives to secure it. Home treatment, therefore, is an extremely important factor for the reduction of the mortality from this disease, and is especially to be considered because of the ease with which people in early stages may be persuaded to submit themselves to it, while it is practically impossible to persuade the majority of people to go away for treatment until the disease has advanced so far as to make its ultimate cure, or even permanent relief, very doubtful. Hence, the report of the Committee for the Prevention of Tuberculosis of the New York Charity Organization Society will prove of interest. This report[1] contains an account of twenty months' experience of a subcommittee.

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[1] A Mind That Found Itself. By Clifford Whittingham Beers, See page 1546

The committee's main activities have been in five directions: the home treatment proper, the day camp, country treatment, sanatorium treatment, and a system of tuberculosis dispensaries. One hundred and twenty-seven patients were treated exclusively in their homes. Out of 35 incipient cases in only 11 did the disease progress, while in 23 cases, 66 per cent., the condition of the patient was materially improved at the end of the term. Of 80 cases originally diagnosed "moderately advanced," in less than one-half did the disease progress, while in 41 the patients were improved. Even out of 12 cases originally diagnosed as "far advanced" one patient improved and all were made more comfortable, and, above all, were put in circumstances and given instructions which made them less likely to be foci of contagion for others. The average cost per patient for accomplishing this has been less than $3.00 a week. This includes not only money used for the patient, but also that spent for the family.

One of the most important features of the work was the so-called "day camp." Various plans were considered, such as vacant lots in the suburbs, a part of Blackwell's Island, hospital roofs, boats and recreation piers. Finally, one of the old Staten Island ferry boats was placed at the disposal of the committee, free of charge, with the privilege of making minor alterations. It was supplied with steamer chairs and hammocks, and from every point of view—health, happiness, comfort and economy—the boat has been a success. Only one feature is disappointing. The attendance was regrettably small. The boat was opened as a camp about the middle of June, 1907, and closed at the end of October. Out of 242 patients who presented themselves at one time or another during the 141 days in which the camp was in operation only 87 attended for twenty days or more. The average daily attendance was less than 40 though there were accommodations for at last 100. It is evident that if this feature is to accomplish the good that it should, interest must be aroused in it by the proper instruction of tuberculosis patients, and the attention of physicians must be widely called to the opportunity thus provided.

As a result of the interest aroused by the work of this committee there has been established the "Association of Tuberculosis Clinics." Through the efforts of this committee all the hospitals under the New York Department of Health and the dispensaries of five other important hospitals in the city have united to organize for the care of tuberculous patients. Lack of cooperation in the past has prevented the success of dispensary treatment; patients wandered from one dispensary to another and thus could not be kept under observation.

The other two features of the work that are discussed in the report, the sanatorium treatment and treatment in the country, do not belong properly to this subject, yet they serve to show how much of good can be accomplished. Of 47 patients treated in sanatoria 39, or 83 per cent., improved; 48 patients were given from one to five months in the country. Seventy-five per cent. of those who were sent to the country returned improved and all "returned to their families realizing the value of fresh air, of quiet rest and food, knowing how to protect their families against infection and determined to do their part in the long struggle toward health." The report states that the average cost of treating a patient in a sanatorium was less than $3.50 a week; at the same time it was necessary to allow an average of $2.69 a week to afford relief in the home because of the absence of the bread winner. In the country the average weekly cost for each patient was about $6.50.

THE THERMAL DEATH POINTS OF PATHOGENIC BACTERIA SUSPENDED IN MILK.

This complex and difficult problem has been reinvestigated recently by Rosenau[1] in the Hygienic Laboratory at Washington. In this work special attention has been given to the thermal death point of the tubercle bacillus which presents peculiar difficulties in the way of accurate results because it does not grow readily on artificial media. Animals must be inoculated in order to determine whether or not the bacillus is alive and pathogenic, and here again special difficulties arise because dead bacilli retain the power to produce tubercles and other lesions. Dead bacilli, however, are not infective, and in doubtful instances, e. g., when the lesions in the primarily inoculated guinea-pigs are very extensive or unusual, secondary inoculation becomes necessary to determine whether or not the bacilli are alive or dead. Even tuberculin can not differentiate between living and dead tubercle bacilli introduced into the bodies of guinea-pigs and there causing lesions.

In Rosenau's careful experiments young cultures of tubercle bacilli of the bovine type were rubbed up with milk until uniform suspensions were secured; test-tubes containing from 10 to 15 c.c. of this milk were kept immersed for the required time in a water bath at the proper temperature and in such a way that the level of the milk was below the level of the water. Further details need not be given here. Suffice it to say that Rosenau's results tally well with those previously obtained by the most careful investigators in this field, of whom may be mentioned Theobald Smith, Schroeder, and Russell and Hastings in this country: "Nine series of tests on guinea-pigs with five cultures plainly show that in milk the tubercle bacillus loses its virulence and infective power when heated to 60 C. for twenty minutes." When heated to 65 C. a much shorter time is necessary. In these experiments the milk was very heavily loaded with bacilli—the control animals died promptly—and it is not likely that milk ever contains so many bacilli under natural conditions. For this reason it is believed that market milk after this kind of treatment, which is practicable even on a large scale, would be safe for human consumption. This is the most important deduction from the practical point of view from the results of Rosenau's experiments, so far as tubercle bacilli are concerned.

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[1] Home Treatment of Tuberculosis in New York City, Charity Organization Society, March, 1908.

[1] Bull. No. 42, Hyg. Lab., U .S. Public Health and Marine-Hospital Service, Washington, D. C., 1908.

As regards other bacteria, it was found that the typhoid bacillus when grown in milk is killed by heating such milk for two minutes at 60 C.; the diphtheria bacillus and the cholera vibrio were usually destroyed by the time the temperature of the milk reached 55 C., only occasional germs surviving until 60 was reached; the dysentery bacillus, somewhat more resistant than the typhoid bacillus, was killed always after heating at 60 for ten minutes. Hence milk heated to 60 C. and maintained at that temperature for twenty minutes probably no longer conveys infection with the bacteria mentioned, if guarded from subsequent contamination. In all probability the cause of scarlet fever, as well as streptococci, staphylococci and most of the bacteria commonly associated with infantile diarrheal diseases, are also destroyed on heating milk containing them to 60 C. for twenty minutes. Practicable means for securing harmless market milk consequently are within relatively easy reach—always bearing in mind, however, that pasteurization of milk, no matter how effective, does not prevent subsequent contamination.

THE ROENTGEN RAY NOT AN UNMIXED BLESSING TO THE SURGEON.

Notwithstanding the great services rendered, and the no doubt greater services still to be rendered, to medicine by the Roentgen ray, it is by no means an unmixed blessing. Apart from the damage to health sometimes sustained by operators as well as by patients, and from the actions at law arising therefrom, it is likely to become a serious menace to the surgeon more particularly in the case of fractures. The noted English case of Southern vs. Lynn Thomas and Skryme, in which the defendants were penalized altogether for damages and expenses to the extent of over $20,000, is an example of a peril to which any surgeon or general practitioner may at any time be subjected. The case was tried first in November, 1906, and, the jury disagreeing, a second trial was held, at which the above-mentioned judgment was given.

The facts were that the patient had sustained a subglenoid dislocation of the humerus, with a fracture of the surgical neck and much bruising and edema of the soft parts. The dislocation was reduced, but it was found impossible to bring the ends of the humerus into apposition, for the upper fragment remained rotated with the articular surface inward and the fractured end outward. The great swelling, moreover, prevented any immobilizing measures. Numerous surgeons of the highest reputation in Great Britain testified at the trial that—failing the possibility of bringing the fractured surfaces into end-to-end apposition—the next best thing was done, viz., the shaft and head were brought into lateral apposition and union was obtained, though, of course, with limitation of function.

The raising of a subscription to meet the expenses of Mr. Thomas and Dr. Skryme affords an opportunity to Dr. Lucas-Championnière to comment[1] on the increasing danger to practitioners of charges of malpractice in fracture cases, resulting from the introduction of the x-ray. The public, he points out, has always considered itself capable of deciding questions regarding fractures, and this dangerous result of a little knowledge has been greatly increased by the seeming simplicity of the radiograph. Dr. Lucas-Championnière insists on the necessity of impressing on the public the fact that even the best x-ray pictures can be properly interpreted only by a skilled man, and that the public, so far from having its supposed "common sense" knowledge of all about fractures rendered infallible by the x-ray is more than ever liable to be led astray.

Altogether the most dangerous element in this case, however, is the theory that was advanced by the lawyers for the complainant, apparently favored by the judge and adopted by the jury, that the line of treatment used was not justifiable because it could not cite authority in well-known text-books in use in Great Britain. Should such an absurd view be widely accepted as a legal precedent, it would sound the knell of all advance in modern surgery and bind all medicine once more with the medieval shackles of "authority." It would seem only in accordance with the much worshipped "common sense" that the insistent advocates of slavish adhesion to the typical methods of the text-books should also insist on Nature "playing the game," too, by providing only typical fractures to be dealt with.

CONGESTION AND CONCENTRATION.

Dr. Devine[2] has pointed out the important distinction that while congestion of population in large cities is an unqualified evil, a concentrated population is by no means necessarily so. In some ways concentration, under the imperative conditions of our seething modern civilization, is even beneficial. In some localities sanitary science has been so well applied that many people may now enjoy health within an area in which, a decade ago, the conditions would have been deadly for a few inhabitants; for, on the one hand, tenement house laws have compelled landlords to make the homes of their tenants sanitary, and, on the other, landlords have had the speculative wisdom to do this of themselves. The plumbing and ventilation of houses are much better than they were a decade ago. The authorities have provided purer water. Streets are adequately sewered. A concentrated population is, therefore, not necessarily an unhealthy one, while concentration secures certain economic advantages.

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[1] British Medical Journal, March 28, 1898, abstracted in The Journal, April 25, 1908, page 1381.

[2] Charities and the Commons, March 21, 1908.

There seem to be inexorable reasons for the ever-increasing gathering of people in cities. There is the clannishness of immigrants which prevents their separation and dissemination throughout the country. The often meretricious glamour of urban life, which induces men and women to forego living in healthful rural districts, was, to be sure, a much stronger magnet a score of years ago than to-day, when the rural free delivery, the trolley, the 10-cent magazine, the mail-order method of selling goods, the moving picture, the various musical appliances, and many other diverting factors have turned almost every rural into a really suburban district. The inevitable and most powerful factor in the production of congestion, however, is the fact that men whose working hours are greatly prolonged must, or at any rate will, live near their work. In the very instructive exhibit on congestion of population recently held in New York City there was a diagram showing, in the case of three important trades in Manhattan, the percentage of workmen who live in that borough. Of those who work 10 hours a day on food products, 74 per cent. have their homes in Manhattan. Of shoemakers, who work 9.3 hours in the day, 42 per cent. live in Manhattan; while but 31 per cent of printers, who work but 8 hours a day, live on that island. Certain civic conditions peculiar to given municipalities, moreover, favor congestion. The conformation of Manhattan Island, for example, is such that the problem of transporting to and from business those who would make their homes in the suburbs is one of constantly increasing difficulty. A dozen subways, added to the single one now in existence, besides the various bridges and tunnels now used or being constructed, with all the trolley and elevated cars in commission, are not expected to give adequate service.

A solution of the problem has been proposed in the building, in congested districts, of tenements twice as high as those which exist at present, of which the average height is six stories. High buildings, up to this time, have solved the problem of commercial congestion; and by analogy it is held that they might also solve the problem of congested homes. The idea seems so specious and alluring that the objections to it which experience would interpose must be stated. Commercial skyscrapers are usually isolated; should they in the course of time become so numerous as to form lofty, continuous canyon walls the resulting exclusion of light, sunshine and pure air would make the lower stories uninhabitable. Even now the attendant evils, such as dark or poorly-lighted rooms, where artificial light must constantly be used, however bright the days may be, afford sufficient evidence that only a limited number of such structures are practicable for use. And these objections would be still more potent in the case of tenements, which must be occupied night and day and used for all the purposes of domestic life. The exclusion of light, pure air and sunshine from living apartments, especially in buildings facing on narrow streets, would mean the prevalence of disease among the tenants, increasing progressively with the age of the buildings. Tuberculosis especially, which even under present conditions is decreasing to so gratifying a degree, would regain its lost vantage.

There are in the congested parts of most great cities large areas taken up with insanitary structures, and some non-producing property held for speculation; here the capacity of the land for the wholesome accommodation of tenants has by no means reached its limit. In Chicago, as in Boston, New York, Philadelphia and other cities, model tenements have been built, and there are still extensive tracts ready for such structures. The humane capitalist can find no more sensible or grateful outlet for investment. "Philanthropy with 4 per cent." is an attractive and a most reasonable motto. The New York City and Suburban Homes Company has now for dividend disbursements 4.5 per cent. a year.[1] Its investments have reached $5,500,000. Its losses during the last five years from unpaid rents and bad debts were in the "wholly insignificant proportion of fourteen one-hundredths of 1 per cent." London has more than $100,000,000 invested in model tenements. The market value of such investments is relatively stable, while fluctuations in railway and other stocks and bonds are facts "that some of us are too sensitive to talk about." In the certainty of reasonable profits from investments in sanitary urban homes lies the most hopeful element in the problem of population congestion. Nor is the proposition one which millionaires alone could handle; even physicians might cope with it.

BODY TEMPERATURE AND PERIODICITY.

The well-known rhythmical variation in the body temperature, which finds its minimum in the early morning hours and its maximum toward evening, usually persists unchanged, even though the individual sleeps during the day and works at night or if he remains in bed for the twenty-four hours. A curious characteristic of this periodicity has been noted by W. A. Osborne,[2] who made notes of the variations in his temperature during a voyage from Melbourne to London. He had previously determined that his own daily maximum occurred at about 6 p. m., and as the local time changed with the increasing distance from Melbourne it was found that the time of his maximum was determined by the local time rather than by Melbourne time. Thus it appears that the body is able to adjust itself in this respect to gradual changes in the time of the daily variations of atmospheric conditions, such as light, heat and pressure, and of physiologic activity.

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[1] Gould, E. R. L.: The Way Out, Charities and the Commons. April 4, 1908.

[2] Jour. of Phys. xxxvi, No. 6.

PROMOTING NOSTRUMS AMONG MEDICAL STUDENTS.

It is not only the "Heathen Chinee" who is peculiar for "ways that are dark." The paths of the evildoer are many and devious. We learn that in at least one university medical school, and probably, therefore, in many more, all the students are being bombarded with "literature" and samples of one of the most discredited nostrums. This is, of course, not to be wondered at, and it is a far-seeing scheme to endeavor to breed up among undergraduates a race of future physicians to whom the name of this one time "ethical proprietary" shall be, verbally and in fact, familiar in their mouths as household words. Fortunately, the means of meeting such a flank attack are as obvious as the duty of doing so. If the professors of therapeutics in these schools are as earnest in the fulfilment of the obligations of their chairs as we believe them to be they will devote one or more lectures to the subject of nostrums, categorically laying down the objections, scientific, economic and ethical, to their encouragement by physicians. Attention can be especially directed to those particular nostrums that are adopting the above mentioned method of diverting the allegiance of the students from science to quackery. Thus it will not be difficult to convert "ways that are dark" into "tricks that are vain."

Medical News

ALABAMA.

Cabot in Birmingham.—Dr. Richard C. Cabot, Boston, was the guest of the Jefferson County Medical Society, Birmingham, April 17, when he delivered an address on "Essentials and Non-essentials of Physical Diagnosis." He also gave a clinic at St. Vincent's Hospital.

Tuberculosis Exhibit.—The Tuberculosis Exhibit of the American Society for the Prevention of Tuberculosis was opened in Montgomery, April 23, Dr. Samuel W. Welch, Talladega, president of the Medical Association of the State of Alabama, presiding. The opening program of the exhibit was a symposium on tuberculosis, participated in by many practitioners in attendance at the annual meeting of the association.

Personal.—Drs. Glenn Andrews, Montgomery, Benjamin L. Wyman, Birmingham, George T. McWhorter, Riverton, T. H. Marbury, Birmingham, and Hon. H. E. Reese, Selma, have been appointed members of the board of trustees of the State Sanitarium of Tuberculosis.——Dr. J. E. Garrison, Birmingham, is said to have shot and killed J. D. Williams, an electrician, in a duel at Flat Creek, April 30. Dr. Garrison was seriously wounded.

State Society Meeting.—The sixty-first annual meeting of the Medical Association of the State of Alabama was held in Montgomery April 21 to 24. The following officers were elected: Dr. Benjamin L. Wyman, Birmingham, president; Dr. Robert J. Redden, Vernon, vice-president for the northern district; Dr. James N. Baker, Montgomery, secretary; Dr. Henry G. Perry, Greensboro, treasurer; Drs. Glenn Andrews, Montgomery and Gay, censors; Drs. William D. Partlow and Stuart, orator and alternate orator, respectively, and Drs. Joseph B. Letcher, Shorter, M. L. Mallory, J. P. Stuart, William S. McElrath and William A. Burns, Shelfield, councilors. By reason of the absence of Dr. Edward L. Marechal, Mobile, on account of ill health, the Jerome Cochran lecture was not delivered.

Medical Society Meetings.—At the annual meeting of Autauga County Medical Society, held recently at Prattville, the following officers were elected: President, Dr. John E. Wilkinson, Sr.; vice-president, Dr. John W. Hagler; secretary-treasurer, Dr. John E. Wilkinson, Jr.; health officer, Dr. Robert M. Davis, all of Prattville, and delegates to the state association, Drs. Elbert H. Downs, Billingsley and Dankersly.——At the meeting of the Walker County Medical Society, held in Jasper March 13, the following officers were elected: Dr. John M. Miller, Cordova, president; Dr. J. L. Sowell, Jasper, vice-president; Dr. John M. Miller, censor, and Dr. Andrew M. Stovall, Jasper, county health officer.——The Bessemer Medical Society was organized April 9 with a membership of 45, and the following officers were elected: President, Dr. Thomas C. Donald; vice-president, Dr. Edward P. Lacy; secretary, Dr. Thomas J. Conwell, and treasurer, Dr. E. V. Colwell.——Shelby County Medical Society, at its annual meeting, held at Montevallo, April 4, elected the following officers to fill unexpired terms; Dr. John R. Pow, Maylene, vice-president; Dr. Joseph R. Morgan, Shelby Springs, censor; Dr. V. H. Williams, Calera, secretary, and Drs. Orlando E. Black, Wilsonville, and Charles T. Acker, Columbiana, delegates to the state association.——At the annual meeting of the Lee County Medical Society, held at Opelika, April 14, the following officers were elected: President, Dr. Homer S. Bruce, Opelika; vice-president, Dr. William J. Love, Opelika; secretary-treasurer, Dr. Cecil S. Yarbrough, Auburn; health officer, Dr. Andrew H. Read, Opelika, and the president and secretary-treasurer delegates to the State Association.

ARKANSAS.

Sanitarium Opened.—The Florence Sanitarium, Pine Bluff, has been formally opened to receive patients. The institution is in charge of Dr. Arthur C. Jordan, assisted by Dr. John S. Jenkins.

Smallpox.—Smallpox has developed in the negro settlement between Branch and Charleston.——Dr. A. Earl Hardin, state health officer of Fort Smith, is having great difficulty in maintaining quarantine in the negro families in which smallpox has been discovered. Guards have allowed patients to go to restaurants, and in many ways have allowed disregard of quarantine.

Correspondence Course in Military Medicine.—Dr. R. L. Russell, Little Rock, head of the medical department of the Arkansas National Guard, is now engaged in planning a course of lectures to be studied by all of the men in his department. His plan is to mail the lectures at regular intervals to each man, who must study them and be examined on them later. His intention is to make his men thoroughly acquainted with all work of the medical department of the guard.

Society Meetings.—The annual meeting of the Crawford County Medical Society was held in Van Buren, April 24, at which the following officers were elected: President, Dr. Thomas F. Wood, Uniontown; vice-president, Dr. Matt S. Dibrell, Van Buren; secretary, Dr. C. J. Campbell, Mulberry; treasurer, Dr. James E. Blakemore, Van Buren; censors, Drs. Othello M. Bourland, Van Buren, Giles Lucas, Van Buren, and James C. Sharp, Alma; and delegate to the state society, Dr. Othello M. Bourland, Van Buren.——At the last meeting of the Independence County Medical Society, held at Batesville, Dr. Charles G. Hinkle, Batesville, was elected president; Dr. James H. Kennerly, Batesville, vice-president; Dr. William B. Lawrence, Batesville, secretary; Dr. Robert H. Hodges, Sulphur Rock, treasurer; Dr. Franklin A. Gray, Cave City, delegate to the state society, and Dr. William B. Lawrence, Batesville, alternate.

DELAWARE.

Jury Decides for Physician.—In the case of Dr. Jacob C. Knowles, Seaford, who sued Edwin Massey for $250 for attendance on a smallpox case, the jury on April 15 rendered a verdict in favor of Dr. Knowles.

New Castle County Society Active.—At the meeting of New Castle County Medical Society, held in Wilmington, April 17, Dr. Howard A. Kelly, Baltimore, gave an address on "The Relation of Art to Medicine and Surgery" The address was followed by an informal reception and collation.——The interest in the postgraduate class is well sustained. Diseases of the lungs are being considered during the sessions of April and May.

Personal.—Dr. Dudley L. Munson, Wilmington, has moved to Seattle, Wash., where he will resume practice.——Dr. Henry W. Briggs, Wilmington, has been re-elected physician of New Castle County.

Hospital Election.—At the annual meeting of the board of trustees of the Delaware Hospital, Wilmington, the following staff was elected: Surgeons—Drs. John Palmer, Jr., James A. Draper, Joseph P. Wales and Harold L. Springer; physicians—Drs. William Bullock (emeritus), John P. Wales, Willard Springer, William C. Pierce and Joseph W. Bastian; gynecologist—Dr. Henry J. Stubbs; associate gynecologist—Dr. Samuel C. Rumford; pathologists, Drs. Albert Robin and W. H. Kraemer; skiographer, Dr. Samuel C. Rumford; and eye, ear, nose and throat, Drs. Joshua A. Ellegood and Read J. McKay.

Hypnotic Healer Convicted.—"Prof." G. Herman Lawson, known as a "hypnotic healer," was convicted of practicing medicine without a license at Wilmington and was sentenced to one year's imprisonment and to pay a fine of $100. This is the first conviction secured under the new medical practice act of Delaware. Much credit for the conviction is due to Mr. Daniel O. Hastings, the deputy attorney-general for the state, for the vigor with which he prosecuted the case. It is intimated that an appeal may be made to the board of pardons in behalf of Lawson, on account of the condition of his health, but it is generally believed that no interference with the execution of the sentence will follow.

Medical Societies Meet.—At the second annual meeting of the Delaware Antituberculosis Society, held in Wilmington, April 14, Vice-president Dr. Harold L. Springer, in the chair, the following physicians were elected directors of the association: Drs. Irvine M. Flinn, Peter W. Tomlinson, Joseph P. Wales, Harold L. Springer and Albert Robin, all of Wilmington.——Sussex County Medical Society at its annual meeting, held in Georgetown, elected the following officers: President, Dr. William P. Orr, Lewes; vice-president, Dr. Robert B. Hopkins, Milton, and secretary, Dr. Joseph K. Frame, Millsboro.——The physicians of Milford have organized a medical association and have elected Dr. John S. Prettyman president; Dr. George W. Marshall, vice-president, and Dr. Edith Phelps, secretary.

ILLINOIS.

Communicable Diseases.—Five cases of smallpox are reported in one family in Elgin.——Five families in La Harpe have been placed under quarantine on account of scarlet fever.

Certificate Revoked.—The State Board of Health, at a special meeting held in Chicago, April 25, revoked the certificate of Dr. Jabez Clifford Casto, late of Decatur, on account of unprofessional conduct in connection with the publication of fraudulent testimonials in the daily newspapers of Decatur.

Personal.—Dr. Charles K. Unkrich, Monmouth, has recovered from his recent attack of appendicitis.——Drs. Frank Billings, Chicago; Vaclav H. Podstata, Elgin; J. L. Greene, Hospital; Gillette, Jacksonville; William L. Athon, Anna and George A. Zeller, South Bartonville, have been appointed delegates to represent Illinois in the National Conference of Charities and Corrections, to be held in Richmond, Va., May 6-13.

Practical Examination of Physicians.—At a special meeting of the State Board of Health, held April 25, the board, by a formal resolution, approved of the proposition to subject all physician applicants for a state license, to a practical examination covering one day, in addition to the written examination, which requires three days for completion. Owing to press of work the details were not arranged, but it is probable that the plan will be put in operation with the October (1908) examination.

Society Meetings.—The thirty-fourth annual meeting of the Central Illinois District Medical Society was held April 28 at Pana, under the presidency of Dr. Frank P. Auld, Shelbyville. The following officers were elected: President, Dr. Frank P. Auld, Shelbyville (re-elected); vice-president, Dr. Don W. Deal, Springfield; second vice-president and treasurer, Dr. John N. Nelms, Taylorville; secretary, Dr. Roscoe C. Danford, Pana (re-elected); and censors, Drs. Jacob Huber, Pana, William J. Eddy, Shelbyville, Darwin D. Barr, Taylorville, Ben B. Griffith, Springfield, and Frederick J. Eberspacher, Pana.——At the April meeting of the Tazewell County Medical Society the following officers were elected:: President, Dr. Carl G. Muehlmann, Pekin; vice-president, Dr. Harry V. Bailey, Pekin, and secretary-treasurer, Dr. Edgar E. Kilby, Mackinaw.

Chicago.

Personal.—Dr. Edward A. Fischkin has been elected president of the Jewish Civic League.——Dr. Thomas J. Robeson is seriously ill at his home with pneumonia.

Illegal Practitioner Fined.—Dr. R. Scoda, charged with practicing medicine without a license, is said to have been found guilty and fined $20 April 30, in Judge Scovel's court.

Fined for Assault.—Dr. Willis C. Stone is said to have been fined $25 and costs April 28 by Municipal Judge Maxwell for striking a boy, who persisted in building a bonfire near the physician's home.

Ambulance Surgeons in Uniform.—The 16 police ambulance surgeons on April 25 donned the new uniform prescribed by the health commissioner.

Mortality of the Month.—With one exception, the mortality for April, equivalent to 14.24 per 1,000 per annum, was the lowest for the month in ten years. It was 24 per cent. lower than the average for 30 years, 12 per cent. lower than the 10-year average, and 17 per cent. lower than for the preceding year. The greatest reductions compared with last year were in pneumonia with 136 fewer deaths; acute contagious diseases, 107 fewer; nervous diseases with 81 fewer; nephritis with 59 fewer; heart diseases, with 52 fewer; accidents (including violence), with 29 fewer; cerebrospinal meningitis, with 20 fewer; cancer, with 17 fewer; diarrheal diseases, with 14 fewer; consumption, with 13 fewer; and typhoid fever, with 5 fewer.

Good Health and Low Death Rate.—The health of the city for the week ended May 2, was phenomenally good, the death rate, equivalent to an annual mortality of 12.90 per 1,000, being the lowest record for any week for the last six months, and nearly 32 per cent. lower than that of the corresponding week of 1907. The deaths reported were 536, 87 fewer than for the preceding week, and 208 fewer than for the corresponding week of 1907. All the important diseases except heart disease, cancer and bronchitis show a lower mortality than for the preceding week, and for the first time in a year no death from typhoid fever was reported. Pneumonia caused 68 deaths; consumption, 67; heart diseases, 54; violence (including suicide), 40; acute intestinal diseases, 32; cancer, 29; nephritis, 28; bronchitis, 22, and nervous diseases, 20. There were 10 deaths reported from diphtheria, 4 from scarlet fever, 3 from influenza, 2 from measles and one death from whooping cough.

INDIANA.

Hospital Notes.—The Methodist Hospital at Sixteenth Street and Capitol Avenue, Indianapolis, was formally dedicated April 29.——Ground was broken for the Union Hospital, Terre Haute, April 22. The new building is expected to cost $35,000.

Personal.—Dr. Frank Randolph, wife and son, Elkhart, sailed for England April 21.——Dr. Robert J. Clark, Monticello, is reported to be seriously ill at a hospital in Indianapolis.——Dr. Malachi R. Combs, Terre Haute, is convalescent after a severe attack of pneumonia.——A petition has been circulated in Logansport, asking trustees of the Northern Indiana Hospital for the Insane, Longcliff, to appoint Dr. Clarke Rogers, son of the late superintendent, as medical superintendent of the institution.

District Society Meetings.—At the annual meeting of the Twelfth Councilor District Medical Society, held in Fort Wayne, April 21, the following officers were elected: President, Dr. Alphens P. Buchman, Fort Wayne; vice-presidents, Drs. Joseph L. Gilbert, Kendallville, and Henry F. Costello, Decatur; secretary, Dr. Edmund M. Van Buskirk, Fort Wayne, and treasurer, Dr. David C. Wybourn, Sheldon. The resolutions introduced by Dr. Henry O. Bruggeman, Fort Wayne, following an address by Dr. John N. Hurty, Indianapolis, secretary of the State Board of Health, regarding medical inspection of school children, were adopted unanimously.——At the annual meeting of the Eighth Councilor District Medical Society, held April 17 in Anderson, Dr. Granville Reynard, Union City, was elected president; Dr. Manford M. Clapper, Hartford City, vice-president, and Dr. Maynard A. Austin, Anderson, secretary-treasurer (re-elected).——At the annual meeting of Jefferson County Medical Society the following officers were elected: President, Dr. Charles E. Hansel; vice-president, Dr. Walter M. Peck; secretary, Dr. Charles S. Bosenbury, and treasurer, Dr. J. Willis Hill, all of South Bend.

MARYLAND.

Measles Epidemic.—The Bulletin of the State Board of Health shows that during March a severe epidemic of measles prevailed throughout the state, where 715 cases were reported, with 3 deaths.——On April 30 measles was reported epidemic in Allegany County.

Baltimore.

In Europe.—Dr. Lewis J. Rosenthal is in Paris.——Dr. Claribel Cone sailed for Naples, May 2.

Charged with Illegal Practice.—The charge of practicing medicine without a license, in the case of E. Frederick Morris, was withdrawn on his promise to leave the state.

Infirmary Condemned.—The Union Protestant Infirmary and the Home for Nurses adjoining has been been condemned by the inspector of buildings on account of lack of fire escapes, adequate stairways and exits. There are 90 patients and 40 nurses in the institution.

Pure Milk Ordinance.—The pure milk ordinance has passed both branches of the city council and will take effect June 1. It places control of the milk supply under the city health department, from which permits to sell milk must be obtained, the permits to be revocable for cause. Skim milk, buttermilk and milk modified under physicians' prescriptions may be sold as such. The health department is given supervision and inspection of stables and dairies of milk sellers, within and without the city.

Babies' Milk Fund.—In an appeal for support, the Babies' Milk Fund Association reports that 942 infants received milk at the stations of the association during the year, the largest daily number, 350, in August. Through the winter the average exceeded 180. In the twelve months, 51,610 days' feeding of modified milk was distributed, representing about 365,000 separate bottles, and in addition 12,440 quarts of whole milk. The milk is pasteurized during warm weather. The total mortality among infants using the milk was less than 10 per cent., or one-half the general death rate among city infants. The association has seven stations, and, in addition, during the summer has one in Patterson Park. During the summer seven nurses were employed, and afterward four. No milk was dispensed without a physician's order. A charge of 10 cents per day was made, but no milk was withheld in cases where the parents were unable to pay. The total expense for the year was $8,621.13.

Hospital Reports.—The report of St. Joseph's Hospital for 1907 shows the receipts and expenses to be about $51,500. The total admissions were 2,693; of these, 1,119 patients were able to pay a part, or in part, or entirely. The males outnumber the females by more than two to one. There are 2,456 reported cured; 494, improved; 104, unimproved, and 188, or 6.98 per cent. died.——The Presbyterian Eye, Ear and Throat Charity Hospital treated 11,658 patients in 1907, 10,808 of whom were white and 850 colored; of the entire number 30 per cent. were Hebrews. Dr. Francis M. Chisholm resigned from the staff after a service of more than 17 years. During the year 6,216 eye cases were treated, 2,389 ear cases and 3,053 throat cases; 36,236 visits were paid, and 823 patients were received in the hospital. The receipts for the year amounted to $11,222, and the expenses $10,491, and the invested funds now amount to $57,000.——The Baltimore Eye, Ear and Throat Charity Hospital reports for the year 1907 that 6,000 patients were treated; 1,754 operations were performed, 437 of which were on the eye, 238 on the ear and 1,079 on the throat. Of the patients treated 5,814 were charity patients. The white patients numbered about 66 per cent. of the total. The receipts for the year were $11,837 and the expenditures $11,668.——During 1907 St. Joseph's German Hospital treated 2,963, 1,119 of whom were pay patients in whole or in part. A new building has just been completed for emergency and isolation cases.

MASSACHUSETTS.

Hospital Notes.—By the will of the late Charles H. Newhall, Lynn, a bequest of $50,000 is left to the Lynn Hospital in memory of the parents of the deceased.——Founders Memorial, a modern hospital building thoroughly equipped, was presented to the Newton Hospital Corporation, recently, on behalf of Mellen Bray. Owing to the illness of the donor, the presentation was made by his son. The building is three stories high, of red brick with marble trimmings, and is connected with the main hospital building by an overhead walk and a tunnel.

Personal.—Dr. George H. M. Rowe, superintendent of the Boston City Hospital for 29 years, has been granted an indefinite leave of absence to recuperate from a general breakdown, due to overwork. Dr. John H. McCollom, for several years head of the contagious disease department, will act as superintendent during Dr. Rowe's vacation.——Dr. William H. Davis, Dorchester, Boston, medical inspector of the health department, has been made provisional sanitary inspector.——Dr. E. Peabody Gerry, Boston, has been appointed by the mayor special agent to investigate sanitary conditions in the handling of milk in West Roxbury and Jamaica Plain.——Dr. Charles E. Donlan, Dorchester, Boston, formerly superintendent of the Lowell City Hospital and almshouse, on April 23, was elected superintendent of the Long Island Almshouse and Hospital.

Medical Society Elections.—At the annual meeting and dinner of the Boston Society of Examining Physicians and Surgeons, the following officers were elected: President, Francis D. Donoghue; vice-presidents, Drs. Frank E. Allard, Edward M. Greene and Timothy Leary; secretary, Charles T. Cutting, and treasurer, Dr. Charles O. Kepler.——The Chicopee Medical and Surgical Club, on April 2, completed its organization, adopting a constitution and by-laws and electing the following officers: President, Dr. Francis F. Parker; vice-president, Dr. Locero J. Gibbs; secretary, Dr. Arthur F. Warren, and treasurer, Dr. W. S. O'Brien.——At the annual meeting and dinner of the Boston Medical Society, held April 7, the following officers were elected: President, Dr. William F. Gay; vice-president, Dr. Abraham J. Hurwitz; financial secretary, Dr. Frederick J. Bailey; corresponding secretary, Dr. L. A. Herman; treasurer, Dr. Rufus K. Noyes; and directors, Drs. Israel J. E. Shapira, John Dixwell, Nathan M. Goodman and J. Lockhart.——At the annual meeting of the Brockton Medical Society, held April 9, the following officers were elected: President, Dr. John P. Shaw; vice-president, Dr. Wieber P. Safford; secretary, Dr. R. A. Elliott; treasurer, Dr. Edward E. Goodwin, and executive committee, Drs. Jacob M. Morin, Joseph H. Lawrence and Thomas H. McCarthy.

MICHIGAN.

Society Meetings.—At the annual meeting of the Ontonagon County Medical Society, held at Houghton, recently, the following officers were elected: President, John S. Nitterauer, Ontonagon; vice-president, Dr. Edwin J. Evans, Rockland; secretary, Dr. E. W. Knowles, and treasurer, Dr. William B. Hanna, Mars.——On March 27, fifteen physicians of Adrian met and organized the Adrian Medical Society, with the following officers: President, Dr. George B. M. Seagar; vice-president, Dr. William E. Jewett, Sr.; secretary, Dr. Mart Hammond, and treasurer, Dr. Charles H. Lards.——The following medical men are officers of the Michigan Association for the Study and Prevention of Tuberculosis: President, Dr. Charles G. Jennings, Detroit; second vice-president, Dr. Edward T. Abrams Dollar, Bay; secretary, Dr. Alfred S. Warthin, Ann Arbor; treasurer, Dr. Henry J. Hartz, Detroit, and members of the executive committee, Drs. Victor C. Vaughan, Ann Arbor, Frank W. Shumway, Lansing, and Guy L. Kiefer, Detroit.

MISSISSIPPI.

Society Meetings.—At the semi-annual meeting of the Six Counties Medical Association, held in Clarksdale, March 25, Frederick M. Belen andej;?t;andBronghershrdlushrdlushrdlu the following officers were elected: President, Dr. John G. Backstrom, Tutwiler; vice-presidents, Drs. S. Wade Glass, Dublin, Coahoma County, Leonard L. Bankstrom, Tunica, Tunica County, J. S. Sanders, Tallahatchie County, Albert P. Alexander, Sledge, Quitman County, and T. J. Allen, Bolivar County; delegates to the state association, Drs. Thomas M. Dye, Sherard, and Luther D. Harrison, Clarksdale, alternate, Coahoma County; Drs. Daniel W. Coker, Tunica, and Lancelot M. Minor, Hollywood, alternate, Tunica County; Drs. I. S. Sanders, Coffeeville, and George D. Hightower, Webb, alternate, Tallahatchie County; Drs. Smith, Robison, alternate, Sunflower County; Drs. Frederick M. Belen and John U Brougher and Abernethy Marks, alternate, Quitman County; and Dr. W. F. Ashley Shaw, and Allen, alternate, Bolivar County; secretary, Dr. James W. Gray, Clarksdale, and treasurer, Dr. Luther D. Harrison, Clarksdale.——At the annual meeting of the Panola County Medical Society, held in Sardis, April 3, Dr. J. G. Pou was elected president; Dr. J. P. Stovall, vice-president; Dr. Jacob M. Anderson, Batesville, secretary; Dr. John H. Walton, Sardis, delegate to the state association, and Dr. Edwin Wright, Sardis, alternate.

MISSOURI.

Sanitary Rules for Railroads.—By order of the State Board of Health, placards warning passengers against spitting on the floor are displayed in all railway coaches in the state, and in all railway waiting rooms and stations.

Commencement.—The graduating exercises of the Ensworth Medical College, St. Joseph, were held May 1, when a class of 31 received diplomas.——The trustees of the Ensworth Central Medical College and Hospital have filed application in the circuit court to eliminate the word "Central" from the name of the institution.

Society Meetings.—The Southwest Missouri Medical Society, at its annual session, held in Springfield, April 24 and 25, elected the following officers: President, Dr. William P. Patterson, Springfield; vice-presidents, Drs. C. A. Moore, Springfield, and Thomas Doolin, Ash Grove; secretary, Dr. Herbert B. S. Hill, Springfield (re-elected), and treasurer, Dr. Lee Cox, Springfield.——Taney County Medical Society was organized April 14, at Branson, by Dr. Theodore A. Coffelt, Springfield, councilor for the Twenty-eighth district. The following officers were elected: President, Dr. Charles W. Burdett, Branson; vice-president, Dr. James O. Nicholon, Protem; secretary, Dr. Elizabeth McIntire, Branson; censors, Drs. R. M. Irwin, Gretna; D. B. Mitchell, Forsythe, and Francis V. Baldwin, Forsythe; and delegate to the state association, Dr. Charles W. Burdett.

St. Louis.

Commencement.—At the annual commencement exercises of the College of Physicians and Surgeons, held April 27, degrees were conferred on 47 by Dr. Waldo Briggs, dean of the faculty.

Summer Course in Medicine.—The St. Louis University, for the first time in its history, has established a summer course in medicine for practitioners and students. The term will open May 25 and end July 4.

Contagious Diseases.—During the week ended May 2 there were reported to the health department the following new cases of contagious disease: Smallpox, 1; diphtheria, 19, with 2 deaths; scarlet fever, 31, with 3 deaths; typhoid fever, 4; measles, 51; varicella, 12; pertussis, 13, and consumption, 20, and 34 deaths.

Alumni Society Incorporated.—Application has been made in the circuit court for a pro forma decree of incorporation by the Medical Society of the City Hospital Alumni of St. Louis. Dr. William E. Sauer is president of the organization; Dr. Louis H. Hempelman, vice-president; Dr. William H. Luedde, secretary; Dr. E. Lee Dorsett, treasurer, and Drs. Louis H. Behrins, John C. Falk and Louis J. Oatman are directors.

Personal.—Dr. Frederick G. A. Bardenheier left recently for an extended period of European study.——Dr. Robert C. Atkinson fell recently, sustaining a fracture of the humerus.——Dr. John Young Brown will deliver the address on "Surgery" at the meeting of the Illinois State Medical Society, at Peoria.——Prof. William H. Warren has been selected as dean of the medical department of Washington University, vice Dr. Robert Luedeking, deceased.

Fitzporter Case Fails.—The indictment against Dr. John L. Fitzporter, charged with having sent prohibited matter through the mails, was dismissed by the United States District Court April 8, because the government was unable to furnish a bill of particulars, ordered by the court, setting forth the nature of the remedy which the defendant is said to have offered to furnish women on the payment of $25, in letters alleged to have been written by him.

Medical Council Election.—On April 3 the Joint Medical Council elected the following officers: Chairman, Dr. John C. Morfit; vice-chairman, Dr. Bransford Lewis; secretary-treasurer, Dr. John Green, Jr., and auditor, Dr. L. Claude McElwee. The council is vigorously pushing the question of doing away with the present antiquated method of municipal hospital control and substituting an organization in keeping with the modern ideas of hospital management.

Phenomenal Krauss Again.—About six months ago a medical faker calling himself "Phenomenal Krauss," made a well advertised entry into St. Louis. He had associated with him physicians whom he advertised as specialists. Postoffice Inspectors John Sullivan and S. J. Means collected sufficient evidence to lead the United States attorney to issue an order for the arrest of Krauss, charging a scheme to defraud. Krauss and his "specialists" were arrested April 29, and released under bond, pending hearing. He is said previously to have operated at Peoria, Ill., and Des Moines and Marshalltown, Iowa.

NEW JERSEY.

Medical Society Meetings.—Somerset County Medical Society, at its annual meeting, held in Somerville, April 9, elected the following officers: President, Dr. Henry V. Davis, North Branch; vice-president, Dr. Peter J. Zeglio, North Plainfield; secretary, Dr. Claudius R. P. Fisher, Bound Brook; treasurer, Dr. Thomas H. Flynn, Somerville; reporter, Dr. Aaron L. Stillwell, Somerville; censor, Dr. J. Henry Buchanan, North Plainfield, and delegates to the state society, Drs. J. Henry Buchanan and Peter J. Zeglio.——At the annual meeting of the Essex County Medical Society, held in East Orange, April 7, the following officers were elected: President, Dr. Wells P. Eagleton, Newark; vice-president, Dr. Charles D. Bennett, Newark; secretary, Dr. Ralph H. Hunt, East Orange; treasurer, Dr. Theodore W. Corwin, Newark, and reporter, Dr. Frank W. Pinneo, Newark.——At the annual meeting of the Morris County Medical Society, held in Dover, the following officers were elected: President, Dr. Christopher C. Beling, Newark; vice-president, Dr Arthur W. Condict, Dover; secretary, Dr. Henry W. Kice, Wharton; treasurer, Dr. James Douglas, Morristown; reporter, Dr. Jacob W. Farrow, Dover, and delegates to the state society, Drs. Peter S. Mallon, Morris Plains, and Clifford Mills, Morristown.—The Hudson County Association for the Advancement and Study of the Medical, Surgical and Sanitary Sciences was incorporatel April 1 by Drs. Joseph M. Rector, Edward P. S. Hart and Arthur P. Hasking, of Jersey City, and Dr. William W. Brooke, Bayonne. The association is incorporated under the "act to provide for the incorporation of pathological and anatomical associations for the advancement of medical and surgical science."——Plainfield Medical Society held its annual meeting April 2, electing the following officers: President, Dr. Ellis W. Hedges; vice-president, Dr. John H. Carman, and secretary-treasurer, Dr. Benjamin Van D. Hedges.

NEW YORK.

New York City.

Personal.—A dinner was given to Dr. Lee Frankel on the occasion of his resignation as manager of the United Hebrew Charities. Dr. Frankel is to occupy a similar position with Mrs. Russell Sage's $10,000,000 endowment fund.——Dr. and Mrs. Martin W. Ware sailed for Europe on the *Deutschland* April 30.

Milk Committee Meets.—The last two meetings of the series held by the New York milk committee on April 25 were unusually interesting. The subject under discussion for the afternoon meeting was "Pasteurized Milk;" in the evening the subject was "Certified and Other Clean Raw Milks." The purpose of the conference is to arrive at some constructive conclusion with respect to pasteurized milk.

Scarlet Fever and Diphtheria Epidemic.—An epidemic of scarlet fever and diphtheria has been menacing the Bronx for two months. During the past month nearly 1,000 cases have been reported to the board of health, and since the first of the year there have been as many as 40 cases of these two diseases reported in one day. The epidemic is believed by some to be due to overcrowded schoolrooms and the torn-up condition of the streets.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended April 25, 439 cases of tuberculosis, with 180 deaths; 1,891 cases of measles, with 39 deaths; 929 cases of scarlet fever, with 64 deaths; 344 cases of diphtheria, with 39 deaths; 33 cases of typhoid fever, with 11 deaths; 14 cases of whooping cough, with 1 death; 12 cases of cerebrospinal meningitis, with 7 deaths, and 153 cases of varicella, making a total of 3,815 cases and 341 deaths.

To Lessen the Number of Car Accidents.—The Public Service Commission has begun the work of seeing that the cars of the traction lines in the city are thoroughly equipped with safety devices to the end that the number of accidents may be diminished. In the six months ended Feb. 1, 1908, the street railways of Greater New York killed 299 persons and injured 944. The total number of accidents due to collisions of street cars was 1,196, and the number of vehicles and persons struck by cars amounted to 14,000.

Last Harvey Lecture.—The tenth and last lecture in the Harvey Society course will be delivered at the New York Academy of Medicine building Saturday, May 9, at 8:30 p. m., by Prof. A. E. Schäfer of the University of Edinburgh, on "Artificial Respiration in Man." Professor Schäfer, who has come to the United States to give the Herter lectures at Johns Hopkins Medical School, was chairman of a committee appointed by the Royal Medical and Chirurgical Society to investigate the phenomena attending death by drowning and the means of promoting resuscitation in the apparently drowned. His lecture will embody the results of much practical work on the subject of artificial respiration.

OHIO.

Hospital News.—At a meeting of the incorporators of the Union Hospital, Canal Dover, held March 24, Dr. R. S. Barton was re-elected a member and Dr. Samuel B. McGuire was elected president of the board.——The Emergency Hospital, Mansfield, erected at an expense of nearly $18,000, was opened for inspection March 17, and will soon be ready to receive patients. The institution offers accommodation in two wards for male patients, in one ward for female patients and two private rooms, accommodating in all 18 patients.——At the annual meeting of the staff of the Aultman Hospital, Canton, Dr. Frank W. Gavin was elected president; Dr. David F. Banker, vice-president; Dr. Charles A. Crane, secretary, and Dr. Edward O. Morrow, treasurer. A new operating amphitheater is soon to be built. Dr. Maria G. Pontius was elected a member of the staff, vice Dr. Katherine Burns, deceased, and Dr. J. Eugene Shorb was made radiographer.——The Solar Refining Company has made a donation of $1,000 to the Lima Public Hospital.

PENNSYLVANIA.

New Dispensaries Opened.—The State Department of Health has now opened 60 tuberculosis dispensaries in various parts of the state. The last two are located at Everett, Bedford County, in charge of Dr. Walter de la M. Hill, and at Stroudsburg, Monroe County, in charge of Dr. William E. Gregory. Another dispensary will be opened at Easton soon.

Millions in Benefits.—According to the report of the Pennsylvania Railroad Employé's Relief Fund for the twenty-five years of its existence, $18,000,000 in benefits has been paid out. The fund from which these payments were made is formed by voluntary contributions from members, from interest paid by the company on monthly balances and from income and profit on investments. There has been distributed $10,316,096, in 715,759 cases of disablement for periods ranging from one day to twenty-one years. Death benefits amounting to $7,117,962 have been paid to families of 12,365 deceased members. The company pays the cost of maintaining the fund, and the operating expenses of the relief department amounted to $2,686,908. The railroad paid deficiencies, amounting to $654,741, for relief to sick members, who had exhausted their title to benefits. The relief fund has a membership of 95,089, or an increase of 400 per cent. since its organization.

Philadelphia.

Extension and Improvement of Sewage System.—During the past week the director of public works has awarded contracts amounting to $247,052 for the extension and improvement of the city's sewage system.

Bequests.—By the will of the late Jane B. Shain, the Working Home for Blind Men and Blind Women of Philadelphia will receive $1,000 each and the Baptist orphanage of Philadelphia will receive $5,000.

Large Hall for Dr. McCormack.—On account of the large number of applications for tickets for the McCormack meeting, May 11, the committee of arrangements has secured the auditorium of Witherspoon Hall, which has a seating capacity of 1,000.

Cornerstone Laid.—The ceremonies of laying the cornerstone of the new home of the College of Physicians of Philadelphia, took place April 29. After an invocation by Bishop Whitaker, a short address was delivered by the president of the college, Dr. James Tyson, and the cornerstone was then placed by Dr. S. Weir Mitchell.

Physician Awarded Fee.—Dr. John H. Gibbon was awarded $500 by Judge Martin's court, April 16, for operating on a patient for appendicitis. The doctor's original bill was for $1,000, which was later reduced to $500, but the patient refused to pay more than $100. The annual income of the patient was $5,000.

Contract Awarded for New Hospital.—A contract has been awarded for the erection of the Frederick Douglass Memorial Hospital. It will be a five-story and basement structure, 60 by 135 feet, and containing receiving wards, operating room, physicians' and servants' quarters and a number of large ward rooms. The cost will be about $75,000.

Program for Medical Day. The medical day of Founders' Week will be held in the Academy of Music, and the following program has been arranged: "The College and Allied Institution of Philadelphia," George A. Pearsoll; "The Great Hospitals of Philadelphia," Dr. J. Chalmers Da Costa; and "The Development of Practical Medicine in Philadelphia," Dr. James M. Anders.

Smallpox.—Two more cases of smallpox were discovered in the southern section of the city during the past week, and as a result six houses were quarantined and about 200 persons residing in the neighborhood were vaccinated. The disease appeared in the section where two cases were found in the preceding week. The patients have been removed to the municipal hospital, and the malady is reported to be of mild type.

Measles Prevalent.—According to the returns made to the health bureau, measles is present in all sections of the city, and the number of cases reported for the first four months of the year were greater than for any corresponding previous period. The total number of cases reported during this period reached 4,102, distributed as follows: January, 359; February, 616; March, 1,017, and April, 2,110. During the week ended May 2, 504 cases were reported.

German Hospital Physicians' Meeting.—The annual meeting and banquet of the Association of Ex-Resident Physicians of the German Hospital was held May 1. Dr. Albert D. Whiting acted as toastmaster, and addresses were made by Drs. Charles Turnbull, Aloysius O. J. Kelly, Sherborne W. Dougherty and Mark Weed. The following officers were elected: President, Dr. James F. Berlet; vice-president, Dr. Henry F. Page; secretary and treasurer, Dr. Alfred Miller; and member of the executive committee, Dr. John F. Sinclair.

Health Report.—The total number of deaths reported for the week ended May 2 reached 513, including 242 males and 271 females. This is an increase of 14 over the preceding week and a decrease of 53 from the corresponding week of last year. The principal causes of death were: Typhoid fever, 14; measles, 17; scarlatina, 5; pertussis, 5; diphtheria, 8; consumption, 64; cancer, 21; meningitis, 4; apoplexy, 15; heart disease, 57; acute respiratory disease, 74; enteritis, 20; hepatic cirrhosis, 6; appendicitis, 4; Bright's disease, 30; premature birth, 8; congenital debility, 7; suicide, 2; accidents, 19, and marasmus, 4. There were 208 cases of contagious disease reported, with 27 deaths, as compared with 201 cases and 28 deaths reported in the previous seven days.

WASHINGTON.

Osteopaths and State Politics.—At the annual meeting of the Washington Osteopathic Association, held in Seattle, a candidate for governor was nominated, the association claiming that this was the only one of the various candidates who would give osteopathy a square deal. The association is said to be prepared to expend funds in its treasury to work against any candidate who is known to favor legislation against osteopathy, and to aid in legislation favorable to their cult.

Hospital Notes.—The Pulmonary Hospital of the city of Seattle has been incorporated by Drs. James B. Eagleson, Clarence A. Smith, William R. M. Kellogg and others. A fund of $50,000 is now available, and a building site will be selected and a building erected at once.——The King County Humane Society is interested in a movement to use the detention hospital at Seattle for aliens, where immigrants from the Orient, believed to be suffering from contagious diseases, may be isolated.——Dr. Franklin L. Carr, Hoquiam, is making arrangements to re-open his hospital at Montesano.——Drs. M. Jones and Joseph H. Fitz are about to open a hospital at Montesano.

GENERAL.

Physicians' Filing Cabinet Companies.—We have received several letters from physicians complaining that they are unable to have delivered to them cabinets purchased from the Simmons Agency and James H. Graves & Co., both of Chicago, and recommending that no money be forwarded to either of the above firms until the goods ordered are received.

Volunteer Emergency Service.—The National Volunteer Emergency Service, instituted in 1900, has recently been reorganized, Dr. James Evelyn Pilcher, Carlisle, Pa., being elected director general, and Dr. F. Elbert Davis, adjutant general. The work of the service is conducted along military lines, details being worked out in three separate corps, first-aid, public health and medical.

Coming Meetings.—The eleventh annual meeting of the American Gastro-Enterological Association will be held at the Auditorium Hotel, Chicago, June 1 and 2, under the presidency of Dr. John P. Sawyer, Cleveland, Ohio.——The Medical Association of the Southwest will meet at Kansas City, Mo., October 20 and 21, under the presidency of Dr. Thomas E. Holland, Hot Springs, Ark.——The annual meeting of the National Confederation of State Medical Examining and Licensing Boards will be held at the Lexington Hotel, Twenty-second Street and Michigan Avenue, Chicago, June 1, under the presidency of Dr. George W. Webster, president of the Illinois State Board of Health.——The annual meeting of the National Association for the Study of Epilepsy and the Care and Treatment of Epileptics will be held in Indianapolis, November 10 and 11, Dr. H. M. Weeks, Spring City, Pa., presiding.

CANADA.

Hospital News.—The proposed by-law to raise $225,000 for the purpose of the Winnipeg General Hospital has been killed in the Winnipeg city council, the mayor ruling there was no authority for submitting the question to a vote of the ratepayers.

Personal.—Dr. John T. Fotheringham, Toronto, will represent the Canadian Militia Medical Service at the meeting of the Army, Navy and Ambulance Section of the British Medical Association at Sheffield in July.——Dr. E. Ralph Hooper, Toronto, will spend several months in England and on the continent.——Dr. David E. Mundell, Kingston, has been appointed chairman of the medical section of the Canadian Fraternal Congress.

Annual Meetings.—The annual meeting of the Association of Ex-House Surgeons of Toronto General Hospital was held in Toronto, April 15, 40 being present. Dr. Thomas B. Futcher, associate professor of medicine in Johns Hopkins University, Baltimore, was present and delivered an address. The vice-chairman of the board of governors offered a handsome prize to the ex-house surgeon who would publish during the coming year the best contribution to medical literature. The following officers were elected: President, Dr. Alexander Taylor, Goderich, Ont.; vice-president, Dr. Frederick Fenton, Toronto; treasurer, Dr. William B. Hendry, Toronto; and secretary, Dr. John N. E. Brown, superintendent of the Toronto General Hospital.——The annual meeting of the Canadian Hospital Association was held in Toronto, April 21 and 22. "No Visitors Allowed" was the text of an address delivered before the association by Dr. Charles Sheard, medical health officer of Toronto, who characterized visitors to hospitals as nuisances. Dr. Henry M. Hurd, superintendent of the Johns Hopkins Hospital, Baltimore, delivered an address on "General Practitioners and Mental Diseases." The following officers were elected: President, Dr. W. J. Dobbie, superintendent of the Free Hospital for Advanced Cases of Tuberculosis, Weston, Ont.; vice-president, Dr. A. D. McIntyre, superintendent of the Kingston General Hospital, and secretary, Dr. John N. E. Brown, superintendent of the Toronto General Hospital.

FOREIGN.

Memorial to Annandale of Edinburgh.—Subscriptions are being collected to place a bust of the late Professor Annandale in his old lecture theater and to endow a gold medal to be awarded annually in his name. The appeal for subscriptions is signed by the principal of the university and others. Subscriptions are received by H. M. D. Watson, 13 Rutland Square, Edinburgh.

Lennander's Property Left to Medical Science.—The late Professor Lennander, the well-known surgeon of Upsala, Sweden, bequeathed his entire property to endow scholarships for medical students, for stipends for research work, and for a fund to provide free postgraduate courses in surgery, hygiene and other branches of medicine. He gave his library to the local medical society and his various collections to the Art Institute.

International Good Roads Congress.—An international gathering of those interested in promoting and the structure of good roads is to be held at Paris, October 11 to 18, this fall. Besides the purely technical questions, the subject of dust and its bearing on the public health and means of suppression will be discussed. Further details can be obtained on application to the general secretary at the Department of Public Works, Boulevard Saint-Germain 244, Paris, France.

Annual Meeting of the German Antiquackery Society.—The report of the work accomplished by the society during the last year, reviewed at the annual meeting held at Berlin, March 14, is very encouraging. The society is in good financial condition owing to the increasing membership, many medical societies and other organizations having joined it as well as individual physicians and laymen. The "quackery exhibition," held in the parliament buildings as part of the exhibit connected with the recent International Congress for Hygiene and Demography, attracted great attention, especially on the part of the state authorities. The "quackery exhibition" presents a graphic picture of the fraud, deception and injury of the public health from quack practices, and the past criminal records of many of the quacks, etc. One exchange comments that the exhibition was probably the entering wedge which made possible the bill now pending in parliament for restriction of irregular practice of medicine (described in these columns April 11, page 1213). A delegate from Austria stated that the regulations in that country against quacks are so stringent that there is practically no open quackery in that country. What there is bears the stigma of fraud and unreliability. The officers of the German society are Dr. Siefart (Hardenbergstrasse 39, Charlottenburg), Jakob, Lennhoff, Kempner and Manasse. The official organ of the society is now the popular *Guide to Health—Gesundheitslehrer*, published by Dr. Kantor.

LONDON LETTER.

(From Our Regular Correspondent.)

London, April 18, 1908.

Doctors Who Do Not Keep Their Windows Open.

The open-air treatment of consumption and hygienic teaching on the subject of ventilation has caused in recent years a great change in the habits of the people with regard to opening windows. The old belated idea that open windows involved a danger of catching cold has given place to an appreciation of the advantages of a good supply of fresh air and of the evils of badly ventilated rooms. Nevertheless, many persons who may claim to be enlightened cling to the old practice. It occurred to an enterprising daily paper to find out whether or not physicians practice what they preach in the matter of fresh air, and to take a census of physician's windows in the districts inhabited by the leading consultants—Harley street, Wimple street and Cavendish Square at 12 o'clock at night. In Harley street only 126 out of 1,390 doctors' windows were open. In Cavendish Square, the most fashionable medical locality in London, the number open was 10 in 161. In Wimple street only 58 out of 1,149 windows were open. In the two streets and the square there were 2,700 doctors' windows. A daylight inspection showed that 522 of them were open and, according to the preceding figures, at night the number had fallen to 194. The weather during these inspections was pleasant.

Miscellany

MEDICAL LEGISLATION IN 1907-1908.

During the past winter the legislatures in the following states have been in session: Georgia, Illinois, Idaho, Kentucky, Kansas, Maryland, Massachusetts, Mississippi, New Jersey, New York, Ohio, Oklahoma, South Carolina and Virginia. The legislature in Louisiana has just convened. A number of bills of interest to the medical profession have also been before Congress. We give below a synopsis of medical legislation for the year:

NATIONAL.

The most important bill introduced in Congress was the bill for the reorganization of the Army Medical Department, which became a law April 23, 1908. The object of this law is to secure a medical corps which will be adequate to perform the medical service of the Army in time of peace; to provide means of expansion to meet the conditions in time of war and special needs in time of peace; to offer sufficient inducement in the way of pay and promotion to attract the desirable class of young physicians, and to abolish the contract surgeon system. Under this law the personnel of the medical department has been increased from 320 to 443. Further increase will probably be required in the near future. The law provides for 14 colonels, 24 lieutenant-colonels, 105 majors and 300 captains and first lieutenants. It also provides that first lieutenants shall be promoted to the grade of captain after three years' service instead of five, thus giving the medical officers of the Army the same advantage regarding promotion possessed by medical officers of the Navy. Expansion of the medical corps in time of war is provided for by the organization of a Medical Reserve Corps, auxiliary to the regular medical corps. This reserve corps is to be composed of first lieutenants, regularly commissioned as such and holding all the authority, rights and privileges of commissioned officers of the same grade in the regular medical corps, except promotion and retirement. These rights, however, are held only when on active duty. In order to provide for the large number of contract surgeons now in the military service, the law specifies that on the favorable recommendation of the surgeon-general, contract surgeons shall be eligible to appointment on the reserve corps without further examination.

The passage of this bill marks the restoration of the Medical Department of the Army to the same position which it occupied previous to the Army reorganization. The immediate effect can be judged from the fact that since the bill passed the Congress five weeks ago there have been 35 applications filed for appointment on the medical corps as compared with 47 applications in the preceding seven months. This bill received the endorsement of the Conference, as well as of the Committee on Medical Legislation, which latter body exerted its influence in favor of the measure.

At the beginning of the present session of Congress, three bills affecting the Medical Corps of the United States Navy were introduced. None of them has become a law. It is understood that they have been withdrawn for the purpose of amendment and revision, and will be introduced in improved form at another session. The usual bill providing for a board of osteopathic examiners for the District of Columbia was introduced into the House early in the session. This bill has not been reported on. Some variety has been added to the usual program by the introduction of a bill establishing a board of examiners for "chiropractics," whatever they may be. This bill also has remained in committee.

STATE LEGISLATION.

The amendment to the Illinois practice act has already been commented on.

No legislation of direct medical interest has been reported from Georgia or Idaho.

The Louisiana legislature has only recently convened and no definite reports have yet been received.

KANSAS.

An amendment to the medical practice act, approved Jan. 31, 1908, was adopted by the legislature. The amendment consists in an addition to the definition of the practice of medicine, adding the following clause to the definition of those who shall be regarded as practicing medicine and surgery within the meaning of the act:

. . . . "or any person attempting to treat the sick or others afflicted with bodily or mental infirmity; or any person representing or advertising himself by any means or through any medium whatsoever or in any manner whatsoever, so as to indicate he is authorized to or does practice medicine or surgery in this state, or that he is authorized to or does treat the sick or others afflicted with bodily infirmities."

KENTUCKY.

The last session of the Kentucky legislature was productive of one of the best pure food laws yet enacted by any state. A synopsis of this law appeared in The Journal for March 21, 1908. This act, together with the pure food laws of Tennessee and Iowa, constitutes the best state legislation on this subject yet formulated. The Kentucky and Tennessee laws have been reprinted in pamphlet form and can be obtained from this office on receipt of a stamped-directed envelope. A law appropriating $25,000 for the use of the state board of health was passed by the legislature, but was vetoed by the governor. A bill defining the crime of abortion and prescribing a penalty therefor was also vetoed by the governor. Other bills introduced were a bill establishing a central bureau of vital statistics for the registration of births and deaths, a bill changing the name of the Agricultural and Mechanical College of Kentucky to the State University of Kentucky and providing for a medical department thereof, a bill amending the state board of health act by placing the appointing power in the hands of the governor, a bill authorizing the state board of health to arrange for school instruction for the prevention of tuberculosis, typhoid fever, diphtheria and other preventable diseases, and a bill providing for the establishment of a state sanitorium for the cure and treatment of tuberculosis.

MARYLAND.

The bill which has attracted the most attention in Maryland has been the so-called "healers" bill, referred to frequently as the "Anti-Christian-Science Bill," as it was assumed that the bill was aimed at that sect more than any other. The bill amends the Maryland medical practice act by adding the following amendment to the definition of the practice of medicine:

"Any person shall be regarded as practicing medicine who shall append to his or her name any title indicating that he is a healer or who shall profess to heal any ailment or supposed ailment, or who for hire or any gratuity or compensation, directly or indirectly, to him paid by or for any patient, shall undertake to treat, heal, cure, drive away or remove any physical or mental ailment or supposed ailment of another by mental or other process, exercised or invoked, on the part of either the healer or the patient, or both."

This amendment was passed by both houses of the legislature and became a law through the governor's signature. As this is the first instance of state legislation directed specifically at the mental healers, it is of particular interest.

This bill was not introduced nor pushed by the medical profession, but was inaugurated and supported by laymen entirely. The principal objection urged against the bill was not that it prohibited the "healer" from following his religious views, but that it forbids healing for a fee. It does not interfere in any way whatever with the belief, teaching or practice of Eddyism as a religion, neither does it prevent any followers of this cult from adding their "healing efforts" to the work of a legally qualified physician who is endeavoring to restore the patient to health. The bill was prepared and introduced by two laymen, one of whom lost two of his children on account of his wife's adherence to Eddyism. The debate in both the senate and house was heated and the interest manifested throughout the state was intense, but the bill was finally adopted.

Other bills introduced were for the regulation of the sale of milk; for the inspection of cattle; to prevent expectoration in public places; for the examination of school children; for the appropriation of money to aid in the erection of a building in Baltimore for the Medical and Chirurgical Faculty—the state society—and for the drainage of swamp lands in order to exterminate mosquitoes. The bill appropriating $100,000 for a faculty building was amended by substituting $25,000, and passed in this form.

MASSACHUSETTS.

A number of bills have been introduced into the Massachusetts legislature, notably, a bill providing for the appointment of a state board of examiners in "optometry;" a bill providing for the registration of osteopaths; a bill prohibiting compulsory vaccination; a bill providing for a nurses' registration board; a bill prohibiting expectoration in public places and a bill providing for the keeping of records of births by physicians and midwives. The state board of registration also presented an amendment to the medical practice act, defining medical practice and recommending the adoption of an amendment requiring a four years' course of study in a chartered school of medicine. The provisions of the Massachusetts act in these particulars are weak, and the board of registration has attempted repeatedly to secure a better law. We have not been advised regarding the passage of any of these bills.

MISSISSIPPI.

The following bills have been introduced into the state legislature: A bill regulating the sale of cocain; a bill to prevent the spread of tuberculosis; a bill regulating the manufacture and sale of cigarettes; a bill amending the Mississippi code so as to require the examination of persons suspected of insanity by two reputable physicians instead of before a jury; a bill creating a pathologic and chemical laboratory for the use of the state board of health; a bill giving physicians a lien on the crop of any person indebted to them; a bill changing the manner of appointing the county medical officer; a bill regulating the practice of optometry; a bill providing for a bureau of vital statistics, and a bill regulating the board of health law.

The last bill, which provided for a board of health of ten members, all to be nominated by the Mississippi State Medical Association, was defeated, the law being retained as it stood, providing for five members to be nominated by the state association and eight members, one from each congressional district, to be appointed by the governor. The bill creating a state board of examiners in optometry passed the house of representatives and was defeated in the senate.

NEW JERSEY.

The bill which has attracted the most interest from a medical point of view has been the anti-vivisection bill. This bill modeled closely after the New York bill, was drafted for the express purpose of hampering the work of the Rockefeller Institute. The state medical society organized a determined fight against the bill. Two hundred and fifty prominent physicians from all parts of the state, together with leading scientists and educators of the medical profession from New York City, Philadelphia, Princeton University, etc., appeared before the committee to which the bill had been referred and spoke against its adoption. The arguments made for and against the bill were reviewed in The Journal, March 21.

An osteopathic bill was also introduced, which was opposed by the medical profession of the state on the ground that the amendment lowered the requirements by lessening the prescribed course of study. Neither of these bills was passed. A new board of health bill was also adopted.

NEW YORK.

The bills which have attracted the most attention in New York have been those amending the medical practice act passed last winter. An adroit attempt to lower the standard was made by a bill which changed only the word "and" to "or," but which would have allowed osteopaths from outside the state of New York to secure license in the state without having had more than a two-year course. An optometry bill was also introduced and passed both houses and is now in the hands of the governor. The usual anti-vivisection bill providing restrictions on animal experimentation was withdrawn by the introducer.

OHIO.

A most vigorous campaign for better health regulations has been carried on by the committee on medical legislation of the Ohio State Medical Association. A large number of bills has been introduced at different times, some of which, such as the Elson non-medical healing bill, the optometry bill, the nurses' bill, etc., have been commented on in The Journal from time to time in the past few months. A summary received from Dr. J. W. Clemmer, chairman of the state committee on public policy and legislation, reads as follows:

"The Elson non-medical healing bill was defeated in the house by a vote of 31 to 50. The optometry and nurses' bills were not taken out of committee. The following bills have been enacted: The pure food and drug bill; bill regulating buildings for occupancy and habitation; bill providing county hospitals for tuberculosis; bill for the regulation of lying-in hospitals and maternity boarding houses. The vital statistics bill, introduced by Mr. West, passed both houses. The medical advertising bill, drafted along the lines of the Colorado law, has passed the house, and it is to be hoped will pass the senate in the last week of the session."

The medical profession, as well as the state legislature in Ohio, is certainly deserving of much credit. The Elson non-medical healing bill was a most absurd piece of legislation, but was supported throughout by the proprietary medicine men of the state in an effort to "get even" with the medical profession in Ohio on account of the pure food and drug bill and the agitation regarding "patent medicines." The bills establishing boards of registration for optometrists and for trained nurses were both objectionable. It is certainly a noteworthy achievement when a state association secures legislation regulating pure food and drugs, passes a vital statistics law, and at the same time prevents the adoption of any vicious bills.

OKLAHOMA.

The legislature of the state of Oklahoma has been in session all winter, framing legislation for the new state. As is to be expected, a large number of bills has been presented and much discussion has ensued. Extended comment on legislation in this state is deferred until the legislature has completed its work.

SOUTH CAROLINA.

A bill establishing a board of registration of trained nurses failed of adoption. The most important law passed was an amendment to the medical practice act which gave the State Board of Medical Examiners the power to revoke the license of any practicing physician or surgeon qualified under the act or qualified prior or subsequent to the passage of the act, for felony, gross immorality, addiction to liquor or drugs or conviction of illegal practices. The clause in the law allowing the board to issue licenses on the strength of five years of practice was eliminated. Osteopaths are required to pass an examination in all branches except materia medica, therapeutics and major surgery.

A bill authorizing the appointment by the state board of health of a state health officer was also adopted. As the result of the passage of these two laws, the position of both the state board of health and the State Board of Medical Examiners is greatly strengthened.

A bill prohibiting the manufacture and sale of adulterated or misbranded food or drug articles also became a law.

VIRGINIA.

A vital statistics bill, providing for the registration of deaths in Virginia, was introduced and was supported by the medical profession of the state, but was defeated by the united opposition of the undertakers of Virginia, who were opposed to the features of the bill requiring death certificates, burial permits, etc.

The bill in which the medical profession of the state was most interested was one repealing the license tax levied on practicing physicians. The medical profession in the state has repeatedly endeavored to secure the repeal of this law, but has not as yet been successful. A bill creating a state board of health and appropriating $40.000 yearly for its use became a law, as well as an act authorizing the appointment of a state dairy and food commissioner who should have oversight of the dairy food and drink products and of the manufacture and sale of them in the state. This latter law, while the title relates entirely to the appointment of a dairy and food commissioner, is in reality a pure food law.

Medical Language.—The writings of Hippocrates, Aristoteles and Galenos, as well as of Celsus, Plinius and Vegetius, are, and will remain for all scientists, the basis and test for correctness of language, and purity of Greek and Latin terms in the domain of natural philosophy. Pollux, in his Greek "Onomasticon," has stored up the existing supply of medical onomatology. It is by this means that these sciences still bear to-day the stamp of intercommunity, simplicity and internationality, and this fact makes it an indispensable duty for every physician and natural philosopher to acquire a knowledge of these two languages. Without a knowledge of etymology and the laws of word construction a linguistic expression will not be retained in the memory; it possesses neither sense nor form, its relations and differentiations are unrecognizable and obscure, throwing the door wide open to arbitrary misconception and linguistic malformations.—D. H. Zimmerer, Professor of Philology, Regensburg, Germany.

Why Children Are Stupid.—The so-called stupidity, inattention, indifference to study, ill-temper, incorrigibility and truancy of children are in reality, in a large percentage of cases, simply the indirect result of some physical defect that influences the whole moral and mental state of the child. Such children, instead of being given extra tasks, by way of punishment, the rod or the discipline of the reformatory, really need glasses to correct eyestrain, the removal of adenoids, more fresh air, healthful exercise, or the services of a good dentist. Children under 8 years of age should be cared for in playgrounds, situated in parks, where nature study and systematic exercises may be carried out. Gymnasiums and forced baths are often most valuable.—From a lecture by Dr. H. Warren Buckler.

Therapeutics

[It is the purpose of this department to outline an up-to-date management of disease, to suggest scientific treatment for diseased conditions, and to present prescriptions that are simple, useful and palatable. Prescriptions are written in both the metric and apothecaries' systems, but the amounts of the ingredients are NOT exact translations of one system into the other, but quantities convenient for pharmacist and physician. It should be understood that solids are weighed in grams or fractions of grams, while liquids are measured in cubic centimeters; that a teaspoon holds five cubic centimeters, i. e., more than a fluid dram, hence a 100 cubic centimeter preparation will contain twenty doses.]

Podophyllum or Mayapple.

Podophyllum is the dried rhizome of a perennial herb which grows in the woods of Canada and northern and middle United States, and is sometimes called wild mandrake and umbrella plant. It contains besides starch, a resin (4 to 5 per cent.), a gum, a fixed oil and gallic acid. The active principle is contained in the resin, and is called podophyllotoxin, to which is due the purgative properties of the drug. The resin also contains podophyllinic acid.

The drug is practically without odor, but has a bitter, acrid taste. It is slightly irritant to the skin, and decidedly so to mucous membranes, and, therefore, is slightly stimulant to the stomach mucous membrane, but acts mostly on the intestinal canal, causing increased peristalsis. Its action is very slow, taking from ten to fifteen hours to cause a movement of the bowels. There may be some griping pains, perhaps accompanied by a little nausea and rarely vomiting. The movements are soft, and if the drug has been taken alone, there may be several. In proper combinations only one good movement a day occurs, making this drug valuable as a laxative. It seems to cause an increased output of bile, and, therefore, stimulates the activity of the liver. It also probably reflexly or otherwise stimulates the other digestive organs. As it can cause considerable griping and irritation of the intestines, even to causing blood-stained stools, the drug should not be used as a cathartic. As it seems to be active in the duodenum and a stimulant to the liver, it has been classed as a cholagogue. Its irritant action should class it with the irritant or drastic cathartics, although its best use is in small doses in combination with other mild cathartics as a laxative. Consequently its best use is in chronic constipation.

The most active preparation is the resin, which should be combined with other slow-acting cathartics, as aloes, rhubarb or colocynth. It should not be given with cathartics that act quickly, as it would then either be useless and pass off without any action at all, or would cause irritation of the bowels and movements after the quicker acting cathartic had finished its work. It should be remembered that this drug is an irritant, and consequently should not be administered when there is inflammation of the intestines, and should probably not be given to children. Its overaction has caused death. Besides its combination with other slow-acting cathartics, a drug to control its tendency to cause griping is indicated. In other words, it is well combined with hyoscyamus or belladonna, and sometimes with an aromatic like ginger or capsicum.

The full dose of the drug itself is 0.5 gram, or 7½ grains, but as there is occasionally a susceptibility of patients to overaction from this drug, the beginning dose should be smaller than the above.

The best preparation is:

Resina Podophylli (podophyllin), the resin of podophyllum. The laxative dose is 0.005 gram, or 1/12 grain.

Fluidextractum Podophylli is the only other official preparation of podophyllum. The laxative dose is 0.25 c.c., or 4 minims.

The resina podophylli is an ingredient of the following official and National Formulary pills:

Pilula Cathartica Vegetabilis, U. S. P.
Pilula Podophylli Belladonnæ et Capsici, U. S. P.
Pilula Aloes et Podophylli Composita, N. F.
Pilula Aloini Composita, N. F.
Pilula Colocynthidis et Podophylli, N. F.
Pilula Laxativæ Post Partum, N. F.
Pilula Triplices, N. F.

The dose of any of these is one pill, increased if deemed advisable.

The Pilula Podophylli Belladonnæ et Capsici is the only one of the above that has podophyllum as its only cathartic. The other pills are all in combination with other laxatives or cathartics. The Pilula Cathartica Vegetabilis contains besides the resin of podophyllum, compound extract of colocynth (which contains besides colocynth, aloes and scammony), hyoscyamus, jalap and leptandra. The Pilula Aloes et Podophylli Composita and the Pilula Aloini Composita contain aloes and podophyllum and aloin and podophyllum respectively. The Pilula Colocynthidis et Podophylli contains the compound extract of colocynth and the resin of podophyllum. The Pilula Laxativæ Post Partum contains the compound extract of colocynth, aloes, ipecac, resin of podophyllum, and extract of hyoscyamus. The Pilula Triplices contains aloes, mercury and podophyllum.

Acne.

Dr. Sutton, Kansas City, Mo., in the *Therapeutic Gazette*, Feb. 15, 1908, discusses the etiology and treatment of this common disease of the skin. It occurs most frequently from the time of puberty to 24 or 25 years of age, and if it occurs later in life is due to some distinct digestive disorder. It is often accompanied or preceded by fermentative dyspepsia, constipation, anemia, and in girls and women by uterine disturbances. Sutton does not think that sexual indiscretions have much to do with causing the disease. Certainly living or working in dusty atmospheres and the infrequent use of soap and water on the face are distinct etiologic causes.

While the prognosis of cure is favorable, the length of time it will take for the condition to be cured varies from one to several months, and there are few skin diseases in which systemic treatment is more important.

Good hygiene, perfect cleanliness, perfect hydrotherapeutic care of the skin, fresh air during sleep, outdoor exercise and a proper diet are necessities for cure that can not be overestimated. All sweets, as candies and cakes, fried stuffs and greases (as gravies), hot breads, pastries, pancakes, oatmeal and other gummy cereals should be avoided. Iced water and excessive amounts of tea, coffee, and even rich cocoa should be prohibited. Much sour food, whether taken as condiments, as pickles or as vinegar, should also be avoided. A constipated condition should be corrected by the means found best for the individual patient, i. e., by diet, exercise, plenty of water between meals, fresh fruits, and if must be, by the laxative found best, with cascara sagrada as the preference.

If the appetite is poor, a bitter tonic before meals is indicated, and none better than nux vomica or gentian, as:

℞.
c.c
Tincturæ gentianæ compositæ..........100| or fl℥iv

Sig.: A teaspoonful, in water, three times a day, before meals.

Or:

℞.
c.c.
Tincturæ nucis vomicæ.................. 25| or fl℥i

Sig.: Five drops, in a wineglass of water, three times a day, before meals.

When the "utero-ovarian system is not properly performing its function" in young girls, Sutton finds that the administration of ovarian extract is beneficial, as:

℞.	gm.		
Glandularum ovarianarum siccarum......	2	or	gr. xxx

Fac capsulas 20.

Sig.: One capsule twice a day, between meals.

He advises using the above capsules for one week, then discontinuing for a week, and then repeating.

If there is a scanty menstrual flow or much dysmenorrhea, he advises the administration of viburnum, as:

℞.	c.c.		
Fluidextracti viburni prunifolii..........	50	or	fl℥ii

Sig.: One-half teaspoonful, in hot water, every three hours.

If there is anemia he, of course, uses iron and arsenic, alone or together, taking care not to upset the digestion, as:

℞.	gm.		
Ferri reducti	2	or	gr. xxx
Arseni trioxidi	|04		gr. ⅔

M. et fac capsulas 20.

Sig.: One capsule three times a day, after meals.

He finds ichthyol, or some combination of it, of advantage in relieving the intestinal indigestion of acne patients, and uses it nearly always in this disease.

℞.	gm.		
Ammonii ichthyosulphonatis	6	or	ʒiss
Glycyrrhizæ .... q. s.			q. s.

M. et fac capsulas 20.

Sig.: One capsule three times a day, after meals.

Sutton prefers the ichthyol in the form of the albuminate, viz., ichthalbin, made up into 5-grain tablets (one three times a day, after meals).

As to local treatment, he recommends that the comedones be expressed each day with an instrument made especially for that purpose, and as to external applications he thinks that lotions are the best, and as a mild application recommends the following:

℞.	gm. or c.c.		
Zinci sulphatis	1|50		gr. xxx
Sulphuris præcipitati	4	or	
Potassii sulphidi	4		āā, ʒi
Aquæ	100		fl℥iv

M. et Sig.: Shake well, and apply with a cotton swab night and morning.

[This should be dispensed in a dark bottle.]

When the type of the disease is more severe, all the active ingredients should be increased in strength. "The effect is stimulating, astringent and antiseptic." If the superficial inflammation which is caused by this application is too great, the simple sweet unguentum aqua rosa is as satisfactory as any other ointment.

In the deep, indurated forms of acne the pus sacs should be opened with a bistoury, "the contents squeezed out, and the cavities mopped with a tiny cotton swab dipped in pure phenol (carbolic acid)." The above treatment he has found generally satisfactory, and various disagreeable ointments are not needed.

If the disease is aggravated and does not readily yield to treatment, he obtains good results with the *x*-ray. He prefers to use "a soft tube, placed from 30 to 50 centimeters from the affected area, making the exposures very brief (from two to five minutes at first)," and repeats the treatment two or three times weekly. If the patient is to be thus benefited, improvement is soon apparent.

Enterocolitis of Young Children.

Three valuable papers on this subject, which it is none too early in the season to discuss, appeared in the *British Medical Journal*, Oct. 13, 1906. The first paper, by Dr. Charles G. Kerley, New York, was on the prevention of this disease.

As the best prevention, viz., removal to a cool, healthy climate, can not often be inaugurated, the prevention at home with poor environment must be discussed. He says that the predisposing causes are a disordered gastrointestinal tract, infected food, faulty feeding methods, and an absence of appreciation on the part of the parents and even physicians of the fact that an attack of diarrhea or vomiting, or even a green, undigested stool occurring in an infant under eighteen months of age during the hot summer should be looked on as a serious matter requiring prompt relief. As the diet of the artificially fed child is milk, which so readily becomes infected, the best safeguard against accidental imperfections in the milk is a healthy resistant intestine. The child's intestine becomes unhealthy and susceptible to infections or to toxins taken in by the mouth from the foolishness and ignorance of mothers who feed their children a little of all sorts of foodstuffs. The resistance power of such children having been reduced, an unclean milk during the heated term starts the enterocolitis, and the prognosis is serious.

As the ability is developed in different communities for mothers to obtain pure milk for their young children, the frequency of this disease will diminish. Kerley also advises the proper instruction of every mother whom the physician sees (and especially in dispensary practice, and best by printed pamphlets), in the way to prepare the baby's food. She should be taught that her own hands must be thoroughly cleansed as well as the utensils used in preparing the food, and that the milk should be as pure and clean as can be obtained. She should next be told that at the first sign of intestinal derangement, regardless of the season of the year, the milk should be stopped at once and the baby sustained for a day or so on some "cereal water, such as barley or rice, together with the administration of a dose of castor oil."

Kerley particularly emphasizes the necessity for the prevention of little inflammations of the intestinal canal during other seasons of the year, as babies having had such infections are more susceptible to the more serious intestinal disturbances of the hot weather. He emphasizes the seriousness of the greenish stool, and that it should be an indication to the mother that the child needs medical advice.

Dr. John L. Morse, Boston, in the second paper of this symposium, discusses the dietetic treatment of this disease, and states that the object aimed at is "such an arrangement of the food as will starve the bacteria without starving the baby." In other words, the baby must receive a reasonable amount of nourishment of such a food as will be a poor culture medium for bacteria.

In the beginning of the treatment total abstinence should be ordered, the length of time depending on the condition of the patient: all the babies can stand twenty-four hours without nutriment, most of them standing forty-eight, this provided that they are given a sufficient amount of water. They must receive as much water in twenty-four hours as they normally would get in their food, and the amount of water must be carefully prescribed. If the baby takes the water willingly by the stomach and it is retained, that method of administration is sufficient. If it is not retained, it must be injected into the colon by means of a long tube, and if it is not retained by the colon he advises administration of physiologic salt solution subcutaneously, the amount thus injected being from two to six ounces, depending on the age and size of the infant. It is useless to repeat such an injection until the previous one has been thoroughly absorbed. The administration of water in one of the above methods is absolutely necessary for the life of the patient. The amount of water lost by vomiting and purging if not replaced so depletes the blood as to cause the retention of toxins, the inhibition of kidney function, and paralysis of the circulation.

The first food given after from twenty-four to forty-eight hours should be a weak, diluted nutriment. Morse believes that it is not generally recognized how little nutrition is contained in barley water, which "as usually prepared contains only about 0.05 per cent. of fat, 0.25 per cent. of proteid and 1.5 per cent. of starch, and thus contains only one-tenth as much nutriment as milk. The white of one egg is equal in nutritive value to only three-fifths of an ounce of milk, while beef juice contains 0.6 per cent. of fat, and 2.9 per cent. of proteid, giving a nutritive value, bulk for bulk, of only one-fourth as great as milk. Broths contain only about 1 per cent. of proteid, and hence have a minimum nutritive value." Therefore, many times a very much diluted milk will be as valuable for nutrition, and may not cause any more disturbance of digestion than do these substitutes.

In selecting a substitute for milk one should endeavor to select one in which the germs present do not readily thrive. While a scientific examination can not often be made, "a clinical rule of some value is that sour stools mean bacteria which thrive on sugars and starches, and foul stools those which thrive on proteids." Morse finds that in these conditions of foul stools the babies do better on starches and sugars than on proteid foods, and he generally selects barley water and milk sugar. When proteids are indicated, the white of egg in the form of albumin water, beef juice, and broth may be used. He cautions that whatever substitute for milk is used, the amount of liquid must be kept up to the required limit, just as during the starvation period.

It is seldom wise to return to a milk diet until the temperature and the movements have become normal. However, after the baby has been sick a week it may be necessary to give some form of modified and pasteurized milk, even if the disease has not stopped. Too much alkali should not be given either medicinally or in the food, as it will retard the formation of the chyme for nutrition and healthy intestinal digestion. In the beginning of the return to a milk diet he finds milk whey often valuable. "It contains about 1 per cent. of proteids and 5 per cent. of sugar." He also has lately found that pasteurized buttermilk is a good initial milk food. Buttermilk contains very little fat, a moderate amount of sugar, a considerable amount of proteids, and lactic acid, and also contains lactic acid bacteria. He has pasteurized this milk, but is not even sure that pasteurization is necessary, as the advantages of buttermilk as a bowel antiseptic have lately been lauded.

When the baby shows no signs of improvement and is gradually failing in spite of all medicinal, dietetic and hygienic treatment, a wet nurse should be considered, as patients have been saved by such natural nutrition.

(*This subject is to be continued.*)

Aneurism in Celiac Axis Superposed on Aneurism of Aorta.—G. Baccelli based this diagnosis—which was confirmed in every point by autopsy—on the facts that the patient was a syphilitic and hard drinker, who had had symptoms, previously, suggesting angina of the abdominal aorta, what Baccelli calls "angina abdominis," similar to angina pectoris. Both ventricles were enlarged, the right less than the left. The stomach was unusually low and the tumor corresponding to the assumed aneurism in the celiac artery rested on the lesser curvature, while no trace could be found of the trunk of the celiac artery. The aneurism in the celiac artery partially rested also on a much older aneurism in the abdominal aorta; the patient succumbed to a rupture between them. Baccelli's report was published in the *Policlinico*.

Pharmacology

THE BROADER AIMS OF THE COUNCIL ON PHARMACY AND CHEMISTRY.

TORALD SOLLMANN, M.D.
Member of the Council, Professor of Pharmacology and Materia Medica at the Medical Department of Western Reserve University.
CLEVELAND, OHIO.

(*Continued from page 1439.*)

VII. HAVE ALL THE WORTHY PRODUCTS BEEN ACCEPTED BY THE COUNCIL?

As I have pointed out in the preceding paper, the policy of enforcing the rules uniformly has obliged the Council to accept some products which its individual members would prefer to see excluded. I have also pointed out that much, if not all of this, can be avoided in the future by making these rules more exacting. I believe that eventually the products already admitted should be re-examined and made to pass the muster of the more stringent standards. This must, however, be done conservatively, gradually, and in a sense tentatively. The manufacturers who have made sacrifices to conform to the original rules of the Council should be granted the benefit of these rules for a reasonable time. Nor should any revolutionary tactics be employed without some investigation as to their ultimate influence on the complex problems which need solution. Finally, before definitely committing itself to any new and far-reaching policies, the Council needs to be assured that these will command not merely the moral but the active support of the medical profession. Without this active support a rule of the Council is valueless.

It is evident, therefore, that improvements should not be expected too rapidly. This, however, is not so important as it might appear, since more exacting standards, such as those suggested by Dr. Brady, can in the meantime be applied by the individual physician. He will not need the Council to tell him that the name "Migrainin" suggests something to his patient; or that "Elixir Buchu Juniper and Potassium Acetate, P. M. & Co." is not distinguished by a high order of originality. If he objects to such practices—as he should—they are by their very nature so conspicuous that he will recognize them at sight, and refrain from using the objectionable products. It is just as well to remember that the Council has always emphasized that it does not *approve* any product—that the admission of an article means nothing more than that the product complies with the rules, and is therefore entitled to the consideration of the profession—whether that consideration is to be favorable or unfavorable is a matter for the decision of the individual practitioner. He—and not the Council—must be the final arbiter of his prescribing.

The question whether every product in the lists of the Council constitutes an advance in therapeutics (the answer would be a very emphatic No!) is really much less important than the converse question, whether every eligible proprietary product can be found in these lists. Whether, in fact, the absence of a product from these lists is presumptive evidence that the product is not entitled to confidence; or, on the other hand, whether there is any truth in the plea that the Council has been able to consider only a small fraction of the worthy products.

To throw some light on these questions, a tabulation was made of the advertisements of proprietary medicines occurring in the January, 1908, numbers of six representative medical journals.[1] Of the nearly two hundred articles thus advertised, approximately two-thirds have been considered by the Council. Of the relatively small number which had not been brought before the Council, fully two-thirds present such obvious violations of the rules that their consideration would be a mere matter of form; the few which remain are so unimportant that I had never heard of them.

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[1] Boston Med. and Surg. Jour., January 16; Chicago Med. Recorder, January 16; Interstate Med. Jour., January; Medical Record, January 4 and 11; New York Med. Jour., Jan. 4 and 11; Therapeutic Gazette, Jan. 15.

This test, then, seems to show that the Council has indeed well completed its first task of sorting the important products on the market, and the prescriber need not fear that any worthy article of established reputation and value has been omitted. The principal work which the Council has still to do in this direction is to re-examine products which have been refused recognition, but which have since been reformed; and to examine the new products which are constantly being introduced. The consistent and universal refusal to prescribe these products until they conform to the admittedly liberal requirements of the Council will be the most efficacious method of securing their prompt submission or reformation.

The Council, however, does not confine its investigations solely to those preparations submitted voluntarily by manufacturers, but periodically examines the advertising pages of the medical press for articles which seem to require consideration. The impression which has been fostered by some of the opponents of this movement—that the Council is too busy to take up new products—is entirely false. The Council is, and for a long time has been, ready to consider at once any product which may be submitted to it; and to render a verdict in a very few weeks, if the available evidence is clear and decisive.

(*To be continued.*)

ARHOVIN.

A Proprietary in Process of Evolution.

The German product iodofan was referred to recently[1] and attention called to the discrepancy between the facts, as determined by analysis, and fiction, as represented by the manufacturer's description. Instead of containing nearly 50 per cent. of iodin, as represented, it actually, according to the analysis, has less than 5 per cent.—a remarkable variation! Another preparation of this same firm is arhovin which, unlike iodofan, has been on the American market some time. This product seems to be in an evolutionary state with regard to its composition. According to the descriptive advertising matter sent out a few months ago by the American agents, arhovin at that time was a "thymyl-benzoate of diphenylamine." This description is eminently scientific—providing it is true. Possibly because such a specific description could be challenged with comparative ease, the "literature" sent out a little later described the product as a "chemical compound of diphenylamine, thymol and benzoic acid." This, of course, is less definite and would be proportionately harder either to prove or disprove. The latest description (or the latest we have seen) gives even greater opportunities for "hedging" should that be necessary. Here we find that arhovin "consists of diphenylamine and thymol-benzoicacid-ethyl-ester in *molecular* proportions." [Italics ours.—Ed.] Thus in its evolution from the atomic to the molecular and from the specific to the general, we may confidently expect before long to hear that this much advertised "synthetic" has become a mere mixture.

Firms of the better class are beginning to recognize the unwisdom of jeopardizing their reputations for commercial integrity by standing sponsor for the wildly unscientific statements put out by some of the foreign pharmaceutical manufacturers. This will result in the weeding out of the valueless foreign products and in saner descriptions of those which may become valuable therapeutic agents.

Gowan's Pneumonia Cure.

Wallburg, N. C., Feb. 19, 1908.

To the Editor:—Please print the analysis of "Gowan's Pneumonia Cure." What effect does this remedy have on pneumonia? J. A.

Answer.—The results of an examination of this preparation in the American Medical Association's laboratory follow:

This preparation was not considered of sufficient importance to warrant an exhaustive chemical analysis, as its general character, sufficient for all practical purposes, can be determined by a cursory examination. The "pneumonia cure" as found on the market is a brownish ointment, having an odor of camphor. When applied to the skin, or subjected to a temperature approximately that of the body, it becomes liquid. It is almost completely soluble in chloroform, indicating the absence of any appreciable quantity of water or inorganic constituents. Tests indicate that the base of the ointment is a fat. From these facts we conclude that "Gowan's Pneumonia Cure" is an ointment composed of some fat having a low melting point and containing camphor, and, if the statements on the label are to be given credence, a small quantity of opium.

This nostrum is recommended by the purveyors as a valuable remedy for local application and it is said to be "antiseptic, nutrient, antipyretic and diaphoretic." It is claimed that it will determine blood to the surface and relieve congestion. The base is said to be emulsified fats which are readily absorbed and the implication is made that the other constituents, also, are absorbed. It probably equals in therapeutic value the old fashioned camphorated oil application. In common with other so-called "cures" sold to the public, its viciousness lies in the false sense of security its use engenders.

Correspondence

Comparative Potency of Hyoscin and Scopolamin Hydrobromid in Refraction Work.

REPLY TO DR. REBER'S PAPER.

Cleveland, Ohio, April 27, 1908.

To the Editor:—The appearance of Dr. Reber's paper in the last issue of The Journal (April 25), reminds me that you asked my opinion of this contribution some time last summer. I remember that I protested with some emphasis against its publication until Dr. Reber should have confirmed his conclusions with regard to a few quite elementary precautions. I do not doubt that you had good reasons for disregarding this advice, but since the paper will tend to throw discredit on clinical research, I would ask you also to give space to the comments which I sent you at that time.

Torald Sollmann.

The comments referred to above appeared in the following letter, which was dated July 27, 1907, at Cleveland, Ohio:

The paper of Dr. Reber carries two important lessons: 1. The experience of the practicing physician furnishes a wide opportunity for research in pure science, to one who can see the problems, and has the inclination and knowledge to follow them up. 2. Without this special knowledge, research work is a waste of time, or worse. In this sense Dr. Reber's paper does not deserve publication, for it makes for a low standard in research, and it would be very misleading to anyone unfamiliar with the facts.

Dr. Reber observed that the effects of what is known commercially as hyoscin and scopolamin, in his hands, appeared to be somewhat different, and undertook to confirm this difference by exact experiments. The experiments which he made confirmed his impression, and he concludes therefrom that hyoscin and scopolamin are not identical, physiologically or chemically. This would not by any means be the first instance when the differences in chemical composition have been demonstrated by physiologic means—indeed, the physiologic method is one of the classical means of demonstrating such differences, since its introduction by Pasteur. The principle of Dr. Reber's research is, therefore, correct and his object was most praiseworthy. So far as I can judge, his clinical work was also painstaking; but one becomes a little skeptical when one reads in his first notes (to which he incidentally refers) that the same methods, which he then stated to be "as close an approach to mathematical perfection as we find anywhere in Nature" (*Am. Jour. Pharm.*, 1899, lxxi, 285), and which he now claims prove to him that hyoscin and scopolamin are not identical, that these same methods, I repeat, proved to him, eight years ago, that these two drugs *are* identical. Of course, Dr. Reber may have changed his mind in these eight years; but one can not help feeling a little insecure in a method which absolutely, definitely and forever proves a thing in 1899, and then just as finally disproves the same thing in 1907. The facts and laws of Nature are generally supposed to be immutable.

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[1] The Journal, March 7, 1908, 784

Unfortunately, in his work, Dr. Reber ignores every rule which must be observed when it is desired to show the identity or non-identity of two products. The first of these rules should be self-evident, namely, that the products to be compared must be of absolutely known purity; the second rule is that the sources of error involved in the method must not exceed the physiologic differences actually observed.

As to the first rule: Reber contents himself with comparing a single commercial sample labeled "hyoscin," with another commercial sample labeled "scopolamin"! These alkaloids are notoriously very difficult to obtain pure, and I imagine that the Merck Company does not aim to have its medicinal products absolutely pure, since this would raise the cost out of all proportion to the practical gain in medicinal value. But even should it have made this claim of absolute purity for its product (which is inconceivable), no scientist would dream of accepting a manufacturer's assurance when a mooted question of this kind is involved.

The problem which Reber tries to investigate is a strictly chemical one, and so he must conform to the rules of this science, if he wishes his work to be taken seriously. On the contrary, however, he omits even the most elementary precautions, thus entirely invalidating his conclusions from the start. From a strictly scientific standpoint, the correct title of his paper would be, "Comparative Potency of a Commercial Sample Labeled 'Hyoscin,' and Another Commercial Sample Labeled 'Scopolamin,'" etc. In view of this, it is scarcely necessary to continue the criticism beyond pointing out that there are some other slips of technic, each of which might well suffice to explain the observed differences. Dr. Reber apparently did not even supervise the preparation of his solution. He employed the rather inaccurate method of measuring his doses by a "dropper;" accurately graduated pipettes would have been easily obtainable.

Dr. Reber anticipates one criticism; namely, that his conclusion is based on only three experiments. He concludes: "The claim is, therefore, made that the results herein set forth are entitled to consideration and may be accepted as working results until such time as some other worker by a larger series of cases may be in a position to rise and disprove them." To this I would observe that the main desideratum is not a larger series of faulty experiments, but the exercise of a little common care in the experimentation.

I am inflicting this lengthy review on you, not with the object of finding fault with Dr. Reber, but to convince you that this sort of happy-go-lucky style of research should not be published. I have consistently advocated that clinical research is quite as valuable as laboratory research, but it must be research worthy of the name. Such papers as Dr. Reber's do incalculable harm by tending to discredit all clinical data.

I shall not take up your time in discussing the question whether scopolamin and hyoscin are identical, because this question is really not affected by Dr. Reber's paper, and because I have not myself done any work on the subject. I would suggest, however, that before Dr. Reber presumes to criticise the opinions of others he should take the pains to inform himself that there is no longer any controversy as to the identity of caffein and thein, and that he is probably the only man in the world who considers cocain ($C_{17}H_{21}O_4N$), and stovain ($C_{14}H_{21}O_2N$) isomeric! Further, that he should then make a careful study of the masterly paper of Cushny and Peebles on the related subject, "Action of Optical Isomers. II. Hyoscin," *Journal of Physiology*, 1905, xxxii, p. 501, and note the caution which is necessary in such work. If, then, he would repeat his own work with due regard to chemical as well as to clinical accuracy, with samples of scopolamin and hyoscin of known origin and optical rotation, he could produce a piece of research which would be well worth publishing.

Torald Sollmann.

Voting by Ballot.

Buffalo, N. Y., April 27, 1908.

To the Editor:—Several methods are in vogue for ascertaining the will of an assembly of persons organized for the transaction of business. For choosing its officers, trustees, orators and honorary members the House of Delegates of the American Medical Association has adopted the method of voting by ballot according to the following by-law: "All elections shall be by ballot, and a majority of the votes shall be necessary to elect." (Chapter II, Section 2.) Whenever only one nomination has been made it has been the custom generally to make a motion directing the secretary or some other member to cast one ballot for the nominee. The vote on this motion has been taken by acclamation. This is not a genuine method of election by ballot; it is a method of election by acclamation and violates the by-law quoted above. The vote by acclamation determines the election; the casting of the one ballot is simply a part of the act of recording the acclamatory vote. At the last session of the House of Delegates a proposed by-law was presented to the effect that each voting member should have the privilege of casting his own ballot. It was not adopted. The principal argument made against it was that it would restrict the liberty of the House by preventing it from selecting a method of voting. The same argument would hold with equal force against the adoption of any by-law. The by-law, Section 3 of Chapter VII, relating to the time of election is a restriction of the liberty of the House. All by-laws, in their very nature, are restrictions. Even if an assembly is restricted in its liberties great care should be taken in restricting the liberties of each of its members. Minorities have rights as well as majorities. It has been said that any member can compel each member to cast his own ballot by objecting to the single-ballot method. This is true, but very few persons, even those strongly opposed to the single-ballot method, like to do this. They fear that they will be regarded as obstructionists, that they will be marked for future reference. Most persons prefer to forego their right in this respect rather than subject themselves to the disapprobation and repression of the majority.

When a motion has been made to use the single-ballot method and has been rejected, it has not infrequently happened that several votes have been cast for some one else than the person who was supposed to be the unanimous choice of the assembly. In Roberts' "Rules of Order," which has been adopted by the House of Delegates for its government in the transaction of business, is the following comment on the single-ballot method: "It should always be remembered that this can be done only by unanimous consent, and it is doubtful whether it should ever be allowed."

Not infrequently an argument used in favor of the single-ballot method is, that it consumes much less time than other methods. This may be true, provided the officers to be elected are few and no member objects to the method. If the officers to be elected are many, as is the case in the House of Delegates, some other methods consume much less time. Economy of time is exceedingly important on account of the vast amount of business brought to that body.

The following method is suggested for adoption by the House of Delegates as far superior in many respects to the single-ballot method. Provide for the making of nominations at a sitting held previous to the afternoon of the third day of the session, which is the time designated for the election. (Section 3, Chapter VII, of the By-Laws.) Appoint a committee whose duty shall be to secure and distribute printed ballots. Have a ballot handed to each member as he reaches the assembly room at the opening of the sitting on the afternoon of the third day of the session. Only a few minutes will be required to cast the ballots. While the ballots are being counted by the tellers other important business can be transacted. According to this method less time by fully one hour will be required for the election than by the single-ballot method.

The following are some of the advantages in favor of the method above outlined:

It provides for a genuine ballot. It permits each voting member the privilege of casting his own ballot. It encourages each member to cast a free and independent ballot. By this method the person elected may know how he stands with his constituency—how many votes are for and how many are against him. This method saves a vast amount of time which can be well used for the transaction of important business.

It is my ardent hope that at its coming session the House of Delegates will provide for this method as a whole or with slight modification, for the election of its officers. I am confident that after a fair trial it will be approved as much superior to the method heretofore adopted.

J. W. GROSVENOR.

Medical Education and State Boards of Registration

COUNCIL ON MEDICAL EDUCATION OF THE AMERICAN MEDICAL ASSOCIATION.

Fourth Annual Conference, held at Chicago, April 13, 1908.

The Chairman, DR. ARTHUR DEAN BEVAN, Chicago, presiding.

Besides the members of the Council, 88 delegates were present, representing 21 state examining boards, 21 state medical societies, 3 departments of the government services, 2 confederations of examining boards, 2 college associations and 2 national medical associations, as well as 30 medical and liberal arts colleges.

DELEGATES.

FROM STATES AND STATE BOARDS: *Alabama*, E. O. Williamson, Gurley; *Colorado*, S. D. Van Meter, Denver; *Illinois*, George W. Webster, Chicago; J. A. Egan, Springfield; *Indiana*, J. C. Webster, Lafayette; W. A. Spurgeon, Muncie; *Iowa*, Louis A. Thomas, Des Moines; *Kentucky*, A. T. McCormack, Bowling Green; *Maryland*, J. McPherson Scott, Hagerstown; *Michigan*, B. D. Harison, Detroit; A. W. Alvord, Battle Creek; *Missouri*, Robert H. Goodier, Hannibal; Frank J. Lutz, St. Louis; *New Jersey*, J. W. Bennett, Long Branch; *New York*, William Warren Potter, Buffalo; *Ohio*, A. Ravogli, Cincinnati; H. E. Beebe, Sidney; *Oregon*, R. C. Coffey, Portland; *Rhode Island*, James O'Hare, Providence; *South Dakota*, F. S. Howe, Deadwood; *Tennessee*, James K. Blackburn, Pulaski; *Texas*, J. J. Dial, Sulphur Springs; *Vermont*, W. Scott Nay, Underhill; *Virginia*, Richard H. Whitehead, Charlottesville; *West Virginia*, John L. Dickey, Wheeling; *Wisconsin*, L. F. Bennett, Beloit; J. V. Stevens, Jefferson; W. T. Sarles, Sparta.

FROM STATE MEDICAL SOCIETIES: *California*, F. Dudley Tait, San Francisco; *Colorado*, W. H. Harlow, Boulder; *District of Columbia*, W. F. R. Phillips, Washington; *Illinois*, Frank P. Norbury and Carl E. Black, Jacksonville; *Indiana*, H.C. Sharp, Jeffersonville; *Iowa*, Charles J. Saunders, Fort Dodge; Clyde A. Boice, Washington; James R. Guthrie, Dubuque; *Kansas*, F. M. Daily, Beloit; *Kentucky*, W. H. Wathen, Louisville; *Maine*, Frederic H. Gerrish, Brunswick; *Maryland*, Charles F. Bevan, Baltimore; *Massachusetts*, Horace D. Arnold, Boston; *Minnesota*, F. F. Wesbrook, Minneapolis; *Missouri*, N. B. Carson, St. Louis; *Nebraska*, D. C. Bryant, Omaha; *New Mexico*, G. W. Harrison, Albuquerque; *New York*, C. Howard Travell, Troy; *Ohio*, R. H. Grube, Xenia; *Oklahoma*, B. J. Vance, Checotah; *Pennsylvania*, Alex. R. Craig, Philadelphia; *South Dakota*, Stephen Olney, Sioux Falls; *Virginia*, Charles H. Hazen, Richmond; *Washington*, J. G. Cunningham, Spokane; *Wisconsin*, Louis R. Head, Madison.

FROM OTHER ORGANIZATIONS: *United States Army*, Assistant Surgeon General, P. F. Harvey, Chicago; *United States Navy*, Assistant Surgeon A. B. Hayward, Chicago; *United States Public Health and Marine-Hospital Service*, Surgeon G. B. Young, Chicago; *Association of American Medical Colleges*, Fred C. Zapffe, Chicago; *American Academy of Medicine*, Charles S. Sheldon, Madison, Wis.; *National Confederation of Examining Boards*, Murray Galt Motter, Washington, D. C.; *American Confederation of Examining Boards*, W. A. Spurgeon, Muncie, Ind.; *American Medical Association*, Herbert L. Burrell, Boston, Mass.; Frederick R. Green, Chicago; *National Eclectic Medical Association*, E. B. Shewman, Waymansville, Ind.

GUESTS: Prof. A. H. F. Barbour, University of Edinburgh; President Charles W. Eliot, Harvard University; President George E. MacLean, State University of Iowa; George H. Kress, University of Southern California, College of Medicine; Ludvig Hektoen, Harry Gideon Wells, John Milton Dodson and F. S. Churchill, Rush Medical College, Chicago; Winfield S. Hall and John H. Long, Northwestern University Medical School, Chicago; J. N. Roe, Chicago College of Medicine and Surgery; Burton D. Myers, University of Indiana, School of Medicine, Bloomington; W. L. Bierring, University of Iowa, College of Medicine, Iowa City; George H. Hoxie, University of Kansas, School of Medicine, Kansas City; Isadore Dyer, Tulane University Medical Department, New Orleans, John F. Morse and E. L. Eggleston, American Medical Missionary College, Battle Creek, Mich.; Samuel W. Lambert, College of Physicians and Surgeons, New York City; J. L. Heffron, Syracuse University Medical Department, Syracuse, N. Y.; F. C. Waite, Western Reserve University, Medical Department, Cleveland, Ohio; A. H. Brundage, Milwaukee Medical College; Charles R. Bardeen, University of Wisconsin, College of Medicine, Madison.

The conference was called to order at 10 a. m., by the chairman, Dr. Arthur Dean Bevan, who delivered the following address:

CHAIRMAN'S ADDRESS.

Gentlemen, Delegates from the state licensing bodies, from the state medical societies, from the National Institute of Homeopathy, from the National Eclectic Medical Association, from the medical college associations, from the confederations and associations of state licensing boards, from the United States Army and Navy Medical Corps and the Public Health and Marine-Hospital Service, from the schools of liberal arts, officers of the American Medical Association and invited guests.

The Council on Medical Education of the American Medical Association has invited you to this fourth annual conference to discuss the subject of medical education in America. We welcome you in the name of the American Medical Association and ask for your advice and cooperation in the effort to elevate the standards of medical education in this country. It has become apparent that the three annual conferences which have preceded this have been productive of much good.

This body of delegates, called together from all parts of the union and representing the agents which are most interested and most influential in medical education, has no legal powers. We are not even an organized body. We are an informal conference, met to discuss fully and freely the existing conditions of American medical education, and to suggest plans and methods which may lead to improved standards.

It is the desire to have this conference open to all who are interested in modern, scientific medicine, irrespective of schools of practice.

The value of such a conference lies in the interchange of ideas between men representing the various states, associations, schools and services, and the wide publicity which can be given to the views of these men who have given much time and thought to the problems of medical education.

OBJECT OF THE COUNCIL.

The Council on Medical Education of the American Medical Association is the instrument of the association in matters pertaining to medical education. Its functions are those of a national bureau of information. It seeks to collect the facts in regard to medical education in this country and abroad and to give publicity to these facts.

The work of the council was made possible by the reorganization of the American Medical Association. The new constitution gave considerable permanence to the council, established permanent headquarters in the building of the American Medical Association, and provided a permanent secretary and clerical force sufficient to carry on the work.

THE FIRST THREE CONFERENCES.

At the first annual conference the important questions discussed were those of preliminary education, medical curriculum, and the relation of the medical school to schools of liberal arts. As a result of this conference the ideal and recommended standards were offered and adopted by the American Medical Association at its Portland session. At the second annual conference a report of the standing of medical schools, based on the percentage of failures of their graduates before state boards, was presented, the relation of the state boards and state medical societies to medical education was discussed and the discussion of preliminary education and medical curriculum was continued. At the conference last year a report was given showing the conditions existing in the 161 medical colleges of this country, based on personal inspection. On the basis of this inspection 82 schools were found to be of acceptable grade and 32 were regarded as worthless, leaving 47 which were regarded as susceptible of improvements which would bring them into the acceptable class. The state boards were notified of these findings.

A further report of the standing of the schools based on the percentage of failures before the state boards was made last year, showing a very considerable improvement and proving the value of the publicity of these facts.

Special reports of committees on admission to advanced standing of college graduates and on preliminary medical education were made and the subjects of inspection of preliminary credentials by an officer of the state examining board and methods of conducting state board examinations were discussed.

SUGGESTIONS FROM THIS YEAR'S WORK.

During the last year the work of the council has been continued along the same lines of attempting to ascertain and collect the facts in regard to medical education and present these to the state boards and the profession. With the gradual accumulation of facts in regard to existing conditions of medical education both here and abroad, the plan of campaign which must be carried on to place American medical education on an acceptable and fairly uniform plane throughout the country, becomes clearer. It would seem to be about as follows:

SUGGESTIONS FOR MEDICAL PRACTICE ACTS.

The basic principles of a model medical practice act should be agreed on and adopted in each state. These basic principles should include: (*a*) A single licensing board made up of members irrespective of schools, the only requirement being that the men should be qualified practitioners of modern scientific medicine. (*b*) This board should have the power to determine the matter of preliminary education and medical curriculum and should have the power to refuse recognition to disreputable medical schools. (*c*) The preliminary education should be a standard four-year high school education to which should be added in each state as soon as conditions warrant a thorough training in physics, chemistry and biology, including laboratory work. (*d*) A four-year medical curriculum should be required, each annual session consisting of thirty weeks, thirty hours a week, the first two years to be spent in well-equipped laboratories of anatomy, physiology, bacteriology, pathology and pharmacology, officered by trained teachers; the second two years devoted to medicine, surgery, obstetrics and the specialties, largely in clinical work in well-equipped laboratories, dispensaries and hospitals. (*e*) When conditions warrant there should be added to this, as has already been done in Germany, a compulsory year as a hospital interne. This last requirement will probably come without special urging, since in our better schools the majority of the graduates even to-day are convinced of the necessity of this hospital year and strive eagerly to secure it. (*f*) The state boards of each state should inspect its schools and refuse recognition to those which are not teaching scientific medicine. This should be done in the interests of the public, since there are a number of medical schools in the United States not properly equipped to teach modern scientific medicine. We have almost as many medical schools in this country as in all the rest of the world combined. We have about 161; the rest of the world, 174. Many of our American schools are disreputable and should not be recognized by state boards.

A SINGLE ASSOCIATION OF STATE BOARDS.

Then there should be a single association of state licensing boards organized, which should consist of delegates who are active members of state boards representing every state in the union; such an association could be of enormous service in handling such matters as the withholding of recognition from disreputable schools, reciprocity, etc.

In order to secure better conditions there should be an active, earnest cooperation in each state between the state licensing board and the organized medical profession; and the profession must see to it that the necessary laws are secured and that efficient men are appointed on the state board to see that they are enforced.

CONDITIONS IN EACH STATE.

With such a plan of campaign in mind and with our present knowledge of existing conditions, let us rapidly review the contions in the various states.

Let us do this from the standpoint that:

1. There should be a single board.
2. There should be provision for reciprocity, provided that this is properly safeguarded and administered.
3. The board should have the power to inspect the medical colleges and refuse recognition to such as are disreputable.
4. That at least a four-year high school education should be required.
5. A degree should be required before the candidate can take a state board examination.
6. Let us note the number of medical colleges in each state, acceptable and non-acceptable.

This will show what changes are desirable as far as medical laws are concerned and what number of medical colleges should be refused recognition in order to place the entire country on a fairly acceptable basis.

Alabama.—This state does not require a candidate for license to be a graduate of a medical college: it has no provision for preliminary education and it has no power to refuse recognition to disreputable medical colleges. It has two medical colleges, neither of which is as strong as could be desired. It would be better if there was a single strong school supported by the state and the profession of the state.

Arizona.—This state requires graduation of all applicants for license, has a single board of medical examiners, has no provision for reciprocity, has only a limited authority to refuse recognition to disreputable schools, and has no provision for preliminary education.

Arkansas.—The state requires graduation from a medical college, has separate boards of medical examiners, has no provision for reciprocity, has no provision in law for preliminary education, and has no authority to refuse recognition to disreputable schools. There are two medical schools, neither being entirely satisfactory. There should be one strong medical school supported by the state and the profession of the state.

California.—This state requires graduation of all candidates for licensure, has a single board of medical examiners, has no provision for reciprocity, has but limited authority to refuse recognition to disreputable schools, requires good preliminary education, and has eight medical schools, five acceptable and three which are unsatisfactory.

Colorado.—This state does not require graduation of all candidates for license, has a single board of medical examiners, has provision for reciprocity without a retaliatory clause,, has power to refuse recognition to disreputable schools, requires a four-year high school education, and after 1912 will require one year in physics, chemistry and biology. It has two medical schools which should be merged on the plan recently adopted in Indiana. There should be a strong medical department of the State University offering the first two years at Boulder and the complete four years at Denver. This arrangement is similar to that adopted by Cornell University and will be referred to as the Cornell plan.

Connecticut.—This state requires graduation of all applicants for license, has separate examining boards, has provision for reciprocity, has power to refuse recognition to disreputable medical schools, and requires hereafter a four-year high school plus one year of liberal arts' work in physics, chemistry and biology. It has one medical school of good standing.

Delaware.—This state requires graduation of all applicants for license, has separate medical examining boards, has provision for reciprocity without a retaliatory clause, has power to refuse recognition to disreputable schools, and requires for preliminary education a standard four-year high school course. It has no medical colleges.

District of Columbia.—The District of Columbia requires graduation of all applicants for license, has separate boards of medical examiners, has provision for reciprocity, has only a limited authority to refuse recognition to disreputable schools, and has no requirement as to preliminary education. It has three medical schools of fair grade.

Florida.—This state requires graduation of all applicants for license, has separate medical examining boards, has no provision for reciprocity, has no power to refuse recognition to disreputable schools, has no provision for preliminary education, and has no medical colleges.

Georgia.—This state requires graduation of all applicants for license, has separate examining boards, has provision for reciprocity, has but limited authority to refuse recognition to disreputable schools, and has no provision for preliminary education. It has five medical schools, three of which are of fair grade and two of poor standing. ' A merger of the three stronger schools has already been rumored. If, out of these, a single strong school, supported by the state and the medical profession, could be formed, it would be highly desirable.

Idaho.—This state requires graduation of all candidates for license, has a single board of medical examiners, has no provision for reciprocity, has authority to refuse recognition to disreputable schools, and does not as yet require a four-year high school education. It has no medical colleges.

Illinois.—This state requires graduation of all applicants for license, has a single examining board, has provision for reciprocity, has power to refuse recognition to disreputable schools, and requires a four-year high school course as preliminary education. It has more medical colleges than any other state in the Union; more than Austria or France, and almost as many as the two countries combined. Of the 13 medical colleges in Illinois, five are acceptable, two more, after making improvements, may be regarded as acceptable and six are of low grade and non-acceptable. The state board has recently withdrawn recognition from five of these schools.

Indiana.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has authority to refuse recognition to disreputable schools, and requires a standard high school education for admission to medical colleges. Indiana until recently had several medical schools; these were gradually reduced by merger and finally, to the great credit of the profession of the state, all of the schools have merged into the medical department of Indiana University. There are, in addition, two unsatisfactory schools, from one of which the state board has recently withdrawn recognition.

Iowa.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has authority to refuse recognition to disreputable schools and requires a four-year high school education for admission to medical colleges. It has five medical colleges, three of acceptable grade and two of doubtful standing.

Kansas.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, and the board has power to refuse recognition to disreputable schools.

It has not fixed a four-year high school course as the minimum requirement of preliminary education. It has three schools, two acceptable and one non-acceptable.

Kentucky.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has the power to refuse recognition to disreputable schools and medical colleges. Until recently it had a large number of schools which has been reduced by mergers. Recently a movement has been discussed of merging all the regular schools into a medical department of the State University. Such a merger is highly desirable. There are also two schools of poor grade in the state.

Louisiana.—This state requires graduation of all applicants for license, has separate boards of medical examiners, and has no provision for reciprocity. The board has full power to refuse recognition to disreputable schools, but the practice act makes no provision for preliminary education. It has two medical colleges, one of which is among the strong schools of the South. The other is a colored school, which is struggling to reach an acceptable position.

Maine.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has authority to refuse recognition to disreputable schools, and requires a four-year high school education for admission to medical colleges. It has one medical college, which is in the acceptable class.

Maryland.—This state requires graduation of all applicants for license, has separate boards of medical examiners, has provision for reciprocity, has no authority to refuse recognition to disreputable schools and does not require a four-year high school course. It has eight medical colleges, four of which are acceptable and four not acceptable.

Massachusetts.—Singularly enough, Massachusetts and Rhode Island are the only Eastern states which do not require graduation of all applicants for license. This state has a single board of medical examiners, has no provision for reciprocity, has no authority to refuse recognition to disreputable schools and has no requirement of preliminary education. It has four colleges, three of which are acceptable and one not acceptable.

Michigan.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has the power to refuse recognition to disreputable schools, and requires a four-year high school education for admission to medical colleges. It has five schools. The state board refused recognition to one college lately which has gone out of existence. Of the five schools remaining, four are acceptable and one not acceptable.

Minnesota.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has authority to refuse recognition to disreputable schools, and requires for admission to medical colleges a four-year high school course plus two years of work in a college of liberal arts, including physics, chemistry and biology. It now has but one medical school connected with the University of Minnesota with regular and homeopathic departments.

Mississippi.—This state does not require graduation of all applicants for license, has a single board of medical examiners, has no provision for reciprocity, has no authority to refuse recognition to disreputable schools, and has no provisions for preliminary education. It has two medical schools, one of which is acceptable and one not acceptable.

Missouri.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has authority to refuse recognition to disreputable schools, and requires a four-year high school education for admission to medical colleges. It has eleven schools, four of which are acceptable and seven non-acceptable. Barnes Medical College is to become a part of the University of Missouri after the close of the present session.

Montana.—This state requires graduation of all applicants for license, has a single board of medical examiners, has no provision for reciprocity, and has the power to refuse recognition to disreputable medical schools, but as yet has not fixed a four-year high school education as its minimum standard of preliminary education. It has no medical colleges.

Nebraska.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has authority to refuse recognition to disreputable schools, and requires a four-year high school education for admission to medical colleges. It has four schools, two of which are acceptable and two non-acceptable.

Nevada.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has but limited authority to refuse recognition to disreputable schools, and requires a four-year high school education for admission to medical colleges. It has no medical schools.

New Hampshire.—This state requires graduation of all applicants for license, has separate boards of medical examiners, has provision for reciprocity, has the power to refuse recognition to disreputable schools, and requires a four-year high school education for admission to medical colleges. It has one medical school, which is in the acceptable class.

New Jersey.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity without a retaliatory clause, has the power to refuse recognition to disreputable medical schools, and requires a four-year high school education for admission to medical colleges. It has no medical schools.

New Mexico.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has the power to refuse recognition to disreputable schools, and requires a four-year high school education for admission to medical colleges. There are no medical schools in the state.

New York.—This state requires graduation of all applicants for license, has now a single board of medical examiners, has provision for reciprocity, has authority to refuse recognition to disreputable medical schools, and requires a four-year high school education for admission to medical schools. Before matriculation in any medical college in the state the student must secure from the Board of Regents a medical student's matriculation certificate. This state has ten medical colleges, eight of which are acceptable and two not acceptable.

North Carolina.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, and has only limited authority to refuse recognition to disreputable schools, but has not yet fixed a four-year high school education as its minimum standard of preliminary education. It has four medical schools, two of which are acceptable and two non-acceptable.

(*To be continued.*)

Book Notice

A Mind That Found Itself. An Autobiography. By Clifford Whittingham Beers. Cloth. Pp. 363. Price $1.50. New York: Longmans, Green & Co., 1908.

We have read many books that were real or alleged chronicles of insanity and asylum experiences, but none like this—a faithful and graphic record by the patient himself of the inner workings of his own disordered mind, and also of the outward circumstances and places of abode in which he dwelt while alienated from himself.

The book is one that challenges attention. In the first place, it is a literary performance of a very high order. It is equally remarkable that it should have been written so well, and that it should have been written at all. Again, it is an exploration of human life in regions strange and unfamiliar, yet fascinating—near at hand, yet far away. It depicts, with vivid lights and shadows a malady whose sufferings and sorrows are the deepest that life can bring, and which appeals strongly to the universal mind and heart in its need for every means and measure of relief and help in any way attainable.

The author's story is that of a young man of neurotic temperament who, being nervously exhausted after graduating at Yale, imprudently went forthwith into business. A brother dying of epilepsy, the author, in his morbid state, himself becomes possessed with the irresistible idea that he, too, is hopelessly epileptic. He goes through the agony of what he takes to be epileptic seizures, not knowing that had they been really epileptic he would almost certainly have been wholly unconscious. The condition as here described might be taken for one of psychasthenia, but evidently a deeper-seated manic depressive cycle is in process of evolution. There is no psychasthenia about this young man, as the sequel shows.

In his desperation the author makes a suicidal attempt by dropping from a window. This attempt is followed, possibly in consequence of the traumatic shock, by a complete cessation of the delusion about epilepsy, but there is now evolved, along with hallucinations of sight, hearing and all the senses, a whole series of fairly systematized delusions of criminal self-accusation—poison, espionage, etc.; further, a most distressing complication is present in the fractures of foot and ankle bones resulting from the fall.

The patient is placed successively in a private sanitarium, at a private home under the care of a nurse, in an endowed retreat, and finally in a state hospital. He cures himself of his persecutory delusions by the secret aid of a fellow-patient, who helps him to smuggle out a letter, which, on being brought back by his brother, convinces him that that brother is not a detective in disguise, but is actually his brother. The depression, the delusions, and the hallucinations now fade, and the maniacal phase supervenes with extraordinary expansiveness and combativeness. He is receiving treatment after the routine fashion, but does not fit into any of the usual moulds, and the process of "trimming" to make him fit, only intensifies his misery and rebelliousness.

The author presents a graphic picture of treatment, not merely tactless, but positively harsh and brutal; and it is impossible to read of his courage, resourcefulness, persistency and the skill with which he meets the ordeals that the combined circumstances of his grandiose mental state and the unfeeling and unintelligent treatment bring about, without being deeply stirred by indignation and compassion. Suffice it to say, that he emerges victorious from his appalling experiences, regains, if not absolutely, at least with relative completeness, his mental force, and devotes his energies to the preparation of his unparalleled story and to labors calculated to assist in bringing about a state of affairs in the care of the insane better than that encountered by himself—a state of affairs which, it must be admitted, is duplicated to a great extent in a large majority of our public institutions for the insane.

The timely publication of this work, it is to be hoped, will arouse the public to a realization of existing conditions in our public institutions and to a demand for their amelioration. If it can do that, it will render a service that the medical profession has long endeavored to effect, but with the only too common result that all its remonstrances and warnings fall on deaf ears.

Medical Economics

POSTGRADUATE COURSE FOR COUNTY SOCIETIES.

DR. JOHN H. BLACKBURN, DIRECTOR.
Bowling Green, Kentucky.

Secretaries of all county societies which have adopted the postgraduate course of study who have not notified the director of such action, or whose societies have not been reported in The Journal, are requested to write at once to Dr. Blackburn, giving the desired information. Dr. Blackburn wishes to make a complete report on postgraduate work to the House of Delegates at the Chicago session.

Eighth Month.

Third Weekly Meeting.

Intestinal Pathology.

Portion of intestine involved. 1. Stage of hyperemia. Changes in mucous membrane and lymphoid structures. 2. Medullary infiltration. Peyer's patches, location, shape, size. Solitary follicles. 3. Necrosis and ulceration. Cause of necrosis. Microscopic changes. "Typhoid ulcer." Sloughs. Hemorrhage. Number of ulcers. Perforation. 4. Cicatrization. Rate of healing. Tissues regenerated. Relation of each stage of clinical course. Changes in other portions of bowel. Mesenteric glands. Glands involved. Relation to intestinal changes. Color, shape, size. Microscopic changes. Terminations.

Liver: Macroscopic appearances. Microscopic changes. Changes in bile. Changes in gall bladder and bile passages.

General Pathology.

Muscles: Macroscopic appearances. Microscopic changes. Varieties of degeneration.

Bones: Periostitis and osteomyelitis. Organisms found. Changes in bone-marrow. Arthritides.

Heart and blood vessels: Myocardium. Parenchymatous changes. Interstitial changes. Endocardial and pericardial changes. Vascular changes. Arteritis, thrombosis, gangrene. Phlebitis, femoral.

Spleen: Gross changes in relation to clinical course. Microscopic changes. Presence of bacilli.

Kidney: Usual gross and microscopic changes. Typhoid nephritis.

Respiratory Organs: Ulcer of larynx. Changes in bronchial mucous membrane and glands. Hypostatic congestion. Lobar pneumonia, organisms present.

Nervous System: Intensity of anatomic changes, relation to symptoms. Changes in meninges. Cerebral changes.

Association News

Additional Hotels.

In addition to the hotels already mentioned (THE JOURNAL, May 2, page 1468), are the following:

CHICAGO BEACH HOTEL, Fifty-first Boulevard and the Lake Shore; 450 rooms; can take 300; rates, American plan, $3.50 up for one person; $6 up for two. European plan, $2 up for one person; $3.00 up for two.

Detailed information concerning the following hotels is not at hand, but they are all of the better class:

ALEXANDRIA HOTEL, 70 Rush Street.
DREXEL ARMS HOTEL, Oakwood and Drexel Boulevards.
HYDE PARK HOTEL, Fifty-first Street and Lake Avenue.
JULIEN HOTEL, Sixty-third Street and Stewart Avenue.
MORRISON HOTEL, Madison and Clark Streets.
NEWBURY HOTEL, 225 Dearborn Avenue.
ONTARIO HOTEL, North State and Ontario Streets.
PLAZA HOTEL, North Avenue and Clark Street.
VENDOME HOTEL, Sixty-second Street and Monroe Avenue.
YORKSHIRE HOTEL, 1837 Michigan Avenue.

NEW MEMBERS.

List of new members of the American Medical Association for the month of April, 1908:

ALABAMA.

Brothers, T. J., Anniston.

ARIZONA.

Bacon, J. E., Tombstone.

ARKANSAS.

Reich, J. L., Everton.

CALIFORNIA.

Brown, N. N., Bakersfield.
Condit, J. C., Healdsburg.
Hopkins, M. F., San Jose.
Howard, Edward, San Diego.
Kellogg, W. H., San Francisco.
Lum, W. T., Alameda.
Matsuda, M., San Francisco.
McClenahan, H. C., Belmont.
Meyer, Henry, San Francisco.
Milliken, A. A., Fort Jones.
Millspaugh, W. P., Los Angeles.
Newmark, Leo, San Francisco.
Painter, G. L., San Francisco.
Simpson, J. A., San Francisco.
Stowell, J. M., San Francisco.
West, S. V., Bakersfield.
Wiel, H. I., San Francisco.

COLORADO.

Ayers, V. B., Fairplay.
Burt, C. I., Denver.
Harvey, H. H., Trinidad.
Heath, H., Denver.
Mayhew, D. P., Colorado Springs.
Sedwick, W. A., Denver.

CONNECTICUT.

Owens, W. T., Hartford.
Smith, D., Bridgeport.
Winne, W. N., New Haven.

DELAWARE.

Davis, W. F., Dover.

DISTRICT OF COLUMBIA.

Anderson, C. L. G., Washington.
Heinecke, G. B., Washington.
Lawson, H. W., Washington.
Lyon, Martha M. B., Washington.

GEORGIA.

Alsobrook, J. S., Ringgold.
Anthony, E. R., Griffin.
Curtis, C. M., College Park.
Jones, E. G., Atlanta.
Lee, Lawrence, Savannah.
Matthews, W. J., Rome.

ILLINOIS.

Adles, Max., Du Quoin.
Alderson, A .S., Yorkville.
Alexander, J. W., Oakland.
Allport, W. H., Chicago.
Alvis, E. C., Kell.
Alvis, W. H., Benton.
Avery, E. K., Chicago.
Bagley, H. P., Chicago.
Baker, Carl, Herrin.
Ball, R. M. C., Monmouth.
Ballard, H. F., Cullom.
Barton, L. E., Malta.
Bath, T. W., Bloomington.
Beard, C. G., Sterling.
Becker, Louis, Knoxville.
Beecher, C. E., Gilson.
Belfield, W. T., Chicago.
Black, R. A., Chicago.
Blake, J. M., Chicago.
Bottom, E. H., E. St. Louis.
Bowman, L. M., Alton.
Bozarth, J. W., Mt. Pulaski.
Brannan, C. S., Albion.
Brown, A. C. W., Chicago.
Brown, Columbus, Herrin.
Browning, H. D., Moline.
Bryan, J. L., Xenia.
Buhlig, W. H., Chicago.
Burroughs, L. G., Collinsville.
Burton, R. C., Savanna.
Buswell, C. A., Chicago.
Campbell, H. C., Jacksonville.
Caron, Walter, Chicago.
Cavanaugh, J. A., Chicago.
Champlin, S. H., Chicago.
Chrisman, W. D., Bradford.
Clancey, J. H., Naperville.
Clinton, Bertha L., Paris.
Clyne, J. A., Joliet.
Coffin, C. A., Kewanee.
Cole, A. V., Chicago.
Cole, John, Williamsfield.
Conley, D. S., Streator.
Cooper, Earl, Augusta.
Cowan, J. E., Galesburg.
Crist, C. H., Danville.
Cromwell, P. I., Effingham.
Cubbins, W. R., Chicago.
Damiani, Joseph, Chicago.
Darmer, G. A., Woodstock.
Deal, D. W., Springfield.
Dearborn, C. B., Mt. Sterling.
Davis, G. G., Chicago.
Davis, R. A., Chicago.
Dice, H. F. Ridge Farm.
Dobson, J. W., Bloomington.
Dondanville, M. S., Rock Island.
Douglass, S. F., Renault.
Driskell, C. R., Farmersville.
Earel, A. M., Hoopeston.
Edmonson, G. S., Clinton.
Fenlon, J. H., Bloomington.
Floreth, G. A., Mt. Olive.
Foerter, A. J., Peoria.
Franklin, J. H., Spring Valley.
Fullenweider, R. C., La Salle.
Gaebe, O. C., Addieville.
Gardner, N. B., Loami.
Garlington, J. M., Ottawa.
Grassau, Andrew, Malta.
Graybeal, James, Chicago.
Green, Earl, Mt. Vernon.
Halbert, W. A., Springfield.
Hale, J. A., Alto Pass.
Hamilton, Howard, Bethany.
Hammers, L. J., Lexington.
Haney, J. M., Centralia.
Hanson, Henry, E. St. Louis.
Hatch, W. G., Rockford.
Hatfield, R. L., Danville.
Haumesser, G. H., Shumway.
Havens, A., New Philadelphia.
Hennenway, H. B., Evanston.
Hicks, S. J., Ivesdale.
Hilgenberg, J. F., Pesotum.
Hill, F. A., Chicago.
Hinman, W. T., Moline.
Hirsch, J. A., Edwardsville.
Holin, J., Cowden.
Holmes, J. B., Macomb.
Hoornbeck, N. B., Youngstown.
Howard, Florence A., Warsaw.
Hoyne, A. L., Chicago.
Hubly, C. C., New Windsor.
Hundley, J. B., Danville.
Ingles, J. A., Hoopeston.
Isham, G. S., Chicago.
Jessee, R. L., Philo.
Johnson, G. F., E. Moline.
Jones, J. T., Salem.
Jones, Solomon, Danville.
Kimball, F. H., Rockford.
Klans, C. F., Chicago.
Kowsky, J. F., Chicago.
Kraemer, J. N., Marissa.
Kreider, S. G., Lena.
Lacy, L. S., Pittsfield.
Laswell, S. L., Alma.
Lawry, C. C., Earlville.
Leitzell, C. P., Dakota.
Lewis, J. F., Depue.
Long, H. W., Elmwood.
Long, J. H., E. Moline.
Luken, M. H., Chicago.
MacChesney, W. N., Chi. Heights.
Marlow, J. T., Tamaroa.
Martin, J. A., Palestine.
McCullough, J. Y., Casey.
McEachern, D. B., Chicago.
Mead, D. O., Pinckneyville.
Meloy, J. E., Lincoln.
Merwin, E. G., Highland.
Meyer, E. F., Chicago.
Millican, J. A., Chicago.
Mills, P., Chicago.
Morrison, W. S. Minonk.
Morton, J. S. Vernon.
Mosher, G. W., Chicago.
Moyer, M. L., Hillsboro.
Naffz, E. S., Chicago.
Nelles, J. M., Canton.
Nelson, C. S., Springfield.
Nelson, J. A., Chicago.
Nichols, F. C., El Paso.
Obermeyer, A. E., Arcadia.
Ormsby, O. B., Murphysboro.
Ormsby, O. S., Chicago.
Orr, H. M., La Salle.
Orr, L. E., Hull.
Parsons, F. H. B., Morgan Park.
Peckardt, Kate E., Chicago.
Perrin, J. H., Latham.
Phemister, D. B. La Grange.
Pirnat, F. A., Chicago.
Poorman, C. W., Oak Park.
Price, E. M., Astoria.
Pridmore, G. W., Clay City.
Priest, T. W., Williamsville.
Roberson, J. W., Coulterville.
Ream, F. K., Chicago.
Roe, T. H. S., Pinckneyville.
Roler, A. H., Chicago.
Rydin, C. G. S., Chicago.
Sanderson, C. R., Waynesville.
Sandstedt, G. E., Chicago.
Schwer, O. J., Dongola.
Scott, W. F., Maywood.
Seger, D. B., Morrison.
Shockey, G. C., Melrose Park.
Shronts, C. F., Momence.
Silverthorn, F. R., Chicago.
Sims, J. M., Collinsville.
Smith, H. W., Roodhouse.
Smith, N. P., Paris.
Snyder, J. F., Monroe Center.
Souders, J. C., Rock Island.
Stebbings, A. L., Marseilles.
Steele, A. D., Chester.
Stephens, O. Z., Strasburg.
Stevens, S. L., Dalton City.
Sullivan, E. P., Morrison.
Tannus, T. F., Bloomington.
Tennery, W. R., Danville.
Thurmon, F. M., Pearl.
Timpany, J. S., Chicago.
Torey, E. J., Freeport.
Tyler, Aldora J., Clinton.
Valentine, R. E., Augusta.
Voris, H. M., E. St. Louis.
Wagner, C. B., Chicago.
Wahl, Eugene, Jr., Edwardsville.
Waiss, G. C., Chicago.
Wakefield, W. B., Heyworth.
Webster, R. W., Chicago.
Wells, W. H., Monmouth.
West, J. C., Chicago.
Westerlund, J. E. Cambridge.
Wheeler, F. R., Auburn.
Whitehead, E. I., Victoria.
Wiebusch, A. C. C., Cora.
Wiener, A. C., Chicago.
Wilcox, F. W., Minonk.
Williams, R. W., Galva.
Woodward, C. E., Decatur.
Wyatt, W. W. Peoria.
Yudelson, A. B., Chicago.
Zorger, W. H., Champaign.

INDIANA.

Blair, J. S., Lynn.
Clouse, Bertha A., Columbus.
Cook, E. C., Madison.
Foust, P. G., Sante Fe.
Graystone, W. S., Marion.
Harris, C. M., Bourbon.
Jennings, Harriett B., Elkhart.
Kirk, E. W., Veedersburg.
Knapp, H. C., Hintingburg.
Leeds, F. R., Michigan City.
McBride, E. C., Terre Haute.
Miller, H. M., South Bend.
Schneider, A. J., Indianapolis.
Schurtz, E. K., Waterloo.
Shoemaker, S. A., Poneto.

IOWA.

Decker, G. E., Davenport.
Habenicht, H. A., Des Moines.
Haller, J. T., Davenport.
Heald, C. L., South English.
Jenkins, Hugh, Preston.
Jones, H. J., North English.
Juen, J .A., Ossian.
Junger, E. C., Soldier.
Kearney, C .A., Farley.
Kerr, William, Randolph.
Laidley, W. G., Pilot Mound
Lehan, J. W., Dunlap.
McGavren, C. W., Mo. Valley.
Pahl, E. W., Cantril.
Patty, L. G., Carroll.
Peebler, Ora F., Dayton.
Reyner, Franklin, Epworth.
Robinson, J. B., Mt. Vernon.
Rogers, H. C., Primghar.
Rust, E. A., Webb.
Sherlock, Margaret, Sigourney
Stewart, A. P., Rembrandt.
Strobel, A. H., Davenport.
Tillmont, C. P., Centerville.
Woods, W. P., Evansville.

KANSAS.

Blue, R. B., Wichita.
Davis, J. N., Independence.
De Long, A. H., Moran.
Dutton, S. W., McCracken.
Harvey, L. S., Dunlap.
Hatch, B. P., Beattie.
Logsdon, W. T., Wichita.
Martin, C. F., Winchester.
Muir, D. T., Alden.
O'Brien, D. S., Beloit.
Stough, D. F., Stockton.
Stroup, H. A., Winona.
Sudler, M. T., Laurence.
Van Diest, G. A., Prairie View.
Williamson, W. H., Larned.

KENTUCKY.

Aitkin, Chas. W., Flemingsburg.
Armstrong, W. F., Henderson.
Baird, J. W., Chaplin.
Berry, W. D., Louisville.
Bohannon, J. G., Greenville
Brooks, T. B., Valley.
Cawood, W. P., Cawood.
Cohn, Seldon, Fulton.
Coke, A. L., Sutherland.
Collins, Lister, Mt. Eden.
Cowherd, J. R., New Hope.
Darnell, M. C., Duckers.
Duvall, G. W., Shrewsbury.
Erkiletian, D. H., Hopkinsville.
Fitch, E. R., Russell.
Gilbert, J. W., Lawrenceburg.
Harper, R. D., Paducah.
Herndon, R. H., Ludlow.
Hertzsch, Della, Louisville.
Horene, G. Z., Graefenburg.
Humphrey, W. O., Louisville.
Lex, E. A., Louisville.

Lyon, J. L., Fielden.
McCoy, S. C., Louisville.
Overby, Bob., Birmingham.
Owen, W. B., Louisville.
Payne, J. E., Curdsville.
Pipes, M. L., Moreland.
Porter, R. S., Davisburg.
Reeves, W. S., Wyoming.
Shelburn, S. C., Cunningham.
Thompson, E. L., Pierce.
Vorles, W. L., Campbellsburg.
Westerfield, A. A., Utica.
Westerfield, J. B., Barboursville.
Wetherby, S. D., Middletown.
Williams, J. R., Boreing.

LOUISIANA.

Duval, J. B., Houma.
Phillips, J. W., Zimmerman.
Wise, W. L., Lena.

MAINE.

Hutchins, W. P., Rumford Falls.

MARYLAND.

Cornell, W. R., Towson.
Ford, R. H., Queenstown.
Hess, H. C., Baltimore.
Janney, O. E., Baltimore.
Mitchell, R. L., Baltimore.
Price, J. M., Frostburg.
Strouse, Solomon, Baltimore.
Thomas, J. G., Adamstown.
Walton, H. J., Baltimore.

MASSACHUSETTS.

Adler, H. M., Boston.
Baylies, Andrew, Worcester.
Brown, L. T., Worcester.
Chadbourne, A. P., Boston.
Cotter, E. J., Boston.
Davis, F. A., Boston.
Dugdale, Frederick, Lowell.
Houghton, H. L., Winchester.
Latham, B. M., Mansfield.
Loewe, L. J., Whitman.
MacLeod, J. M., Quincy.
Mathes, R. W., Lynn.
Mills, A. V., Attleboro.
Osgood, G. E., W. Somerville.
Peabody, F. W., Cambridge.
Reid, I. E., Boston.
Rumrill, S. D., Springfield.
Sabine, Jane D. K., Boston.
Wilder, W. O., Pittsfield.

MICHIGAN.

Armstrong, O. S., Detroit.
Hoops, G. B., Detroit.
Johnson, Gertrude M., Battle Crk.
Ney, G. S., Port Huron.
Unger, A .E., Dundee.

MINNESOTA.

Adams, J. L., Morgan.
Ewing, C. F., Wheaton.
French, E. A., Plainview
Gerber, L. M., Jasper.
Ghent, M. M., St. Paul.
Giffin, H. Z., Rochester.
Holl, P. N., Minneapolis.
Irish, P. H., Akeley.
Lane, Laura A., Minneapolis.
Leland, J. T., Herman.
Leland, M. N., Minneapolis.
Lester, C. A., Wabasha.
Luedtke, G. H., Fairmont.
Mullin, R. H., Minneapolis.
Slocumb, Maude S., Minneapolis,
Whetstone, Mary S., Minneapolis.

MISSISSIPPI.

Adams, J. S., Orvisburg.
Catching, W. W., Georgetown.
Fox, L. T., Stonewall.
Frizell, H., Vaughans.
Holloway, T. M., Weir.
Jones, F. L., Blue Springs.
Kendrick, C., Kendrick.
Terry, H. M., Goodman.
Thompson, F. H., Bogue Chitto.

MISSOURI.

Alt, Adolf, St. Louis.
Barker, J. C., Russ.
Beil, J. W., Kansas City.
Bourn, J. J., Hannibal.
Bradley, A. H., St. Louis.
Chapman, Chas., Shelbina.
Cooley, E. L., St. Louis.
Dearing, W. A., Jamestown.
De Vilbiss, E. F., Nevada.
Frohling, F. W., Kansas City.
Gartside, J. E., Kingston.
Gayle, V. W., Kansas City.
Geiger, Charles, St. Joseph.
Greer, E. O., St. Louis.
Grosse, L. W., St. Louis.
Hardy, J. W., Sumner.
Herbert, T. B., Lebanon.
Horton, W. H., Purdy.
Howard, C. F., Deepwater.
Iralson, Abe., St. Louis.
Loeb, Virgil, St. Louis.
Mead, S. T., Nevada.
Miller, E. M., Mound City.
Morris, R. H., Linneus.
Nagle, P. E., Billings.
Pitzman, Marsh., St. Louis.
Post, W. .B .Carthage.
Rentfro, E. W., Rayville.
Scanlon, T. W., Polo.
Schultz, Edward, St. Louis.
Shankland, J. W., St. Louis.
Thompson, W. G., Holden.
Westerman, C. M., St. Louis.
Wherritt, H. B., Independence.
Wilson, J. S., Deepwater.
Winn, R. M., Saverion.

MONTANA.

Belcher, J. L., Townsend.

NEBRASKA.

Demaree, H. C., Roca.
Elmore, S. Q., Gretna.
Franklin, W. A., Hastings.
Heine, W. H., Hooper.
Lukens, Isaiah, Tekamah.
Malone, F. F., Lincoln.
Newell,, H. J., Alexandria.
Preston, S. A., Howells.
Randall, A. LaRoy, Pleasonton.
Ray, A. R., Fairfield.
Tyler, A. F., Omaha.
Walker, D. A., Mullin.
Witte, Wm., Hubbard.

NEW HAMPSHIRE.

Batchelder, E. C., Dover.
Chase, D. R., Oxford.
Cheever, N. F., Greenfield.
Lord, L. W., West Ossipee.
Lyons, W. H. A., Manchester.
Richard, J. H., Dover.
Stark, M. A., Goffstown.
Stokes, D. L., Rochester.

NEW JERSEY.

Lore, H. E., Fairton.
Graff, E. R., Somerville.
Robinson, S. E., Waldwick.
Sewall, M. F., Bridgeton.
Van Ess, John, Paterson.
Young, P. C., Ringoes.

NEW YORK.

Becker, W. D., Rochester.
Bernstein, Charles, Rome.
Betts, Lester, Schenectady.
Brewer, G. E., New York City.
Busck, G. J., New York City.
Coleman, Warren, New York City.
Crofutt, E. F., New York City.
Dorn, E. I., Brooklyn.
Draper, E. L., Albany.
Duryee, C. C., Schenectady.
Garrigan, Gerald, New York City.
Gibson, J. A., Buffalo.
Harris, J. G., Poughkeepsie.
Hemstreet, C. A., Troy.
Hill, Isadore L., New York City.
Horton, E. B., Niagara Falls.
Hoyt, D. J., Poughkeepsie.
Hyland, T. G., Amsterdam.
Kelley, J. S., Binghamton.
Leahy, B. J., Port Jervis.
Leshure, John, New York City.
Lewis, F. N., New York City.
Meidenbauer, J. G., Buffalo.
O'Brien, Juel., Elmira.
O'Donnell, W. J., Buffalo.
Pershing, E. H., Lawrence.
Rapp, W. N., Argyle.
Reid, J. H., Troy.
Rulison, H., Albany.
Schneider, Saml, New York City.
Simpson, L. F., Rochester.
Sinclair, D. A., New York City.
Snow, I. M., Buffalo.
Starr, M. A., New York City.
Swartwout, H. B., Port Jervis.
Wells, C. E., Sag Harbor.
Welzmiller, John, New York City.
Witbeck, C. E., Cohoes.

NORTH CAROLINA.

Casteel, L. R., Culberson.
Lyday, A. E., Penrose.
Nichols, C. G., Roxboro.

NORTH DAKOTA.

Alexander, J. C., Tower City.
Bartley, W. M., Sheyenne.
Ekrem, J. M., Minot.
Ferguson, S. M., Brocket.
Hotchkiss, W. M., New Rockford.
Norriss, H. C., Dickey.
Ritchie, C. K., Velva.
Witherstine, W. H., Grand Forks.

OHIO.

Beckel, Frederick, Cleveland.
Bell, W. H., Cincinnati.
Betts, Charles, Toledo.
Black, J. N., Perry.
Brody, Myer, Cleveland.
Burritt, C. A., Toledo.
Darbyshire, M. A., McComb.
Deem, G. W., Hilliards.
Gardner, John, Toledo.
Gamble, C. D., Spencerville.
Harman, F. C., Glandorf.
Hempstead, Helen, Cleveland.
Henderson, G. W., West Cairo.
Hoover, C. E., Edgerton.
Hunt, H. B., St. Paris.
Kerr, L. E., East Toledo.
Krape, J. H., Kent.
Mateer, H. N., Wooster.
Mendenhall, W. C., Trotwood.
Milliette, D. R., Anna.
Morris, E. H., Dayton.
Mowry, Charles, Napoleon.
McClure, C. R., Cincinnati.
McMurray, James, Hubbard.
Newcomb, J. I., West Unity.
Nihart, O. H., Edon.
O'Brine, David, Urbana.
Orr, G. B., Cincinnati.
Roberts, G. J., Westminster.
Ryder, J. C., Eaton.
Sallume, N. N., Toledo.
Schwagmeyer, A., Cincinnati.
Schaeffer, C. A., Hamilton.
Shumaker, D. W., Canal Dover.
Silver, H. Z., Gordon.
Skiff, M. J., Ashtabula.
Sprague, W. V., Chauncey.
Staub, G. S., Dayton.
Stoll, C. W., Dover.
Stoll, K. L., Cincinnati.
Talley, C. F., Powell.
Thatcher, W. F., Jefferson.
Thompson, W. S., Girard.
Wehr, C. J., Bellevue.
Winans, J. V., Madison.
Woodward, H. L., Cincinnati.
Wright, T. M., Troy.

OKLAHOMA.

Bassett, W. M., Jet.
Caldwell, C. W., Chelsea.
Colby, J. H., Purcell.
Flagg, E. E., Moreland.
Hall, G. O., Carnegie.
Houseworth, A. L., Cashion.
Knowles, W. L. M., Nowata.
Kuhn, J. F., Oklahoma City.
Langford, Wm., Oklahoma City.
Racer, F. H., Woodward.
Riely, L. A., Oklahoma City.
Robertson, I. W., Dustin.
Shelton, J. W., Wynnewood.
Smith, M. T., Haskell.
Wallace, W. M., Drake.

OREGON.

Hestor, T. W., Jacksonville.
Manion, Florence S., Portland.
Middleton, C. S., Klamath Agency.

PENNSYLVANIA.

Bloomberg, S. S., Pittsburg.
Brown, W. H., Richlandtown.
Freeman, W. S., Philadelphia.
Jenkins, D. J., Scranton.
Keller, D. H., Russell.
Miller, D. J. M., Philadelphia.
Noone, M. J., Scranton.
Park, C. E., Avoca.
Pennock, W. J., Philadelphia.
Unger, D. F., Mercersburg.
Upham, Helen F., Pittsburg.
Van Pelt, W. T., Philadelphia.

RHODE ISLAND.

Kerr, R. W., Newport.

SOUTH DAKOTA.

Carr, Albert, Hill City.
Trooien, P. O., Toronto.

TENNESSEE.

Larimore, H. P., Chattanooga.
Peete, E. M., Memphis.
Sauls, D. K., Memphis.
Sharber, A. L., Nashville.
Wilson, J. F., Burlison.

TEXAS.

Blair, S. F., Klondike.
Burnett, J. H., Kopperl.
Callan, G. P., Proctor.
Dodge, S. T., Corpus Christi.
Graham, W. A., Falfurrias.
Holliday, Margaret, Austin.
Laidacker, N. E., China.
McElhannon, M. P., Belton.
Watson, J. T., Dallas.

UTAH.

Arntzen, J. L., Salt Lake City.
Hasler, W. T., Lehi.
Hummer, L. F., Salt Lake City.
Neher, E. M., Castle Gate.

VERMONT.

Bombard, B. J. A., Burlington.

VIRGINIA.

Dearmont, C. O., White Post.
Jones, J. B., Petersburg.

WASHINGTON.

Abrams, C. J., Hillyard.
Alexander, C. B., Mabton.
Collins, F. H., Goldendale.
Jordan, Arthur, Seattle.
McRae, R. D., Hunters.
Richty, John, Seattle.

WEST VIRGINIA.

Baker, L. A., Alvy.
Hamrick, R. A., Clay.
Harris, T. G., Mineral.
King, J. M., Buckhannon.
Lantz, J. O., Hartmonsville.
Shepherd, W. S., Wright.
Weirich, C. R., Wellsburg.

WISCONSIN.

Allen, A. L., Norwalk.
Allen, L. P., Oshkosh.
Bardeen, C. R., Madison.
Beffel, J. M., Milwaukee.
Belitz, William, Cochrane.
Brunkhorst, F. O., Cuba City.
Bryant, J. R., Lyndon Station.
Burke, James, Manitowoc.
Fairfield, W. E., Green Bay.
Harper, C. A., Madison.
Haushalter, H. P., Milwaukee.
Holliday, E. R., Ellsworth.
Jones, E. H., Weyauwega.
Lacey, S. W., Footville.
Lockhart, J. W:. Omro.
Malone, T. C., Milwaukee.
Meany, J. E., Manitowoc.
Merrill, W. G., Necedah.
Ott, H. A., Reedsville.
Parham, G. H., Necedah.
Payne, A. L., Eau Claire.
Peterson, G. E., Waukesha.
Prill, H. F., Augusta.
Rice, R. H., Delavan.
Rosinberry, B. P., Arcadia.
Ross, P. M., Waldo.
Schmit, A. T., Beloit.
Schnug, Max, Caroline.
Stoye, J. P., Theresa.
White, W. E., Lyons.
Wilcox, A. G., Sonon Springs.

WYOMING.

Bennett, W. S., Meeteetse.
Hurd, Anna G., Sheridan.

Queries and Minor Notes

Anonymous Communications will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

VANADIUM AS A THERAPEUTIC AGENT.

Pittsburg, Pa., May 1, 1907.

To the Editor:—Will you kindly inform me if vanadium or any of its compounds have come to be recognized as valuable therapeutic agents? The metal has remarkably high oxidizing powers. Because of this characteristic, Dr. Le Tanneur of Paris, in a book dealing with the matter under the heading Vanadio-thérapie, claims wonderful virtues for various preparations of the element for oral and hypodermic administration. From what I can gather, a sort of "perpetual motion" machine for energizing the economy is here said to be available owing to the activities set in motion and maintained by the preparations of vanadium advocated for use in depleted and other conditions. Can you give me information regarding Dr. Le Tanneur? His idea came first from a physicist, I believe—a M. Helonis. I should be glad to have any information throwing additional light on this enthusiastically advocated usage of vanadium or on its sponsor. C. C. Wholey, M.D.

Answer.—We have no knowledge of Dr. Le Tanneur or of the book referred to. Vanadium is classed with niobium and tantalum in a group which resembles the nitrogen and phosphorus group of elements. The compounds used for therapeutic purposes are vanadic acid (HVO_3) or its salts such as sodium or ammonium vanadate. Such therapeutic effects as they may possess are believed to be due to their oxygen-carrying power. Le Bond and David claim (*Jour. de méd. de Paris*, xv, 1903, 191-193; and *Progrès méd.*, July 14, 1906) that vanadic acid acts internally as a tonic and appetizer and they recommend it for internal use in anemia, cachexia, and tuberculosis. Le Blond and Bourgeois have reported (*Communication à la Soc. méd. du LXe Arrondissement*) the rapid cicatrization of a very old lupus to which a solution of vanadic acid was applied after the follicles had been opened by multiple incisions to permit the agent to penetrate to the interior of the tissue. Le Blond and David say that the external use of the remedy is indicated in simple wounds, malignant pustules, tuberculous and syphilitic lesions, varicose ulcers, and other trophic lesions. They have noticed no ill effects except an erythematous eruption in one case, which disappeared with the cessation of treatment. These authors call the solution which they use "oxydasine." They employ for internal use a solution containing 0.0015 gm. in a liter of water (1/40 grain to the quart), which is given in doses of two tablespoonfuls a day. For external use a stronger solution is made containing 0.50 gm. in a liter of water (7½ grains to the quart). The latter solution is again diluted from three to ten times with water for ordinary external use, but for use on the mucous membranes, instead of water two parts of glycerin are added. The claims made for vanadium have not led to its wide use and until they are confirmed by reliable clinicians the remedy must be regarded as in the experimental stage. It is not proprietary and may be obtained through the dealers in chemicals.

TRANSMISSIBILITY OF BOVINE TUBERCULOSIS.

Kalamazoo, Mich., April 27, 1908.

To the Editor:—Will you kindly furnish me the following information through the Queries column of The Journal. What is the consensus of opinion in regard to the transmissibility of bovine tuberculosis to man? Kindly give me some idea as to recent literature on bovine tuberculosis. E. J. Brady.

Answer.—This question is still unsettled, but the weight of authority inclines to the view that the transmission of bovine tuberculosis to man is possible, but probably infrequent. Children, it is claimed, are more liable to be affected than adults. The literature on the subject is too extensive to include here, but the following are important references and cover both views:

Koch, R.: Communicability of Bovine Tuberculosis to Man, *Deutsch. med. Wchnschr.*, Nov. 20 and 27, 1902; abstracted in The Journal, Dec. 20, 1902, p. 1625.

Ravenel, M. P.: Bovine Tuberculosis a Factor in the Causation of Human Tuberculosis, *Maryland Med. Jour.*, February, 1904; abstracted in The Journal, Feb. .6, 1904, p .391.

Rabinowitsch, L.: Relations Between Human and Bovine Tuberculosis, *Berl. klin. Wchnschr.*, xliii, No. 23.

Salmon, D. E.: Bovine and Human Tuberculosis, The Journal, March 12, 1904, p. 692.

Kossel, H.: Human and Bovine Tuberculosis, *Brit. Med. Jour.*, Dec. 2, 1905; abstracted in The Journal, Dec. 30, 1905, p. 2032.

Raw, N.: Human and Bovine Tuberculosis, *Brit. Med. Jour.*, Aug. 18, 1906; abstracted in The Journal, Sept. 15, 1906, p. 898.

Shaw, H. L.: The Present Status of the Transmissibility of Bovine Tuberculosis, The Journal, Oct. 12, 1907, p. 1276.

Ravenel, M. P.: Etiology of Tuberculosis, *Am. Jour. Med. Sci.*, October, 1907; abstracted in The Journal, Nov. 16, 1907, p. 1717

Smith, Theo.: Channels of Infection in Tuberculosis, *Boston Med. and Surg. Jour.*, Sept. 26, 1907; abstracted in The Journal, Oct. 12, 1907, p. 1309.

Report of the Royal Commission on Human and Animal Tuberculosis, The Journal, Jan. 4, 1908, p. 56.

IVY POISONING.

Hudson, Ohio, April 27, 1908.

To the Editor:—What can be used to prevent autointoxication in a case of ivy poisoning? Can the active irritant of ivy or sumach be neutralized or rendered inert in a manner similar to that of antiseptics in germ infections? George M. Frost.

Answer.—So far as our present knowledge extends, it seems an established fact that ivy poisoning depends not on an infectious germ, but on a chemical poison. Hence the remedy is not an antiseptic but an antidote. Acetate of lead is supposed to act as an antidote by precipitating the poison as an insoluble compound with lead. The favorable action of potassium permanganate may be by its oxidizing the poison and thus rendering it harmless. Sodium thiosulphate may act by destroying the poison by reduction.. The value of grindelia robusta may reside in its being a protective varnish. The treatment of ivy poisoning was discussed in the following articles in The Journal: "Efficient Treatment of Ivy Poisoning," The Journal, Aug. 31, 1907, p. 789. "Ivy Poisoning," The Journal, Sept. 21, 1907, p. 1042.

The Public Service

Army Changes.

Memorandum of stations and duties of medical officers, U. S. Army, week ending May 2, 1908:

Carter, E. C., surg., granted leave of absence for two months, about June 1.

Craig, C. F., asst.-surg., granted leave of absence for two months, about July 1.

Williams, A. W., asst.-surg., granted leave of absence for two months, at its expiration to proceed to Fort H. G. Wright, N. Y., for duty.

Davis, W. R., asst.-surg., granted leave of absence for fifteen days.

Raymond, T. U., surg., granted leave of absence for one month.

Banta, W. P., asst.-surg., granted leave of absence for four months.

Fisher, H. C., surg., relieved from duty at Fort Logan, Colo.; ordered to Washington, D. C., for instructions; thence to Fort Slocum, N. Y., to familiarize himslf with certain methods pertaining to the examination of recruits, and thence to Columbus Barracks, Ohio, for duty.

Raymond, H. I., surg., relieved from duty at Columbus Barracks, Ohio, and ordered to Fort Sam Houston, Texas, for duty.

Vose, W. E., asst.-surg., relieved from duty at Columbus Barracks, Ohio, and ordered to Fort Slocum, N. Y., for duty.

LeWald, L. T., asst-surg., relieved from duty at Fort Slocum, N. Y., and ordered to Columbus Barracks, Ohio, for duty.

Gosman, G. H. R., asst.-surg., relieved from duty at Columbus Barracks, Ohio, and ordered to Fort Morgan, Ala., for duty.

Powell, J. L., dep. surg. gen., granted an extension of eight days to his leave of absence.

Raymond, T. U., surg., order for Fort Sam Houston, Texas, is amended; will proceed to Fort Logan, Colo., for duty.

Rockhill, E. P., asst. surg., relieved from observation and treatment at the General Hospital, Fort Bayard, N. M., and from further duty in the Philippines division, and ordered to duty at that hospital.

Whinnery, J. C., dental surg., left Fort Lawton, Wash., for duty at Vancouver Barracks, Wash.

Voorhies, H. G., dental surg., arrived at Fort Meade, S. D., for duty.

Weston, H. R., cont. surg., ordered from Windsor, Vt., to Fort Ethan Allen, Vt., for duty.

Jones, E. C., cont. surg., granted leave of absence for ten days.

Murray, Wilson, cont. surg., granted leave of absence for four months.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending April 26, 1908:

Fiske, C. N., P. A. surgeon, orders to Washington, D. C., revoked; to continue treatment at the Naval Hospital, Mare Island, Cal.

Koltes, F. X., asst.-surgeon, detached from the Navy Yard, Mare Island, Cal., and ordered to the *Connecticut*.

Ransdell, R. C., asst.-surgeon, detached from the *Connecticut* and ordered to the second torpedo flotilla.

Ziegler, J. G., acting asst.-surgeon, ordered to duty at the Naval Hospital, Portsmouth, N. H.

Fiske, C. N., P. A. surgeon, ordered home and granted sick leave for two months, when discharged from treatment at the Naval Hospital, Mare Island, Cal.

Changes in the Medical Corps, U. S. Navy, for the week ending May, 2, 1908.

Spear, D. A., asst.-surgeon, ordered to duty at the naval hospital, Washington, D. C.

Plummer, R. W., surgeon, commissioned surgeon from February 23, 1908.

Rothganger, G., surgeon, granted sick leave for three months, when discharged from treatment at the naval hospital, New York, New York.

Bacon, S., Rhodes, G. C., Hough, F. R. W., Biello, J. A., asst.-surgeons, appointed assistant surgeons from April 11, 1908.

Cook, F. C., surgeon, detached from the Naval Academy and ordered to the *North Carolina* when commissioned.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended April 29, 1908:

Mead, F. W., surgeon, granted leave of absence for 10 days, from April 12, 1908, amended to read on account of sickness.

Wasdin, E., surgeon, directed to proceed to certain points in Mississippi for special temporary duty, on completion of which to rejoin his station.

Brooks, S. D., surgeon, granted leave of absence for three days, from April 20, 1908, revoked

Oakley, J. H., P. A. surgeon, leave of absence granted for one month from April 15, 1908, amended so as to be effective April 17, 1908.

Parker, H. B., P. A. surgeon, granted leave of absence for nine days, from April 18, 1908, on account of sickness.

Boggess, J. S., P. A. surgeon, relieved from duty at Chicago and directed to proceed to Seattle, Wash., reporting to the commanding officer of the Revenue-Cutter *Perry*, not later than May 5, 1908, for duty.

Foster, A. D., P. A. surgeon, relieved from duty at Ellis Island, and directed to proceed to Port Townsend, Wash., reporting to the commanding officer of the Revenue-Cutter *Thetis*, not later than May 5, 1908, for duty.

Hurley, J .R., asst.-surgeon, relieved from special temporary duty at San Francisco and directed to report to the commanding officer of the Revenue-Cutter *Bear*, not later than May 5, 1908, for duty.

Wood, C. E.,, asst.-surgeon, relieved from duty at Stapleton, N. Y., and directed to proceed to Chicago, reporting to the medical officer in command for duty and assignment to quarters.

Olesen, Robert, asst-surgeon, relieved from duty at the marine hospital, San Francisco, and directed to report to the commanding officer of the Revenue-Cutter *McCullough*, not later than May 5, 1908, for duty.

Goldsborough, B. W., acting asst.-surgeon, granted leave of absence for three days, from April 28, 1908.

Green, E. S., acting asst.-surgeon, granted leave of absence for 12 days, from April 18, 1908.

Gustetter, A. L., acting asst.-surgeon, granted leave of absence for three days, from April 27, 1908.

Jackson, J. M., acting asst.-surgeon, leave of absence granted for 10 days, from April 4, 1908, amended so as to read for 16 days, from April 4, 1908.

Simonson, G. T., acting asst.-surgeon, granted leave of absence for four days, from April 30, 1908.

Simonson, G. T., acting asst.-surgeon, granted extension of leave of absence for two days, from May 5, 1908.

Thomas, J. N., acting asst.-surgeon, directed to proceed to Puerto Barrios, Guatemala, for special temporay duty.

BOARD CONVENED.

A board of medical officers was convened to meet at Seattle, Wash., April 24, 1908, for the purpose of making physical examination of an alien immigrant. Detail for the board: P. A. Surgeon M. W. Glover, chairman; Asst.-Surgeon C. W. Chapin; Acting Asst.-Surgeon P. R. Underwood, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended May 1, 1908:

SMALLPOX—UNITED STATES.

California: Los Angeles, April 4-11, 2 cases.

District of Columbia: Washington, April 11-18, 5 cases.

Illinois: Chicago, April 11-18, 4 cases; Galesburg, April 11-18, 3 cases; Springfield, April 9-16, 6 cases.

Indiana: Indianapolis, April 12-19, 7 cases; Lafayette, April 13-20, 1 case.

Kansas: Kansas City, April 11-18, 20 cases; Wichita, April 11-18, 9 cases.

Louisiana: New Orleans, April 11-18, 7 cases, 1 death.

Maryland, Baltimore, April 11-18, 1 case.

Michigan: Detroit, April 4-11, 4 cases; Grand Rapids, April 4-18, 3 cases; Kalamazoo, March 28-April 11, 2 cases.

Mississippi: Greenville, February 1-29, 4 cases; March 1-31, 4 cases.

Missouri: Kansas City, March 4-18, 24 cases; St. Louis, April 11-18, 3 cases.

Montana: Butte, March 31-April 7, 3 cases.

Nebraska: Nebraska City, April 11-18, 2 cases.

North Carolina: Charlotte, April 4-18, 2 cases.

Ohio: Cincinnati, April 10-17, 9 cases, 1 death; Dayton, April 11-18, 1 case.

Tennessee: Nashville, April 11-18, 1 case.

Texas: Fort Worth, March 1-30, 58 cases.

Vermont: New Bury, March 12-18, 10 cases.

Washington: Spokane, April 4-11, 12 cases; Tacoma, March 28-April 4, 1 case.

Wisconsin: La Crosse, April 11-18, 3 cases; Milwaukee, April 4-18, 5 cases; Racine, April 11-18, 4 cases.

SMALLPOX—FOREIGN.

Arabia: Aden, March 23-30, 2 deaths.

Austria: Vienna, March 28-April 4, 1 case.

Brazil: Bahia, February 29-March 28, 80 cases; Pernambuco, February 1-29, 85 deaths; Para, March 28-April 4, 1 case; Rio de Janerio, March 28, April 4, 196 cases, 70 deaths.

China: Hongkong, February 22-March 7, 62 cases, 45 deaths; Shanghai, March 8-15, 2 cases, 3 deaths.

Ecuador: Guayquill, March 14-28, 8 deaths.

Egypt: Cairo, March 18-25, 1 case 1 death; Suez, February 18-March 18, 8 cases.

Formosa: March 7-14, 5 cases.

France: Marseilles, March 1-31, 4 deaths; Paris, March 28-April 4, 5 cases.

Germany: General, March 29-April 11, 43 cases.

Great Britain: Leith, March 21-28, 1 death.

India: Bombay, March 17-24, 67 deaths; Calcutta, February 22-March 14, 40 deaths.

Italy: General, April 2-9, 19 cases; Catania, March 26-April 9, 5 cases, 3 deaths; Naples, March 28-April 4, 1 case.

Japan: Kobe, March 7-14, 56 cases, 39 deaths; March 14-21, 34 cases, 20 deaths; Nagasaki, March 14-22, 1 case, 1 death; Osaka, March 7-14, 306 cases, 101 deaths.

Mexico: Aguas Calientes, March 29-April 12, 4 deaths; City of Mexico, March 7-14, 13 cases.

Portugal: Barreiro, March 28-April 4, 1 case; Lisbon, March 28-April 4, 1 case.

Russia: Moscow, March 14-28, 38 cases, 19 deaths; Riga, March 28-April 4, 5 cases; St. Petersburg, March 14-21, 26 cases, 2 deaths; Warsaw, February 8-March 14, 34 deaths.

Spain: Denia, March 21-April 4, 20 cases, 3 deaths; Madrid, March 1-31, 1 death; Valencia, March 22-April 5, 37 cases, 3 deaths.

Straits Settlements: Penang, March 7-14, 2 cases; Singapore, February 27-March 7, 1 case, 1 death.

Turkey: Smyrna, February 23-March 24, 13 deaths.

YELLOW FEVER.

Brazil: Para, March 28-April 4, 5 cases, 4 deaths; Rio de Janeiro, March 15-22, 1 case, 1 death.

Ecuador: Guayaquil, March 14-28, 5 deaths.

CHOLERA—INSULAR.

Philippine Islands: Manila, February 22-March 7, 8 cases, 7 deaths.

CHOLERA—FOREIGN.

Cochin China: Saigon, February 21-March 7, present.

India: Calcutta, February 22-March 14, 399 cases, 399 deaths; Madras, March 14-20, 8 cases; Rangoon, March 7-14, 4 deaths.

PLAGUE.

Brazil: Bahia, February 29-March 14, 3 cases, 3 deaths; Rio de Janeiro, March 15-22, 3 deaths.

China: Hongkong, February 22-29, 1 case, 1 death.

Cochin China: Saigon, February 22-March 7, 4 cases,

Ecuador: Guayaquil, March 14-28, 67 deaths.

Egypt: Assiout Province, March 6-12, 6 cases, 6 deaths; Fayoum Province, 2 cases, 1 death; Girgeh, March 8-11, 2 cases, 2 deaths.

India: Bombay, March 17-24, 343 cases, 343 deaths; Calcutta, February 22-March 14, 133 deaths; Rangood, March 7-14, 32 deaths.

Straits Settlements: Singapore, February 27-March 7, 1 death.

Marriages

PARKER SYMS, M.D., to Miss Harriette Barkus, both of New York City, April 20.

SAMUEL KENNEDY, M.D., to Miss Katherine Leefers, both of Shelby, Ind., April 20.

ALFRED G. SHISSLER, M.D., to Miss Irene Heck, both of Shamokin, Pa., April 21.

JAMES A. MCMURRAY, M.D., Marion, Ohio, to Mrs. Harriett Webb, of Newark, Ohio, April 20.

PAUL R. BURROUGHS, M.D., Allison, Iowa, to Miss Grace Crain, of Iowa City, Iowa, April 22.

GARDNER WELLS HALL, M.D., Boston, to Miss Elizabeth Hancock Page, at Brookline, Mass., April 22.

ROBERT HARROLD DONNELL, M.D., Bath, Maine, to Miss Helen Beatrice Maxim, of New Castle, Ind., April 22.

HARRY EARL PFEIFFER, M.D., Cedar Rapids, Iowa, to Miss Altah A. Wilautt, of Iowa City, Iowa, March 11.

CARROL D. BUCK, M.D., U. S. Army, to Mrs. Ynez Shorb-White, at Camp McKinley, Manila, P. I., April 10.

Deaths

Thomas Lafayette Maddin, M.D. University of Louisville (Ky.), Medical Department, 1849; a member of the American Medical Association; a member of the staff of the Nashville Hospital from 1854 to 1861; professor of anatomy for two years and professor of surgery thereafter in Shelby Medical College until the institution was closed by the Civil War, in which he served on the Confederate side; from 1867 to 1906 professor of nervous diseases in the University of Nashville; one of the most prominent physicians and citizens of central Tennessee; died at his home in Nashville, April 27, after an illness of three weeks, aged 83. In 1903 the medical societies and medical profession of Nashville united in tendering to Dr. Maddin a banquet in honor of his semi-centennial as a teacher of medicine in the state.

Abiah Morgan Cartledge, M.D. Hospital College of Medicine, Louisville, Ky., 1882; a member of the American Medical Association; once president of the Southern Surgical and Gynecological Association; professor of abdominal surgery and gynecology in the Louisville Medical College; surgeon to the Louisville, St. Louis & Texas Railroad, and to the Louisville City Hospital; one of the most prominent gynecologists of Kentucky; died suddenly at his home in Louisville, May 4, from angina pectoris, aged 49.

Carlton E. Starrett, M.D. Bennett College of Eclectic Medicine and Surgery, Chicago, 1884; Rush Medical College, Chicago, 1893; a member of the Association of Military Surgeons of the United States and Association of Military Surgeons of the State of Illinois; captain and assistant surgeon of the Third Illinois Infantry, U. S. V., during the Spanish-American War, serving with that command in Porto Rico; major and surgeon, Illinois National Guard, assigned Third Infantry; surgeon to St. Joseph's Hospital, Elgin; died in St. Luke's Hospital, Chicago, May 1, from diffuse suppurative meningitis, after an illness of one week, aged 43. He was given a military funeral at his home in Elgin, May 3, with full ceremonial, three companies and the hospital corps of the Third Infantry participating.

William Henry Earles, M.D. Rush Medical College, Chicago, 1880; a member of the American Medical Association; dean and professor of surgery in the Medical Department of the Marquette University, Milwaukee Medical College; one of the founders of, and surgeon to Trinity Hospital; editor of the *Milwaukee Medical Journal;* and one of the prominent practitioners of Milwaukee; died suddenly at his home, April 28, from cerebral hemorrhage, aged 55. At a meeting of the combined faculties of the medical, dental and pharmaceutical departments of Marquette University, held April 29, tributes of affection and respect were paid, and it was decided to raise a fund for the erection of a bust of Dr. Earles, to be placed in the college.

William Stevens England, M.D., C.M. McGill University, Montreal, 1889; house surgeon of the Montreal General Hospital for a year after graduation; medical superintendent of the Winnipeg General Hospital from 1890 to 1893; chief surgeon to the Winnipeg General Hospital and consulting surgeon to St. Boniface Hospital, Winnipeg; demonstrator and professor of anatomy, professor of applied anatomy and professor of clinical surgery in the Manitoba Medical College; a member of the British Medical Association; died at his home in Winnipeg, April 24, from cerebral hemorrhage, aged 40.

James N. Buckham, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1878; a member of the American Medical Association and a prominent practitioner of Flint, Mich.; died in Rochester, Minn., recently, after a surgical operation, and was buried April 21, aged 50. At a special meeting of the Genessee County Medical Society, held April 20, a committee was appointed to draft resolutions, expressive of the loss sustained by the members of the society in the death of Dr. Buckham.

Marcello Hutchinson, M.D. Medical School of Harvard University, Boston, 1877; of Lynnfield Center, Mass.; assistant in the agricultural and chemical laboratories of Bussey Institute; once assistant physician of Taunton Insane Hospital; from 1890 to 1899 superintendent of the Massachusetts Hospital for Dipsomaniacs and Inebriates, Foxboro, and from 1899 to 1905 superintendent of the Vermont State Hospital for the Insane, Waterbury; died, April 21, after an illness of three years.

Halstead Alfonso Stansfield, M.D. Cooper Medical College, San Francisco, 1897; passed assistant surgeon, P. H. and M.-H.; who resigned from that service March 23; a member of the American Medical Association; formerly bacteriologist and diagnostician of the marine hospital laboratory, San Francisco; died in the Sutro Forest, near the Affiliated Colleges, April 13, from the effects of a self-inflicted gunshot wound of the head while suffering from mental aberration, aged 33.

Charles J. Aldrich, M.D. University of Wooster, Medical Department, Cleveland, 1882; a member of the American Medical Association, Mississippi Valley Medical Association and Tri-State Medical Society; formerly president of the Academy of Medicine of Cleveland; professor of mental and nervous diseases in the College of Physicians and Surgeons of Cleveland; consulting neurologist to the Cleveland General and City hospitals; died suddenly in Cleveland, April 29, aged 46.

Richard Aylett Barret, M.D. Missouri Medical College, St. Louis, 1854; who afterward graduated in law and adopted that as his profession; for a time secretary of legation at Paris; one of the leaders in the movement which retained Missouri in the Union; for a time editor-in-chief of the St. Louis *Evening Dispatch* and St. Louis *Times*, and private secretary of two mayors of St. Louis; died at his home in St. Louis, April 6, from nephritis, after an illness of two years, aged 73.

Joseph Henry Scammell, M.D. McGill University, Montreal, 1894; a member of the Canadian Medical Association and New Brunswick Medical Society; physician to the Outdoor Department of the St. John (N. B.) General Public Hospital; pathologist to the St. John Home for Incurables; surgeon for the St. John salvage corps and fire and police departments; also for a time deputy quarantine physician; died at his home, April 25, from pneumonia, after a short illness, aged 38.

Samuel Nickles, M.D. Medical College of Ohio, Medical Department University of Cincinnati, 1865; a member of the Ohio State Medical Association, Hamilton County Medical Society and Cincinnati Academy of Medicine; a charter member of the German Literary Society; emeritus professor of materia medica and therapeutics in his alma mater; died at his home in Cincinnati, from influenza, April 21, after an illness of three months, aged 74.

Edward M. Rabb, M.D. Medical Department of the Tulane University of Louisiana, New Orleans, 1878; of San Antonio, Texas; second vice-president of the State Medical Association of Texas in 1893 and 1894, and a member of the Bexar County Medical Society; formerly local surgeon to the San Antonio and Aransas Pass Railway, and physician of Lavaca County; died, April 16, at Brownsville, Texas, aged 55.

James Curtis Ralston, M.D. Jefferson Medical College, Philadelphia, 1903; a member of the Medical Society of the State of Pennsylvania and Allegheny County Medical Society; a well-known physician of East End, Pittsburg, and pathologist to the Pittsburg Hospital of the Sisters of Charity; died in that institution, from septicemia, April 26, after an illness of six months, aged 32.

Gladin Gorin Scott, M.D. University of Louisville (Ky.) Medical Department, 1885; a member of the Medical Association of the State of Alabama and Mobile County Medical Society; formerly of Mobile, but since his retirement a resident of Mount Pleasant, Ala.; died at his home, April 12, after an illness of a few hours.

Ezekiel Morrill, M.D. Dartmouth Medical School, Hanover, N. H., 1857; Castleton (Vt.) Medical College, 1857; assistant surgeon of the Thirteenth New Hampshire Volunteer Infantry and of the First New Hampshire Volunteer Heavy Artillery during the Civil War; died at his home in Concord, N. H., April 18, aged 70.

Gustavus Hay, M.D. Medical School of Harvard University, Boston, 1857; a member of the Massachusetts and Suffolk District medical societies, and the American Ophthalmological Society; a prominent oculist and aurist af Boston; died April 26, at his home in Jamaica Plains, aged 78.

Viceroy Marion Bailey, M.D. Miami Medical College, Cincinnati, 1884; of Dayton, Ohio; a member of the Ohio State Medical Association and the Montgomery County Medical Society; died at the Jewish Hospital, Cincinnati, April 22, after an operation for appendicitis, aged 54.

Thomas Jefferson Casper, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1861; first secretary and chairman of the executive committee of the Ohio Pharmaceutical Association; died at his home in Springfield, Ohio, April 21, from pneumonia, aged 70.

James R. Gray, M.D. Louisville (Ky.) Medical College, 1880; a member of the Kentucky State Association and Hardin County and Muldraugh Hill medical societies; died at his home in Elizabethtown, April 18, from malignant disease, after an illness of about one year, aged 53.

John B. Leitzell, M.D. Pennsylvania Medical College, Gettysburg, 1853; a member of the Illinois State and Stephenson County medical societies; died at his home in Dakota, Ill., April 25, from asthma and lung disease, after an illness of several weeks, aged 79.

George Atlick Curriden, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1892; a member of the American Medical Association; formerly of Washington, D. C.; died in Grand Rapids, Mich., April 15, from accidental poisoning, aged 41.

Dewitt Clinton Crumb, M.D. University of Buffalo (N. Y.), Medical Department, 1871; a member of the medical societies of the State of New York and County of Chenango; a veteran of the Civil War; died at his home in South Otselic, N. Y., April 18, aged 60.

Carl Kitchen, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1878; for twenty years a practitioner of Runnells, Iowa; died at his home in Des Moines, Iowa, April 23, from cerebral hemorrhage, after an illness of four days, aged 55.

Isaac N. Hughey, M.D. American Medical College, Eclectic, St. Louis, 1878; of Pomona, Cal.; a veteran of the Civil War; died from septicemia due to an operation wound, at Pomona Valley Hospital, April 16, after an illness of five days, aged 67.

Charles Morris Luckey, M.D. College of Physicians and Surgeons, Chicago, 1884; U. S. pension examining surgeon; at one time mayor of Baldwin, Iowa; died at his home in that city, April 22, from nephritis, after an illness of one year, aged 45.

Jacob K. Zinn, M.D. Physio-Medical College of Medicine, Indianapolis, 1898; a member of the Fountain County (Ind.) Medical Society; died at his home in Covington, Ind., April 23, four days after an operation for appendicitis, aged 44.

William J. Wall, M.D. University of Tennessee, Medical Department, Nashville, 1901; of Inman, S. C.; for several years a member of the Spartanburg County board of education; died at the Spartanburg Hospital, April 24, from appendicitis.

William T. Stanley, M.D. Louisville (Ky.) Medical College, 1889; a member of the American Medical Association; a prominent practitioner of Drew County, Ark.; died at his home in Selma, April 18, aged 41.

Claud H. Lewis, M.D. Jefferson Medical College, Philadelphia, 1878; a member of the Medical Society of the State of North Carolina and Randolph County Medical Society; died at his home in Farmer, April 23.

Chester Pritchard Wagner, M.D. Cooper Medical College, San Francisco, 1907; of San Francsco; an interne in the French Hospital; died, March 4, in that institution, from typhoid fever, aged 27.

James Thomas Holley, M.D. University of Maryland, School of Medicine, Baltimore, 1881; of Port Bolivar, Texas; a member of the American Medical Association; died in Galveston, Texas, April 22, aged 49.

John Robert Dunn, M.D. Medical Department, University of Nashville (Tenn.), 1855; an esteemed practitioner of Robertson County, Tennessee; died at his home in Turnersville, April 20, aged 76.

George F. Abbott, M.D. Dartmouth Medical School, Hanover, N. H., 1892; formerly of Littleton, N. H.; died at Kent, Wash., Dec. 24, 1907, after an illness of three years.

John H. Heidemann, M.D. Washington University Medical Department, St. Louis, 1876; died at his home in St. Louis, April 25, after an illness of four months, aged 63.

Daniel L. Sullivan, M.D. Ohio Medical University, Columbus, 1898; died at his home in Columbus, from typhoid fever, April 24, after an illness of ten days, aged 32.

H. C. Dollar, M.D. Atlanta (Ga.) Medical College, 1875; of Atlanta; died in a private sanitarium in that city, April 19, after an illness of several months, aged 60.

Sidney Rowland Walker, M.D. Cleveland University of Medicine and Surgery, 1895; died suddenly at his home in Aurora, Ohio, April 19, from diabetes, aged 49.

John L. Lusk, M.D. University of Louisville (Ky.) Medical Department, 1889; died at his home in Berea, Ky., April 15, after a prolonged illness, aged 51.

Frederick C. Robinson, M.D. Jefferson Medical College, Philadelphia, 1861; for fifty years a practitioner of Monongahela, Pa.; died April 26, aged 87.

Afred M. Golliday, M.D. Rush Medical College, Chicago, 1860; a rich recluse of Bedford, Iowa; was found dead in that place, April 23, aged 76.

Elias Cornelius Guild, M.D. Bennett College of Eclectic Medicine and Surgery, Chicago, 1874; died at his home in Wheaton, Ill., April 25, aged 76.

Charles G. Crosse, M.D. Eclectic Medical Institute, Cincinnati, 1853; died at his home in Sun Prairie, Wis., April 21, aged 79.

Henry D. Smith, M.D. Kentucky School of Medicine, Louisville, 1892; of Ogden's Landing, Ky.; died April 17, aged 49.

Deaths Abroad.

L. von Schroetter, M.D., the celebrated laryngologist of Vienna, is reported by the cable to have died suddenly April 21, after delivering the inaugural address at the International Congress of Laryngology at Vienna. A souvenir volume was issued in his honor on his seventieth birthday last year. He was professor of internal medicine, and succeeded Türk in the chair of laryngology. As delegate to various international congresses and member of numerous scientific societies, as well as author and teacher, his name is known around the world. His full title was Ritter von Kristelli.

A. V. Cornil, M.D., until last year professor of pathologic anatomy at the University of Paris, prefect and senator, editor of the *Journal des connaissances médicales pratiques* and author of numerous works and manuals on histology and pathologic anatomy; died at Paris, April 14, aged 71.

F. Mracek, M.D., professor of syphilology at the University of Vienna; died April 8, aged 61.

Society Proceedings

COMING MEETINGS.

American Medical Association, Chicago, June 2-5.

American Association of Physicians, Washington, May 12-13.
State Medical Association of Texas, Corpus Christi, May 12.
Utah State Medical Association, Salt Lake, May 12-13.
Louisiana State Medical Society, Alexandria, May 12-14.
Montana State Medical Association, Butte, May 13-14.
Arkansas Medical Society, Little Rock, May 13-15.
West Virginia State Medical Association, Clarksburg, May 13-15.
New Hampshire Medical Society, Concord, May 14-15.
Oklahoma State Medical Association, Sulphur, May 14-16.
Illinois State Medical Society, Peoria, May 19-21.
Missouri State Medical Association, Springfield, May 19-21.
Nebraska State Medical Association, Lincoln, May 19-21.
North Dakota State Medical Association, Grand Forks, May 20-21.
Iowa State Medical Society, Des Moines, May 20-22.
Rhode Island Medical Society, Providence, May 26.
Connecticut State Medical Society, New Haven, May 27-28.
American Pediatric Society, Delaware Water Gap, May 26-28.
American Gynecological Society, Philadelphia, May 26.
American Academy of Medicine, Chicago, May 30-June 1.
American Association of Medical Examiners, Chicago, June 1-2.
American Gastro-Enterological Association, Chicago, June 1-2.
American Proctologic Society, Chicago, June 1.
American Urological Association, Chicago, June 1.
Nat. Confed. of State Med. Examining, Etc., Boards, Chicago, June 1.
American Orthopedic Association, Chicago, June 4-6, 1908.
Massachusetts Medical Society, Boston, June 9-10.
American Climatological Association, Boston, June 9-11.
Maine Medical Association, Bangor, June 10-11.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON SURGERY.

Regular Meeting, held April 3, 1908.

Dr. Charles H. Peck in the Chair.

Hernia of the Lung.

Dr. Edward Adams presented a patient with hernia of the lung. The first case of this nature was reported in 1499, since which time but 48 cases have been reported. These 48 cases were classified as follows: Congenital, 10 cases; spontaneous, 8 cases; traumatic, 30 cases. During the Civil War there were about 20,000 injuries to the chest wall, and among these were found but five cases of hernia of the lung. During the Russo-Japanese war not one case was recorded.

The patient was 22 years old, an iron-worker in Buenos Aires. Two years ago, when lifting a heavy piece of iron, he felt something give in his chest and soon noticed a bulging in the upper intercostal region. This was accompanied by pain. On inspection there was found nothing except a slight bulging in the second and third intercostal spaces on the right side and near the median line; this bulging was more marked when he bent forward than when he was in the erect posture. On palpation, the swelling was found to be soft and elastic, and not adherent to the skin. On percussion, it was found to be tympanitic. On auscultation there was a slight exaggeration of the breath sounds and an increased vocal fremitus. The differential diagnosis was to be made from aneurism, empyema, abscess of the lung, angioma, lipoma, cyst and cold abscess. The *x*-ray picture showed nothing. Aspiration of the swelling gave negative results. The treatment consisted in a well-fitting pad held in place by straps. If a cure was not effected in a short time, he intended to cut directly down over the swelling and suture the muscles with silver wire.

DISCUSSION.

Dr. William Henry Luckett questioned the diagnosis. The patient could not produce this tumefaction while in the erect posture; if this was a hernia he could produce it in whatever position he assumed. The tumor did not crepitate under the finger or on auscultation. He thought that it might be a peculiar sacculation, possibly containing fluid. There might be a small opening, with a sac inside as well as outside the chest wall, a wallet-shaped affair.

Dr. H. A. Haubold believed the tumor was too near the median line to be a hernia of the lung. If the patient made a sudden exertion, or took a deep inspiration, the lung would be driven toward the diaphragm, where there was room for it. He suggested that it might be a branchiogenetic cyst.

Dr. W. A. V. Moschcowitz examined the tumor some time ago and believed it to be a hernia of the lung. He had seen one other such case and this presented similar symptoms.

Dr. Willy Meyer also confirmed the diagnosis. The man got his hernia by lifting a heavy weight. The percussion sounds were those of lung. With increased intrathoracic pressure there was increase in the size of the swelling.

Dr. Charles A. Elsberg called attention to the fact that when the patient inspired the skin over the tumor sank in, and when he expired it bulged out. He thought it might be a hernia of the pleura, the sac containing no lung and formed by parietal pleura.

Perforated Gastric Ulcer; Gastroenterostomy.

Dr. William C. Lusk presented this patient. Two weeks before admission to the hospital he had been having pain after eating. One morning he was seized with sudden pain in the abdomen, which was followed by vomiting. Dr. Lusk saw him at 5 p. m. and found the abdomen rigid and tender, particularly over the region of the appendix and to a less degree over the pit of the stomach. Fourteen hours after the onset of the attack operation was performed. At the point of incision a pint and a half of pus gushed out. The appendix was found to be normal. Another incision was made above, and a small perforation was revealed in the anterior wall of the stomach at the upper portion near the pylorus. There were adhesions around the gall bladder; the gall bladder was adherent over the entire front of the pylorus. The peripheral induration was about one-half an inch. The perforation was closed with three rows of chromic suture uniting the gall bladder to the stomach and finally drawing a piece of fat from above and one from below over the line of union. A posterior gastroenterostomy, leaving no slack in the loop of jejunum, was performed by suture. No irrigation was employed. There was little sponging, and the bulk of the pus was removed by large gauze pads tucked down into the pelvis. Proper drainage was used. The temperature promptly dropped. The patient made an uninterrupted recovery.

Cases Illustrating the Result of Bier's Hyperemic Treatment.

Dr. Willy Meyer believed that Bier's hyperemic treatment was the best method for achieving certain results. Bier started his artificial hyperemia in the treatment of surgical tuberculosis. He then read that pathologists had seen that patients with chronic hyperemia of the lungs due to valvular heart disease would not be stricken with tuberculosis. On the other hand, a patient with stenosis of the pulmonary artery was apt to be stricken with tuberculosis. Then Bier started his surgical investigations in 1892 and he and his followers have since shown results. In Bier's hyperemic treatment, instead of fighting the symptoms of inflammation, the point is to increase them by means of an increased amount of blood. Eleven patients were presented by Dr. Meyer to show the results of the Bier hyperemic treatment.

Importance of Abdominal Position in Operations on the Pleura and Lungs.

Dr. Charles A. Elsberg said that if a small opening is made in the right or left pleura of a dog that is lying on the back, or on the right or left side, the animal will, in most instances, continue to breathe well, although the amount of inspired and expired air will be less than the normal. But such an animal is very sensitive to the slightest influence which disturbs the breathing, producing a typical pneumothorax dyspnea. In almost all of the animals in which the size of the opening approached or exceeded the diameter of the trachea, dyspnea and death followed, regardless of what part of the chest was opened. When, however, the animal was operated on while lying flat on its abdomen, not only could a small opening be made and the animal continue to breathe normally, but even a very large opening could be made and the breathing continue regularly and quietly. Again, if a dog on its back with an opening in the chest, with typical violent dyspnea due to pneumothorax, is turned on its abdomen, the breathing will become regular and quiet again, and the pressure of air breathed in and out will be found to be several times as great as when the animal was on its back. On the other hand, a dog on its abdomen with a large opening in one pleural cavity and breathing quietly, can be brought into a condition of grave dyspnea and asphyxia by turning it on its back. These experiments seem to show that, in dogs at least, a pneumothorax is better borne when the animal is on its abdomen than when in any other posture. It was also shown that a pneumothorax was much better borne when the animal was deeply under the influence of the anesthetic.

Dr. Elsberg has applied these results in his work at the Mount Sinai Hospital. All of the patients in whom operations were performed which required the opening of the pleura were operated on lying flat on the abdomen. He has operated on a large number of patients with empyema, on two patients with abscess of the liver, and on three with subphrenic abscess and one with bronchiectatic cavity in the left lung. In all of these the pleura was opened. The patients in whom a normal pleura had to be opened showed few untoward symptoms when the opening was made and air was allowed to enter the pleural cavity. In the patients on whom an operation for empyema was done it was noted that with only one exception the coughing and interference with breathing that is regularly observed when the opening in the pleura is made for this affection was entirely absent.

Arthritis Deformans of Hip; Report of a New Operation.

Dr. Fred H. Albee discussed the clinical history of this affection (coxitis senilis) and reported one case, that of a man aged 59 years, with an advanced arthritis deformans of the right hip. The brace treatment was recommended and refused. Eleven months ago he sought further treatment. He was a powerfully built man, weighed 185 pounds, and walked with a marked limp. The right shoe was built up two and a half inches. The actual bony shortening was one-quarter of an inch; the practical shortening two and three-quarters inches. The leg was much atrophied and markedly adducted and flexed. Attempts at passive motion were painful. A skiagraph showed the head of the femur much worn away and flattened with many bony outgrowths about the rim of the acetabulum.

In view of the disintegration of the joint, the marked adduction and flexion with firm contractures in a man so large and powerfully built, with the leg in faulty position, with progression toward bony ankylosis, it seemed best to aim for immediate firm ankylosis with the limb in a position of slight overcorrection of the deformity to compensate for the existing practical shortening. Therefore, the operative indications were to devise a procedure which would, if possible, fulfil the above requirements and at the same time produce of itself as little real bony shortening as possible.

The hip joint was reached by an anterior incision five inches long, starting from just below and inside of the anterior superior spine of the ilium, and extending downward along the inner border of the sartorius muscle, which was retracted outward. The muscles and the deep structures were separated by blunt dissection and the iliacus and the rectus femoris muscles were retracted inward. A part of the large ring of osteophytes about the rim of the acetabulum were turned upward with the soft tissues adherent to them. It was thought wise to leave as many as feasible on account of their bone forming possibilities. In so thick a thigh with the presence of so much bony outgrowth it required some care to locate definitely the joint and head. With the head of the bone in situ, about one-half of its upper hemisphere was removed with a large chisel through a plane at right angles to the long axis of the shaft of the femur. Then with the same instrument the acetabulum was transformed into a flat surfaced roof, against which the fresh surface of the head was finally brought into firm contact by abduction of the thigh. On further attempting abduction it was impossible on account of the shortened adductors. An open tenotomy of these tendons and muscles was found necessary before the leg could be brought into proper position. The plain surfaces of the head and acetabulum were then brought together by simply abducting the thigh, and the capsule and soft tissues were then sutured. The leg was put up in a spica from axilla to toes in strong abduction.

This operation has the following advantages: 1. It assures bony union, bringing two large bony surfaces together for ankylosis and holds them firmly by the mere correction of the deformity. 2. It produces a minimum amount of bony shortening. The patient made an uneventful convalescence and was walking with crutches at the end of four weeks. At the end of nine weeks he walked without cane or crutch, and he went back to his work as patrolman in four months. He has not suffered any pain since the operation and the leg has remained in the corrected position.

Dr. Albee has done this operation five times; all the cases were advanced cases of arthritis deformans. The ages of the patients were respectively 30, 60, 63, 55 and 67. The shock was very slight in every case. This he believed was accounted for by the fact that the hip is not disarticulated, and that there were very few structures cut, and all had healed by first intention. The results in all the cases were most favorable.

FLORIDA MEDICAL ASSOCIATION.

Thirty-fifth Annual Meeting, held in Ocala, April 15-17, 1908.

The President, Dr. W. P. Lawrence, Tampa, in the chair.

The secretary's report showed a total membership of 272 from twenty county societies, a decrease of 32 members since 1907. At this session, 17 county societies were represented by 22 delegates. The total number of members present was 69.

Officers Elected.

Officers for the ensuing year were elected as follows:

President, Dr. J. F. McKinstry, Gainesville; vice-presidents, Dr. J. D. Love, Jacksonville, Dr. W. H. Powers, Ocala, and Dr. L. A. Peek, Melbourne; secretary, Dr. J. D. Fernandez, Jacksonville (re-elected); councilors, Dr. L. J. Efride, Live Oak, Dr. E. N. Liell, Jacksonville, Dr. D. M. Smith, Ocala, Dr. U. S. Bird, Tampa; librarian, Dr. C. E. Terry, Jacksonville; delegate to American Medical Association, Dr. J. Harris Pierpont, Pensacola; alternate, Dr. C. P. Rogers, Jacksonville; orator 1909, Dr. J. D. Love, Jacksonville. Chairmen of committees 1909: Legislation and public policy, Dr. J. H. Pierpont, Pensacola; publication, Dr. J. D. Fernandez, Jacksonville; scientific work, Dr. John MacDiarmid, DeLand; medical education, Dr. E. N. Liell, Jacksonville.

The report of the secretary of the State Medical Examining Board showed that 31 graduates in medicine took the examination, the results thereof to be determined later. The examination covered two days, April 13 and 14.

House of Delegates.

The House of Delegates held four sessions. They selected Pensacola as the 1909 meeting place, the date to be announced later. It is thought that the gathering in the extreme western end of the state will intensify the interest of the physicians of that section.

A committee was appointed to revise, have printed and issue the constitution and by-laws of the association. The librarian was instructed to have bound such journals and pamphlets on hand, as it was desired should be preserved for future reference.

Report of Committee on Medical Education.

This committee endorsed the standard set forth in Dr. Liell's paper as a prerequisite for the practice of medicine in the state, and also recommended that the paper be referred to the committee on legislation for prompt action thereon, in order that it may eventually become the standard of the Florida Board of Medical Examiners. The committee also approved the action of the American Medical Association in endeavoring to improve the standard of medical schools throughout the country, and finally recommended that the following definition of the act of practice of medicine (being a part of the laws of New York state), be favorably passed on by the association, with the end in view of its being eventually the accepted law of Florida: "A person practices medicine within the meaning of this act who shall either offer or undertake, by any means or method, to diagnose, treat, operate or prescribe for any human disease, pain, injury, deformity or physical condition, charging or receiving therefor money or other compensation or consideration, directly or indirectly."

This report was referred to the committee on medical legislation for prompt action.

Resolutions.

Resolutions as follows were offered by the Bradford County Society, through their delegate:

Resolved: That we favor the passage of a state law giving the Medical Examining Board the right to revoke licenses, on proof of unprofessional conduct, such as (a) addiction to the use of liquors or drugs; (b) unprofessional conduct; (c) committing or offering to commit an abortion; (d) dishonorable conduct; (e) immoral conduct; (f) deceptive public advertising.

Resolved: That we favor a law defining the practice of medicine.

Resolved: That this proposed legislation be referred to the State Association through the regular channels; and be it further

Resolved: That we endorse the Kentucky resolutions regarding nostrums.

These resolutions had been offered before and adopted by the Bradford County Medical Society. On vote the unanimous sentiment of the association was: "The Florida Medical Association endorses the position taken by the Bradford County Medical society in the resolutions offered, and declares the same the sense of this association."

The resolutions were referred to the committee on legislation for action.

The following resolution, offered by Dr. E. W. Warren of Palatka, was unanimously adopted and referred:

Resolved: That the Florida Medical Association favors legislation that will change our present method of execution of criminals, from hanging to electrocution.

Invitation to American Public Health Association.

The association instructed the secretary, Dr. J. D. Fernandez, to invite, by a proper communication, the American Public Health Association to hold their 1909 session in Florida.

Contract Practice.

Dr. W. P. Lawrence, Tampa, in his presidential address, dealt especially with prophylaxis in the practice of medicine; the prevention of communicable diseases; prevention of ophthalmia neonatorum; medical education, with a view of securing better state laws, controlling the practice of medicine and admission to practice, and contract practice. The latter subject was dealt with in detail, especially as it affects Florida.

The Oration.

Dr. C. M. Sandusky, Jacksonville, selected as a subject: "As a man thinketh in his heart so is he." The address was masterful, inspiring and appreciated by those in attendance.

Medical Education and State Board Examinations in Florida.

Dr. E. N. Liell, Jacksonville, after summing up conditions as existing to-day, suggested the following standard as a prerequisite to the practice of medicine in Florida in the future. The standard is that accepted by the American Medical Association.

Preliminary Education: A diploma from a recognized high school, or its equivalent, showing that the applicant has passed a satisfactory examination in all branches usually embraced in the curriculum of a four-year high school course.

Medical Education: A recognition by the Board of Medical Examiners of Florida, of all medical colleges requiring not less than four full courses of instruction, each of not less than six months, and extending over a period of four calendar years.

Tetanus; with a Report of a Case Treated by Intraspinal Injections of Magnesium Sulphate.

Dr. W. H. Powers, Ocala, said that a contracted muscle means a working muscle and constant contraction means constant work, therefore, exhaustion, and this is given as the cause of death in tetanus. The intraspinal use of magnesium sulphate paralyzes the muscles, therefore gives rest while the system is elaborating the antitoxin. The injection is comparatively simple. The solution should be used only at body temperature. The injections should be repeated at intervals of from 24 to 72 hours, depending on the severity of the seizures. He reported the case of a negro, who about ten days before consulting physicians, had been shot, the ball entering thigh muscles posteriorly about the middle of the thigh and ranged upward, probably lodging in the hip. The patient was chloroformed turned on side, flexed, a small area over lumbar vertebræ sterilized, the line at upper margins of innominate bones ascertained and a little to one side of the spinous process a small skin incision was made. An ordinary solid metal 10 c.c. syringe, filled with a 25 per cent. solution of sterilized magnesium sulphate, with about a four-inch needle was used. After inserting the needle approximately to the proper place, the syringe was detached. About 2 c.c. of spinal fluid was allowed to flow, then the syringe was attached and 2 c.c. of magnesium solution injected slowly. A prescription was written for a combination of chloral, bromid and morphin, also for a saturated solution of magnesium sulphate. Three hours later the patient was having mild convulsions. On the third day 10 c.c. of tetanus antitoxin was injected deep into the thigh muscles, along the supposed course of bullet. At the time of injection of tetanus antitoxin patient was considerably worse as regards pulse and respiration, although convulsions were not so severe as when first seen. The next day another spinal injection of magnesium sulphate was made of a slightly larger dose; three hours afterward patient was absolutely relaxed and complained of a "splitting" headache. Six days afterward patient was absolutely rigid, general conditions improved, convulsions not so frequent nor severe. From this on his condition gradually improved under the use of chloral and bromid and salts, until 16 days later he was able to walk around.

DISCUSSION.

Dr. Rogers, Jacksonville, stated that a series of 4 cases Blake of New York had had one recovery with magnesium sulphate. The magnesium sulphate blocks the nerve impulses, prevents the contractions and exhaustion and controls the convulsions. Some patients have been kept perfectly free from convulsions. Dr. Power's dose is, he thinks, a little less than that usually recommended. The rule is to give 1 c.c. of 25 per cent. solution for every 25 pounds of body weight. Dr. Powers in the first dose gave 2 c.c., which would be a small dose for the average negro. In his subsequent doses he gave a little more and presumably this was sufficient to control the convulsions. There is a question as to whether the drug is dangerous. It is too dangerous if we use too much and too many doses; it is stated that there is a cumulative effect; that is, if doses are given too often and too much, that convulsions will return and more of the drug is required to control the convulsions, in which there is danger of causing death. If used in a conservative way and in not too frequent or large doses, it will control the convulsions.

Gallstone Disease.

Dr. C. P. Rogers, Jacksonville, said that it has been stated for many years that between 15 and 20 per cent. of all people who reach the age of 40 have gallstones. For a long time it was believed and taught that gallstones, in the majority of instances, produced no symptoms which might be recognized by patient or physician. Workers, especially in the department of surgery, in the past decade or two have proved conclusively that gallstones are as frequent during life as they have been found to be at autopsies, and that far from being latent and harmless they are a distinct menace to life and a frequent source of chronic ill health.

Diagnosis of Cholelithiasis.

Dr. J. E. Boyd, Jacksonville, said that gallstone disease is a common affection. The earliest symptoms are not definitely referred to the region of the gall bladder, but more particularly to the stomach. Only a careful and systematic examination of all patients complaining of dyspepsia, indigestion, etc., will yield an intelligent diagnosis. He believes that attacks of cholecystitis are being diagnosed as malarial fever daily, and that the classical symptoms of colic and jaundice present themselves in only a small proportion of these cases.

DISCUSSION.

Dr. E. N. Liell, Jacksonville, said that the greater complications are associated with stones found in the common duct rather than those in he hepatic duct. The danger, as shown by statistics, is always four times as great with stones in the bile duct in proportion to those in the gall bladder. Pancreatic disease is not an uncommon condition in cholelithiasis.

Rational Treatment of Syphilis and Rheumatism.

Dr. T. C. Thompson, Jacksonville, has treated patients unable to go to Hot Springs, Ark., with the electric bath, and has found this method of treatment satisfactory, particularly in the nervous types of the disease and in tertiary lesions.

DISCUSSION.

Dr. J. E. Boyd, Jacksonville, said that a year and a half ago he was making a trip to Hot Springs and consented to look into the matter for Dr. Thompson. He got thorough information from the leading physicians as to their methods of handling syphilitics and the methods carried out at that place. Afterward he satisfied himself that the electric bath filled all the requirements. During the last year he has used this treatment for all patients who were not financially able to go to Hot Springs, instead of attempting to administer mercury by the mouth or hypodermically. In no case has he been disappointed by the results obtained. Patients have responded promptly.

Other Papers Read.

The following papers were also read:

"Great Work of the American Medical Association; A New Era in Medicine," J. H. Hodges, Gainesville. "Mosquitoes and Other Parasites," Hiram Byrd, Jacksonville, illustrated by stereopticon. "The *X*-Ray as an Aid to Diagnosis," P. C. Perry, Jacksonville, with demonstration of *x*-ray work. "Chronic Suppuration of the Middle Ear," C. Drew, Jacksonville. "Intestinal Obstruction," E. N. Liell, Jacksonville. "Tuberculous Arthritis of the First and Second Cervical Vertebræ," F. W. Wilcox, St. Petersburg. "The Leucocytes in Appendicitis," Raymond C. Turck, Jacksonville. "Larval Tapeworm in Human Flesh," H. Gates, Manattee. "A Visit to the Mayo Bros., at Rochester, Minn." E. Van Hood, Oclala. "The Nasal Septum," U. S. Bird, Tampa. "Sequelæ of La Grippe in the Ear, Nose and Throat," W. S. Mannlng, Jacksonville. "The Treatment of Pelvic Inflammatory Disease," G. R. Holden, Jacksonville. "Menstruation, the Cause of Acute Otitis," F. P. Hoover, Jacksonville. "A Case of Hematochyluria, Due to Filaria Sanguinins Hominis," H. C. Dozier, Ocala. "Neglected Common Throat Troubles," L. A. Bize, Tampa. "Rachitis," W. E. Ross, Jacksonville. *"Inguinal Hernia," R. L. Harris, Orlando. "The Physician and the Pharmacopeia," C. L. Jennings, Jacksonville. "Pus Tubes in Male and Female," C. M. Greiner, Jacksonville. "Hemorrhagic Fever," J. D. Bennett, Crystal River. "An Epidemic of Infantile Paralysis," L. J. Efride, Live Oak. "Germs in Health and Disease," J. W. Duncan, Atlanta, Ga.

BOSTON MEDICAL LIBRARY MEETING.

Held March 18, 1908.

Dr. Richard C. Cabot, Chairman.

The Therapeutic and Diagnostic Value of Tuberculin.

Dr. Lawrason Brown claimed that tuberculin for diagnostic purposes, commonly used in Germany, feared in England and France, has been but little used in this country, except in cattle. Since 1906 tests have been more freely made. Most recent has been the cutaneous method. Conjunctival and subcutaneous tests are also used. The latter, which in his hands has been used eight years with no bad results, is best and surest.

For therapeutic purposes Trudeau alone has made any large use of tuberculin. He prefers a mixture of equal parts of T.R. and B.E. Keep on ice and in dark and with 0.25 per cent. phenol in normal salt solution. Give subcutaneously, deep, 4 to 8 cm. below the scapulæ. First dose should be very small. Patients vary in susceptibility. Give not oftener than twice a week. Gradually increase dose till over-stimulation is evident, and then reduce at once, or it may be omitted for one or more times. The doses may be guided by the opsonic index. But that is not necessary. Avoid hypersusceptibility. Use great care in all details. Give in evening, and reaction, if it does appear, will probably not be till next day. Skin reactions are not important. Usually all in limbs. Local reactions are rare. If they appear, omit. General reaction is more important, and at once check the dose. If temperature rises to 100°, reduce next dose to ¼ or 1/6 the last dose or omit altogether. Small dose is as good as larger ones; 1 c.c. is often too much. Continue for a year, then omit for a few weeks or months and again renew. Tuberculin is a toxin. Hence care must be used in the selection of suitable cases, acute types being surely unsuitable. Theoretically, it acts as an enzymogen. It does not fan a smoldering process, but an overdose sets free too much endotoxin. Usually it does most good when general condition of patient is good. But one may use it when other treatment fails. Ambulant patients should be warned to take less than usual exercise after a dose. Weight is but little affected. Blood conditions vary. Phagocytosis is increased. It is antipyretic. Sputa varies. He has seen no hemorrhages follow its use, nor any other bad results. Its use may allow a man to remain at his work, does no harm, but must be in small doses in order to be safe.

DISCUSSION.

Dr. Frederick Shattuck has used tuberculin for the past twelve years in diagnosis in hundreds of cases. He used at first 5 mg., later 10 mg. and 7 mg. in single doses. Lately he has tried the 1/10 mg., 1 mg. and 10 mg. in divided doses, as recommended by Dr. Brown. There are some sources of error, but, on the whole, it is very useful. He has never seen any ill effects, except in one case of Addison's disease, which was rapidly fatal.

Dr. Theobald Smith discussed briefly the subject of immunity, which he believes is still quite an unsettled matter. He has tested a series of calves with tuberculin heated only to 60° and can not understand how a bouillon extract which is heated much higher can be efficient.

Dr. John B. Haurs, Jr., has been using tuberculin at the Massachusetts General Hospital for the past two years in pulmonary and other forms of the disease. He has followed Trudeau's methods. He has seen a reaction with 1/10000 mg. No permanent ill effects and few uncomfortable symptoms have followed its use. In all about 100 cases have been treated for periods varying from two years to two months.

Dr. Cleaveland Floyd advises its use for diagnosis only as a last resort and with extreme care. Subcutaneously he has used it in 100 cases. Only two have had a severe reaction. He has heard from Dr. Ross, of Toronto, of two other cases of Addison's disease which have been rapidly fatal after a dose of tuberculin. An ointment of tuberculin has been used, but the simplest test is the conjunctival method. He has tried this 400 times and with no bad result. There is danger, however, of lighting up a tuberculous iritis. Therapeutically, he has used it in the Day Camp of the Good Samaritan Hospital for the past year and a half in 25 patients. All have gained and only one relapsed.

Dr. Charles Derby has used the tuberculin at the eye clinics of the Carney Hospital, testing by the conjunctival method 50 cases in the last six months. In treatment about 12 cases have been tried, and all doing well, though not yet cured.

Dr. Vincent Y. Bowditch told of his introduction of the method at Sharon and at Rutland after successfully testing it in two cases which had come to a standstill on the fresh air and good food methods. He is deeply impressed with its value, has seen no deleterious results, but believes careful observation is needed, more careful than can usually be given to an out-patient.

MEDICAL JURISPRUDENCE SOCIETY OF PHILADELPHIA

Meeting held March 16, 1908.

Dr. William M. L. Coplin in the Chair.

Prevalence of Medical Crime and Fraud.

Thomas W. Barlow, Esq., of the Philadelphia Bar, said it was somewhat difficult for reputable members of the medical and legal profession to point with pride to the records of the Philadelphia police authorities during the past eighteen months with respect to medical crimes and frauds. Out of 35 cases of criminal abortion reported to the coroner's office there have been but three convictions, with prison punishment aggregating six and a half years. In not one case was the maximum punishment inflicted.

It is suggested that the remedy lies in the establishment of separate courts of criminal jurisdiction, and the election of judges exclusively therefor. An effective administration of the law lies in the certainty of conviction and punishment. The movement against medical crimes and frauds Mr. Barlow declared is growing rapidly. The rising tide of public wrath against the sale of alcohol will include a movement against that other rum seller who passes his poison to the community in the guise of medicine. It is said that conditions here are not encouraging to those who wish to supplement police power. Austria is strongly determined to punish illegal practitioners, and in Switzerland "patent medicines" are withdrawn from the protection of the patent laws. It is asserted that lawyers and physicians should unite in a war of extermination of quacks and nostrum vendors.

Lack of Defense of the People Against Medical Criminals and Quacks in Medical Acts.

Dr. Alexander R. Craig remarked that the object of legislation regulating the practice of medicine is justified solely for the protection of the public, and that if a multiple board of examiners be considered, the number of boards must be increased with every claimed system of treatment, thus multiplying the number of standards of qualification recognized. Of the two general types of law—restrictive and definitive—the state laws of these United States are of the former class, the English law of the latter. Both define the practice of medicine. The former limits the right to practice to those qualified, while the latter only accords recognition to those qualified. Examinations to determine the applicant's qualifications are considered the only means of testing the recent graduate. The three-board law now in effect in Pennsylvania, with other systems asking for boards of examiners, was considered. The suggestion of the Medical Society of the State of Pennsylvania is that the difficulty be overcome by establishing a single board to pass on the qualifications to practice medicine, leaving the phase of medicine or sect to the discretion of the licentiate, believing that the public is interested solely in being protected from ignorance of the fundamental truths underlying the practice of medicine.

Difficulties in the Way of Correct Legislation.

Dr. Charles McIntire, of Easton, showed that these difficulties have their origin in certain temperamental conditions of which he mentioned three—selfishness, suspicion, prejudice. The purpose of the medical practice act is to secure protection to the citizens of a state from incompetent medical advice. Such act does not consider the convenience of the physician. Medical practice acts, it was said, usually include three things to be done: To secure license to practice the completion of a defined course of study, passing an examination before a state board and registering the license issued. Many medical colleges seek to evade the provisions of the law for reasons best known to themselves, and the public generally are not educated to the thought that scientific knowledge is always necessary for the successful treatment of disease. The lack of trust of one branch of practitioners toward all other branches forms the chief difficulty in the second point, while the unwillingness of one board to accept the certificate of the board of another state places difficulties in the way which do not increase the safeguard of the people. Consequently, it behooves those who would be wise to attempt to frame a law that will recognize these difficulties and minimize the opposition produced by them.

DISCUSSION.

Champe S. Andrews, Esq., of New York City, reviewed the steps leading to the creation of the New York medical law and spoke of its details. Materia medica and therapeutics had been left out because the state said as long as doctors themselves could not decide on a definite standard of therapeutics and materia medica, this question should be left to the individual schools. As one interested from the standpoint of the layman, Mr. Andrews believes that the question of medical legislation, medical examination and medical practice can never be settled until it is settled along the broad general line of one standard for medical men, leaving it to them after they have satisfied the state as to competency to practice in whatever way they see fit. All medical bills should have two main points in view: one standard of education and, incidentally, how that standard of education is to be established, and provisions in that law that keep it from being a dead letter. It is better to have no law than to allow it to be ignored. Personally, Mr. Andrews is more interested in the features of the law which make it possible to punish those who seek to trade on the dignity of the profession. In eight years, in fighting the quacks of New York City, there have been brought about seven or eight hundred convictions. It was shown that the one board bill of New York provides a series of provisions whereby a man guilty of unprofessional conduct may be summoned to the bar of his own profession, and for conduct not necessarily criminal may have his license revoked, just as lawyers disbar members of their own profession, even though they are safe enough within the law itself.

Knowing that the survival of the quack is impossible without the newspaper, an important item in medical legislation should be the provision that any man, other than a regular physician, shall not advertise to practice medicine. In this way it is obvious that a physician who does advertise is a fraud, and a corporation so advertising is liable to arrest. Medical law must be stiffened up and enforced. There is no higher duty on legislators and private citizens than to endeavor through medical legislation to save the poor and afflicted from being the means of filling the pockets of quacks who prey on them.

Mr. Barlow asked Mr. Andrews to state why the New York County Medical Society considered it necessary to establish a system of carrying on prosecutions, not allowing that to rest with the police power of the city.

Mr. Andrews replied that unless this work were done by private institutions it would never be done satisfactorily.

Dr. John B. McAlister said that most of the features of the New York law had been embodied in the act recommended for Pennsylvania, and that special urgency was placed on the recommendation of the one board of examiners.

Dr. John B. Donaldson, of Canonsburg, spoke on the importance of instructing legislators in medical and sanitary matters in connection with proposed legislation, and stated that the average member of the legislature would like to know what his constituents wanted.

Dr. Seneca Egbert thinks that in the new medical law it would be well to provide that a physician who has practiced a certain number of years and is in good standing in his state society should have the privilege of practicing in another state by passing a practical and at times an oral examination. It ought to be easy for a reputable physician to take up practice in another state, and he thinks such an arrangement could be made without detriment to the commonwealth.

Medicolegal

Entitled to Compensation as for Surgical Treatment.

The Supreme Court of Michigan says that the case of Marshall vs. United States Accident Association was brought by the plaintiff, a practicing physician of Muskegon, to recover against the defendant for services rendered to its members under a contract under which the plaintiff agreed to accept as compensation for such services "at the rate of ten per centum (10%) per month for each member enrolled in the Medical Aid Department in the said city of Muskegon who is in good standing, and is entitled to services at the end of each quarter, and for surgical cases the usual scale as adopted by the Physicians' Association of Muskegon County."

On the trial of this case the only question was whether treatment for an abscess on the leg or thigh of a member, which was treated, according to the testimony of the physicians, surgically, was the treatment for which the plaintiff was entitled to receive the usual compensation fixed by the Physicians' Association of Muskegon County, or whether it should be considered medical treatment and compensated as such. The testimony showed, and the circuit judge found, that the treatment given to this case was surgical treatment within the proper meaning of that term. The defendant then sought to show that at a time prior to the execution of the contract, in conversation with an agent of the defendant company, the plaintiff agreed that the treatment of such ailments as an abscess or a carbuncle was contemplated under the term "medical," and would not be considered surgical treatment. The testimony given by the plaintiff very clearly disputed the testimony offered on behalf of the defendant, and afforded an ample basis for the finding of the circuit judge.

The judgment in the plaintiff's favor is affirmed.

President of Coal Company Has Power to Employ Physician.

The Appellate Court of Indiana had, in Cushman vs. Cloverland Coal & Mining Co., a case where a physician asked judgment for $300 on an account for medical and surgical services and for medicines furnished to the defendant company for the benefit of an injured employé. The complaint stated that on a certain date the employé, while at work for the company, was personally injured, his wounds being of so serious a nature as to create an emergency for the immediate attention of a physician and surgeon in order to save his life, by reason whereof the plaintiff was called and employed to attend and treat him by the company, by and through its mine superintendent, which superintendent immediately reported to the company his act. That the company by its president and general manager, with full knowledge of the employment of the plaintiff, ratified and confirmed the same by then and there stating to the superintendent that "that was all right; that was the thing to do." That thereafter the company, by its president and general manager, notified the plaintiff to purchase what was necessary to aid in the further treatment and attention of the injured employé. That the company well knew that the plaintiff was continuing to attend and treat the injured employe, and that the company did nothing toward giving the plaintiff notice that it would not recompense him for his services, but notified the plaintiff that it would recompense him for the same.

The disputed point in the case was whether the complaint showed a liability on the part of the company. The lower court held that it did not. But the Appellate Court holds that it did, and was not, therefore, subject to demurrer.

The Appellate Court says that the averment was that the superintendent who called the plaintiff for the company immediately reported his action to the company, and that the company ratified and confirmed such employment. It was averred that it acted by its president and general manager. It was competent for it so to act. Proof of the fact was, of course, another thing. The power of an agent to bind his principal in matters within the scope of the agency is elemental. In speaking of contracts made by the president of a corporation it has been said "When a contract is made in the name of a corporation, by the president, in the usual course of business, which the directors have the power to authorize him to make, or to ratify after it is made, the presumption is that the contract is binding on the corporation until it is shown that the same was not authorized or ratified."

Coal mining is recognized as a dangerous occupation and numerous provisions for the protection of persons engaged in it have been made by the General Assembly. In mines employing ten or more men it is the duty of the operator to "keep always on hand, readily accessible and near the mouth of the mine, a properly constructed and comfortable stretcher; a woolen and waterproof blanket; a roll of bandages in good condition for immediate use for bandaging and dressing wounds of any one injured in such mine; a supply of linseed oil, lime, camphor, turpentine, antiseptic gauze dressing, and surgeon's splints for the dressing of broken bones; also to provide a comfortable apartment near the mouth of the mine in which any one so injured may rest while waiting transportation to his home, and to provide for the speedy transportation of any one injured in such mine to his home." Section 13, Indiana Act of Feb. 28, 1905.

In view of this legislative requirement it can not very well be said, as a mater of law, that the president of a corporation operating a coal mine has no power to employ a surgeon when necessary to save the life of an injured employé, nor that such employment can only be made when the injured employé is a pauper. Both self-interest and humanity require that there be some person in authority accessible and authorized to act in such emergency as may arise requiring action.

Appearances and Exclamations as Evidence of Bodily Conditions.

The Supreme Court of Kansas holds, in Federal Betterment Company vs. Reeves, an action brought by the latter party, that, in an action to recover damages for personal injuries, corporal appearances and conduct, as indicating health or the lack of it, are relevant, and such ordinary indications may be testified to by any competent person who was in a situation to know. The looks, appearance and conduct of a person, his ability to labor before and after an alleged injury, are ordinarily competent in determining the effect and extent of the hurt.

In many cases a witness, although not an expert, may be permitted to state the result of his observation, notwithstanding it involves, in a sense, his opinion or judgment, such as the apparent health of a person or other characteristic manifest to the apprehension of a common observer. One who is in a situation to know may testify to the fact whether another is competent to perform manual labor before and after an injury.

Where it is claimed that the disability from such injury continues, the limits of time covered by such evidence must depend on the circumstances of each case, and the probability of intervening changes, and must be left to the wise discretion of the trial judge.

Where the bodily condition of a person is a subject of inquiry, exclamations of present pain or suffering made by the party who claims to have been injured may be received in evidence in connection with his appearance and conduct, where they appear to be the natural and spontaneous expressions of present feeling.

Rights Where a Plaintiff Offers His Body for Examination.

The Supreme Court of Illinois says that, in the personal injury case of Pronskevitch vs. Chicago & Alton Railway Company, all of the plaintiff's clothes were removed from the upper part of his body, and his injuries were exhibited to the jury. The defendant requested the court to require him to submit to an examination by its physicians, in the presence of such witnesses as he might desire, in a private room or some place convenient to the courtroom. The plaintiff expressed a willingness to be examined before the jury by the physicians of the defendant, but not out of the presence of the jury. The trial court refused to compel the examination, and that ruling was assigned as error. The Supreme Court, however, does not think that it was error. This court has held that the court has no power to compel the plaintiff in a personal injury case to submit to a physical examination. The plaintiff having offered his body voluntarily to the inspection of the jury, it then became a subject of examination under such reasonable restrictions as the court might see fit to require. Inasmuch as the plaintiff offered to submit to such an examination, in the presence of the jury, as the defendant might see fit to make, there was no just cause for complaint.

Judges May Require or Refuse to Require Physical Examinations—"Health" Includes Appetite.

The Court of Appeals of Georgia holds, in City of Cedartown vs. Brooks, that it is within the discretion of the trial judge, on a proper showing made therefor and at the instance and expense of the defendant in the action, to require a plaintiff, suing for physical injuries, to submit to an examination by competent physicians in order to ascertain the nature and extent and probable duration of the injury, and to afford means of proving the same at the trial of the cause. It follows that it is likewise within the discretion of the judge to refuse to require such examination, and this discretion will not be controlled unless abused.

It is also said in this case that the term "health" includes appetite

Current Medical Literature

AMERICAN.†

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

April 25.

1 Physiologic Mechanism of Vasoconstriction and Vasodilatation. G. B. Wallace, New York.
2 *Therapeutics of Vasoconstriction and Vasodilatation. E. Le Fevre, New York.
3 *Treatment of Endometritis by Irrigation and Drainage. A. H. Goelet, New York.
4 *Sciatica. M. L. Barshinger, York, Pa.
5 Intramural Transplantation of the Round Ligaments Versus Alexander's Operation or Ventro-Suspensio-Fixation of the Uterus for Retroversio-flexion. C. W. Barrett, Chicago.
6 Autointoxication and Indicanuria. A. Abrams, San Francisco.

2. Therapeutics of Vasoconstriction and Dilatation.—Le Fevre divides high arterial tension into three stages: 1, Persistent high tension, due to hypertonicity of the muscular coats of the arteries and arterioles; 2, progressive hypertrophy of the cardiovascular muscular tissue with degenerative changes in the intima and arterial fibrosis; 3, diminished muscular control, due to progressive fibrosis causing increased obstruction and cardiac exhaustion. Treatment must take into consideration not only the stage but also the cause. The first stage is the curable one, the indication being to remove the cause or to bring the blood vessels under normal physiologic control. Tobacco, alcohol, improper diet and mental and nervous excitement are among the principal causes. In the second stage, in addition to the factors present in the first stage, there is progressive obstruction from arterial capillary fibrosis. Here it is necessary to determine how much of the obstruction is due to spasm and how much to sclerotic changes. High blood pressure is often a conservative process. Excessive blood pressure does not itself constitute an absolute indication for treatment. Active vasodilators should be used only to meet emergencies—angina pectoris, cerebral disturbances, etc. The effect of vasomotor dilators is not to be gauged entirely by the fall of blood pressure, but also by the patient's subjective feeling and the pulse rate. Le Fevre is convinced that the present inordinate use of vasodilators to control arterial tension is not free from danger of secondary effects in increased tendency of the vessels to spasm on slight reflex irritation. Control of high blood pressure by cardiac sedatives is justifiable only when cardiac hypertrophy is excessive and cardiac overaction occurs under nervous excitement or physical exertion. One of the most valuable methods of treatment lies in measures influencing cutaneous vascular dilatation—baths, counter-irritation and high-frequency currents—or the muscles—massage and restricted exercise. Patients who suffer from anginal attacks on exposure to cold should have the peripheral circulation educated by graded baths. In the bath treatment, however, all the details should be adapted to the individual patient. Massage can render great service. While thyroid extract does have an effect on blood pressure it is a drug that must not be entrusted to the patient. Potassium iodid is much safer, 15 grains (1 gram) daily in divided doses, continued over two or three years, with a week or two's intermission every two or three months.

3. Endometritis.—Goelet classifies endometritis as: 1, Catarrhal; 2, septic; and 3, senile. The first two conditions may be either acute or chronic; the third is essentially chronic. Gonorrheal endometritis must be considered apart from other forms of septic endometritis. The fundamental principle in the treatment of endometritis, in whatever form encountered, should be drainage, not of the cavity alone, but of the submucous glands as well. Goelet describes a clinical uterine irrigator of his own devising and details its mode of use. He condemns the indiscriminate application of caustics and irritants to the endometrium, and while not decrying curettage judiciously used, asserts that it must be regarded only as an initial step in the treatment, and never as a curative measure alone.

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†Vernal Conjunctivitis: A Correction—The title No. 90 on page 995 of The Journal, March 31, should read: "90 Vernal Conjunctivitis Showing Unusual Corneal Conditions," instead of "Veronal Conjunctivitis, etc."

4. **Sciatica.**—Barshinger points out that the favorite seat of this affection is the sciatic notch. He describes the anatomy and points out that the pyriformis muscle lies posteriorly to and close on the nerve at that point. Given the usual history of rheumatism, gout, exposure, muscular exertion, or wetting, this muscle becomes the seat of irritation, and consequently of contraction, causing it to impinge on the sciatic nerve. This he regards as a very frequent cause of sciatica. He attaches great importance to physical measures in the treatment, particularly mechanical vibration, radiant energy, static electricity, galvanism and the *x*-ray, the methods of use of which he describes.

Boston Medical and Surgical Journal.

April 23

7 *Orthopedic Heresies on Feet and Their Treatment. L. R. G. Crandon, Boston.
8 Rosenmueller's Fossæ and Their Importance in Relation to the Middle Ear. F. P. Emerson, Boston.
9 *Periosteal Flap for Use in Primary and Radical Mastoid Operations, with Illustrative Case. G. A. Leland, Boston.
10 Case of Caries of the Middle Ear, Mastoid Process and Internal Ear with Extradural Abscess, Pachymeningitis and Destruction of the Semicircular Canals. G. H. Powers, Jr., Boston.

7. **Orthopedics of the Feet.**—Crandon enunciates the following principles as the basis on which he founds his method of treatment in regard to pathologic conditions of the feet: 1, The foot has adapted itself to vicious shoeing conditions and has become a hindfoot or hoof; 2, acute foot symptoms are only a part of general muscular flabbiness and ligamentous relaxation; 3, chronic foot symptoms are due partly to general lack of tonicity and partly to vicious shoes; 4, the reason that some patients get well on using plates is that they develop muscles through trying to get away from the uncomfortable plates; 5, modifications of the plate idea are equally bad; 6, footprints and plaster casts as a means of diagnosis are sources of fallacy; 7, the proper treatment is the education of the patient in standing and walking combined with right shoeing. He considers these points in detail, reproducing from a previous article in the same journal for Nov. 1, 1906, an analysis of proper walking, the underlying principle of which is that the walking foot is not a "hock, arch and hoof," but rather a hand with the heel a grasping talon. The outline of education in brief is parallelism, rather than angularity of the feet; the use of Chinese slippers and bare feet on turf or sand as much as possible to train the prehensile action of the foot and crossed leg walking. Cases are reported and the article is illustrated.

9. **Mastoid Operations.**—Leland refers to the frequency of recurrence, after mastoid operation, which is due to the lack of a deposition of bone in the aditus after operation, so that subsequent infection through the Eustachian tube is not prevented. Often only fibrous tissue lines the bony cavity and encloses flabby granulations, thus presenting an excellent focus for reinfection. Leland first tried rubber tissue, to shut off the aditus, and that failing, resorted to a large flap of periosteum with a broad base to ensure its nourishment. He describes the formation of this flap as follows: The usual curvilinear incision is made through the skin and the superficial muscles down to the fascia. Then the skin is dissected up from the fascia forward, till the depression is reached between the cartilaginous canal and the anterior mastoid wall; backward, it is then dissected upward for something like an inch and a half. With the posterior edge of the mastoid process as a guide, an incision is then made down to the bone, from the tip upward and backward to the junction of the mastoid and occipital bones and then curved somewhat backward and then upward to the level of the linea temporalis; then forward on this ridge or a little above it on the fascia, covering the lower edge of the temporal muscle. If the posterior edge of the mastoid process is strictly followed there will be almost no danger of cutting the mastoid emissary vein. The elevator is then passed down to the bone and this flap, including the periosteum and the fascia and the tissue between, is dissected upward and forward till the anterior edge of the mastoid process is bared, as it is in the ordinary mastoid operation. The flap is then drawn forward by the retractor and the operation completed as usual. After the cavity is thoroughly cleaned out this large flap is drawn backward and its tip pressed down into the antrum so as to cover the aditus, and is there packed rather firmly by gauze wicks. The flap is firmly anchored in position, the posterior part of the cavity being more lightly packed. He has tried this in several acute cases and has found that in almost every instance the flap grows firmly in its new position. He has recently used this method successfully in a chronic case also.

New York Medical Journal.

April 25.

11 *An Original Method of Operating for Congenital Dislocation of the Hip. R. A. Hibbs, New York.
12 *Sudden Blindness and Its Various Causes. M. Buchanan, Philadelphia.
13 Radiographic Diagnosis of Renal Lesions. L. G. Cole, New York.
14 Case of Chronic Fibrinous Bronchitis. E. Burvill-Holmes, Philadelphia.
15 Accidents During Anesthesia. E. R. Zemp, Knoxville, Tenn.
16 *Etiology of Psoriasis. B. LeRoy, Athens, Ohio.
17 Management of Typhoid Fever Without a Nurse. L. C. Freeny, Pittsville, Md.
18 Chlorosis Cured by Thyroid Extract. F. K. MacMurrough, New York.

11. **Congenital Dislocation of the Hip.**—Hibbs says that it seemed to him possible that if in extending and abducting the thigh in an attempt to bring the leg back to its former position, parallel to its fellow, some means could be devised by which the head could be forced to travel upward by a more anterior route, a reduction of the dislocation could be secured, as the acetabulum would be directly in the way of the anterior route, assuming that the acetabulum was large enough to receive the head, of approximately normal shape and size. Two things appeared indispensable to the accomplishment of this result: First, absolute control of the pelvis, and, second, an immovable trochanteric pad so shaped and held against the trochanter as to direct the head upward and forward. Such resistance as the capsule or the Y ligament might offer to the reduction would certainly not be increased by such a method and might be diminished, while the muscular resistance, so serious an obstruction to reduction by the Lorenz method, would be entirely avoided, with the injuries not only to the muscles themselves, but often to other important structures, consequent on the application of a force necessary to overcome that resistance. To attain this result he has devised an apparatus which he describes and illustrates, and details the method of use. He has operated by its means on fourteen hips, in thirteen of which he has succeeded in placing the head of the femur in the acetabulum without traumatism. In consequence of this latter factor he confidently hopes the greatest ability of the reduction is thereby secured, the duration of the after-treatment and the wearing of a fixed dressing is lessened and an early resumption of the normal function of the limb secured. In his cases the children have walked, several the day after operation, and all within three days. He considers that cure may be effected more quickly in all cases than by the Lorenz method, and that the upper age limit at which perfect results may be obtained can be increased.

12. **Sudden Blindness.**—Buchanan describes the various causes of sudden blindness in both eyes, in one eye, and of partial blindness sudden in its onset, excluding cases due to traumatism. Binocular blindness is represented by uremic amaurosis, methyl alcohol poisoning, malarial poisoning, quinin, lead poisoning, excessive hemorrhages, particularly from the stomach and transitorily from certain brain tumors, malingering, and mind, psychic, or object blindness. Hysterical blindness is rarely bilateral. Sudden monocular blindness, without inflammation, suggests embolism, detachment of retina, or hemorrhage into the vitreous, also thrombosis of the central retinal vein. These conditions are distinguishable from acute glaucoma by the intense pain and hardness of the eyeball in the latter condition. Hemorrhage into the sheath of the optic nerve may cause blindness, which, however, will disappear on the absorption of the blood. Buchanan discusses these conditions fully with special reference to malingering. Sudden partial loss of vision may arise from conditions similar to those causing complete loss. The author also discusses snow blindness, electric ophthalmia, transitory hemianopsia and chorioiditis.

16. **Psoriasis.**—Leroy considers that he has at last succeeded in obtaining a pure culture of the organism—a mould—which he takes to be the cause of psoriasis, and from which he has made opsonins and successfully treated a patient therewith. He describes his process and the treatment of the case.

Journal of Infectious Diseases, Chicago.

March.

19 *Frequency of Tubercle Bacilli in the Market Milk of Washington, D. C. J. F. Anderson, Washington, D. C.
20 *Pathology of *Amanita phalloides* Intoxication. W. W. Ford, Baltimore.
21 *Gonorrheal Vulvovaginitis in Children. A. Hamilton, Chicago.
22 *Inoculation Treatment of Gonorrheal Vulvovaginitis in Children. Id. and J. M. Cooke, Chicago.
23 *Leucocytotoxins of Normal Serum. H. M. Goodman, Chicago.
24 *Duration and Disappearance of Passive Diphtheric Immunity. Id.
25 *Is the Present Method of Standardizing Diphtheric Serum According to Antitoxin Units Therapeutically Accurate? E. Steinhardt and E. J. Banzhaf, New York.
26 *Relative Therapeutic Value of Antitoxic Globulin Solution and the Whole Serum from Which It Is Derived. Id.
27 *Immunity in Rocky Mountain Spotted Fever. H. T. Ricketts and L. Gomez, Chicago.
28 *Activation of Opsonins in Heated Serum. A. H. Caulfield, Toronto, Ont.

19. **Tubercle Bacilli in Milk.**—Of 272 samples of milk 49, or 18 per cent., were lost by the animal dying in less than three weeks and before sufficient time had elapsed for it to develop tuberculosis. Of the 272 samples 223, or 82 per cent., remained for study. Of the 223 that remained 15, or 6.72 per cent., contained sufficient tubercle bacilli to cause typical tuberculosis in the inoculated animals. Of the samples of milk from 104 dairies, two were lost by acute death of the animals, leaving 102; the milk from 11 of these 102 dairies contained tubercle bacilli; this gives a percentage of 10.7 of the dairies examined showing tubercle bacilli in the milk supplied to their customers. These results, showing that approximately 11 per cent. of the dairies whose milk was examined contained tubercle bacilli virulent for guinea-pigs, do not, however, give a fair idea of the frequency of tubercle bacilli in the market milk of the city of Washington. When two animals were inoculated with the same sample both did not always develop tuberculosis; this might indicate that the bacilli are so few in the amount inoculated that one of the animals, by being a little more resistant, was able to overcome the infection. The amount inoculated, less than 2 c.c. of milk, is a very small portion of a pint bottle. The creamy layer was not inoculated, and other workers have shown that tubercle bacilli are more frequent in this than in the bottom milk; it is very probable that if more animals had been inoculated with the same sample and both cream and sediment had been used, the percentage of positive results would have been very much higher. The results, however, as they were found, are sufficiently high to emphasize the great necessity for the enactment and rigorous enforcement of a law requiring that all cows supplying milk to the District be tuberculin tested and free from tuberculosis. This test, which is now universally recognized as a means of determining whether or not an animal has tuberculosis, should be made by a competent veterinarian, and those animals that respond should be disposed of in some way, so that their milk may no longer be a source of danger to the community.

20. **Amanita Phalloides Poisoning.**—The lesions in fatal cases of *Amanita phalloides* intoxication in man consist of ulcers in the stomach and intestines, hemorrhages in the serous membranes and parenchymatous organs, necrosis of various cells, and fatty degeneration, especially advanced in the liver and kidney. The lesions produced by the whole extract of the fungus consist of gastric and intestinal ulcers, hemorrhages, necrosis of cells, fatty degeneration, hemoglobinuria, and pigmentation of the spleen and other organs. The lesions produced by the amanita toxin consist of gastric and intestinal ulcers, hemorrhages, necrosis and fatty degeneration, and to a certain extent they approximate the lesions seen in man. The amanita hemolysin acts on animals by virtue of its blood-laking properties, producing the hemoglobinuria and the pigmentation of the spleen characteristic of hemolytic intoxications. The amanita toxin is probably the more active principle in alimentary intoxications in man, since it produces experimentally the lesions usually found. The action of the hemolysin can not be ruled out in cases in which large quantities of insufficiently cooked fungi are consumed or when the fungus is eaten raw.

21. **Gonorrheal Vulvovaginitis in Children.**—Hamilton discusses the history, prevalence, modes of infection, predisposing causes, complications and duration of gonorrheal vulvovaginitis in children. A hospital epidemic is described the important points in the history of which are: The apparent predisposition to gonorrheal infection caused by scarlet fever; the fact that no girl over 13 years of age was infected; the total absence of Koplik's non-specific purulent vaginitis; and the fact that the infection was introduced into the hospital by children with vaginal discharge which was apparently non-gonorrheal. In conclusion, a table is appended of the epidemics of gonorrheal vulvovaginitis of children reported in the literature, and also of observations of scattered cases in dispensaries and private practice.

22. **Id.**—As a result of the investigations here recorded by Hamilton and Cooke the following statements are made: The opsonic index to the gonococcus is usually below normal in the chronic gonorrheal vaginitis of little girls and in acute vaginitis during the first weeks. The index rises toward the end in patients who are recovering and remains more or less persistently low in patients who do not improve or who improve very slowly. It is sometimes possible to raise the opsonic index to gonococcus by injections of dead gonococci, and when this occurs an improvement in the clinical condition usually occurs also. The acute cases inoculated with killed gonococci from strains which had been grown for several months on artificial media improved rather more rapidly than did control cases who received no injections of killed gonococci. Better results are obtained by the use of strains which have been grown for a long period on artificial media than by the use of freshly isolated strains, and there appears to be no advantage in using the patient's own organism. While inoculation treatment does not produce a marked effect during the first weeks in acute cases, it seems to shorten the later stages; in chronic cases its effect is more evident than in acute. The substitution of inoculation therapy for local treatment in little girls presents some decided advantages, especially in chronic cases. It is desirable, though not absolutely essential, to control the inoculations by the patient's opsonic index.

23. **Serum Leucocytoxins.**—Normal serum leucocytoxins have a fairly wide distribution. They consist of a thermostabile specific body and a thermolabile non-specific substance. They are distinct from the normal hemolysins, have a different distribution, and are present in considerably smaller amounts of serum. Their action is essentially on the nuclei of leucocytes. They affect all types of leucocytes, but the large mononuclear variety is the most susceptible and the polymorphonuclear form the least susceptible to their action. In diseases associated with a leucocytosis there is an increase in the amount of normal leucotoxin in the serum, this increase corresponding more or less to the extent of the leucocytosis.

24. **Passive Diphtheric Immunity.**—Goodman finds that in passive immunization with diphtheria antitoxin, the degree of protection afforded is always in excess of the protection as calculated from the amount of antitoxin in the blood. Free antitoxin disappears from the blood before immunity is wholly lost by the organism. Diphtheria antitoxin is eliminated by the kidneys, though to but a minor degree. The duration of the protection conferred is practically independent of the quantity of antitoxin administered and the age of the animal.

25. **Standardization of Antidiphtheric Serum.**—The authors conclude that in view of the results obtained in the comparison of the antitoxic content of sera, both preventively and curatively, it is obvious that in diphtheria in the guinea-pig the therapeutic value of antidiphtheric sera depends on the number of antitoxic units present. There is no reason for believing that conditions in man are different. Contrary to certain claims recently advanced, antidiphtheric serum contains no protective substances, aside from the antitoxin, which play an important rôle therapeutically. The present method of standardizing antidiphtheric serum accurately measures its therapeutic value.

26. **Antitoxic Globulin Solution.**—The experiments recorded indicate that the therapeutic value of the plasma is not appreciably impaired through the process of eliminating the albumins and other nonantitoxic proteins by the salting out methods employed, and the final dialyzation of the concentrated product.

27. **Rocky Mountain Spotted Fever.**—Ricketts and Gomez show that an attack of spotted fever in the guinea-pig and monkey produces a strong active immunity of long duration. This immunity is characterized by the presence of protective antibodies in the serum which may be demonstrated by injecting mixtures of virus and immune serum. The concentration of the antibodies in the blood of the immune animal undergoes a decrease in the course of several weeks. The female that has recovered from spotted fever transmits immunity to her young. The young are immune even when the female acquired her immunity several months before impregnation. The immunity of the young does not depend on the ingestion of milk from the immune mother. Passive immunity may be established in the healthy guinea-pig by the injection of blood or serum from the immune guinea-pig. The immune defibrinated blood contains antibodies in such concentration that 0.1 c.c. often protects against 1 c.c. of third-day virus, representing from 30 to 100 minimum pathogenic doses. In other instances 0.3 or 0.4 c.c. of immune blood are required for this degree of protection. When 1 c.c. of strong immune blood is injected subcutaneously into healthy guinea-pigs, the passive immunity is still present in marked degree after 20 days; after 38 days it is present only in such degree that a mild course of spotted fever results when the virus is injected; after 45 days it is no longer manifest. It is possible that passive immunity would not last so long if the immune blood were injected into a foreign species. The guinea-pig may be protected against spotted fever following its inoculation with infected blood, provided the immune blood is administered on the second or third day after inoculation. The curative power of the immune blood or serum is low, and in order to produce a distinct effect it is necessary to begin its administration early in the disease and to give relatively large quantities. By mixed immunization or sero-vaccination, in which virus and immune blood or serum are mixed in suitable proportions, it is possible to immunize the guinea-pig by one or several injections with the result that he is thereafter immune to infection. The blood of animals immunized in this way contains protective antibodies in fairly high concentration and in the case of females the immunity is transferred to the offspring. The quantity of antibodies produced by this method of immunization probably is in proportion to the severity of the febrile reaction which follows the administration of the immunizing dose. However, strong immunity caused only a barely perceptible febrile reaction. It may be possible to use the immune serum from the horse, which is shown to be susceptible to inoculation, for the prevention of the disease in man. For this purpose the serum should be injected in sufficient quantity within two or three days following the bite of the tick. Such an injection should not be considered protective for a longer period than three weeks. The method of sero-vaccination is not yet sufficiently perfected to warrant its application to man, but the subject is being studied further in order to determine its safety and efficiency. There is no hope of obtaining a stronger serum for curative purposes than that yielded by an animal which has recently recovered from the disease, until the micro-organism can be cultivated artificially, thus making available a desirable quantity of antigens for immunization. Even with this condition realized the results of further immunization can not be anticipated, but must await experimental determination.

28. **Activation of Opsonins.**—Wright's heated serum test is briefly as follows: Both the immune and normal sera are heated for ten minutes at 60 C. and the phagocytic index taken. It will usually be found that the sera from cases infected with tuberculosis retain their phagocytic power in marked contrast to the heated normal sera whose indices are usually nothing or at most found in the second decimal place (as 0.05). Thus there is induced in the serum of the patient undergoing autoinoculation a thermostabile substance capable of producing phagocytosis. Occasionally this substance is not demonstrable in undoubted cases. This loss of phagocytosis was investigated by Caulfield by adding a fourth volume of complement (in the form of fresh diluted rabbit serum). Under these conditions the sera from infected cases gave a diagnostic phagocytosis while the loss of phagocytosis of normal sera was unaffected.

Bulletin of the Johns Hopkins Hospital, Baltimore.

March.

29 Albrecht v. Haller: Scientific, Literary, and Poetical Activity. J. C. Hemmeter, Baltimore.
30 Primary Hemangiomata of Muscle. J. S. Davis, Baltimore.
31 *Pulmonary Complications Following Anesthesia. O. B. Wight, Portland, Ore.
32 *Relation of the Parathyroid to Calcium Metabolism and the Nature of Tetany. W. G. MacCallum and C. Voegtlin, Baltimore.

31. **Pulmonary Complications of Anesthesia.**—Wight discusses lobar pneumonia, bronchopneumonia, bronchitis and pleurisy consequent on anesthesia. He finds that the lobar pneumonia following anesthesia differs from that commonly seen in the medical wards in lower and more irregular temperature, shorter and rarely a true crisis, greater freedom from complications, central type, lung signs developing late and cough not marked or severe, and sputum rarely blood tinged. He discusses the various theories of causation, stating, however, that in most cases more than one is necessary to explain the origin: 1. Irritant action of anesthetic; ether is the most irritant, chloroform the least. 2. Aspiration of mucus and vomitus and hypersecretion of mucus. He regards the preanesthetic administration of atropin as valueless. 3. Emboli; that these constitute a factor is doubtless true, but other factors must bear part. 4. Toxic effect of anesthetic on heart and blood vessels; chloroform is the most dangerous. 5. Presence of pneumococci and other bacteria in mouth and throat. 6. Extension of infection through subdiaphragmatic space. 7. Cooling of the body; a loss of temperature from half to one degree may follow prolonged anesthesia without any other factor, but the cold table, wet towels about the site of incision, irrigating solution, and other conditions under the surgeon's control, are sometimes responsible. 8. Limitation of lung expansion. 9. Lessened resistance of the patient. Prevention lies in disinfection of the mouth and nose as a routine measure, and administration of the anesthetic by the open drop method with the head low and to one side, and the jaw kept forward. The patients must be kept warm and dry by warm pads, jackets and leg covers. Patients should be warmly covered on removal from operating table to bed.

32. **The Parathyroid and Calcium Metabolism.**—MacCallum and Voegtlin publish a preliminary note on a study of the calcium metabolism of animals in which tetany is produced by parathyroidectomy, and of the relations of various salts, especially those of calcium, to the tetany thus produced. They say that all violent symptoms produced by parathyroidectomy, muscular twitching and rigidity, tachypnea, fibrillary tremors, increased rapidity of the heart beat, etc., may be almost instantly cured by the intravenous injection of a solution of a calcium salt. They have usually employed the acetate or lactate in 5 per cent. solution. Subcutaneous injection or the introduction of the solution into the stomach are quite as effective but act more slowly. The condition of complete well-being attained in this way lasts for perhaps twenty-four hours, when tetany may reappear, but disappears immediately on renewed administration of calcium. Injection of magnesium salts has a somewhat similar effect in causing the symptoms of tetany to disappear, but the results are obscured by the toxic anesthetic action of the salt. On the other hand, the injection of potassium salts in tetany not only causes no amelioration, but actually intensifies all the symptoms.

Military Surgeon, Carlisle, Pa.

March.

33 *Plague in India. A. H. Moorhead, Indian Medical Service.
34 *Benjamin Rush's Directions for Preserving the Health of Soldiers with a Note on Surgeon Ebenezer Alden. H. P. de Forest, National Guard, N. Y.
35 *Notes and Statistics of the Year's Service at the United States Marine-Hospital, San Francisco. H. W. Austin, U. S. Public Health and Marine-Hospital Service.

36 *Instruction in the Physiology of the Circulation. R. S. Woodson, U. S. Army.
37 Necrology of the Association for 1907. S. C. Stanton, Ill. National Guard.
38 Heat Exhaustion on Men-of-War. M. S. Elliott, U. S. Navy.

33. **Plague in India.**—In an interesting paper Moorhead describes the history of plague in India from its first appearance in Bombay in 1896. He details the sequence of events in an infected village, and gives the results of experiments conducted by the Bombay plague commission. In regard to fleas he states that both male and female rat fleas transmit the disease, and that: "A most important point is the nasty habit it has of squirting blood from the intestines at the same time that it is sucking in blood, and curiously, this is the most probable way it gives infection to its host, because the bite of the flea is irritating and is usually scratched and thus the discharged contents of the flea's intestine, now proved to contain abundant *Bacilli pestis*, are rubbed into the punctured wound caused by the flea in the act of biting. Plague bacilli have been found in stomachs of rat and human fleas." The marked seasonal prevalence and decline of the disease in India is thus explained. The hot weather causes the disease to decline, no doubt, mainly, because the virulence of the disease among rats diminishes, and because the fleas die off and the population live more in the open and sleep outside their houses. The former idea that the dung plastered huts were a factor in maintaining plague has since been disproved by the commission, which shows that plague bacilli in cow dung floors of native huts not only do not multiply, but soon die out altogether. The bacilli of plague may number as many as 100,000,000 per c.c. in the blood of the rat, and a flea's stomach may easily contain 5,000 of them. The plague bacillus was found not to lose its virulence by a series of inoculations and subcutaneous injections into rats. Moorhead shows the difficulty of dealing with plague among the people, or rather the many peoples, of India, who are ignorant, suspicious and distrustful, and with whom any measure taken that will change their ordinary routine of life is sure to fail. He considers the future outlook for Europe a serious problem. In eleven years the disease has spread through the whole of India and he has no doubt will next infect Afghanistan and Persia, on its northwest frontier and adjacent to Russia, and the former countries are not likely to adopt more vigorous measures than have been taken in India. Wherever the plague-carrying rat and its flea can travel and live, the disease is sure to spread, and he believes it will reach Europe over land. The later methods of dealing with it are evacuation, inoculation and rat destruction. The latter does not seem to have been successful in Japan. Inoculation shows excellent results as a preventive and as decreasing the severity of the attack; the disadvantage is that it confers immunity only for one season. He describes the difficulty in obtaining the cooperation of the people, not arising, as among more civilized races as a mere matter of individual indifference which can be startled in an emergency into action, but as a matter of superstitious and traditional opposition. He describes the outbreak, course and conquest of an epidemic in a native regiment, the principal factor being the strict isolation of the sick and evacuation of the cantonments, the regiment going into camp. Buboes in the groin were opened and treated antiseptically early, and drained to prevent absorption of poison. Strength was supported by diet and stimulants, and medicinally large doses of carbolic acid freely diluted, as much as eight grains twice or thrice daily, were given internally. The remaining treatment was symptomatic. The mortality under this treatment was 65 per cent., which is considered satisfactory.

34. **Rush and the Health of Soldiers.**—De Forest writes an interesting historical article and gives a photographic reproduction of a pamphlet containing directions for preserving the health of soldiers, by Benjamin Rush, published in 1728, by order of the board of war. It formerly belonged to Dr. Ebenezer Alden, of whom a biographic note and portrait are appended.

35. **The United States Marine Hospital at San Francisco.**—Austin gives a statement of the work done at this hospital that affords abundant evidence of the great public value of the United States Public Health and Marine-Hospital Service.

36. **Physiology of the Circulation.**—Woodson describes and figures a syringe with two rubber bulbs used to demonstrate the mechanism of the systemic and pulmonic circulation.

Journal of Nervous and Mental Diseases, Lancaster, Pa.

March.

39 Case of Recurrent Autohypnotic Sleep, Hysterical Mutism and Simulated Deafness; Symptomatic Recovery with Development of Hypomania. B. Oettinger, Denver, Colo.
40 A New Diagnostic Sign in Recurrent Laryngeal Paralysis A. A. Allen, Philadelphia.
41 Case of Matricide and Attempted Suicide with Brief Psychologic Analysis. W. K. Walker, Dixmont, Pa.
42 *Nature and Relationships of Hysteria. R. C. Woodman, Middletown, N. Y.

42. **Hysteria.**—Woodman concludes his article on the nature and relationships of hysteria by saying that it is enough if through the concept of hysteria the physician's mind may be freed from a too exclusive pathology of toxin and cell change. The recognition of hysteria as a psychosis tends to bridge the gap which has been allowed to grow between diseases of the body and diseases of the mind, and to give a wider outlook and a new point of view from which to regard the other insanities. It makes it possible to correlate the insanities with what most physicians in their practice and thought regard as nervous diseases, and through them the physician and the patient's friends can come to some conception of what goes on in the insane person's mind, and of how such insane thoughts can arise and be entertained. It need not be supposed that the hysterical process is the only one through which mental aberrations occur. Rather in the past its rôle has been almost totally overlooked. The studies in hysteria should be applied to the problem of insanity, and the functional element sought in every mental disorder, and its mechanism be made clear if possible, whether it be hysterical or some other as yet unnamed type of reaction.

Archives of Pediatrics, New York.

March.

43 Meningococcus Hydrocephalus. F. Huber, New York.
44 *Kernig's Sign in Infancy; Study of 2,000 Cases. J. L. Morse, Boston.
45 Case of Congenital Biliary Cirrhosis—Congenital Obliteration of the Bile Ducts. J. P. C. Griffith, Philadelphia.
46 *Caloric Value of Modified Milk in Its Relation to Infant Feeding. M. Ladd, Boston.
47 Peripheral Phlebosclerosis in Childhood. C. F. Martin and J. A. C. Tull, Montreal.
48 Case of Chylothorax in a Child. C. G. Jennings and H. M. Rich, Detroit.
49 Use of Traction in Treatment of Hip-Joint Disease in Children. E. J. Wynkoop, Syracuse, N. Y.
50 Carbohydrate Incapacity in Infants and Young Children. C. G. Kerley, New York.

44. **Kernig's Sign in Infancy.**—Morse reports a study of 2,000 cases, which lead him to the conclusion that Kernig's sign is almost never found in infancy, either in health or disease, except in meningitis. It is found so rarely in other diseases at this age that its presence in acute disease justifies, so far as any one sign can, the diagnosis of meningitis. It is never present, however, in some cases, and in many others it is present only intermittently. It occurs with equal frequency at all stages of the disease. It has no apparent connection with the degree of intracranial pressure. It is more often present when the knee jerk is increased than when it is diminished. It is of no value in the diagnosis between the tuberculous and cerebrospinal forms of meningitis.

46. **Caloric Value of Modified Milk.**—Ladd reports a series of observations which lead him to various conclusions, the substance of which is that the caloric value of the food, expressed either in terms of the number of calories ingested daily or as the energy quotient, is not the most important consideration in determining the quality of an infant's food. While such calculations can be easily made, they add nothing in the way of information which can not be obtained by careful observation of the gastric and intestinal functions and the weekly gain in weight.

The American Journal of Physiology, Boston.

April.

51 *Some Effects of the Cardiac Nerves on Ventricular Fibrillation. W. E. Garrey, San Francisco.
52 *Glucose in Saliva. A. J. Carlson and J. G. Ryan, Chicago.
53 *Resistance to Lack of Oxygen. W. H. Packard, Peoria, Ill.

54 *Direct Utilization of the Common Sugars by the Tissues H. McGuigan, St. Louis, Mo.
55 *Glycolysis. H. McGuigan, St. Louis.
56 Resuscitation. F. H. Pike, C. C. Guthrie and G. N. Stewart, Chicago.

51. **Ventricular Fibrillation.**—By ventricular fibrillation is meant a state in which fibers of the muscle of the ventricle contract independently of each other in an incoordinated manner, so that no effectual contraction of the whole heart results. Garrey has studied the effect of the cardiac nerves on this condition, which he produced by faradization of the heart muscle. The vagus and accelerans were found to have opposite effects. Stimulation of the accelerans favored the production of fibrillation. Stimulation of the vagi hindered or prevented occurence of fibrillation, and at a certain stage was capable of restoring the heart to coordinated action. In all cases, however, a state could eventually be reached from which stimulation of the vagus was no longer able to restore the coordinated rhythm of the heart. In such states the abnormal condition was amenable to Hering's potassium chlorid treatment. Section of the vagi favored the production of fibrillation and in some cases actually induced it. These results were obtained only on dogs and, even in this species, failed in normal animals, indicating that the abnormal heart may act differently from the normal, and that one species of animal may respond to such treatment when another will not.

52. **Glucose in Saliva.**—Carlson and Ryan find a small percentage of glucose in the saliva. This glucose is derived from the blood and is proportionate to the amount contained in the blood, although the proportion varies somewhat in the secretion derived from the various glands.

53. **Resistance to Lack of Oxygen.**—In a previous paper Packard has shown that the ordinary sugars, when injected into the body cavity of the common minnow, increase the animal's resistance to a lack of oxygen. He continues these experiments, using mannose, fats, alcohol and pilocarpin. Mannose acted like other sugars; fats had practically no effect. Alcohol, in high concentration, killed the animals. In dilutions above 1 per cent. it decreased the resistance to lack of oxygen, probably by impairing the power of respiration in the tissues. Its action was proportionate to the strength of the solution. Alcohol showed itself less toxic to fishes than to higher animals. Acetone acted like alcohol. Pilocarpin, in strengths of from 0.05 to 0.1 per cent., caused a decrease in the power of resistance to lack of oxygen.

54. **Utilization of Sugars.**—McGuigan reaches the following conclusions: 1. The living muscles of an animal when perfused with dextrose, levulose or galactose, cause a rapid oxidation of these sugars. 2. The results with maltose would indicate that little, if any, of it is oxidized directly by the muscle. 3. Increasing the amount of sugar in the perfused blood increases the amount oxidized. 4. Stimulation of the muscles during the perfusion increases the oxidation. 5. The perfusion of dead muscles shows practically no loss of sugar. 6. Both in living and dead tissues perfusion causes an edematous condition. This occurs very much sooner and to a greater degree in the dead tissues. 7. The perfused liver also utilizes the common sugars. It is probable that this will hold for all glandular organs. 8. The glycogen-storing function of the liver is lost in perfusion much sooner than the sugar-destroying function. The same statement holds for the muscle. 9. The glycolysis occurring in drawn blood at 40 C. in two hours is very small in amount.

55. **Glycolysis.**—Muscle extract is incapable of causing more than an insignificant destruction of sugar. It has been claimed by Cohnheim that oxidation takes place if extract of pancreas is mixed with the muscle extract. McGuigan concludes from his experiments that mixtures of muscle and pancreatic extracts are as inert in glycolysis as the muscle extract alone. He considers glycolysis a function of living tissues only.

American Journal of Surgery, New York.

March.

57 Significance of Abdominal Tenderness in Locating Lesions of Viscera. T. C. Witherspoon, Butte, Mont.
58 *Induction of Premature Labor in Amaurosis and Amblyopia in Connection with the Albuminuria of Pregnancy. T. R. Pooley, New York.
59 *Use of the Automobile in Surgical Practice. W. B. Reid, Rome, N. Y.
60 Postoperative Treatment of Adenoid Patients. B. de F. Sheedy, New York.
61 Blood Examination in Surgical Diagnosis; Practical Study of Its Scope and Technic. (To be continued). I. S. Wile, New York.
62 Stricture of the Esophagus Treated by Gastrostomy and Retrograde Dilatation by Ochsner's Method. F. W. Parham, New Orleans.
63 Case of Ununited Fracture of the Shaft of the Humerus and Paralysis of the Musculospiral Nerve. D. Eve, Nashville, Tenn.

58. **Premature Labor and the Albuminuria of Pregnancy.**—Pooley cites an array of figures and facts which lead him to conclude that, in extreme cases in which the sight is either lost, or the risk of its loss is imminent, the induction of premature labor, or even abortion, is justified and even demanded. It may be justified in certain cases of uremic amaurosis, neuroretinitis with grave organic lesion of the optic nerve, and in cases in which permanent affections of vision have occurred in a previous pregnancy.

59. **The Automobile in Country Surgery.**—Reid points out that the lighting in country houses is frequently one of the great difficulties of emergency surgery. He reports an instance in which he was enabled to convert the kitchen into a very satisfactory operating room by backing up his automobile to the window, passing the searchlight lamp into the kitchen, and connecting it with the gas tank on the automobile by means of rubber tubing. The light was as good as in any well-appointed operating room.

Cleveland Medical Journal.

March.

64 Brief Survey of the Development of Physiologic Knowledge from the Time of the Reformation to the Beginning of the Nineteenth Century. J. J. R. Macleod.
65 *Intrauterine Pregnancy Indefinitely Prolonged. N. S. Scott, Cleveland.
66 Gastric Ulcer with Report of Cases. M. J. Lichty, Cleveland.
67 Duration of Disability in Injury and Disease. H. S. Mathewson, U. S. Public Health and Marine-Hospital Service.
68 *Studies in Aneurism. (Concluded.) J. G. Mumford, Boston.

65. **Prolonged Intrauterine Pregnancy.**—Scott reports a case in which a fetus was removed piecemeal, presumably fourteen months after the beginning of pregnancy. The diagnosis was made in the course of an operation for appendectomy and exploration of the uterus as a consequence of the history. The development of the fetus was probably five months, corresponding to the period when a miscarriage had threatened consequent on an attack of grip, and from which time all fetal movements ceased. Ordinarily speaking, when a fetus is not expelled at the time of death it is usually expelled at the expiration of the ninth month. Scott reviews the literature of prolonged retention of the fetus. He considers that his case refutes the conclusions drawn by many of the authorities, in that a prolonged intrauterine pregnancy occurred in a young, reasonably vigorous primipara, without any apparent etiologic factor, such as tumor or bicornate uterus, or other pathologic lesion or anatomic anomaly. The fetus seemed to be undergoing the changes incident to the formation of a lithopedion. There is no reason for thinking that the condition might not have continued indefinitely, provided sepsis did not supervene. Lastly, the case terminated in a complete recovery as the outcome of the simple but timely operation, dilating and curetting.

68. **Aneurism.**—Mumford concludes in this issue his interesting and critical studies in aneurism, with a reference to the operation of Matas, whose work on aneurism he considers the first worthy of prominent record since the days of John Hunter. He describes the history of the Matas operation and emphasizes certain points often misapprehended, misquoted or ignored. The fundamental purpose of Matas' scheme in all cases is closely to suture all arterial openings within the aneurism. Though Matas has suggested such a step, which Mumford considers not necessary, Matas' plan does not embrace a reconstruction of the artery out of the sac in fusiform aneurism. His operation differs radically from that of Antyllus, in that the latter, by tying the main artery above and below the aneurism, left to chance the settlement of two important elements in the problem: In certain cases he ran the risk of cutting off by his ligatures small but essential col-

laterals, whose presence would safeguard against gangrene; on the other hand, he failed to eliminate those extra arterial feeders of the aneurism which, as well as the main artery, sometimes pour blood into the sac. The sac, too, is often adherent to surrounding structures and carries important vessels and nerves in its walls. Matas explains how he folds it in on itself and preserves it entire as a crumpled but vital mass. Thus all possible tissue of value is preserved, all harmful arterial streams are held in check, and every vascular avenue which may share in bearing needed supplies of blood is encouraged to take up its vicarious duties.

Journal of the Michigan State Medical Society, Detroit.

March.

69 Gastric Disturbances Caused by Hernia. M. Ballin, Detroit.
70 *Preventive Medicine in Its Relation to Pneumonia. F. W. Shumway, Lansing.
71 Conservative Treatment of Inflammatory Pelvic Conditions. R. Parmeter, Detroit.
72 Surgical Operations on the Head. L. S. Griswold, Big Rapids.
73 *Organization of a State Antituberculosis Association. A. S. Warthin, Ann Arbor.

70. **Pneumonia and Preventive Medicine.**—Shumway considers the facts actually known and established, in relation to pneumonia as a preventable disease, the attitude of the State Board of Health thereto, and the relation of the medical profession to its prevention.

73. **Antituberculosis Association.**—Warthin discusses the function of a state antituberculosis association in regard to literature, lectures, publicity, exhibits, legislation and conference, and also its relation to the national association. He describes the meeting of organization of the Michigan state association and its constitution.

Laryngoscope, St. Louis.

March.

74 *Researches on the Voice. E. W. Scripture, New York.
75 Probable Function of the Malleus, Incus and Stapes. O. Greenberg, Milwaukee.
76 Remarkable Case of Sigmoid Sinus Thrombosis with Multiform Septico-Pyemic Complications Extending Over a Period of Four and a Half Months. J. R. Winslow, Baltimore.
77 The Vicious Circle of the Nose; the Rationale of Sinus Inflammations and Their Treatment. W. L. Ballenger, Chicago.
78 Management of Suppuration of the Middle Ear Based on Analysis of 100 Consecutive Cases Seen in Private Practice. W. S. Bryant, New York.
79 President's Address, American Laryngological, Rhinological and Otological Society, 1907. W. C. Phillips, New York.
80 A New Bronchoscope. C. Jackson, Pittsburg.
81 Retention in the Maxillary Antrum of an Iron Bolt, for a Period of Four Years, Without Important Unpleasant Symptoms. J. O. McReynolds, Dallas, Texas.

74. **The Voice.**—Scripture describes three methods of studying the voice: the graphic method, and those by the phonograph and gramophone. His studies show that the prevailing views of speech and the action of the vocal organs are largely erroneous. The view that the larynx contains the two cords or membranes swinging in the breath current and setting the air in vibration is not true. The larynx contains the two vocal lips which open and shut by compression; it thus emits a series of puffs of air, as a locomotive or siren does, but so fast that the puffs make a tone. Moreover, the vocal cavities do not, as generally supposed on Helmholtz's theory, act like brass resonators, reinforcing over tones. The cavities are adjusted to certain tones for each vowel; the puffs from the larynx strike them and bring forth these tones. Two incidental points of interest are noted: First, when the alphabet is spoken certain movements of the tongue are registered for each letter. These movements are reproduced in a lesser degree when the subject, instead of speaking the alphabet, merely thinks it, trying to keep his tongue still. Secondly, the epileptic has a distinct type of speech which the ear can learn to recognize and use as a diagnostic test.

West Virginia Medical Journal, Wheeling.

March.

82 *Operative Treatment of Uterine Retrodisplacement. R. J. Reed, Wheeling.
83 Cocain Anesthesia. R. E. Vickers, Huntington.
84 Diphtheria in Adult. H. P. Linsz, Wheeling.
85 Ophthalmia Neonatorum. C. B. Williams, Philippi.
86 Circumcision Under Cocain and Adrenalin Chlorid. J. N. Simpson, Morgantown.
87 Enuresis in Children. C. S. Hoffman, Keyser.
88 Medical Organization. C. A. Wingerter, Wheeling.

April.

89 Annual Address Before the West Virginia Medical Association. F. Howell, Clarksburg.
90 Surgical Clinics of Europe. J. E. Cannaday, Charleston.
91 Treatment of Empyema of the Maxillary Sinus Through the Inferior Meatus. T. W. Moore, Huntington.
92 Heredity. R. M. McMillen, Wheeling.
93 The Realization of Our Ideals. A. C. McKay, Hansford.
94 Relation of the Minister to the Physician. W. J. Holmes, Wellsburg.

82. **Uterine Retrodisplacements.**—Reed considers that there is but one surgical procedure founded on a scientific basis, the Alexander operation, which, however, is applicable only in uncomplicated retrodisplacements. It requires a precision of diagnosis attained by few, as to the absence of complications. With regard to the other operations, any will prove satisfactory, save as it relates to the child-bearing period. Notwithstanding the wide popularity of ventrosuspension, he adduces arguments against it, and particularly that in ventrosuspension of the uterus a pregnancy will destroy the work of the operation or the work of the operation will destroy the pregnancy, or surround it with grave dangers. He then describes a technic based on the Alexander idea, but carried out from within the cavity in four easy steps after an abdominal section in the median line, which has been perfected through the efforts of a number of American surgeons.

Mississippi Medical Monthly, Vicksburg.

March.

95 *Handicaps in Negro Practice. T. M. Dye, Sherard.
96 Gonorrhea. L. W. Bayne, Hattiesburg.
97 *Case of Gallstone. H. C. Buck, Friars Point.

April.

98 Technic of Brain Surgery. S. G. Wilson, Brookhaven.
99 Suggestion, Simple and Hypnotic. J. J. Slack, Friars Point.
100 Benefits of Exercise and Plain Food During Pregnancy. B. F. McNeal, Ezra.

95. **Negro Practice.**—Dye discusses the obstacles to negro practice. The principal ones are the negro's efforts to lead the physician to an erroneous diagnosis—he seems to have a delight in fooling the doctor if possible; an utter inability to understand and follow directions; the interposition of outsiders, who dissuade from obedience to instructions; the undying fondness for filling his belly; his morbid dread of water; his poverty and filth, and fondness for night prowling and sexual excesses. No reputation built on negro practice is secure.

97. **Gallstones.**—Buck reports a case of gallstone and incidentally expresses his conviction that calomel has no effect on the liver, so far as increasing or diminishing the secretion of bile goes, but that it does affect the duct and cause an increased flow of bile into the intestine.

Illinois Medical Journal, Springfield.

March.

101 *Modern Treatment of Pulmonary Tuberculosis; Principal Agencies Employed. J. W. Pettit, Ottawa.
102 *The Heath Mastoid Operation Whereby the Disease is Cured and Hearing Restored. W. L. Ballenger, Chicago.
103 Medical Organization and the North Central Illinois Medical Association. W. O. Ensign, Rutland.
104 Diagnosis and Treatment of Commoner Injuries of the Eye. W. E. Gamble, Chicago.
105 The Trend in Modern Medicine. E. P. Cook, Mendota.
106 Drugs in Diabetes. A. R. Elliott, Chicago.

101. **Pulmonary Tuberculosis.**—Pettit describes the details of treatment as carried out at the Ottawa Tent Colony, in reference to fresh air, food, exercise and tuberculin, the last of which he regards as neither a specific nor a substitute for the hygienic-dietetic treatment, but nevertheless a valuable adjunct, when indicated, in conjunction with the usual methods. Its value in localized lesions where its action can be observed, is unquestioned.

102. **The Heath Mastoid Operation.**—Ballenger describes clearly and in detail this modified, radical mastoid operation which does not include exposure of the middle ear. The ten patients in whom he has used it have shown great improvement in hearing, the curative effects being as good as those obtained by radical operation. It should be performed in most cases of chronic ear discharge; it is not a formidable operation.

Iowa Medical Journal, Des Moines.

March.

107 Report of the Chairman of the Section on Medicine of the Iowa State Medical Society. R. J. Nestor, Waterloo.
108 Pneumonia in Children. W. J. Bradley, Cedar Rapids.

109 Hysteria. S. Bailey, Mount Ayr.
110 Use of Food in Treatment of Disease. G. H. Clark, Waterloo.
111 Etiologic Classification of Leukemia. W. L. Bierring, Iowa City.
112 Idiopathic Splenic Enlargements. Splenic Anemia. W. W. Bowen, Fort Dodge.
113 *Anesthesia Fatalities in Iowa. L. W. Littig, Iowa City.
114 Pneumonia. G. E. Crawford, Cedar Rapids.
115 Case of Bronchial Calculus. J. B. Robb, Russell.

113. Abstracted in THE JOURNAL, Feb. 1, 1908, page 395.

Kentucky Medical Journal, Bowling Green.

March.

116 Osteomyelitis. J. G. Carpenter, Stanford.
117 Case of Abdominal Pregnancy. C. R. Garr, Flemingsburg.
118 Use and Abuse of Forceps. G. H. Freeman, Plano.
119 Differential Diagnosis of Membranous Croup and Diphtheria. W. L. Mosby, Bardwell.
120 Two Cases of Membranous Croup, Intubation in Each Case, and Recovery. L. B. Cook, Stanford.
121 Hydrocephalus-Face; Presentation; Rupture of Uterus. J. C. Brice, Flemingsburg.
122 Work of County Society Officers. J. W. Crenshaw, Versailles.
123 The Doctor's Duty to the Laity. A. W. Cain, Somerset.
124 The Laity's Duty to the Doctor. Id.

April.

125 *Exophthalmic Goiter. J. G. Cecil, Louisville.
126 *Surgical Treatment of Goiter. T. C. Holloway, Lexington.
127 A Pharmacologic Consideration of the Thyroid Gland. V. E. Simpson, Louisville.
128 Local Health Records. R. L. Woodard, Hopkinsville.
129 A Few Suggestions to the Young Practitioner. E. B. McMorries, Clinton.
130 Preparation and After-Treatment for Surgical Operations. B. F. Van Meter, Lexington.

125 and 126. Abstracted in THE JOURNAL, Nov. 9, 1907, page 1625.

Journal of the Missouri State Medical Association, St. Louis.

March.

131 Salpingitis. J. G. Sheldon, Kansas City.
132 *Law and Lawyers; Their Failure to Cope with Modern Medicolegal Exigencies. J. Punton, Kansas City.
133 Art of Prescribing. J. C. Matthews, Springfield.
134 Removal of Ureteral Calculi. W. Bartlett, St. Louis.
135 Reflections Concerning the General Practitioner. J. R. Buchanan, Nevada.

132. This article appeared in the *St. Louis Medical Review*, December, 1907, and was abstracted in THE JOURNAL, Feb. 1, 1908, page 402.

Therapeutic Gazette, Detroit.

April.

136 Treatment of Rheumatism in Children. J. P. C. Griffith, Philadelphia.
137 Medical Treatment of Gonococcus Infection in Women. E. McDonald, New York.
138 Treatment of Hemorrhoids Under Local Anesthesia. J. H. Maynard, Adair, Iowa.
139 Treatment of Uncinariasis in Porto Rico. F. D. Patterson, Philadelphia.
140 *Treatment of Pelvic Abscess. F. C. Hammond, Philadelphia.
141 Six Cases of Gonococcic Arthritis Treated with Antigonococcic Serum. A. Perez-Miro, Havana, Cuba.
142 Wiring Operation in Treatment of Aneurism of the Aorta. H. A. Hare, Philadelphia.

140. Abstracted in THE JOURNAL, Nov. 16, 1907, page 1706.

Dominion Medical Monthly, Toronto.

March.

143 Public Health Act of Ontario; Medical Practitioners and Medical Health Officers. L. J. A. Hythenrauch, Appin, Ont.
144 Menstrual Disorders of Young Women. J. Burke, Manitowoc, Wis.
145 *The Aseptic Hospital Floor. C. J. Fox, Washington, D. C.
146 Lysol as an Application in Smallpox. H. C. Jamieson, Glencoe, Ont.
147 Acute Nephritis. W. C. Abbott, Chicago.
148 Vivisection. A. MacPhail, Montreal.

April.

149 Case of Patient Suffering from Heart Block and Delusion of Infection of Skin by Insects. G. Chambers, Toronto.

145. A similar article by the same author appeared in the *Yale Medical Journal*, November, 1907, and was abstracted in THE JOURNAL, Feb. 8, 1908, page 433.

Western Medical Review, Omaha.

April.

150 Ablatio Placentæ. A. P. Overgaard, Fremont, Neb.
151 Suprapubic Prostatectomy. A. L. McKinnon, Lincoln, Neb.
152 Thirteen Cases of Prostatectomy with Complications and Sequelæ. A. C. Stokes, Omaha.
153 Diagnosis and Treatment of Inevitable and Incomplete Abortion. F. A. Long, Madison, Neb.
154 Twelve Cases of Extragenital Syphilis. E. J. Angle, Lincoln.
155 President's Address Before Laramie County Medical Society. W. A. Wyman, Cheyenne, Wyo.

Northwest Medicine, Seattle.

March.

156 Injection Treatment of Neuralgia. B. Hahn, Seattle.
157 Aseptic Midwifery. R. A. Gove, Tacoma, Wash.
158 Pelvic Contraction as a Factor in Labor. R. M. Purman, Seattle.
159 Treatment of Asthma with Diphtheria Antitoxin, Death Following Its Administration. P. W. Willis, Seattle.
160 Treatment of Partial Optic and Retinal Atrophy by Electricity and Massage. (Concluded). H. V. Würdemann, Milwaukee.

Lancet-Clinic, Cincinnati.

April 18.

161 Bacteriotherapy. O. Berghausen, Cincinnati.
162 The Psychasthenic States. C. W. Hitchcock, Detroit, Mich.
163 Arthroplasty for Ankylosis, with Report of Cases. H. J. Whitacre, Cincinnati.

Maryland Medical Journal, Baltimore.

March.

164 Prevention of Tuberculosis Among School Children. H. B. Jacobs, Baltimore.
165 Playground as an Aid in the Prevention of Tuberculosis. G. E. Johnson, Pittsburg.
166 Prevention of Tuberculosis in the Schools. H. W. Steele, Baltimore.

Vermont Medical Monthly, Burlington.

April.

167 Hematuria. L. Davis, Boston.
168 Home Treatment of Tuberculosis. H. H. Lee, Wells River.

American Journal of Urology, New York.

March.

169 Prostatic Hypertrophy. F. Cabot, New York.
170 Acute Bacterium Coli Infection of the Bladder. C. G. Cumston, Boston.
171 Three Cases of Cystitis Treated with Gomenol. C. L. Wheeler, Lexington, Ky.
172 Spasmodic Hysteric Retention of Urine. G. P. LaRoque, Richmond, Va.

April.

173 The Ureter in Fused (Horse-Shoe) Kidney. B. Robinson, Chicago.

Colorado Medicine, Denver.

March.

174 Venesection: Its Commoner Indications. H. B. Whitney, Denver.
175 Opsonic and Bacterial Vaccine Experiences. G. B. Webb, Colorado Springs.
176 Recent Advances in the Physiology of the Digestive Tract. E. B. Queal, Boulder.
177 Causes of Death in the City and County of Denver for 1907. E. Lawney, Denver.

American Practitioner and News, Louisville.

April.

178 Simple Anemia in Children. P. F. Barbour, Louisville.
179 Case of Herpes Zoster Lumbo-Femoralis. J. V. Shoemaker, Philadelphia.
180 Inflammation of the Nasal Accessory Sinuses. W. Cheatham, Louisville.

Yale Medical Journal, New Haven.

March.

181 Diagnostic Significance of Retention Fever. L. W. Bacon, New Haven.
182 Chronic Gonorrheal Prostatitis. P. D. Littlejohn, New Haven.
183 Influence of General Conditions on Accident Cases. C. E. Bedell, New York.

Journal of Cutaneous Diseases, New York.

April.

184 Frambesia Tropica (Yaws, Pian, Bouba). A. Castellani, Colombo (Ceylon).
185 Zittmann's Decoction. D. W. Montgomery, San Francisco.
186 Provisional Nomenclature of the American Dermatological Association. A. Rose, New York.

The Ohio State Medical Journal, Columbus.

April.

187 Injuries to the Elbow. L. G. Bowers, Dayton.
188 Cerebral Pneumonia. S. P. Wise, Millersburg.
189 Reflex Disturbance of Digestion. R. H. Grube, Xenia.
190 Lipomatosis. J. J. Thomas, Cleveland.
191 Tuberculous Laryngitis. A. B. Thrasher, Cincinnati.
192 Oculist's Records for Ten Years at the Ohio State School for the Blind. J. E. Brown, Columbus.
193 Urethral Caruncle. C. M. Harpster, Toledo.
194 Extensive Lupus of the Face and Nasal Canal. M. Metzenbaum, Cleveland.

Denver Medical Times.

April.

195 Three Cases of Pernicious Malarial Paroxysm Occurring in Colorado. J. N. Hall, Denver.
196 The Vermiform Appendix. F. L. Dixon, Denver.
197 Perforation of the Intestines by Swallowed Pin. F. M. McCartney, Denver.

198 Health of the City of Denver. W. H. Sharpley, Denver.
199 Law of Anesthetic Accommodation. C. G. Parsons, Denver.
200 Diagnosis and Treatment of Scarlet Fever. J. D. Crisp, Denver.

Utah Medical Journal, Denver.

April.

201 Vesical Irritability Due to Hyperacidity of Urine and Method for Diagnosing the Condition. W. T. Hasler, Manti.
202 Blood Examination: Its Value as a Diagnostic Measure. F. O. Reynolds, Springville.
203 Surgical Treatment of the Prostate Gland. E. Viko, Salt Lake City.

Journal of the Kansas Medical Society, Columbus.

April.

204 Injuries to the Abdominal Viscera, Due to Blows, Kicks, Crushes and Similar Accidents. E. E. Liggett, Oswego, Kan.
205 Lesions of the Motor Tracts of Cerebrum. C. C. Goddard, Leavenworth.
206 Cholera Infantum. C. S. Kenney, Norcatur.
207 Our Professional Standing. J. R. Scott, Independence.
208 Case of Pemphigus. R. E. M'Vey, Topeka, Kan.
209 Parasitic Diseases of the Skin and Their Treatment. J. R. Lytle, Richmond, Kan.

Indiana Medical Journal, Indianapolis.

March.

210 Repair of Divided Tendons. N. E. Jobes, Indianapolis.
211 Diagnosis of Rectal Diseases. A. B. Graham, Indianapolis.

April.

212 Purposes and Limitations of the Hospital. E. Walker, Evansville.
213 Lumbar Puncture; Its Value as a Diagnostic and Therapeutic Procedure. J. V. Reed, Indianapolis.
214 Fissure in Ano. A. B. Graham, Indianapolis.
215 Case of Spina Bifida; Operation and Recovery. E. K. Pfaff, Mooresville, Ind.
216 The American Medical School and Its Entrance Requirements. D. S. Jordon, Berkeley, Cal.

Montreal Medical Journal, Montreal.

March.

217 Giant-Celled Rhabdomyoma, Sarcoma from the Trout. J. G. Adami, Halifax.
218 Experimental Work Arteriosclerosis. O. Klotz, Halifax.
219 Trypanosomes in Montreal Rats. Id.
220 Chart for Study of Congenital Cardiac Diseases. M. E. Abbott, Montreal.
221 Cultural Features of New Pathogenic Micro-organism of the Conjunctiva. H. McKee, Montreal.
222 Ovarian Dermoid Tumor Communicating with Rectum. W. Gardner, Montreal.
223 Unilateral Congenital Absence of the Paired Genitourinary Organs. J. McCrae, Montreal.
224 Bilharziosis. R. P. Campbell, Montreal.
225 Mediastinal Sarcoma with Extensive Involvement of the Heart. C. F. Martin, Montreal.
226 Blue Baby, 17 Years Old. N. Viner, Montreal.
227 Tuberculoma of the Tongue. E. M. v. Eberts, Montreal.
228 Hypopion Iritis, Associated with Epidemic Cerebrospinal Meningitis. F. Tooke, Montreal.
229 Vincent's Angina. A. H. Gordon, Montreal.
230 Perforation of Gall Bladder from Erosion by Calculus. E. J. Williams, Sherbrooke.
231 Appendix in Inguinal Canal and Scrotum. Id.
232 Modifications of the Treatment of Cystitis in Women, with Report of 45 Cases Treated Cystoscopically. E. McDonald, New York.

Virginia Medical Semi-Monthly, Richmond.

March 13.

233 Clinical and Practical Points About Prostatectomy. R. C. Bryan, Richmond.
234 Splenic Abscess. E. T. Brady, Abingdon, Va.
235 Deviation of the Nasal Septum: Disturbances, Causes, Treatment. D. A. Kuyk, Richmond.
236 Office Treatment of Gynecologic Cases. G. Baughman, Richmond.

April 10.

237 Pathology and Etiology of Cancer. J. S. Horsley, Richmond.
238 Differential Diagnosis of Ectopic Pregnancy. C. R. Robins, Richmond.
239 Amebic Dysentery in the Southern States. T. B. Boggs, Baltimore.
240 Duty of the Physician to His Obstetric Patients. O. P Schaub, Roxboro, N. C.
241 The Ureter. R. C. Bryan, Richmond.
242 Simple and Easy Way to Remove a Collapsed Eyeball. D. D. Willcox, Petersburg.
243 Sanitary Villa on a Peak of the Appalachians. J. A. Burroughs, Asheville, N. C.
244 Principles of Surgery. S. McGuire, Richmond.

Texas State Journal of Medicine, Fort Worth.

March.

245 Glioma of Both Retinæ. Result of X-Ray Treatment. E. H. Carey.
246 Cancer of the Breast—Diagnosis, Prognosis and Treatment. B. Saunders, Fort Worth.
247 Relationship That Should Exist Between Physician and Druggist. C. E. Cantrell, Greenville.
248 Pelvic Abscess Resulting from Appendicitis. J. E. Thompson, Galveston.
249 Instruction of Women on the Questions of Sex, Venereal Diseases and the Early Detection of Cancer. M. Duggan, San Antonio.
250 Appendicitis—Some of Its Complications and How to Prevent Them. J. P. Runyan, Little Rock, Ark.

Louisville Monthly Journal of Medicine and Surgery.

April.

251 Pneumonotomy and Drainage in Abscess of the Lung. W. O. Roberts, Louisville.
252 Case of Tuberculosis of the Kidney. J. G. Sherrill, Louisville.
253 Management of Varicose Veins. A. D. Willmoth, Louisville.

Journal of Ophthalmology and Oto-Laryngology, Chicago.

March.

254 Jequirity in Trachoma. R. W. Gillman, Detroit.
255 Improvised Operating Room in Ear, Nose and Throat Practice. D. T. Vail, Cincinnati.
256 Formidin in Ear, Nose and Throat Surgery. J. F. Barnhill, Indianapolis.

April.

257 Ocular Disturbances the Result of Dental Disease. A. K. Higgs, Portland, Ore.
258 Papilloma of the Conjunctiva, Successfully Treated with X-Ray. T. Faith, Chicago.
259 Subjective Sensations of Smell and Their Significance. H. Kahn, Chicago.

Journal of Outdoor Life, Saranac Lake, N. Y.

March.

260 Outdoor Life in California. P. K. Brown, San Francisco.
261 Prevention of Tuberculosis. G. H. Kress, Los Angeles.

April.

262 Prevention of Tuberculosis Among School Children. H. B. Jacobs, Baltimore.
263 Cooperation that Counts. J. A. Cleary.
264 Modern Sewage Disposal Plant. L. Rosenberg, New York.

The Ophthalmic Record, Chicago.

March.

265 Probable Tumor of the Pituitary Body Without Giantism But Exhibiting a Binasal Hemiopia. C. A. Wood, Chicago.
266 Diaphanoscopy in Glaucoma. H. V. Würdemann, Milwaukee.
267 Case of Nonvascular Parenchymatous Keratitis. F. A. Davis, Denver, Colorado.
268 Paracentesis of the Anterior Chamber in Inflammatory Processes of the Uveal Tract. R. Denig, New York.
269 Argyrosis Due to Argyrol. F. Krauss, Philadelphia.
270 Ocular Paralyses and Their Diagnosis. E. M. Alger, New York.
271 Six Cases of Phlyctenular Conjunctivitis Associated with Diplobacillary Conjunctivitis. H. McKee, Montreal.
272 An Improved Retinoscopical Mirror. A. A. Bradburne, Southport, Great Britain.
273 Possible Use of Atoxyl and Other Preparations of Arsenic in Sympathetic Ophthalmia, Trachoma and Syphilitic Affections of Eye. H. Gifford, Omaha.
274 New Pterygium Knife. H. B. Young, Burlington, Iowa.
275 Mittendorf's Lens-Spots. H. Gifford, Omaha, Neb.
276 Syphilitic Paralysis of Accommodation. L. Emerson, Orange, N. J.
277 Ulcerative Keratitis Probably Due to Trophic Change. J. W. Pancoast, Philadelphia.
278 Surgical Interference in Choked Disc. E. Stieren, Pittsburg.
279 European Eye Clinics and Their Clinical Opportunities. A. P. Horwitz, Chicago.
280 Methods of Muscular Advancement. S. Klein, Bäringen, Germany.

April.

281 Use of the Ocular Transilluminator (The Würdemann Lamp). H. V. Würdemann, Milwaukee.
282 Ocular Tuberculin Reaction. F. M. Brawley, Chicago.
283 Optic Neuritis Due to Chronic Empyema of the Frontal and Anterior Ethmoidal Sinuses. W. A. Murray, Minneapolis.
284 Binocular Exophthalmos Recovery. S. D. Risley, Philadelphia.
285 Case of Probable Cerebellar Tumor Treated by Tuberculin Injections. H. B. Young, Burlington, Iowa.
286 Simple and Effective Instrument for Cauterizing Corneal Ulcers. F. C. Todd, Minneapolis.

Alienist and Neurologist, St. Louis.

February.

287 My Conception of Hysteria and Hypnotism (Pithiatism). J. Babinski, Paris.
288 The Fount of Evil. A. S. Ashmead, New York.
289 Case Showing Constitutional Defects. E. M. Somers, Ogdensburg, N. Y.
290 "La Phobie du Regard." C. H. Hughes, St. Louis.
291 Summary of the Pathologic Findings in 147 Autopsies Performed at the Central Indiana Hospital for the Insane. C. F. Neu, Indianapolis.
292 Allourophobia as Symptom of Psychasthenia. C. H. Hughes, St. Louis.
293 The Milwaukee Morbid Kleptophile. Id.
294 Dementia Senilis and Opinion Evidence. Id.
295 Inadequate Precautions Concerning the Insane. Id.
296 Medical Rank and Command in the Navy. Id.

Archives of Ophthalmology, New York.

March.

297 Report of a Pathologic Examination of a Case of Acute Primary Glaucoma. A. Knapp, New York.
298 Glaucomatous Excavation of the Lamina Cribrosa Without Excavation of the Papilla and with Marked Papillitis, in Case of Acute Inflammatory Glaucoma. B. Pusey, Chicago.
299 Affections of the Optic Nerve During Pregnancy. A. Knapp, New York.
300 Nail from a Shotgun Cartridge, which Spontaneously Came Out from Under the Eyelid, Where It Had Been Lodged for Eight Years, Without Damage to the Patient. J. S. Fernandez, Havana, Cuba.
301 Interstitial Keratitis After Use of Calmette's Ocular Reaction. A. Knapp, New York.
302 Oxide of Copper in the Cornea. E. G. Rust, Cleveland.

303 Particles of Glass as Foreign Bodies in the Lens. Prof. Laquer, Strasburg, Germany.
304 Xeroderma Pigmentosum. C. Velhagen, Chemnitz, Germany.

Ophthalmology, Milwaukee.

April.

305 Three Cases with Ocular Manifestations of Tertiary Syphilis in Colored Subjects. W. C. Posey and F. Krauss, Philadelphia.
306 Centune System, Percentage or Nomenclature of Angles. E. E. Maddox, Bournemouth, England.
307 Insufficient Pigmentation as Cause of Eye Diseases. C. E. Woodruff, Fort Wadsworth, New York.
308 Vibratory Massage in Eye Diseases. L. Connor, Detroit.
309 Morax-Axenfeld Conjunctivitis. Analysis of 300 Cases. H. McKee, Montreal.
310 The Evil Eye Among the Hebrews. A. Brav, Philadelphia.
311 Verhoeff's Astigmatic Charts. J. Green, Jr., St. Louis.
312 Relation of the Eye and the Nose. H. C. Parker, Indianapolis.

International Clinics.

Vol. I. Eighteenth Series.

313 The Sanatorium. L. Brown, Saranac Lake, N. Y.
314 Treatment of Syphilis by Injection of Soluble Salts of Mercury. J. Dardel, Aix-les-Bains, France.
315 Clinical Aspects of Blood Coagulation. T. R. Boggs, Baltimore.
316 Value of Opsonic Test for Diagnosis and of Employment of Vaccines in Infective Conditions in Children. A. D. Fordyce, Edinburgh, Scotland.
317 Paratyphoid Fevers. J. C. Wilson, Philadelphia.
318 Urinary Acidity with Reference to Gastric Acidity. Acid and Alkaline Tides in Urine Denied. A. L. Benedict, Buffalo, N. Y.
319 Textural Proclivities and Immunity; the Personal Factor in Medicine. Sir D. Duckworth, London, England.
320 Mucous Colitis. D. Sommerville, London, England.
321 Normal Temperature of the Body. R. D. Rudolf, Toronto, Canada.
322 Diseases of the Gall Bladder. J. B. Deaver, Philadelphia.
323 Practical Deductions from Series of Operations for Perforated Gastric and Duodenal Ulcer. B. T. Tilton, New York.
324 Resection of Shoulder Joint for Suppurative Disease of Bone. J. G. Sherrill, Louisville, Ky.
325 Import of Digestive Disturbances in the Diagnosis of Surgical Lesions of the Abdomen. L. Frank, Louisville, Ky.
326 Fixation Abscesses. J. Thiroloix, Paris, France.
327 Care of the Newborn. H. E. Tuley, Louisville, Ky.
328 Perfected Surgical Treatment of Fibroid Tumors of the Uterus. L. S. McMurtry, Louisville, Ky.
329 Fracture of the Spine. G. L. Walton, Boston.
330 Mode of Infection in Tuberculosis. L. F. Flick, Philadelphia.
331 Etiology of Hemoglobinuric Fever. W. H. Deaderick, Marianna, Ark.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London.

April 11.

1 *Treatment of Fractures of the Patella of Long Standing. Lord Lister.
2 The Pygmy and Negro Races of Africa. F. C. Shrubsall.
3 *Diagnosis and Treatment of Malignant Disease of the Prostate. J. W. T. Walker.
4 Fifty Cases of Stovain Analgesia by the Intraspinal Injection. L. H. McGavin.
5 *Renal Hemorrhage in Chronic Interstitial Nephritis. J. T. McNab.
6 Treatment of Disease and Deformity Due to Scar Tissue. J. Snowman.
7 Labor in a Case of Triple Pregnancy. V. Z. Cope.
8 Abnormality of the Liver Simulating a Thoracic Tumor. E. A. Elder and J. E. Postlethwaite.
9 The Cell as a Factor in Phagocytosis. H. W. Bayly.
10 *Cures for Asthma; Fatal Case from an Overdose of Oil of Sage. H. T. M. Whitling.
11 Motoring Notes. C. T. W. Hirsch.
12 Peter of Abano. C. E. A. Clayton.

1. **Fractures of Patella.**—Lister publishes, for the first time, in a letter to a physician written in 1895, a method of dealing with old standing fractures of the patella. When complete approximation can not be brought about, he wires the fragments in the following manner: Making a sufficient vertical incision from the free convex border of each fragment extending a little beyond the fractured border, the upper fragment is drilled from without inward with two holes. A sufficient length of wire is then threaded through both holes in such fashion that when the ends are pulled on, the loop of the wire will rest on the upper surface of the fragment. The lower fragment is also drilled with two holes. Through the lower incision the soft tissues are detached by means of a raspatory from the femur between the two incisions, and a forceps passed upward seizes the two ends of the wire and brings them out through the lower wound. The lower fragment is then wired from within outward. The limb is brought into a vertical position to give all natural help in approximation of the fragments, and a strong sharp hook passed through the attachment of the quadriceps to the upper fragment, aids in its drawing down. When the fragments have been drawn as close together as possible, the ends of the wire passed from within outward in the lower fragment are secured in the usual way. After dressing the limb the vertical position is still retained for two or three days and then gradually reduced an inch or two at a time to the horizontal. After some time, in which the patient uses the limb, it will be found that the fragments can be approximated, and the lower incision is then opened and the fragments wired through the existing holes in the usual manner with two interrupted sutures or a continuous wire suture, which, however, Lister does not prefer, as it may tilt the fragments so that their anterior edges do not come together.

3. **Malignant Disease of the Prostate.**—Walker discusses the diagnosis of malignant disease of the prostate, based on a consideration of 242 consecutive cases of prostatic enlargement, of which 57 were diagnosed as malignant. Of these he discards 17 as among the doubtful class, the other 40 leaving no room for criticism. This gives a proportion of 16.5 per cent. of malignant growths. Simple and malignant growths begin about the same time, so that age is of little value diagnostically, save that cases beginning much before 50 are likely to be malignant. Difficult micturition is the cardinal symptom. Next to that comes frequency. Pain was slightly less often present than the preceding symptoms; it was the initial symptom in 10 cases. The frequent absence of hematuria is a misleading feature. Emaciation occurred in 15 cases and then was slight. Extensive infiltration of the rectal wall caused obstruction of the bowel in two cases. Walker compares these symptoms with those of diseases most likely to be confused with cancer—simple enlargement, stricture of the urethra, some diseases of the spinal cord. He describes the mode of examination of the patient and of rectal examination. As to treatment, many cases are too far advanced on diagnosis to permit of more than relief of symptoms—the occasional passage of a good sized metal bougie to relieve difficult micturition; this should be avoided, however, if hematuria is present. Catheter life may be necessary; also opium may be needed for pain. The methods of operation open to choice are suprapubic enucleation and perineal operations, perineal prostatectomy and total extirpation of the prostate, prostatic urethra, seminal vesicles and bladder base (Young's operation). He describes these operations.

5. **Renal Hemorrhage in Nephritis.**—Macnab concludes from his investigations that renal hemorrhage is not at all uncommon in the course of chronic interstitial nephritis, and differs from other hemorrhages occurring in the disease, as it often appears very early. This leads to difficulty in diagnosis, but may enable cases of chronic nephritis to be recognized sooner than they otherwise would be. Medical treatment is, as a rule, sufficient to control the bleeding, but recurrence is probable. Surgical treatment may be necessary in rare cases of severe hematuria occurring early in the disease.

10. **Poisoning by Oil of Sage.**—Whitling describes a fatal case of poisoning from taking two drams of oil of sage by mistake. The characters were those common to poisoning by all essential oils—inhibition of the pneumogastric, epileptiform convulsions, cyanosis. This should be remembered, as oil of sage is sometimes used with the view of causing abortion.

British Medical Journal, London.

April 11.

13 *Treatment of Fractures of the Patella of Long Standing. Lord Lister.
14 *Rational Treatment of Functional Dyspepsia. R. Hutchison.
15 Physiology of the Emotions. F. W. Mott.
16 *Clinical Value of the Pancreatic Reaction in the Urine. C. Watson.
17 *Therapeutic Uses of Normal Serum. E. C. Hort.
18 Hysterectomy Performed on a Patient with Glycosuria. J. D. Malcolm.
19 Irish Poor-Law Medical Service. J. W. Boyce.
20 The Attendance Prize System; Its Relation to the Spread of Disease in Elementary Schools. R. P. Williams.

13. See abstract No. 1.

14. **Functional Dyspepsia.**—Hutchison divides functional dyspepsias into four forms, corresponding to the four physiologic

functions of the stomach, viz.: 1, Secretory; 2, motor; 3, sensory, and 4, absorptive. The last being a limited function, is dismissed. Functional dyspepsias, therefore, fall into the following classification:

1. Secretory..	Excess: hyperchlorhydria and hypersecretion.
	Defect: hypochlorhydria and achylia.
2. Motor.....	Excess: pyloric spasm.
	Defect: atony and motor insufficiency.
3. Sensory....	Excess: hyperesthesia.
	Defect: (?) anorexia and diminished capacity.

Any one of these forms may occur alone, but frequently one finds two or more coexisting. Hutchison discusses the treatment of each form in detail. In excessive secretion the indications will be best met by a regimen into which milk, eggs, meat and fish enter freely, while the starchy foods are kept within strict limits. Medicinally, neutralizing drugs, of which the earthy oxids (magnesia is to be preferred) should be given when the secretion is excessive, i. e., about two hours after meals. In defective secretion the actual composition of the diet is indifferent, provided it be given in a suitable mechanical form. Medicinally, the indications are to stimulate the natural secretion or to replace it artificially. The bitters effect the first end, alone or with small doses of sodium bicarbonate. The second, theoretically, would be attained by administration of ferments, but in practice this has proved to be almost worthless. Full doses, say ½ a dram (2.0 gms.) of the dilute hydrochloric acid, after meals, are sometimes of service in restraining some of the secondary symptoms, e. g., "gastric" diarrhea. In the excess form of motor disorder the dietetic treatment must consist mainly of milk supplemented by soft farinaceous foods; medicinally, antacids, bismuth, antispasmodics, e. g., carminatives, and especially opium in small doses before meals, are indicated, with local fomentations, etc., to the epigastrium. Motor defect calls for avoidance of all hard, tough, indigestible food, and of fluids, the diet being dry; medicinally, muscular tonics are indicated—strychnin, alcohol, mineral acids, certain aperients, particularly aloes. Massage, perhaps electricity, and hydrotherapeutics are useful measures. Anesthesia is the only sensory disorder of which we have any knowledge. Blandness should be the characteristic of the diet, while medicinally we have many gastric sedatives, especially bismuth, the bromids, hydrocyanic acid, hyoscyamus, cannabis indica, chloral and chloroform. Also the local application of heat is useful here also. While these lines will not always be successful, Hutchison holds that this is the only way of approaching this disorder that can be called rational and scientific.

16. **The Pancreatic Reaction.**—Watson sums up his conclusions practically as follows: The results of his researches confirm the conclusion arrived at by Mayo Robson and Cammidge, that there is a definite and important relationship between the pancreatic reaction in the urine and disease of the pancreas. They differ from those of Cammidge, in so far that he has recorded a higher percentage of positive results in cases similar to those that may have been included in that author's list of control cases. He divides the cases in which the pancreatic reaction was present into the following groups: 1. A group in which there was definite clinical or pathologic evidence of serious organic disease of the pancreas—for example, acute and chronic pancreatitis, usually associated with disease of the bile ducts. 2. A group in which the reaction in the urine is associated with pronounced arterial sclerosis, a condition usually accompanied by more or less sclerosis in different glands. 3. A group in which the reaction is dependent on congestion and catarrhal conditions of the gland ducts and substance, with associated toxemia; for example, advanced heart disease, appendicitis, pneumonia and malaria. This division is, it is hardly necessary to add, somewhat arbitrary, as most cases are in all probability of mixed origin. If these facts are kept in view, and their urinary reaction is carefully studied along with the other clinical features of a case, Watson has no hesitation in saying that this new test will prove of great value to physicians and surgeons in the diagnosis and treatment of pancreatic disease.

17. **Normal Serum.**—Hort reports a number of cases of the use of normal serum to combat the ulceration and destruction of tissue that characterize many diseases, and which are supposed to be due to a deficiency in the patient's serum of bodies that normally restrain autolysis. The cases are remarkable illustrations of the inhibiting power of the serum. The action of normal serum would appear, Hort thinks, to be the sum of the two opposing actions of an antilytic and auxilytic body.

Medical Press and Circular, London.

April 8.

21 *Three Cases of Inoperable Cancer of the Rectum. W. Alexander.
22 Maladies of the Heart. Sir J. Sawyer.
23 Pelvic Tuberculosis. R. D. Purefoy.
24 Gallstones Removed from the Pancreas. P. J. Fagan.

21. **Cancer of the Rectum.**—Alexander describes an operation performed by him in a case of inoperable cancer of the rectum in 1887, which operation with certain modifications he has continued to perform since. It essentially resembles Kraske's operation, save that instead of removing one side of the sacrum it removes the last two pieces entire, as well as the coccyx. The patient lived and did good work as a laborer for thirteen years, dying subsequently of intercurrent bronchopneumonia, without recurrence of the growth. Alexander now does a preliminary inguinal colotomy, which has a distinct advantage in diverting the feces from their normal passage over the diseased mass, so that the diseased part shrinks in size, becomes less painful and more movable, and irritation and inflammation subside. He allows a month to elapse before doing the radical operation. In this operation the anal opening is first stitched up tight, leaving a loop of silk free to manipulate the bowel with during operation. An incision starting from the level of exit of the fourth sacral nerve in the middle line along the sacrum and coccyx up to within half an inch of the anal margin, sweeps around the anus. The coccyx and the two lower pieces of the sacrum are then denuded from superjacent tissues and removed with bone forceps. The string controlling the rectum is held, and with the scissors the muscles and fascia are snipped through as they appear. The peritoneum may be opened and the proximal part followed up as far as necessary. The proximate part of the healthy bowel is clamped and the diseased part cut away, a Paul's tube being tied in the proximate end. The healthy bowel is stitched high up to the peritoneum and the lower end just above the Paul's tube is sutured to the skin. This operation affords ample room for complete removal of all the diseased tissues.

Bristol Medico-Chirurgical Journal.

March.

25 *Suppurative Disease in the Nose and Ear. P. W. Williams.
26 Typhoid Fever and Typhoid Carriers. D. S. Davies and I. W. Hall.
27 *Operative Interference in Carcinoma of the Pancreas. J. Swain.
28 *Treatment of Spreading Peritonitis by Drainage, the Fowler Position, and Rectal Instillation of Saline Solution. C. H. Whiteford.
29 Rupture of Middle Meningeal Artery: Operation; Recovery. G. M. Smith.
30 Abdominal Fibroma Simulating Splenomegaly. D. A. Alexander.

25. **Suppurative Disease of Nose and Ear.**—Williams describes in detail the anatomy of the accessory sinuses, and discusses the symptoms of chronic suppuration in them and the connection between so-called nasal mucous polypus and nasal suppuration; his own opinion being that probably obstruction arises in the lymphatic vessels, owing to the invasion of microorganisms. The presence of multiple polypi, he says, is strong evidence of the existence of suppuration in one or more of the accessory sinuses. He discusses the treatment, including that by opsonic vaccines. In regard to the latter, while finding it impossible to say how far improvement in his cases was attributable to the vaccines, he considers the results at any rate sufficient to encourage resort to the method in certain cases. He describes various operations, including an osteoplastic one of his own for gaining access to the ethmoidal cells, the sphenoidal sinus, and the frontal sinus, without destroying the nasal bone or leaving a depressed pit below the bridge. He also describes a plan by which the presence of pus in the sphenoidal sinus can be determined. This consists of passing a

fairly fine cannula, with a blunt trocar, under anesthesia, along the floor of the nose until it impinges against the posterior pharyngeal wall; then the distal end is carried forward along the roof of the nasopharynx till it slips up the anterior wall to a point about ¼ inch above the lower border of the anterior wall of the sphenoidal sinus. On slight pressure it readily penetrates the thin anterior wall. A syringe is then substituted for the trocar and the contents aspirated or boric acid solution is thrown in.

27. **Carcinoma of Pancreas.**—Swain reports cases all treated by cholecystenterostomy by means of the Murphy button. Early operation is necessary, as one of the objects is to forestall the occurrence of cholemia and toxemia. The absence of pruritus is a great gain in this operation as against cholecystostomy. He does not consider it of much importance whether the gall bladder is attached to the duodenum or the colon, other things being equal. He advocates the Murphy button strongly, as reducing the mortality and shortening time in the operation. The male part, being the heavier, should be placed in the intestine, thus favoring the fall of the button into the intestine when it becomes loose.

28. **Spreading Peritonitis.**—Whiteford describes a case and comments on the advantages of a swing for retaining the patient in a semi-sitting position, practically after the method of Mayo Robson and Moynihan; the use of Moynihan's flexible pewter tube for administering saline solution by rectum; the use of morphin hypodermically when operation has been decided on, to conduce to the patient's comfort and, by lessening peristalsis, to check the spread of infection; the Fowler position; the preference for ether anesthesia; the desirability of shortening the operation as much as possible, and the importance of keeping the patient in a semi-erect position before, during and after operation.

Journal of Obstetrics and Gynæcology of the British Empire, London.

March.

31 Paul and Peter Chamberlen? J. W. Ballantyne.
32 *Infantile Breast Tissue. C. N. Longridge.
33 *Hebotomy or Pubiotomy, with Notes of a Case. R. Jardine.
34 *Need of Clinical and Pathologic Investigation into the Nature and Causes of the Common Gynecologic Ailments. W. E. Fothergill.
35 Case of Tuboabdominal Gestation: Death of Fetus at Full Term: Removal of Fetus and Placenta Two Months Later. W. Tate.
36 Lithopedion, Retained Fifteen Years, Causing Acute Intestinal Obstruction. J. W. Smith.
37 Symphysiotomy Performed Three Times on the Same Patient. R. Jardine.
38 Unusual Degree of Cystic Degeneration of the Cervix. M. H. Phillips.
39 Case of Gangrene of the Leg from Thrombosis During Pregnancy. R. Jardine.
40 *Low Implantation of Placenta with Tough Membranes, Causing Prolonged First Stage of Labor in Primiparæ. K. Das.

32. **Infantile Breast Tissue.**—Longridge describes, by means of nine microscopic sections, the development of the infantile breast. He is engaged in trying to collect information as to whether the mother is always a successful nurse in cases in which the infant's breast also secretes. He has failed to find any definite connection between the not uncommon blood stained vaginal discharge of female infants and activity of the breasts.

33. **Pubiotomy.**—Jardine describes Doederlein's method and reports a case of its use. He is unable to see much to choose between this operation and symphysiotomy. If slight enlargement only is necessary either operation will give it, but if there is considerable disproportion between the head and the passages neither should be selected, especially in a primipara, for in such a case it is almost impossible to deliver without tearing the vagina at its most unsupported part, namely, where the bone has been divided, thus leaving a compound fracture. His own experience of symphysiotomy does not lead him to consider that there is any greater danger of injuring the urethra or bladder in that operation.

34. **Gynecologic Ailments.**—Fothergill discusses the history of the development of gynecology through its mechanical phase, and subsequent infection phase, the latter of which still holds a considerable sway, owing to the misapprehension caused by the frequent use of terms ending in *itis*. The problems presented for solution by non-infective minor ailments of women are by no means simple. The anatomic and physiologic changes of puberty demand further investigation. The life history of the ovary must be kept in mind, for deviations from its normal course must be recognized as factors in etiology. The changes that occur in connection with pregnancy, parturition and involution are even more striking than those that accompany the onset, the recurrence and the cessation of ovulation and menstruation. There are other factors also which often disturb the nervous control and vascular supply of the reproductive organs and originate both symptom and morbid tissue changes, e. g., those arising from some period of general disease, those dating from marriage, and from the commencement of sexual activity, though in the latter cases it is possible that they are dependent on pre-existing conditions, their aggravation by these causes simply leading to examination. He discusses further the real relationship between retroversion and uterine disease, which is still regarded as open and calling for investigation.

40. **Tough Membranes and Prolonged First Stage of Labor.**—Das reports a case of a primipara aged 22, in whom labor commenced at 3 p. m. At 7 a. m. next morning, the pains having continued strong all through the night and recurring at this time every three or four minutes, the patient was anxious and had a pulse of 112. The head was low down. The membranes were very thick and detected with difficulty. The os was only dilated to admit the tips of two fingers and was soft. Das ruptured the membranes without escape of any liquor amnii, at 7:15 a. m., and went away promising to return at 9; on doing so found that the child had been born at 8:10. Thus it took sixteen hours for the os to dilate to two fingers' breadth and less than an hour for the remainder of the first stage and the whole of the second. On examination of the secundines, the placenta was found to have had a low attachment. Looking back over the history of several cases of delayed first stage in primiparæ, he concludes that the low insertion of the placenta was the chief factor of delay, by not allowing the lower uterine segment to retract past the membranes, which were closely applied over the presenting head. When the following conditions are present, therefore, he concludes that rupturing the membrane will expedite labor: 1, Primipara; 2, prolonged first stage; 3, presenting head low in the pelvis; 4, os soft, dilatable and generally thin; 5, very little forewaters; 6, membranes tough, and not bulging through the os during a pain.

Australasian Medical Gazette, Sydney.

February.

41 Case of Arrhythmia of the Heart. J. M. Gill.
42 *Significance of the Pathologic Variations of the Reflex Actions. G. E. Rennie.
43 Protection of India from Invasion by Bubonic Plague. J. A. Thompson.
44 Present Methods of Combating the Plague. W. M. Haffkine.
45 Three Cases of Fracture of the Skull. T. Fiaschi.
46 *Tumors of the Breast Showing Peculiar Histologic Characters. S. Jamieson.
47 Perforated Gastric Ulcer; Operation; Recovery. F. J. T. Sawkins.

42. **Reflex Actions.**—Rennie discusses in a practical manner the physiology, patholgy and diagnostic significance of the presence, exaggeration or absence of the reflexes, particularly the tendon jerks.

46. **An Anomalous Tumor.**—Jamieson describes a tumor of the breast, which in different parts, displayed the following characteristics: In one part the cells resemble in arrangement, etc., an endothelioma; in another, a myeloid sarcoma, and in a third a deciduoma malignum.

Annales de Gynécologie et d'Obstétrique, Paris.

March, XXXV, No. 3, pp. 129-192.

48 *Arrest of Dilatation of the Os During Labor. (Dilatation stationnaire de l'orifice utérin au cours du travail.) V. Wallich.
49 *Appendicitis and Disease of the Uterine Appendages. (Appendicite et annexite.) H. Hartmann. Commenced in No. 2.
50 *Ileus Following Removal of Large Uterine Fibroma. J. Boeckel.
51 *Hypertrophy of Pylorus with Stenosis in Newborn Infant Cured by Plastic Operation on Pylorus. Champetier de Ribes, Guinon and P. Frédet.

48. **Arrest of Dilatation of Cervix During Labor.**—Wallich says that when dilatation reaches a certain point and then remains stationary it must be because the uterus has to struggle against some obstacle to normal dilatation and has become exhausted. There is an evident connection, he asserts, between arrest of dilatation and disproportion between the size of the fetus and the diameter of the birth passages or abnormally low insertion of the placenta. Sometimes the cervix is rigid merely from infiltration with blood and serum. In this condition there can be no further dilatation except by rupture or surgical interference. The amniotic sac will generally be found ruptured in these cases or the fetal skull will be found compressing the wall of the uterus against the bones of the pelvis, interfering with circulation. In treatment of stationary dilatation, if it is due to overdistention of the sac, even during the intervals between contractions, puncture of the sac will bring relief; unless there is overdistention, however, puncture is contraindicated, as it does away with one of the most active factors in physiologic dilatation. while it leaves the fetus unprotected, and there is special danger of infection of the fetus when labor is protracted. If there is functional impotence of the uterus, quinin and sugar may be given; it certainly can do no harm to prescribe sweetened water, but ergot should never be used, Wallich insists, so long as either an ovum or fetus is in the uterus. He does not approve of general hot baths, for fear of infection, but advocates repeated sterile hot vaginal douches at a temperature of 48 or 50 C. (122 F.), while patiently awaiting the reappearance of uterine contractions after a period of repose. Waiting should be governed by the state of the fetus and the danger of rupture of the uterus in women who have borne children before, especially when there have been previous obstetric operations. The uterus in primiparæ is more solid and the cervix intact. The inflatable rubber bag can be used only when the head is high and can be moved, leaving room for expansion of the balloon without fear of rupturing the lower segment of the uterus. If the head is lodged against the wall of the pelvis and is immovable, it is better not to attempt to use the balloon. Instrumental dilatation acts unevenly on the tissues of the cervix, and manual dilatation is only effectual when forcible—both these measures sharing the grave danger of causing rupture; it is almost inevitable when the cervix is rigid from infiltration or from sclerous degeneration. Incisions of the cervix do not open a large enough passage for the fetus, as a rule, and it suffers to such an extent that the mortality is still 25 per cent., according to the statistics collected by Bué; the fetus at the time is already suffering from the effects of the protracted labor. It might be possible, Wallich says, to relieve the infiltration in the cervix by scarifying and massaging the tissues to restore suppleness, but this has not been attempted yet in the clinic. Cesarean section seems to be the only means of avoiding rupture of the uterus with an undilatable cervix.

49. **Appendicitis and Adnexitis.**—Hartmann reports in detail eighteen cases of appendicitis with inflammation in the adnexa, and remarks that he is convinced that many operations have been done for appendicitis when the trouble in reality was some mild affection in the uterine appendages. He does not believe in removing the appendix without cause, agreeing with Kelly that the fact that we do not know what can be the function of the appendix is no proof that it has not a function. At the same time he examines the appendix in all operations on the adnexa, and removes it if there are adhesions, if it is unduly long or if abnormal conditions of any kind are discovered.

50. See abstract 56 in The Journal, March 7, page 806.

51. **Hypertrophic Pyloric Stenosis in New-Born Infant.**—Within the last five months, three cases have been encountered at Paris and a fourth is here described. The first signs of trouble do not become manifest until about the third week. Vomiting first attracts attention; it is sudden, violent, explosive, often preceded by pain and followed by evident relief. No bile is found in the vomit; constipation and oliguria or even anuria may follow, with dilatation and marked peristalsis of the stomach and a tumor in the pyloric region. The diagnosis may be difficult if these signs develop in the course of a gastroenteritis. In the case described, meconium appeared unusually long in the stools, then enteritis developed and there was complete intolerance of breast milk. Frequent lavage of the stomach induced only transient relief and charcoal given by the mouth did not make its appearance in the stools. The child lost weight rapidly, but remained vivacious, and its screaming was loud and persistent. Lavage of the stomach three or four times a day enabled the child to sleep, which neither morphin nor belladonna had been able to accomplish. The mucous layer in the hypertrophic stenosis of the new-born is not altered, but only exuberant, the hypertrophy affecting exclusively the circular fibers. A submucous pyloroplastic operation is thus all that is necessary, while it is quicker and less serious than the usual technic. The parts may swell after the operation, temporarily closing the lumen anew, but this soon subsides. In the 22 cases of pyloroplasties known to date there were 9 postoperative deaths, and 30 deaths in the 52 cases in which gastroenterostomy was done. The after-care is extremely important for the outcome. In the present case, the child did not thrive until it was taken from the breast at four weeks of age and fed artificially, when the stools became normal in a few hours.

Bulletin de l'Académie de Médecine, Paris.

March 31, LXXII, No. 13, pp. 377-392.

52 *Connection Between Tracheobronchial Adenopathies and Pulmonary Tuberculosis. C. Leroux and Hutinel.
53 *Progress in Obstetrics of Late Years. (Fonctionnement de la clinique Baudelocque.) A. Pinard.

52. **Connection Between Tracheobronchial Glandular Lesions and Tuberculosis.**—Leroux found a tuberculous process in the mediastinal glands in 185 children, tuberculous lesions in the lung in 122, and in 193 both lesions, among 500 tuberculous children he has recently examined. He discusses these findings from several points of view, and urges that children with caseous glands must be considered as already candidates for pulmonary tuberculosis, and that they must be transplanted permanently into fresh air, especially sea air in a mild climate, to eradicate the infection. A brief sojourn does little good; it merely attenuates the symptoms without removing the cause.

53. **Progress in Obstetrics.**—Pinard comments on the great progress realized in obstetrics in the last few years, the morbidity and mortality of childbirth having been most gratifyingly reduced, but the children have not benefited to the same extent as the mothers, he adds. The mortality of the children at birth has not declined at all. The number of fetuses delivered macerated or stillborn is as large now as fifty years ago. It is no longer a question of gestation, but of retention. He adds that the number of deformities is also as large as it was of old. The physician is unable, of course, to reanimate a macerated fetus or to make a hydrocephalic child normal, but he can do much to prevent the occurrence of such things. It is in the power of the profession, he continues, to reduce the number of stillbirths and of idiots, imbeciles and degenerates by wise puericulture. He continues: "The instinct of reproduction of species is the only one which has remained in its primitive state and has not been educated with advancing civilization. Procreation to-day occurs the same as in the stone age. The most important act in life is presided over by chance alone in these days, as in the days of the cave dwellers." In his statistics more than a third of all the children were born before term. Overwork and sexual traumatism during pregnancy act in the same way as the wind which shakes down from the tree the fruit before it is ripe, although the fruit is normal. He pleads with physicians to work for puericulture before procreation and during gestation as the most potent means for the preservation and improvement of the human species.

Obstétrique, Paris.

February, N. S. I., No. 1, pp. 1-128.

54 *The Placenta in Eclampsia. A. Brindeau and L. N. Larrier.
55 *Turpentine in Prevention and Treatment of Puerperal Streptococcus Infections. (Traitement des infections puerpérales par l'essence de térébenthine.) M. Fabre.

56 *Rupture of the Cicatrix in the Uterus After Cesarean Section. L. Meyer.
57 *The Placenta as Culture Medium for Bacteria. (Le placenta est-il un milieu de culture propice au développement des microbes?) P. Guéniot.

54. **The Placenta in Eclampsia.**—A number of changes in the placenta were observed in eclamptics. None of them seems to be strictly characteristic, but all suggest the effect of some toxin.

55. **Turpentine in Prophylaxis and Treatment of Puerperal Streptococcus Infection.**—Fabre states that the Lyons maternity is used for teaching purposes, and yet the mortality is lower than outside the hospital. He ascribes this to his method of treatment with essence of turpentine, saying that whether the turpentine is ingested by the mouth, absorbed through the skin, lungs or by subcutaneous injection or introduced into the cavity of the uterus, the action is the same, namely, that of an internal non-toxic antiseptic. The organism tolerates comparatively large doses of turpentine, which has a peculiarly destructive action on the streptococcus. It also induces hyperleucocytosis and raises the opsonic power of the blood. Each of these properties is reviewed in detail. In his experience with turpentine he has found that from 4 to 10 gm. (1 to 3 drams) by the mouth and 2 gm. (30 grains) by subcutaneous injection are small doses and practically free from danger, although he warns against the intravenous route. He has never observed any unfavorable action on the kidneys; the diuretic action is slight. Albuminuria frequently vanishes and does not reappear during the treatment. His favorable experience with 254 infected cases in 6,524 confinements since 1904 has confirmed the value of the turpentine treatment to his complete satisfaction. Since last June he has been applying it systematically in prophylaxis. The results have been encouraging, the morbidity being materially reduced, as he shows by statistics and by comparison of alternating series with and without the injections. It was his predecessor Professor Fochier, who advocated turpentine "fixation abscesses," finding them especially useful in puerperal infection.

56. **Rupture of Cicatrix in Uterus After Cesarean Section.**—L. Meyer has witnessed two instances of this mishap, bringing the number on record to thirteen. In both his cases the rupture was very small and the viability of the fetus was not impaired. He does not think that this is a mere coincidence, but believes that it was due to his immediate intervention before the rupture had had a chance to enlarge. He ascribes the rupture to infection of the Cesarean wound; when this wound heals without infection the cicatrix is stout and resistant. One of his cases is remarkable because a spindle-celled sarcoma in the sacrum was only partially removed three years ago, the part left being as large as a child's head, yet the woman has passed through two pregnancies and two Cesarean sections since without any change in the tumor or metastasis or impairment of the general health.

57. **The Placenta as a Culture Medium.**—Guéniot found that the placenta did not prove a favorable culture medium for the streptococcus in his experiments, while the staphylococcus and colon bacillus thrived luxuriantly on it.

Presse Médicale, Paris.

April 1, XVI, No. 27, pp. 209-216.

58 Present Conception of Antibodies. Their Connection with Immunity. (Les anticorps.) Foix and Mallein.
59 Acute Enteritis and Appendicitis. Tardy Perforation of Intestinal Ulcerations. A. Broca.

Semaine Médicale, Paris.

April 8, XXVIII, No. 15, pp. 169-180.

60 *Cyclic Mental States—Cyclothymia. G. Deny.

60. **Cyclothymia.**—This term is defined in the dictionaries as cyclic insanity, but Deny uses it to express a constitutional tendency to cyclic alternations of emotional exaltation and depression which may in time lead to mania or melancholia, but which as a rule stops short of actual insanity. During the phase of expansion or excitement an imperturbable optimism is the most prominent feature. He relates an instance in which the European buyer for an American firm, on a large salary, suddenly cabled his resignation to the firm, stating that he expected to make a fortune at once in buying and reselling pictures. A few days later he was in despair at the loss of his position. The suddenness with which one phase becomes transformed into its opposite speaks for the common origin of the antagonistic emotionalism. The tendency to cyclothymia may manifest itself early, but is generally first noted at puberty, and the subjects are always persons with an inherited nervous taint; it occurs more frequently in women than in men. Hygiene, hydrotherapy and cultivation of the will power are needed in treatment, with supervision to prevent suicide during the periods of depression. As this phase is always the expression of exhaustion of the psychic centers, he says, the patients should be kept in bed, and only allowed to get up for two or three hours for a little exercise every day. The food should be abundant, but not much at a time, and tepid, interrupted douches for the trunk and limbs will aid in combating the general asthenia. Isolation may be useful, but is not at all indispensable. It does not shorten the duration of the attacks. One of his patients is excited and optimistic every second day and depressed and exhausted on the alternating days, this cyclic regularity having persisted for months and years; generally there is no such regular periodicity in the manifestations. The physical sufferings of neurasthenia are absent in the true cyclothymia to which Deny refers.

Archiv für Gynaekologie, Berlin.

LXXXIV, No. 3, pp. 539-836. Last indexed, March 14, p. 922.

61 Experimental Research on Contractions of Uterus During Delivery, and the Influence of Ether and Morphin. H. Wasenius.
62 Experimental Research on Action of Preparations of Ergot. (Wirkung der Mutterkornpräparate.) E. Kehrer.
63 Age at Commencement of Menstruation. (Alter des Menstruationsbeginns.) R. Schaeffer.
64 *Influence of Bile on Movements of the Uterus. (Einfluss der Galle auf die Uterusbewegungen.) E. Kehrer.
65 *Extraction by Deventer-Mueller Technic. A. Labhardt.
66 *A Gynecologic Phantom. W. Liepmann.
67 *Proportions of Sexes in Births in Austria. (Geschlechtsverhältniss bei den Geburten in Oesterreich.) O. Srdirko.
68 *Elimination of Chlorids in Pregnancy, especially in Pregnancy Nephritis. (Ausscheidung der Chloride in der Schwangerschaft.) W. Zangemeister.

64. **Influence of Bile on Contractions of Uterus.**—Kehrer noticed that women with jaundice were peculiarly liable to premature delivery; this suggested that bile might have some special influence on the contractions of the uterus. Experiments on animals, on the living and the surviving uterus, confirmed this view. Fresh bile displayed an unmistakable promoting influence on the movements of the uterine musculature. He found, further, that only the sodium glycocholate and taurocholate elements in the bile possess this property, and especially the common constituent of both, sodium cholate. Its action is independent of the accompanying drop in the blood pressure. Kehrer has published numerous works on the influence of various drugs on the living and surviving uterus.

65. **Delivery According to Deventer-Mueller Technic.**—Labhardt discusses the various methods proposed for management of the arms, in breech presentation and cites experiences which show that Mueller's method of extracting the shoulders without loosening the arms, merely by traction, can be done in the majority of cases (90 per cent.) without trouble. It fails only when the maternal pelvis is contracted and when the arms are in an unfavorable position, especially after version. In such cases Mueller advises forcible traction, but Labhardt advocates the old method of loosening the arms in order to refrain from exposing mother and child to danger of severe injury. His experiences show, he thinks, the great superiority of this method of managing such cases.

66. **Gynecologic Phantom.**—The organs in this phantom are made of inflatable rubber and thus a great variety of physiologic and pathologic conditions can be simulated by inflating the different organs alone or in combination. The physiologic movements of the organs as the bladder is filled, for instance, are instructively shown, both with the normal and the pregnant uterus. The behavior of the peritoneum is shown by a sheet of transparent rubber tissue laid across the inlet into the

pelvis, and the correction of displacements of the uterus and the technic of the Alexander-Adams operation and others can be readily demonstrated. The article is illustrated.

67. **Childbirths in Austria.**—Srdinko shows by his comprehensive statistical study that more girls are born in country districts in Austria than in cities, and that the Slav races average more girls than the Germans. He deems this a good sign for the further increase of the Slavic nations.

68. **Elimination of Chlorids in Pregnancy.**—Zangemeister has been examining the chlorid metabolism in pregnant women, and states that there is no ground for assuming pathologic retention of chlorids in the nephritis of pregnancy and eclampsia. Deprivation of salt as a therapeutic measure has therefore no logical basis. It may cause the edema to disappear, but only at the expense of the kidneys. They are liable to become irritated from lack of the sodium chlorid in the body fluids to hold other, less soluble salts in solution. It is more logical, he says, to give more salt in the nephritis of pregnancy and eclampsia. Hypertonic salt solution has a diuretic action, but this, too, is at the expense of irritating the kidneys. Several writers have reported the development of albuminuria under deprivation of salt and also under the influence of infusion of a hypertonic saline solution. The trouble in the latter case is not that the sodium chlorid acts as a toxin, but merely the disturbance in the osmotic processes which it induces.

Berliner klinische Wochenschrift.

March 30, XLV, No. 13, pp. 633-680.

69 Practical Importance of Opsonins. Jürgens.
70 Efficiency of Pepsin and Simple Method for Its Determination in the Stomach Content. (Wirksamkeit des Pepsins.) O. Gross.
71 Action of Roentgen Rays on Ferments. (Einwirkung der Röntgenstrahlen auf Fermente.) P. F. Richter and H. Gerhartz.
72 *Operative Treatment of Diffuse Suppurative Peritonitis. Kotzenberg.
73 Insects and Ticks in Transmission of Disease to Man and Animals. (Insekten und Zecken als Krankheitsüberträger.) B. Möllers.

April 6, No. 14, pp. 681-724.

74 *Symptomatology and Treatment of Tumors in Cerebellum. (Kleinhirntumoren.) E. Siemerling. Commenced in No. 13.
75 *Surgery of Brain and Spinal Cord. (Chirurgie des Gehirns und Rückenmarks.) H. Küttner. Commenced in No. 12.
76 Antiferment Action of Human Blood. ("Antifermentwirkung" des Blutes.) Marcus.
77 Forms of Tubercle Bacilli That Do Not Stain with the Ziehl Technic. H. Much.
78 *Importance of Serum Diagnosis of Syphilis for Pathology and Treatment. A. Blaschko.
79 Influence of the Reaction on the Occurrence of Wassermann's Complement Binding in Syphilis. H. Sachs and K. Altmann.

72. **Operative Treatment of Diffuse Suppurative Peritonitis.**—Kotzenberg reports 27 cases with operative treatment, with 2 deaths. One of the fatalities occurred from bilateral empyema two weeks after the operation, and the other was in an elderly woman with weak heart in whom peritonitis had been under way a week before the operation. Dreesman drains are regarded as an important advance in drainage. They are glass tubes slightly convex on the lower side, studded with minute holes, not larger than a millimeter in diameter. The tubes are packed tight with gauze, frequently renewed. Great attention is always paid to exact restoration of the intra-abdominal pressure, suturing in three tiers. The abdominal cavity is flushed with salt solution until the solution runs out clear; no attempt is made to wipe it out. The abdominal cavity is drained by raising the head of the bed at an angle of 20 degrees.

74. **Tumors in Cerebellum.**—Seven cases are described in detail by Siemerling and the various differentiating features reviewed. He states that lumbar puncture and puncture of the lateral ventricle may relieve the pressure to such an extent as to render the tumor operable. If localization is possible, he advises operative intervention, or at least palliative trephining to avert the threatening blindness. His experience indicates that the loss of the corneal reflex is an important focal sign as to the side on which a tumor in the posterior cranial fossa is located.

75. **Surgery of Brain and Spinal Cord.**—Küttner reports twenty-two cases in which he operated on the brain or spinal cord with generally good results. One case in particular shows what can be accomplished, even with a palliative operation. The patient was a man of 36 with symptoms of severe pressure on the brain. Two weeks after the first symptoms he was brought to the clinic in profound coma, and the emergency operation was done at night. Both sides of the cerebellum were exposed by the Krause technic and the frontal brain punctured. No tumor could be found, and the wound was sutured with two small drains at the corners. Within two months the patient was restored to robust health; only a few slight symptoms on close examination show that the brain affection still persists. Küttner advocates trephining over the cerebellum to relieve the pressure in the posterior cranial fossa and save the eyesight. The flap is also stronger and thicker when made at this point, while the conditions are better for ample drainage.

78. **Serum Diagnosis of Syphilis.**—Blaschko reports the application of the complement-binding test in 500 cases, and states that it has never yet given positive findings in the certain absence of syphilis. In one case the aspect of a primary sore on the genitals was typical of syphilis, but no spirochetes could be found and the serum test was negative. Investigation revealed that it was a drug eruption, the patient having been taking migrainin. After the lesion had healed, administration of migrainin again caused the recurrence of the primary pseudosyphilitic lesion in twenty-four hours in an aggravated form. The serum test is of great advantage in the cases in which physicians are not sure whether the patient has syphilis or merely a soft chancre or herpes. A positive serum reaction is a great help. One patient had been thoroughly treated for syphilis fifteen years before. She returned complaining of pains in the sacrum and the test gave a positive reaction. The pain vanished at once after the first specific injection. In another case an old syphilitic returned with violent headaches, but the test gave a negative reaction; the headache was evidently of neurasthenic origin. Blaschko tabulates the findings of the test in 270 cases under observation for a number of years. The reaction was positive in from 90 to 100 per cent. in the early stages and even into the late stages whenever there were external manifestations of syphilis. The findings were positive in 80 per cent. of the early latent cases and in 50 per cent. of the tardily latent. The reaction was positive even before the roseola became apparent and remained positive after subsidence of the symptoms into a late stage of the disease. The test seems to be an index of the constitutional disease, regardless of its external manifestations. The few cases in which the reaction was negative, although the primary sore and roseola confirmed the existence of the disease, suggest the possibility that excision of the focus in these cases might prove effectual in preventing general infection, or might abort it. In one of his fifty-six patients with unmistakable early symptoms the test gave negative findings, showing that refractory individuals are exceptionally encountered. He found, further, that under the influence of specific treatment the test, positive at first, gradually became negative in about half the cases. But in the other half the reaction remained positive, although many of the patients had been in apparently perfect health for years and had raised healthy families. The test is not conclusive in respect to the prognosis. He adds a table showing the mortality of syphilitic policy holders among 8,000 deaths on the records for forty-five years of the Victoria Life Insurance Company. The syphilitics show an "excess mortality" of 68 per cent. over the total mortality; this excess mortality increases to nearly 100 per cent. between the ages of 36 and 50. The table further shows that the excessive mortality in syphilitics is not due exclusively to aneurism, tabes or progressive paralysis, but to chronic affections of the kidneys, gastrointestinal tract or circulatory apparatus, cancer, brain affections exclusive of paralysis, suicide and apoplexy, the excess mortality in syphilitics from the two latter causes being 122 and 128 per cent. The table shows further that tuberculosis, pneumonia and other infectious diseases in syphilitics are rather under the average mortality.

Deutsche medizinische Wochenschrift, Berlin.

April 2, XXXIV, No. 14, pp. 577-624.

80 Modern Hypnotics and Relations Between Their Chemical Composition and Their Action. (Moderne Schlafmittel.) H. Thoms.
81 Chemical Hypnotics in Nervous Affections. (Chemische Schlafmittel.) Ziehen.
82 Sleeping Sickness in German East Africa. (Schlafkrankheit im Bezirk Schirati.) Feldmann.
83 Treatment of Diphtheria with Pyocyanase and Persistence of Diphtheria Bacilli. P. L. Schlippe.
84 Source of Diastatic Ferment in Blood and Its Relation to Diabetes mellitus. (Ursprung des diastatischen Fermentes im Blute.) W. Schlesinger.
85 *Resections of the Pancreas. O. Ehrhardt.

85. **Resection of the Pancreas.**—Ehrhardt reports two cases of carcinoma of the pylorus in which the head of the pancreas was involved, requiring resection of part of the gland. One of the patients is still in good health a year and a half after the operation. The other succumbed in a few months to metastasis in a gland. Ehrhardt obtained access to the pancreas through the gastrocolic ligament. It is almost impossible to avoid severing the pancreatic-duodenal artery, and this occurred in the case last mentioned, compelling resection of part of the duodenum to prevent gangrene. The bleeding from the pancreas was controlled by fine silk ligatures applied to the larger vessels. The wound did not heal in the last case until a large sequestrum of pancreas tissue had been expelled.

Medizinische Klinik, Berlin.

April 5, IV, No. 14, pp. 477-522.

86 *Exophthalmic Goiter. (Morbus Basedowii.) L. v. Schrötter.
87 *Professional Affections. (Aus dem Gebiete der Berufskrankheiten.) M. Sternberg.
88 Cardiac Insufficiency. (Herzinsuffizienz.) H. Eppinger.
89. *Intrathoracic Goiter. R. Kienböck.
90 Greenish Discoloration of Cornea in Multiple Sclerosis. (Grünliche Hornhautverfärbung bei multipler Sklerose.) R. Salus.
91 By-effects on the Nervous System Early in Course of Mineral Waters. (Der Brunnenrausch.) Loewenthal.

86. **Exophthalmic Goiter.**—In one case von Schrötter observed patches of dark brown pigmentation over the entire body; in another case localized lipomatosis was a striking feature of the exophthalmic strumous tachycardia, as he prefers to call exophthalmic goiter. In other patients he has observed pigmentation similar to that of Addison's disease. He refers to Löwi's recent researches which demonstrated the existence of mutual relations between the organs with internal secretion, evidenced by pupillary phenomena. He thinks that these facts suggest the participation of the suprarenals in the syndrome of exophthalmic goiter, while the parathyroid glands have nothing to do with it.

87. **Professional Affections.**—Sternberg deplores the prevalent tendency among physicians to disregard the history, priding themselves on their ability to diagnose the condition without asking the patient a question. This is especially important in case of lead poisoning, and he says that the present fashion for white clothing, white shoes, white walls and woodwork is spreading lead poisoning, as white lead has to be extensively used in the preparation of the garments and paints. White lead is rubbed into white felt hats, and also into white gloves to conceal defects in the kid. The workmen making these articles and the proprietors of the factories and possibly also their families, are liable to suffer from lead poisoning. Chronic nephritis appearing in the members of a certain family was finally traced to the sugar of lead used extensively in the silk factory of which the father was proprietor, the children playing in the factory grounds and the women of the family frequently coming to the factory. He is almost convinced that the increase in the number of kidney affections encountered now is directly connected with the fashion for white, although the use of preservatives in articles of food probably contributes its share. He adds that lead poisoning is too frequently overlooked by the physician, even when the lead line on the gums could be found if sought for. He urges, further, that physicians should bear in mind that certain trades or professions are peculiarly unsuited for persons with certain physical defects. He cites statistics, for example, which show that shoemakers are peculiarly liable to heart affections, the venous congestion induced by the attitude required by the work favoring disturbances in the circulation. A boy presenting any indications of valvular trouble should be warned against this trade. He mentions also that certain kinds of wood are poisonous, and relates that a set of workmen making some furniture out of "Indian rosewood" all developed an itching eruption. Similar eruptions have been observed also in cabinet makers working on "satin wood." African boxwood, from which weavers' shuttles are made, contains an alkaloid which affects the heart, inducing arrhythmia and slowing the pulse. Headache, vertigo, visual disturbances and dyspnea are frequently observed in men working on this wood. In conclusion, he refers to seventeen cases in which busy general practitioners succumbed suddenly to fulminating angina pectoris. In some of the cases inadequately treated syphilis may have been responsible, but in the overwhelming majority the heart trouble was evidently due to the excessively long working hours. The lack of sufficient sleep seems to predispose peculiarly to affections of the coronary arteries. It seems to be established, he adds, that fatal angina pectoris in the fifties is the doom of the busy general practitioner. In conclusion, he declares that many of the affections which we now label as "nervous," in reality are the effect of toxic influences which must be sought in the trade or profession or in the food. Exophthalmic goiter, for instance, which used to be considered a "neurosis," is now on its way to its proper place as a toxic affection. Perhaps certain other "nervous" heart affections and asthmas may yet be traced to toxic influences, like the symptoms observed in the men working on the poisonous woods.

89. **Goiter in the Thorax.**—Kienböck is the Roentgen ray expert to the Vienna courts, and in this article he describes 11 cases of intrathoracic goiter, with their special differential Roentgen features, and reviews the cases that have been previously reported. Roentgen treatment caused the goiter to subside in size in two of his patients, relieving the disturbances in breathing, but symptoms of thyroid poisoning developed in one. Wuhrmann collected from the literature 27 cases in which operative treatment was instituted, with recovery in 21 cases; 6 of the patients died.

Mitteilungen aus den Grenzgebieten der Med. und Chir., Jena.

XVIII, No. 4, pp. 557-744. Last indexed, Feb. 15, p. 569.

92 *Nature and Clinical Importance of Inflammatory Leucocytosis. (Wesen und klinische Bedeutung der entzündlichen Leukocytose.) S. Kostlivy.
93 *Sensations in the Internal Organs. (Empfindungen in unseren inneren Organen.) L. R. Müller.
94 Bacteriologic and Clinical Study of Colon and Paracolon Bacillus Infection. F. Blumenthal and A. Hamm.
95 Puncture of the Brain. ("Weitere Beiträge zur Hirnpunktur.") F. Apelt.
96 *Late Rachitis and Relations Between Rachitis and Osteomalacia. (Spätrachitis und Beziehungen zwischen Rachitis und Osteomalacie.) E. Looser.

92. **Nature and Clinical Importance of Leucocytosis.**—Kostlivy has examined 225 cases of inflammatory affections in respect to the connection between the leucocytosis and the inflammatory process. The Arneth theory that the leucocytes are used up in the production of antibodies seems to be sustained by recent research, while it explains the findings. The septic destruction of leucocytes is a necessary consequence of the defensive measures of the organism against invading infection. An increase in the numbers of leucocytes accompanies the overwhelming majority of pus-forming inflammations. The height of the leucocytosis is dependent on the extent of the production of leucocytes, and this in turn depends on the amount of toxins absorbed, as the latter furnishes the stimulus for the leucocyte-producing apparatus. The leucocytosis increases as the inflammation progresses and declines as it subsides. The differential leucocyte count is the expression of the difference between the intensity of leucocyte production and the numbers of leucocytes used up in the production of the antibodies. As soon as the leucocyte-producing system ceases to be able to produce ripe leucocytes fast enough to take the places of those destroyed in the production of antibodies, then it sends out more and more immature cells, the proportion of young cells in the circulation increasing as the numbers of

older, ripe cells decline. The leucocyte count, therefore, will show the relative leucocytosis, and the polynuclear neutrophile count will afford insight into the absolute leucocytosis and the amount of destruction of leucocytes going on. The leucocyte reaction is purely individual, and it may be induced by other stimuli besides suppurative inflammation. It reflects the degree of toxic poisoning, but the extent of the reaction varies in individual cases. Like all reactions, the response at first is liable to be excessive, an overcompensation, consequently, the later blood pictures are more significant than those first obtained. The leucocyte count, repeated at intervals, is principally valuable for prognosis and control of the progress of the affection. As the leucocytosis is an expression of the virulence and toxicity of the infection, rather than of its extent, it is of not much use in diagnosis, and only in combination with other diagnostic measures, but under these restrictions it may occasionally afford valuable information in dubious cases, especially in regard to indications for treatment.

93. **The Sensibility of Our Internal Organs.**—Müller reviews the literature on the lack of sensibility in some of the internal organs, and reports his own research in this line. He has been impressed with the peculiar harmony between the sensations experienced and the circumstances in which they occur. They differ for the different organs, but are characteristically adapted for their purpose in each case. Pain in the head, for example, occurs after mental overwork, after intoxication with alcohol, nicotin and other substances; the headache warns the individual not to expose himself further to these injurious influences. Inhalation of poisonous gases irritates the pulmonary branches of the vagus and the respiratory center feels an inhibiting impulse. When the heart begins to pound during excessive physical exertion, this warns the individual to stop the overexertion; the pains which are caused by deficient blood supply to the heart compel complete repose. Pains in the stomach and intestines warn that inappropriate food has been taken and that the diet must be regulated, or if they are due to insufficient blood supply they compel repose, as is also the case with gallstones and kidney stones. The latter compel the victim to stop work and devote himself to relieving his condition. As the internal organs are protected against heat, cold and contact from without they do not require the protection against them which is needed by the outer covering of the body. Conditions which can not be remedied from without, such as infiltration or ulceration in the lungs, a tumor in the liver or ulceration in the heart valves, generally run their course without pain. Even intestinal ulceration causes no sensory irritation. But wherever there is a possibility for the injury to be remedied from without, or if the irritating substances can be expelled, as in case of sputum in the bronchi, putrefying or unsuitable food in the stomach and inflammatory products in the intestines or bladder, at these points there is sensibility. Painful sensations are experienced when it is possible for the disturbance, be it ischemia or colic, to be corrected by care and repose. The lack of sensibility on the part of the internal organs for irritation from without does not prove by any means, therefore, that pains can not be experienced from them. The sympathetic nervous system not only transmits emotional influences from the central nervous system to the vasomotors, the sweat glands, the stomach, intestines and sexual organs, but it can also transmit sensations from the internal organs to the brain.

96. **Rachitis and Osteomalacia.**—Looser's monograph is based on examination of the amputated leg of an idiot of 27 who developed tardy rachitis at the age of 13. The literature on the subject is reviewed and arguments presented to sustain the assumption that the features of rachitis and of osteomalacia are the result of some cause, outside the bony system, which has an inhibiting action on bone formation and on bone growth. Both rachitis and osteomalacia display a regressive process and a progressive or reparatory process. The latter is most pronounced in infantile rachitis, is less marked in tardy rachitis, is only slightly evident in osteomalacia and is entirely lacking in senile osteomalacia.

Münchener medizinische Wochenschrift.

March 31, LV, No. 13, pp. 657-712.

97 Responsibility for Crimes Committed While Drunk. (Trunkenheitsdelikte und Strafrecht.) Heilbronner.
98 Experiences with Arc Light Treatment of Cutaneous Affections. (Bogenlichtbestrahlung bei Hauterkrankungen.) Riedel.
99 Nervous Phenomena After Operations on Stomach. (Seltene Komplikation nach Magenoperation.) A. Stieda.
100 *History and Technic of Orthodiagraphy. F. Moritz.
101 *Treatment of Spasm of the Cardia. Geissler.
102 Wire Frame, Shape of Hand, to Aid in Sterilization of Rubber Gloves. (Drahtgestell für Gummihandschühe.) S. Flatau.

100. **History and Technic of Orthodiagraphy.**—Since Moritz invented this term eight years ago to apply to his method of taking Roentgen pictures by outlining with the parallel rays alone, this method of examination has found wide adoption, especially for determining the outlines of the heart under varying conditions. He here describes his modified and improved technic, with an illustration of his horizontal apparatus for the purpose.

101. **Treatment of Spasmodic Contraction of the Cardia, etc.**—Geissler gives an illustrated description of a strong inflatable rubber bag on the end of a stomach sound with which he has found it possible to overcome spasm of the cardia. The bag is four or five times as long as it is wide, even when inflated, and it is enclosed in a silk netting, and this again in a second bag with netting. Either air or water can be used to distend the bag. He has found it useful also in stenosis of the rectum.

Virchows Archiv, Berlin.

March, CXCI, No. 3, pp. 411-556.

103 Metastasis from Ganglion Neuroma. J. W. Miller.
104 Development of Bone Marrow. (Entwicklung des Knochenmarks.) Külbs.
105 Behavior of Blood Vessels in Wall of Uterus. (Verhalten der Blutgefässe in der Uteruswand.) J. Kon and Y. Karakl.
106 Experimental Sclerotic Affections of Arteries After Injections of Adrenalin. J. J. Schirokogoroff.
107 Hydronephrosis and Its Relations to Accessory Renal Blood Vessels. (Hydronephrose und ihre Beziehung zu akzessorischen Nierengefässen.) H. Merkel.

Zeitschrift für klinische Medizin, Berlin.

LXV, Nos. 1-2, pp. 1-160. Last indexed, Feb. 15, p. 571.

108 Fermente and Fever. (Fermente und Fieber.) E. Aronsohn and F. Blumenthal.
109 Metabolism in Acromegaly. (Stoffwechsel bei Akromegalie.) E. Oberndörffer.
110 Sclerosis of Pulmonary Artery under Continuous Excessive Beer Drinking. S. Kitamura.
111. Study of Purin Metabolism. (Purinstoffwechsel.) M. van Herwerden.
112 *Value of Salomon's Method of Differentiating Carcinoma of Stomach. (Wert der Methode H. Salomons für die Differentialdiagnose des Magenkarzinoms.) J. Witte.
113 *Clinical and Bacteriologic Study of Croupous Pneumonia, Especially the Bacteriemia. Wiens.
114 Coefficient of Pulse Rate in Normal and Pathologic Conditions. (Coeffizient der Pulszelerität.) W. Janowski.
115 Value of Complement-Binding Test in Diagnosis of Typhoid Fever. (Wert des Komplementbindungsverfahrens in der Diagnose des Typhus abdominalis.) J. Kentzler and G. Kiralyfi.
116 Physiology of the Movements of the Heart. (Physiologie der Herzbewegung.) E. Rautenberg.
117 *Black Pigmentation of Connective Tissue and Its Derivatives. (Ochronose.) A. Wagner.
118 Quantitative Determination of Albumin by Electric Conductibility. (Quantitative Eiweissbestimmung mit Hilfe der elektrischen Leitfähigkeit.) R. Kohler.
119 Metabolism in Traumatic Tetanus. (Stoffwechsel bei Tetanus traumaticus.) J. Mendl.

112. **The Salomon Differential Test for Cancer of the Stomach.**—Witte describes exhaustive tests of Salomon's technic, which is based on the finding of albumin in the fasting stomach content. He assumes that albumin and nitrogen then found in the stomach content must be due to exudation from an ulcerating surface. Witte's experience confirms this view and throws new light on the findings. The Salomon technic was described in The Journal, Sept. 12, 1903, page 694.

113. **Pneumococci in Blood in Croupous Pneumonia.**—Wiens reviews the cases that have been published in which bacteriemia was evident, citing the statistics since 1900 and reporting thirty-three cases from his own experience. He concludes that bacteriemia is constant in croupous pneumonia and can be found invariably if suitable fluid culture media are used.

117. **Ochronosis.**—Wagner has encountered 2 cases of this peculiar black pigmentation of the connective tissue and its derivatives. He reports them in detail and tabulates the details of 12 others from the literature. In his last patient the ochronosis was not discovered until autopsy, but there had

been pronounced alcaptonuria during life. In only 5 of the cases on record was the condition diagnosed during life, as there were no external manifestations of the pigmentation. In some cases the pigment is eliminated in the urine; it is chemically allied to melanin, but is free from iron. It seems to circulate dissolved in the blood, and the affection, like diabetes, is undoubtedly the result of some anomaly in metabolism.

Zentralblatt für Gynäkologie, Leipsic.

March 21, XXXII, No. 12, pp. 393-424.

120 Light as a Disinfectant. (Licht als Desinfiziens.) H. Axmann.
121 Funnel for Irrigating Vagina. (Scheidenspültrichter.) Behm.
122 Modification of Fritsch-Bozemann Catheter. Ekstein.
123 Finger Cap Curette. (Fingercurette zur Entfernung von Abortusresten.) S. Kaufmann (Dürkheim).

March 28, No. 13, pp. 425-448.

124 Epithelium in Sexually Mature Uterus. L. Mandl.
125 Photographic Registration of Fetal Heart Sounds. (Photographische Registrierung der fötalen Herztöne.) J. Hofbauer and O. Weiss.
126 Treatment of Fracture of the Upper Arm in Newborn Infants. (Behandlung der Oberarmbrüche Neugeborener.) F. Brewitt.

April 4, No. 14, pp. 449-472.

127 Decapsulation of Kidney in Eclampsia. (Nierendekapsulation bei Eklampsie.) E. Essen-Möller.
128 Frank's "Suprasymphyseal Delivery." (Suprasymphysäre Entbindung.) P. Baumm.

Zentralblatt für Kinderheilkunde, Leipsic.

January, XIII, No. 1, pp. 1-48.

129 *Operations on Children. (Aphorismen zur Kinderchirurgie.) C. Bayer. Concluded in No. 2.

March, No. 3, pp. 89-132.

130 Three Cases of Spastic Paraplegia in One Family. (Familiäre Form von Zerebraler Diplegie.) E. Hagenbach-Burckhardt.
131 Treatment of Rachitis. A. Klautsch.

129. **Surgery for Children.**—Bayer reviews his twenty years of surgical work on children and emphasizes the differences between surgery for children and that for adults. The benefits of asepsis are especially prominent in operations on children, and much irrigation, he says, and "thorough disinfection" are better dispensed with. His experience with Bier's constriction hyperemia for joint tuberculosis and phlegmons has not been encouraging, but excellent results have been obtained with prolonged hot local baths for all open septic foci. Tuberculous phalangitis in young children healed under mercurial plaster or else improved to such an extent that only a trivial operation was required to complete the cure. The strips of plaster are left on for several days, with a dressing over them at night of aluminum acetate. He applies the mercurial plaster strips also to tuberculous joints before placing them in a plaster cast; fungous swellings in the soft parts and capsule subside quicker. Wryneck in a new-born infant is treated with daily stretching and remodeling, with light massage, and packs. In an older child he severs the sternocleido muscle under chloroform, subcutaneously, and immobilizes the neck. He says that clubfoot in the new-born infant is easily remedied. Until the skin is able to tolerate a little pressure the mother is taught how to twist the foot daily into the corrected position. After a week or two, the foot can be wrapped with a flannel bandage in a correcting position. Strips of plaster to re-enforce the flannel bandage outside are useful. A correcting sandal concludes the treatment long before the child begins to walk. Clubfoot in an older child requires severing of the Achilles tendon, holding the foot in the corrected position by means of a metal sole with wooden splints, fastened on with soft bandages. This is more practical, lighter and more convenient than a cast and allows oversight better. Still older children require wedge-shaped excision of the tarsus and clubfoot boots. Congenital dislocations, especially of the hip joint, are corrected as soon as the child is out of diapers (from the second year on). The difficulties increase as the child grows older, and may be serious even at seven and may sometimes prove absolutely insurmountable after ten. Eeven in apparently irremediable conditions, however, he has occasionally been successful by drawing down the limb, nailing the capsule, with prolonged extension, and final application of a walking apparatus. The joint became firm and the gait much improved. This technic, he thinks, is preferable to more extensive operations liable to prove dangerous. It has been his experience that atresia of the rectum or anus, ruptured umbilical hernia, spina bifida and similar congenital deformities occur only in children with very low resisting powers. Although the deformity was readily corrected, none of the infants in this class long survived. He does not operate for harelip until the child is six months old, and for cleft palate not until 5 or 6 years. He has always had cause to regret his action when he departed from this rule. Fatal enteritis or bronchitis carries off the child operated on too early. With cleft palate the main point is to train the child to speak properly.

Operations for hernia in children give gratifying results. He operates at once in every acute case of tuberculous peritonitis; if not seen until the fifth day or later he does not operate unless there are signs of an abscess or the disease takes a turn for the worse, but after the effusion has been absorbed, then he always opens the abdomen. He has sometimes palpated a tumor-like retroperitoneal effusion behind the bladder—the sequel of peritonitis. Under careful treatment with packs, dieting, catheterization and rectal injections, these effusions generally subsided without leaving a trace. Spontaneous reduction of intussusception occurred in only one of his cases. Malignant intestinal tumors are rare in children; he encountered only one case of carcinoma of the rectum in a girl of 14. In removing a rectal polyp he used to have occasional severe hemorrhage as the pedicle was cut, but this is entirely obviated by ligating it before severing it with the actual cautery. Children with persisting large thymus glands seem to be peculiarly non-resistant, especially to anesthetics. It is hard to diagnose the persisting large thymus; he never met with a tumor in the thymus in a child, but in a case of sudden death of an adult, as the patient sat up in bed, autopsy revealed sarcoma of the thymus. One child had a sarcoma removed from the orbit ten years ago, and is still in good health, as also a boy with sarcoma of the clavicle operated on eight years ago. In the place of the clavicle there is merely a tough cicatrix, but the movements of the arm are unhindered. As a rule, cancer in children seems to be exceptionally malignant. It always behaves like aberrant embryonal tissue, retaining the fetal characteristic of rapid growth. In conclusion, Bayer laments that the most brilliant surgical successes in children are so often undone by an intercurrent enteritis or scarlet fever. He advises always scanty chloroform by the drop method, changing to Billroth mixture as soon as the child is unconscious. Even very young infants take anesthetics well, and wake up ready to eat; cocain, morphin and spinal anesthesia are contraindicated for children.

Gazzetta degli Ospedali, Milan.

March 22, XXIX, No. 35, pp. 361-376.

132 Negative Value of Yefimov Test for Helminths. (Diagnosi di elmintiasi intestinale.) M. V. Carletti.
133 *Connection Between Eosinophilia and Antibodies in Serum. Bazzicalupo.
134 Tumor in Omentum as Content of Hernial Sac. (Tumori epiploici erniari.) E. Arcoleo.
135 *Hyperemic Treatment of Acute Superficial Glandular Lesions. (Iperemia nelle adeniti.) U. Gironi.

March 29, No. 38, pp. 393-408.

136 Syringomyelitic Dissociation of Sensation of Cerebral Origin. T. Silvestri.
137 *Subcutaneous Injection of Oxygen in Treatment of Neuralgia, Especially Sciatica. (Ipodermoemfisi ossigenata come terapie delle forme nevralgiche.) F. Sicuriani.
138 *Ocular Reaction to Tuberculin in Differentiation of Tuberculous Joint Processes. (Oftalmoreazione nella diagnosi del reumatismo articolare tubercoloso.) G. Alessandri.
139 Variability in Heart Findings. (Variazioni cardiache.) Capozzi and L. Minervini.

133. **Research on Eosinophilia.**—Bazzicalupo discusses the various theories that have been advanced in regard to the functions and significance of the eosinophiles, and then reports research which, he thinks, abundantly confirms the view that eosinophilia has some direct relation to the presence of toxins in the blood, and thus to general intoxication. A further connection is evident, he affirms, between the degree of the intoxication and the degree of eosinophilia on the one hand, and the production of antibodies or other defensive processes on the other, the latter standing in inverse proportion to the former. He is convinced that the eosinophile leucocytes are those which have become prematurely old in their struggle for the autodefense of the organism against toxic influences. Eosino-

philia, therefore, is a sign, he asserts, not of a conflict in the full vigor of energy of the defensive processes, but of a prolonged conflict with flagging or exhausted energy in the vital defensive processes.

135. **Hyperemic Treatment of Superficial Glandular Lesions.**—Gironi's experiences with 20 patients confirm the advantages of hyperemia as a therapeutic measure. He first applied a cupping glass after making a small incision, and then kept up the hyperemia with hot compresses after removing the vacuum glass. Healing proceeded unusually rapidly and completely, and he found that serum obtained from the part treated had acquired pronounced bacteriolytic powers.

136. **Subcutaneous Injections of Oxygen in Neuralgia.**—Sicuriani reports 17 cases of neuralgia, mostly old inveterate sciatica, in which a cure was obtained by subcutaneous injection of oxygen. All but one of the patients were men between 25 and 75, and 11 had had simple primary sciatica for from one to twelve months, the pain being so severe that none was able to work. All had the usual painful points and Lasegue's sign, that is, pain when the leg, held stiff, was raised horizontally and subsidence of the pain when the thigh was flexed on the pelvis with the knee flexed. These patients were all cured in the course of 15 days with from 6 to 10 applications of the oxygen, injecting each time about 300 c.c. (10 ounces). The oxygen abolishes the pain completely, while improving the nutrition of the parts and the general metabolism. Its application is simple and inexpensive. Of course, when the pain is due to mechanical compression, this must be removed before the oxygen can exert its effect. About a year ago, Massalongo reported the cure in one month of 9 patients with severe sciatica with from 10 to 12 injections of from 250 to 500 c.c. (8 to 16 ounces) of oxygen each. Eleven other patients were cured in the course of two months. Bernabei has been proclaiming the advantages of this "oxygen hypodermoemphysema," as he calls it, since 1902, expatiating on its threefold action, hematogenic, dynamogenic and metabolic. This communication issues from his clinic at Siena.

138. **Ocular Reaction in Articular Rheumatism.**—Alessandri's patient was a young woman, whose husband had died from pulmonary phthisis not long before. She entered the hospital with the diagnosis of acute articular rheumatism, but ocular instillation of tuberculin induced a specific positive reaction, and the course of the affection confirmed its tuberculous nature. As one joint healed, others became involved.

Policlinico, Rome.

March 29, XV, Practical Section, No. 13, pp. 389-420.

140 *Filtrability of the Virus of Variola. O. Casagrandi. Id. L. Della Vida.
141 *Megacolon. (Malattia dell' Hirschsprung.) E. Casati.

April 5, No. 14, pp. 421-452.

142 The Paravertebral Triangle on Opposite Side in Unilateral Pleurisy and Pneumonia. (Il triangolo paravertebrala opposto nei versamenti pleurici unilaterali liberi e nella pneumonite franca unilaterale della base.) P. Clerico.

140. **Filtrability of Virus of Smallpox.**—Casagrandi's experiments confirmed the possibility of filtering smallpox virus without impairing its infectious properties. He also found that the virus of cowpox and that of smallpox behaved identically in their response to the complement-binding test. As this test is so truly specific, he thinks that this identical behavior indicates the identity of the antigens in the two infections. He reports, further, that the minute corpuscles found in the virus by him, by Volpino, Paschen and others, especially prominent with the ultramicroscope, seem to answer the conditions of the causative germ.

141. **Megacolon.**—Casati describes two cases and advocates treatment by exposing the colon and taking up a lengthwise fold or tuck in it. This operation has been done successfully in the clinic, and remedies the condition, while the operation in itself is not very serious. The diagnosis can be based on the habitual constipation from infancy, the recurrence of signs of intestinal occlusion, the absence of apparent peristalsis in the intestines, and the lack of indican in the urine, besides the behavior of fluids injected into the intestine and the distention of the abdomen.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interest of our readers.

Materia Medica for Nurses. By John E. Groff, Ph.G., Apothecary in the Rhode Island Hospital; Professor of Materia Medica in the Rhode Island College of Pharmacy. Fourth Revised Edition. Rearranged by Lucy C. Ayers, Superintendent of Nurses Training School, Rhode Island Hospital. Section on Therapeutics Rewritten by Herman C. Pitts, M.D., Gynecological Surgeon, Rhode Island Hospital. Cloth. Pp. 221. Price, $1.25. Philadelphia: P. Blakiston's Son & Co., 1908.

Protozoa and Disease. By J. Jackson Clarke, M.B. Lond., F.R.C.S., Formerly Pathologist to St. Mary's Hospital, and Curator of the Museum, Demonstrator of Bacteriology, and Provisional Teacher of Biology in the Medical School. Part II. Cloth. Pp. 137, with illustrations. Price, $2.50. New York: William Wood & Co., 1908.

Minor Maladies and Their Treatment. By Leonard Williams, M.D., M.R.C.P., Physician to the French Hospital; Assistant-Physician to the Metropolitan Hospital; and Late Assistant-Physician to the German Hospital. Second Edition, Revised and Enlarged. Cloth. Pp. 404. Price, $2.50. New York: William Wood & Co., 1908.

Hernia. By W. McAdam Eccles, M.S. (Lond.), F.R.C.S. (Eng.), Examiner in Surgery to the Society of Apothecaries; Examiner in Anatomy for the Fellowship of the Royal Colleges of Surgeons of England. Third Edition. Cloth. Pp. 234, with illustrations. Price, $2.50. New York: William Wood & Co., 1908.

Diseases of the Nose, Throat and Ear. By William Lincoln Ballenger, M.D., Department of Medicine, University of Illinois, Fellow of the American Laryngological Association. Cloth. Pp. 905, with illustrations. Price $5.50. Philadelphia and New York: Lea & Febiger, 1908.

Clinical Lectures, Third Series, the Borderland of Epilepsy. By Sir William R. Gowers, M.D., F.R.C.P., F.R.S., Hon. Fellow R. Coll. Phys., Ireland. Cloth. Pp. 121. Price, $1.25. Philadelphia: P. Blakiston's Son & Co., 1907.

The Labyrinth of Animals. By Albert A. Gray, M.D. (Glas.), F.R.S.E., Surgeon for Diseases of the Ear to the Victoria Infirmary, Glasgow. Volume II. Cloth. Pp. 252, with illustrations. Price $10.00. London: J. and A. Churchill, 1908.

Glimpses of Medical Europe. By Ralph L. Thompson, M.D., Professor of Pathology, St. Louis University School of Medicine. Cloth. Pp. 235, with illustrations. Price, $2.00. Philadelphia and London: J. B. Lippincott Co., 1908.

Climate. By Robert DeCourcy Ward, Assistant Professor of Climatology in Harvard University. Cloth. Pp. 372, with illustrations. Price, $2.00. New York: G. P. Putnam's Sons. London: John Murray, 1908.

Injuries of Nerves and Their Treatment. By James Sherren, F.R.C.S. Eng., Assistant Surgeon to the London Hospital. Cloth. Pp. 310, with illustrations. Price, $2.00. New York: William Wood & Co., 1908.

Nursing the Insane. By Clara Barrus, M.D., Woman Assistant Physician in the Middleton State Homeopathic Hospital, Middleton, N. Y. Cloth. Pp. 409. Price, $2.00. New York: The Macmillan Co., 1908.

Mortality Statistics, 1906. Department of Commerce and Labor, Bureau of the Census. Seventh Annual Report. Cloth. Pp. 480. Washington: Government Printing Office, 1908.

NEW PATENTS.

Recent patents of interest to physicians:

883003. Audiphone. O. J. Davy, Washington, D. C.
883013. Vibrator. A. G. Gray, St. John, N. B., Canada.
882641. Invalid bed. C. T. Joslin, Jerusalem, N. Y.
883142. Non-darkening lithophone and making same. I. P. Lihme, Cleveland, Ohio.
882590. Manufacture of salicylic glycerin esters. C. Sorger, Frankfort-on-the-Main, Germany.
883153. Syringe. T. H. Wallis, deceased, Ocala, Fla.; M. O. Wallis, administratrix.
883329. Double masseur and medicator. C. H. Murray, Macon, Ga.
883672. Indicating bottle. W. C. Schmidt, Richmond, Va.
883357. Combined abdominal and hernia pad. M. A. Snell and C. A. Snell, Syracuse, N. Y.
883583. Stomach pump. J. F. Stallsmith, Topeka, Kan.
39236. Design, bed-pan. C. W. Meinecke, New York, N. Y.
884121. Automatic electric alarm for beds to be occupied by patients, such as hospital beds. F. Apoldt, Philadelphia, Pa.
884160. Device for applying counter-irritants. E. M. Jefferson, Philadelphia, Pa.
884026. Blood compound of glycerophosphate of lime and calcium. A. Langer, Friedrichsberg, near Berlin, Germany.
884025. Manufacturing blood-albumin preparations. A. Langer, Friedrichsberg, near Berlin, Germany.
884027. Massaging machine. C. A. Manker, Pearl, Ill.
883969. Nozzle holder. J. J. Meskill, Philadelphia, Pa.
883987. Apparatus for administering anesthetics. C. K. Teter, Cleveland, Ohio.
884458. Electric-current regulator. A. W Brice, Rochester, N. Y.
884376. Device for curing ingrowing toenails. C. J. Foster, Van Wert, Ohio.
884390. Medicine spoon. W. L. Jerkins, Mountrie, Ga.
884393. Invalid bed. E. A. Keasey, Ligonier, Ind.
884842. Bed pan. E. Nelson, Long Beach, Cal.
884878. Manufacture of emulsions. J. P. Van der Ploeg, Amsterdam, Netherlands.

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Address

IDEAS AND IDEALS IN MEDICINE.*

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NEW YORK.

Some thirty odd years ago, when I listened to my first lecture in medicine, the professor of anatomy told the following story: In the twenties of the last century there was a professor of medicine in Berlin, let us call him Schultz. He had under his care a patient suffering from a severe diarrhea, which he could not check. One day he met Dr. Heim, one of the most popular practitioners of that day, and asked him to see the patient and prescribe for him. The professor called on the patient later and found that Dr. Heim had prescribed a strong laxative. He wondered at such a procedure, but permitted the patient to take the medicine. Next morning, when making his call, he saw from afar that all the windows of his patient's room were wide open; he thought the patient was dead. On entering the sick chamber, however, he found him sitting up and smiling. He recovered rapidly. On meeting the doctor again, the professor said: "Heim, you were right, the remedy cured the man; but what idea did you have in prescribing it?" "Idea," said Heim, "idea? I never have an idea when I prescribe. I simply saw that the man had a 'laxative face' and so I prescribed a laxative."

Here, we had, on the one hand, a professor, presumably full of ideas, who could not help his patient, and, on the other hand, an idea-barren practitioner, who at a glance knew the trouble, and with one prescription cured it. Curiously, my sympathies were not on the side of that idea-immune healing artist. Since then I have seen many who by one glance at the face knew that the patient had a torpid liver and required calomel; I knew and know many in whose success as popular physicians profusion of ideas has no share. Still, I am not converted. I still believe that medicine and mankind would fare better if we had fewer of them. So, when I was honored with the invitation to deliver an address at your annual meeting my thought turned to that problem, and I decided to make it the subject of my discourse.

I am going to make some general remarks on the somewhat strained relations existing between thinking and acting, between facts and ideas; and to plead for the proper place—for a large place—for ideas and ideals in medicine.

There is a natural antagonism between thought and action. This is not confined to the theory and practice of medicine; it manifests itself wherever the phenomenon of voluntary action makes its appearance, and it has a wider scope than human nature. I shall confine what I have to say to the domain of medicine.

Permit me to illustrate one side of the fundamental problem by an experiment in physiology. Let us assume that we have before us two frogs, which we shall name A and B. With some acid, say dilute sulphuric acid, we paint a spot on the front of the left chest of Frog A. It will probably reach out the left leg and try to wipe away that acid with the foot, or the toes. If it does not succeed in reaching the burning spot with the left leg it also gets prompt assistance from the right hind leg. Let us repeat this procedure with Frog B, painting any part of the body with the same acid. It does not attempt to wipe off the acid, but jumps away, with the acid on it. Which of the frogs acts more to the point; which acts more sensibly? Clearly, Frog A. Let us examine them.

Frog A is decapitated for some time; Frog B is normal. Here we have it. A brainless frog acted more to the point, more sensibly, than a normal frog with an intact brain. This is not a fanciful experiment; it is a fact. Would any one be willing to draw the conclusion from this fact, that it is better to be without a brain?

Permit a side remark here. If the animal friends of your city, and my city, who value the lives of cats and dogs more than the lives of their fellow-men, would watch our experiment on Frog A, whose head need not be removed but only the brain destroyed, would they not exclaim: How cruel! Or, take this experiment. If you remove a certain part of the brain in a frog that animal will respond promptly with a croak every time you touch a certain spot on the skin. It is the well-known croak reflex of Goltz. The ignorant agent appointed by an antivivisection society would at his inspection consider the groans as a proof that the animal feels pain, and would report the experiment as an act of cruelty. Who of these ignorant, misguided people is capable of distinguishing between a conscious sensation and a reflex act?

The performance of Frog A, the decapitated frog, is simply a reflex act. An impulse is carried from the periphery to the spinal cord, from which it is transmitted with the least possible delay through the motor nerves to a group of muscles which contract in a coordinate, seemingly purposeful manner. When the brain is intact, inhibitory impulses are sent down to the cord in which the sensory impulse is then retarded or entirely inhibited. Any action is prompt, when it is carried out by a reflex with which the brain does not interfere.

The antagonism between thinking and acting has a deep-seated foundation in the organization of our nervous system, but it does not follow that we have to submit to its dictates; that we should not strive to overcome the evil consequences of this natural antagonism by education, by training and by proper distribution of mental and physical energies.

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* Address delivered at the University of Pennsylvania under the auspices of the Alpha Omega Alpha Honorary Medical Fraternity.

Turning again to our main subject, to medicine, I wish to say that my experimental tale permits the following moral: Just as the prompt practical action of the decapitated frog can not induce us to accept the conclusion that the brain is an undesirable appendix, just so the success of the thoughtless practitioner should not induce us to accept the principle that thinking is an undesirable incumbrance in medicine. As I have indicated at the beginning, it is the existence of the successful practical physician which militates against the necessity of ideas in medicine. Let us examine what the success and the practicality of these physicians actually signify.

Let us first look closer at the actual value of success as an argument in our discussion. By success we can not mean the possession of a goodly number of grateful patients; this can be acquired, as you all know, by means extraneous to the science of medicine. By success I mean the reputation of a physician among his brother practitioners as being a good diagnostician and as having success in treatment. It is a fact that there are many physicians in this country and elsewhere, who have and honestly deserve such an excellent reputation, and who care nothing for ideas and theories in medicine.

What does it prove? Such good men not only exist now, but they existed everywhere and at all times. They existed a hundred and many hundred years ago. They existed when nobody knew any difference between typhus and typhoid fever, when there was no auscultation or percussion; they existed, when diseases were recognized by simply looking at the urine. They existed when treatment meant absolute nonsense, or, still worse, meant danger for the patient. Would you be willing to assume that the celebrated physician of his time, who diagnosed the disease by looking at the urine, was really a great diagnostician? But, he honestly merited his reputation at his time. Or do you really believe that the successful, celebrated physicians of their time, who cured their typhus or yellow fever patients by blood letting, purging and emetics, did cure them and not rather hasten their end? But some of these physicians were great men at their time. Surely, you do not doubt that one of the founders of your alma mater, the celebrated Benjamin Rush, honestly deserved his great medical reputation! No, gentlemen, the practical success of any medical man at any time, be it ever so honestly merited, can not be utilized as an argument in favor of their ideas or their contempt for them. Why this is so I shall not stop to discuss. When you will be in the thick of the fight you will see the reasons for yourself.

As to the highly praised practicality in medicine, let us look at it from the following point of view. A man is a mechanism and a watch is a mechanism. However little one may know of the mechanics of life, he will know this: The complexity of the mechanism of the human machine compared with that of a watch is like comparing a billion of dollars to a single penny. Now, imagine that your watch gets sick, it stops or goes too slow or too fast, and there is nobody who knows its mechanism or can open the case. What would you do? You would shake it, beat it gently, turn it on all sides until somebody who knows better—there is always somebody who knows better than you—will take the watch out of your hands and do all the manipulations over again. You know that, sometimes, after shaking, a watch starts going again. Let us assume that in some village in darkest Africa, traders or missionaries are importing watches, but not watch makers. There will soon develop a set of men who will claim to know how to handle diseased watches. Would you like to trust your watch to the hands of such healing artists?

No doubt this seems absurd to you. But, gentlemen, look at it closer and you will find that the position of the healing artists of crude empirics is not much less absurd. They starve the patient or they overfeed him; they rub him hard; they rub him gently; they wrap him up warm or bathe him cold; they put him on the roof; they send him to the woods. They purge and sweat him, they bleed and blister him, not to speak of the innumerable mineral compounds and vegetable medicines which they make him swallow. But when you ask: What idea is behind all that? you get the answer: Never mind the idea, it is practical; so and so many patients got better under these methods of treatment. But the absurdity of it! Without any knowledge of the immensely complex mechanism of the living animal body, without any knowledge how these various procedures and mixtures affect the healthy and the sick body, to subject a poor broken-down human being to all these procedures, with not much better justification than that of my imaginary practical watch doctor! And how if those who got well got well not on account of the method of treatment, but in spite of it? And, still worse, how if some did not get well just because of it? As to the value of practical experience, let me again remind you of the various practical experiences of the past generations, the reliable practical experience of one generation which was nothing and worse than nothing to the next generation!

At the same time, we must bear in mind that the barren practicality of the successful practitioner is not yet identical with empirical medicine. Even the crudest empiricism in medicine has its positive merits. If we had no watchmakers, even my imaginary watch healer would not be such an absurdity. But the activity of some of the thoughtless but successful practitioners is not based on empiricism, on actual experience; it is simply habit. They continue doing what they have done so long; it is easier, it requires no effort. They began doing it, because they saw others do it, and accepted it without examining its merits, without criticism. The practicality of many idea-barren successful practitioners has as its basis non-critical belief at its start and mental laziness during its continuation.

I have tried to show you that the practice of medicine on the basis of crude empiricsm alone is well-nigh an absurdity, and moreover that the success of the purely practical man in medicine is a negligible factor in a serious discussion of the value of ideas in medicine. Let us turn to a brief review of the rôle which ideas played historically and a consideration of the rôle which they are entitled to play in the science and practice of medicine.

At the outset, let me remind you that I said I wished to plead for a place for ideas in medicine—that I did not say for their dominance. On the countrary, I wish to emphasize that the dominance of ideas, of theories in medicine is as little desirable, as the dominance of crude empiricism, and perhaps even still less so. The history of medicine tells many a discouraging tale of the harm which the autocracy of ideas is capable of doing to medicine. It is not unprofitable to glance at the root of that evil; we may perhaps thus learn how to avoid it best.

We now distinguish two methods of investigation in any branch of science; the deductive and the inductive method. In the deductive method numerous laws are deduced from very few given axioms. In the inductive method the opposite takes place; a few laws are abstracted from numerous observations. These two methods have a natural and historic foundation. The objects of investigation fall naturally into two classes: Those which occur within the human mind and those which occur outside of it. The objects of the first class are all within reach of the investigating mind. These phenomena were, therefore, the first objects to which the great minds of the classic thinkers were turned. It was discovered that only a few axioms were at the foundation of all forms of thinking. On the basis of these few axioms the magnificent structure of the purely mental sciences was erected. It is astonishing how nearly completely the sciences of logic and mathematics were developed at such an early epoch of human civilization. The thinking and investigating efforts of the subsequent thousands of years could add proportionately little to the fundamentals of these sciences. But when the same great minds turned their attention to the phenomena of the world outside of the mind, then the trouble began. From the outset the fatal mistake was made in the assumption that here, as for the objects of the mind, a few facts would be sufficient to construe a science of the knowledge of the outer world. Conceptions were then formed as to the nature of the phenomena of life as well as of the other phenomena of the outer world, in which actual observations had only a small share; the idea was the all-dominant factor. While the theories changed with the philosophers and the changing generations, the method of studying nature remained practically the same for many centuries.

Medicine fared no better than the other natural sciences. The efforts of Hippocrates, of Galen, and of a few others to increase the knowledge of medicine by the gathering of more facts, and to increase the esteem for actual observations, brought no permanent results. On the contrary, their authority, especially that of Galen, paralyzed the proper development of medicine for many centuries. Next to the overestimation of the importance of ideas in natural sciences, it was the unconditional belief in authority which hindered the progress of medicine and of natural sciences.

The new era for natural sciences began with the general awakening of the human races in the European countries, with the rebellion against tradition and authority in all branches of human activity; in religion, in political government, in art, and in the sciences. It was then also finally conceived that the outer world can be recognized and understood only by extensive, unbiased observation, and not by simple mental dictates; and the inductive method of investigation in natural sciences was born. It was also soon recognized that abstraction alone even from ever so many observations is not sufficient to establish a general principle, and that next to the accumulation of facts it is the experiment which gives stability to a theory. Furthermore, it was recognized that the theory is to be utilized for bringing out new facts. Finally, the opinion gained foothold that in the development of new facts lies the chief value of theories.

The pure idea was thus dethroned from its all-dominating position; it was relegated to second place in research in natural science. Henceforth the progress of these sciences was continuous and the results marvelous. Unbiased observations, keen experiments and auxiliary theories worked hand in hand to unveil the mysteries of nature. The results were great. This harmonious activity in research not only created real knowledge, but led up to practical results, to the marvelous technical creations of our day. They also led up to the establishment of a few leading principles, like the laws of gravity, the conservation of energy, the atomic theory, the law of natural selection. But even the permanency of these well-sustained theories is not assured.

With the opening of the new era medicine, too, took a new turn. The assault of Paracelsus shook the foundations of the traditional medicine of Galen. Vesalius inaugurated the study of anatomy on the sound basis of direct observation, and physiology also made some headway on the basis of the inductive method. Nevertheless, medicine proper, the knowledge of diseases and their treatment, remained for centuries still a prey of ideas, of ever-changing theories. The schools of the iatrophysicists, of the chimiatres, the Brunonian theory of irritability, the theory of vitalism and some other purely theoretic creations dominated consecutively the science and practice of medicine up to the last century. We shall not stop to discuss here the causes of this backwardness of medicine in comparison with the progress of other natural sciences. This very point was not grasped, the idea, namely, that medicine is a natural science and has to be studied by the same methods now firmly adopted for all the natural sciences.

The present era in medicine began practically only about the middle of the last century. It received its strongest stimulus in Germany, where the dominance of the pure idea in its worst form lasted longest—I mean the dominance of the idea of the vital force. The revolution—it was a revolution, and not an evolution—was brought about by the brilliant pupils of the great physiologist, Johannes Müller. Helmholtz, du Bois Reymond, Ludwig, Brücke, Henle, Traube and Remak played an important part in achieving the great result. But none greater than that unique combination of a great intellect, a burning love for truth and a great fighting capacity—that immortal master mind—Rudolph Virchow.

The dominance of pure ideas in medicine was a great obstacle to its proper development, and probably a much greater obstacle than the crudest empiricism could ever have been.

The chief difficulty with which medicine has to contend is that which I have indicated before: the apparent hopelessness of the task to repair a mechanism of the construction of which we possess so little knowledge. The perplexing embarrassment could not be relieved by simply guessing the hidden rest. It is a million to one that we guess wrong. It is no fatal mistake if we guess wrong in paleontology, embryology or even astronomy. The wrong guess lasting for centuries that the sun revolves around the earth has apparently done no great harm. But the wrong guess in medicine might lead to killing instead of curing, and the worst of it is, we might not even know it.

But the apparent hopelessness of the task should neither lead us to a wrong step nor to despair. In the course of merely a few decades diligent investigations by proper methods have already succeeded in shedding a great deal of light on many parts of the mysterious, living organism. There are good reasons for the optimistic hope that by the proper adjustment of experience and ideas in a diligent search, medicine will become an effective, practical healing science.

Let us now consider some of the principles which made research in modern medicine effective and fruitful.

The first step is to uncover the gaps of our knowledge. Better to admit frankly our ignorance than to be misguided by unsustained theories or erroneous observations. It is, therefore, of great practical value to be imbued by an honest, healthy skepticism which leads to great watchfulness and to a frequent re-examination of the apparently secure old principles. I do not mean a flippant, paralyzing skepticism born of a natural spirit of contradiction, but a skepticism of a truth-seeking, logical mind which leads to action, to investigation.

The investigations must be carried on by the empirical method, i. e., by a diligent, unbiased observation of facts, but great care has to be taken not to confuse a fact with a conclusion. Let us take for illustration the following simple observation. A physician has given, perhaps for the first time in his life, a dose of an antipyretic, let us say, five grains of phenacetin, to a pneumonia patient with a temperature of 105 F. on the seventh day of the disease. The temperature dropped to normal and the patient got well. The non-critical physician might record it as a fact that five grains of phenacetin reduced a temperature of 105 F. to normal and cured the patient. But this was not a fact; it was a conclusion and a wrong one. The phenacetin did not cure the pneumonia; the cure was accomplished by the crisis which accidentally set in after the giving of the phenacetin. Possibly, the reduction of the fever was essentially also due to the crisis. What the physician actually observed were the three facts following one another, (1) the giving of the phenacetin, (2) the reduction of the fever, and, (3) the recovery of the patient. The connecting of the three facts was an idea, a theory, of which the physician was not aware that it was an act different and separate from the facts he actually observed. This confusion is a frequent occurrence, and in circumstances where the process is not so transparent as in the cited instance. Many statements which are recorded as facts are nothing more than biased subconscious conclusions. It requires a critical mind to observe a pure fact.

While the watchfulness of the mind is required for the acquisition of facts, its activity becomes indispensable when it comes to the correlation of the collected facts. Here is where the idea becomes the important factor in the creation of knowledge. A simple sum of discrete facts is neither knowledge, nor can it yield practical results. Let me cite a brief story of a modern chapter of research. It will illustrate the value of an idea in reseach, the value of a right and even of a wrong idea, if used properly.

Previous to the ninth decade of the last century the thyroid gland was considered as superfluous a thing as, let us say, the appendix. Then came two independent, entirely disconnected statements. Kocher of Berne reported that patients whose goiter was completely removed showed a peculiar pathologic picture. The other statement came from W. Ord, of London, who performed an autopsy on a patient with that peculiar disease shortly before described by Gull. Various pathologic changes were found; the predominant one among them was the great accumulation of large masses of myxedematous tissue, which led to the designation of this disease as myxedema. One of the findings was that this patient had no thyroid. It was the simple record of a post-mortem finding and possibly would have escaped notice. But when both statements were put together the hypothesis sprang up that the thyroid might be a vital organ, and in its congenital or acquired absence such profound pathologic symptoms develop as present themselves in the cases of myxedema or in the cases of cachexia strumipriva of Kocher.

This hypothesis was now tested on animals, but at first with unsatisfactory results. In rabbits and other animals the removal of the thyroids was practically without any effect. In dogs the effect was profound, the animal died, but the preceding symptoms differed from those seen in the above-mentioned states in human beings. Soon, however, two experimental facts were hit on which apparently proved the correctness of the hypothesis. Grafting of thyroids into the peritoneal cavity of thyreodectomized dogs saved their life and feeding of patients with animal thyroids relieved their symptoms. However, while the hypothesis seemed to have thus been settled, some discrepancies remained unexplained. The symptoms of myxedema differed materially from those of cachexia strumipriva, tetany being the predominant symptom in the latter.

Then the question of the immunity of such animals as the rabbit remained a mystery. Many auxiliary hypotheses were made, but offered no real satisfaction. Another fact presented itself. Early in the ninth decade Sandstroem described some tiny bodies seen in the neighborhood of the thyroid glands, which looked almost like the fat tissue in which they were embedded. Sandstroem called them parathyroids and assumed that they were persisting embryonal thyroid tissue. This assumption gave rise to a new hypothesis conceived by Gley. He thought that in the absence of the thyroid the parathyroids assume the function, and vice versa. In the rabbit there are two free parathyroids.

Gley tested his hypothesis. When he removed the thyroids alone or the parathyroids alone, the animal remained normal. But when he removed the parathyroids and the thyroid, the rabbits showed tetany. Now the hypothesis seemed to be proved. Soon, however, two more facts were established. First, it was shown that the so-called parathyroids are neither embryonic tissue nor do they have anything to do histologically with the thyroid; they are an accumulation of epithelial cells. Second, it was found that in the rabbit two more epithelial bodies are imbedded within the thyroid glands. The suggestion was now made that in the experiment of Gley, in which tetany followed after the removal of the thyroids and parathyroids, the result was due not to the simultaneous removal of the thyroids, but to the complete removal of the parathyroids.

This new hypothesis was experimentally tested by Vassale and Generali, and it was found that the removal of the four parathyroids without the removal of the thyroids leads to tetany. Numerous further experiments have now cleared up the entire problem. Thyroids and parathyroids have different functions: the removal of the thyroids leads to a myxedematous state, and the removal of the epithelial bodies, as the parathyroids are now called, leads to tetanic conditions. There is already a report on record of a successful grafting of the epithelial bodies.

These are marvelous chapters in the history of modern medical research. The physiology, pathology and treatment of the organs were revealed within a comparatively short time, organs whose function was absolutely unknown only three decades ago. In one case the very existence of the organ was unknown. In these brilliant results physics and chemistry, from which in our generation all good is expected to come to medicine, had not the slightest share. It was the combination of clear-headed clinical and surgical observations and biologic experiments, which developed these model chapters of modern medicine.

Now, let us glance at the methods employed in these investigations. There were only a few facts gained by pure observations, the balance was yielded by hypothesis, tested and clarified by experiments. Even the wrong assumption of Sandstroem that the epithelial bodies were embryonic thyroid tissue was a useful link in the final development of the correct knowlege, inasmuch as it gave the stimulus to Gley's hypothesis and experiments. It is not an infrequent phenomenon in modern investigation that a hypothesis which proves later to be erroneous might, nevertheless, be instrumental in bringing to light important facts. There is only one indispensable requirement for a hypothesis: it must be provided with a safety guard—the experimental test.

However, the chapter on the epithelial bodies is not yet closed; there is a very interesting end to it. Only a few weeks ago, McCallum and Voegtlin, of Baltimore, published an important preliminary communication to the effect that the tetany in dogs following removal of the epithelial bodies can be inhibited for twenty-four hours by the intravenous injection of a solution of a calcium salt. Injection of potassium salts increases the tetanic state; calcium salts are able to inhibit also this aggravated state, but a larger dose of it has to be given. Here we have an important therapeutic result with a view of finding the deeper cause of the tetany. McCallum and Voegtlin think that the removal of the epithelial bodies causes a deficit of the calcium ion in the body, which is then the further cause of the development of tetany. This is a hypothesis which must be tested by further experiments. But it is interesting to know that apparently it was this hypothesis which brought out a remarkable fact. Furthermore, this hypothesis is only a special application of a general hypothesis advanced by Jacques Loeb, a master biologist of this country, some time ago to the effect that calcium is essentially an inhibiting agent. Now we have, it is believed, satisfactory evidence that this hypothesis is erroneous. Permit me to lay this evidence before you.

Some time ago Dr. Auer and I found that subcutaneous or intravenous injection of a magnesium salt puts an animal into deep anesthesia and paralysis, from which it does not recover if the dose is too large. We discovered this fact on the basis of a hypothesis that magnesium favors inhibition in the animal body. We have recently discovered that this profound effect can be nearly instantaneously reversed by an intravenous injection of a calcium salt. The animal which seemed lifeless wakes up immediately after the injection of the calcium solution, turns over, sits up and moves around like a normal animal. It looks like a miracle. This action of calcium is certainly the opposite of an inhibitory effect. For this and other reasons we believe that Loeb's theory regarding the inhibitory effect of calcium is not well founded. The facts from which this theory was derived were observed well enough. Furthermore, this theory brought to light a number of valuable new facts. We see here, again, that a reasonable theory, even if erroneous, is capable of being fruitful in the right direction.

For the creation of new knowledge we need well-observed facts, ideas and the experimental test. To my mind the idea is the most important factor, although the idea without a fact is absolutely nothing. When we express the final result by the figure 10, then the relations of the idea to the fact is that of the 0 to the 1 in this figure. The idea alone is naught, but in combination with a fact it makes the fact ten times more valuable, and the profounder the idea the higher becomes the value of the fact.

I use the term idea synonymously with hypothesis, because each idea is nothing else than the interpretation of a presumable fact; it is a hypothesis. We may divide all hypotheses into two classes. Into one class we may put all such hypotheses which are amenable to a test. They may sooner or later be proved or disproved. This class of hypotheses is not only useful, but is absolutely indispensable. It is for this class of hypotheses that I wish to reserve the term ideas: they are realizable ideas. There is, however, another class of hypotheses which by their very nature are not amenable to a test; they can never, or at least not within a reasonable time, be proved or disproved. This class of hypotheses I designated as ideals; they are unrealizable ideas. They are surely not indispensable within the domain of research, but they can be useful and, perhaps, even desirable. Such a hypothesis, for instance, is the statement often made by biologists that all phenomena of life are nothing else than physical and chemical combinations. Obviously, this assumption is not amenable to a test. If any one chooses to assume the opposite view, namely, that the phenomena of life contain an element which is outside of the domains of physics and chemistry, this view could not be disproved—can not be disproved within a reasonable time. I shall not say "never," because this in itself would again be a theory. Hypotheses or theories of that kind are ideals, they are guides; they give a stimulus to thought and, perhaps, also to action in a certain desirable direction. But one should be aware, especially should scientists be aware, that ideals are not scientific theories, they do not deal with the provable.

With regard to the hypotheses of the first class, we have to bear in mind that their mission is twofold: to establish the truth they may contain and to bring out new facts. The realization of the first mission of some hypothesis is often unattainable by the present-day methods, and in this regard they border on the class of hypotheses which I termed ideals. They may, however, have a great actual value by their ability to bring out new important facts. Such a great idea, for instance, is the side chain theory of Ehrlich. It is more profitable for the progress of our science to stick to the second mission of our ideas, that is, to the production of new facts; and if I have before me two possible lines of work, one to prove the correctness of my hypothesis and the other to bring out on the basis of this hypothesis some new facts, though they may not prove absolutely the correctness of their progenitor, I always choose the latter line of work. Facts, real facts, are immortal. But theories? The nineteenth century is like a monumental cemetery, in which numerous brilliant theories have found early graves. It is not likely that the twentieth century will be different. But what does it matter? *"Der Mohr hat seine Schuldigkeit gethan, der Mohr kann gehen."*

So far I have dealt with the rôle of ideas and ideals in the domain of medical research. Permit me to continue the discussion of the value of ideas and ideals in the other domains of our science. I mean the domain of teaching and that of the practice of medicine. I shall discuss both domains together. My time limit is in sight and I shall be brief.

The essential task of teaching medicine is to prepare for practice. And the essential task of the practice of medicine is its purely practical part: to prevent and cure disease and to alleviate suffering. To be in practice essentially for the sake of science, that is, to study diagnosis and obtain postmortems, is, to my mind, mentally and morally wrong. It is on this basis and not purely in the interest of science that I wish to plead for ideas and ideals in the practice of medicine.

To get the habit of thinking in the practice of medicine is, to my mind, the best means for obtaining a practical end. And if you get the habit the process will be no effort, it would not consume too much of your time, and it will never paralyze your activity, you will know what you may and ought to know of each case, and you will also become aware of the natural limits of your knowledge in each particular instance; all of which is a great aid in deciding on and guiding your activity. You will further know what you can do and have to do, and you will do it quickly, and you will also be clear as to what you ought not to do. You will, then, always do what Nature and the present state of knowledge permits and requires, and you will never do harm. Habitual thinking is a great aid to proper action and not a hindrance to it.

Disease is not like a piece of goods put in a box with a label on it which you need only to read in order to be able to deliver the goods. If you look at it closer, you will find that every disease you have to deal with is a piece of research, and every treatment is an experiment. You have to learn to observe the pure facts in the case, but you have also to learn and to practice how to make a proper hypothesis, to get the most probable idea. Then comes the experimental test, the treatment. Short cuts from the symptoms to the treatment, with avoidance of the tortuous path leading over the idea are not practical roads; on the contrary, they may lead to danger. The short cuts from fever to phenacetin, from abdominal pains to morphin, etc., not infrequently entailed pretty bad consequences for the patient.

It might sound paradoxical when I say that our advanced modern methods are not favorable to the cultivation of thinking, of ideas, in the practice of medicine. There is a tendency to pathognomonicity in modern diagnosis. I shall not speak of such important pathognomonic signs as the presence of the tubercle bacillus in the sputum and in the urine, the presence of the malarial plasmodium in the blood, or the histologic diagnosis of malignancy in neoplasms. But even here error is possible. I know of a case in which an accomplished consultant and a good family physician agreed on the diagnosis of malaria on account of the presence of the plasmodium in the blood. The woman, nevertheless, continued to be sick until a few months later, when she was finally cured surgically of her pelvic abscess. I know a strong young girl, 14 years of age, in whose case the surgeon, the consultant and pathologist agreed on the necessity of operating for cancer of the rectum on the histologic evidence that the stricture was malignant. She got well without the operation, by treatment for hereditary syphilis instituted by the physician in the hopeless minority who preferred to diagnose by circumstantial evidence.

I could cite many such personal experiences. Even the tubercle bacillus alone is not always an unfailing guide. But what shall we say of a Widal reaction in typhoid fever, of leucocytosis in appendicitis, of casts in Bright's disease, of the tuberculin test, etc.? They are all sometimes valuable contributory signs. But the practitioner becomes imbued with the idea that each one of these signs has a pathognomonic value. And those who do nothing but make such tests, without ever seeing a patient, acquire the belief, and spread it, that they are making the diagnosis.

A disease can not be recognized directly by microscopic, chemic or biologic tests, and can not be seen, heard, felt or smelled. Even a skin disease can not simply be seen; it has to be diagnosed. All that can be acquired by sense perceptions are only signs of a disease. The disease has to be diagnosed, and signs alone, be they ever so fine, are not yet a diagnosis.

In a diagnosis, as in a scientific research, there have to be two parts: facts and ideas. All training in making all sorts of tests without training of the mind to properly and rapidly correlate the collected facts in any given case is a failure. Of the two deficiencies, the deficiency in judgment and the deficiency in capability of performing all prevailing tests I prefer the latter. This I say from my extended personal observation. Besides, somebody else can make the tests for you, but you do not want somebody else to have the sound judgment for you. I have heard in consultation a fine report of a bacteriologic and microscopic account of typhoid fever, but the patient had meningitis. I have seen a progressive physician presenting a competent urinary study in evidence for Bright's disease, but it was nevertheless a case of malignant obstruction of the intestines. Furthermore, you must, in diagnosis, employ your mind in knowing for which facts to look, and how to interpret them properly.

Not all sensory perceptions are facts. Preconceived notions make you see what you expect to find. I saw a child in consultation, a case where pediatrist and aurist agreed on the necessity of paracentesis of the ear drum. But it was one of those cases of pneumonia with earache, in which the latter disappears with the crisis. I believe teachers and practitioners of medicine are laying too much stress on the art of collecting signs, and too little stress on the art of correlating them properly.

That is what I wished to plead for: more thinking in the practice of medicine. To be sure, learn the art of observation, but do not forget that the correlating idea is the leading factor, the supreme judge; cultivate the art to use it properly and readily.

The aim of the practice of medicine is to attend to the sick. This is surely true. But there are other sides in the practice of medicine which the good men in the profession ought to keep in mind. It is the aid which practice can and should render to the science of medicine and its progress. By science of medicine I do not mean the auxiliary sciences like physics and chemistry, anatomy and physiology, or pathology and bacteriology. I mean the knowledge of the manifestations of diseases in the living human being and their course under various influences. For each branch in technology there is a scientific part. This, correlated to the practice of medicine, is the science of medicine, as I have defined it.

The future of the practice of medicine depends on the progress in its science. All the strides made in the auxiliary sciences, all the brilliant results brought to light by pathology, bacteriology and animal experimentation, attain their practical importance only by their applicability to the sick human being. Who is going to study this? With a full consideration for the patient a great deal can be studied on the sick man without doing him harm and with benefit to the progress of the medical science. Who is going to study it and who is going to be the efficient exponent of the science of medicine? Of course, such students have to come from the ranks of those who practice medicine. The pathologist and the bacteriologist, in their domains, are rendering great service to the science of medicine. But they can not be actual exponents of this science, they do not deal with the living sick man, nor with the entire man and all the manifestations of his disease.

The science of medicine is a natural science and must be studied by the same careful inductive methods as set forth above. The investigator in medicine must be an unbiased observer of facts; he must have the ability to conceive working hypotheses, and he must be able to devise proper experimental tests. The medical investigator must possess sufficient knowledge of the auxiliary sciences to be able to interpret the phenomena at the bedside. But, above all, the medical investigator must possess the same enthusiasm for purely intellectual work and a burning love for research and discovery as is possessed by investigators in other branches of science: qualities without which no great success can be attained.

Who is going to be such an exponent of the science of medicine? Gentlemen, this country is greatly in need of such exponents. The last twenty-five years brought a great change in the aspect of the purely scientific branches of medicine in this country. It is a change from nearly zero to a commanding position. A few intellectual men with high ideals have been instrumental in this change. Young bright men with idealistic proclivities were brought into the fold of each of these sciences. If those men would have devoted themselves to the practice of medicine, with their diligence and mental endowments, they would now be in the front rank of the profession. But they chose to study and to wait and to live on only a few hundred a year. To-day the country has no difficulty in filling chairs in anatomy, physiology, pathology, etc., with first-class men at salaries not equal to one-fourth of the incomes of their inferiors in the practice of medicine.

It is true that in this country, twenty-five years ago, medical science proper stood much higher than the pure sciences. But what is the actual progress made by medical science in this country during those twenty-five years? It is best not to enter into a discussion of the particulars of the actual situation. I shall only ask you to look at the smallest university in Germany, and at the high quality of even the third-rate man there, and you will know what this country lacks and what it needs. I believe we have in this country young men with as good brains as they have in Germany and other countries. The fine crop of home-made intellectual men in the various sciences demonstrates this. What we miss here is the proper scientific spirit, the proper ideals in medicine, ideals to influence the receptive mind of the oncoming young generation. What we need in this country is an army, be it ever so small, of new men in medicine, who possess modern knowledge, training in scientific methods and ability for research in medicine; and, above all, we need men who are possessed by the proper enthusiasm and idealism, men who prefer scientific to gilded success, and who have the willingness and energy to lead the rank and file of the oncoming generation into new paths for the elevation of the standard of science and practice of medicine for the benefit of the sick and for the welfare of the country.

My young friends, the aim of my address on ideas and ideals in medicine is to gain some recruits among you for that army of future leaders of medicine in this country, for your own benefit and for the glory of your alma mater.

Original Articles

COAGULATION OF THE BLOOD.

A SUMMARY, WITH ESPECIAL REFERENCE TO THE THERAPEUTIC EFFICACY OF THE ALLEGED COAGULANTS.*

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Apart from a brief historic sketch of the subject of coagulation and the current views as to the more or less theoretic principles underlying it, this paper does not deal with the more intimate physiologic aspects of the question. It is to be regarded rather as a consideration of alleged coagulants from the therapeutic standpoint.

THE PROTHROMBINS.

Sahli sums up the present views as to coagulation, based in large part on Morowitz's work. He quotes Morowitz as having described two prothrombins, alpha and beta: *A*-prothrombin, the one evidently studied by Hammarsten, changes into thrombin after activation by lime salts; β-prothrombin is not converted into thrombin in the presence of lime, but the change is brought about through the agency of alkalies, probably also by Schmidt's zymoplastic substance, and according to Morowitz by acids. Hence the apparent contradiction between Schmidt and Hammarsten as to the lime factor, for Schmidt was doubtless referring to β-prothrombin. Further, Morowitz showed that *A*-prothrombin has a forbear which he calls thrombogen. This latter originates in extravascular blood and is acted on by thrombokinase, *A*-prothrombin resulting.

THROMBOKINASE.

Thrombokinase, a thermolabile substance, is contained in all tissue juices and in extravascular blood. Nothing definite is known as to the origin of β-prothrombin, but it is probably a derivative of all cells. Apparently it bears no relation to thrombogen or thrombokinase. It is believed that the zymoplastic substance of Schmidt, said to be thermostabile, activates β-prothrombin to form thrombin and that weak acids and alkalies do the same, thus playing the same rôle as *A*-prothrombin.

This question of the thermostabile and thermolabile substances in relation to blood coagulation is at best somewhat hazy. The subject is further complicated, too, by a consideration of the antibodies. For instance, plasma of pepton blood contains an antithrombin, while the kinase plasma of Morowitz obtained by intravascular injection of tissue juices (tissue fibrinogen of Wooldridge) contains an antikinase. It is supposed that normally intravascular coagulation fails to occur because thrombogen and thrombokinase do not exist free in the circulating plasma. As soon as the blood is shed and comes in contact with foreign substances the platelets break up and liberate thrombogen, to which it is probable that the leucocytes contribute and even the erythrocytes in minimal amount. This is purely speculative, however.

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* Read in the Section on Pharmacology and Therapeutics of the American Medical Association, at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907. Owing to lack of space, the article is here abbreviated by omission of the portions of the paper dealing with the history of coagulation, prothrombins, the calcium salts, the results of decalcification, and the technic. The complete article appears in the Transactions of the Section and in the authors' reprints.

WHAT PREVENTS CLOTTING IN THE VESSELS?

Difficult as is the study of coagulation, the subject is much more formidable if we ask why, under normal conditions, does the blood not clot in the vessels? It can not be the constant movement of the blood, for outside the vessels, quickening the movement, as in whipping the blood, hastens clotting. Nor is contact with air necessary, as coagulation takes place in blood from which all air is excluded, as in collecting it over mercury for instance. Cold retards it, so cooling can not be a factor. Blood removed from a vessel through an oiled tube and caught in an oiled or waxed vessel remains liquid, but if agitated with an oiled rod no coagulation occurs, but stirring with a dry rod of any kind, even smooth glass, or the introduction of dust particles or other foreign matters will promptly determine coagulation.

This fact has been advanced to explain the absence, under normal conditions, of clotting within the vessels, the assumption being that the walls being kept wet, contact with them by the circulating-formed elements is prevented. In vascular lesions, however, in which roughening of the vessel lining occurs, it has been supposed that the blood elements actually come in contact with the walls, then in consequence break up and set free the thrombogen and thrombokinase. But this can scarcely be the only, or even the chief, reason, for though roughened by the diseased process, the lumen is doubtless kept wet. Hewson showed that blood could be kept liquid for a long time if retained in a ligated and excised vein.

Some of our observations show in a most striking manner the effect of hemorrhage in shortening the clotting time. The probable reason for this, according to Vierordt, is the absorption of tissue juices. This increased coagulability has been noted by us in certain diseased conditions, particularly the anemias, both primary and essential, and the following seems a reasonable explanation: The toxemia induces more or less hemolysis, thus liberating thrombogen and thrombokinase. At the same time capillary hemorrhages are not rare and probably tissue juices are absorbed. That the quantity of fibrin has nothing to do with intravascular clotting seems evident, for both Sahli and Litten agree that fibrin is present in normal amount in hemophilia. Again in pneumonia, where it is increased, thrombosis is rare, while in typhoid fever and anemia, where it is diminished, thrombosis is comparatively common.

POSTOPERATIVE THROMBOSIS.

Postoperative thrombosis may in part be explained by the increased coagulability resulting from the absorption of tissue juices. We have seen that foreign substances, as dust particles, for instance, are capable of inducing coagulation in blood caught in oiled or paraffined vessels. It is conceivable, therefore, that micro-organisms may play, in part at least, a similar rôle within the vessels, acting in fact both vitally—inducing hemolysis in some cases—and mechanically in the production of certain thrombi. It will at once be manifest, however, that, considering the frequent opportunity furnished both in medical and surgical cases for the entrance of micro-organisms, some predisposing factor other than the mechanical must be operative. Wright denies the general statement that foreign bodies hasten coagulation time. It seems certain that in some way coagulation within the vessels differs from extravascular coagulation.

Outside of the body many factors determine the coagulation time, for instance, the volume of blood and rate of flow, nature of the vessel in which the blood is received, the temperature—cold retards and warmth accelerates—duration of contact of blood with the tissues. Free blood from a deep incision is longer in clotting than blood oozing from a superficial wound. Pressure on the part, probably by increasing content of tissue juice, hastens clotting. The first drops of blood have a longer clotting time than those removed from the same wound some minutes later. Blood removed from different parts of the body has different clotting times. The ingestion of alcohol retards coagulation, as does a full dietary, while fasting hastens it, according to Vierordt, hence the time of day may be a factor.

FACTORS INFLUENCING COAGULABILITY.

Vierordt observes that alcohol prolongs coagulation and claimed that a hearty meal lengthened coagulation while fasting shortened the time. More recent observers find the opposite of this statement to be true—coagulation is quickened after a meal and lengthened by fasting. For the shortened coagulation following hemorrhage Vierordt offers what seems to us a most plausible explanation, viz., that the absorption of tissue juices into the depleted vessels quickens coagulation.

In catarrhal jaundice, diabetes, splenic anemia, phthisis and pneumonia Vierordt believed the coagulation time to be shortened. In hysteria and gastrectasia it remained normal. In typhoid fever the coagulation during the febrile stage was from one to two minutes longer than during convalescence.

During the last fifteen years A. E. Wright of England has published a series of papers setting forth in a most logical manner the results of his observations and experiments in the clotting of blood. His studies of nine or more hemophilic families and the treatment employed are most readable, not alone because of the large number of bleeders studied, but because of the almost uniform success met with in the treatment of hemorrhage by calcium salts, either by mouth or hypodermic injection and by the inhalation of CO_2. He, however, cautioned against the use of calcium hypodermically because of the slough which was likely to result. Epistaxis and superficial injuries in hemophilics were controlled by a local styphic composed of fibrin ferment and 1 per cent. $CaCl_2$.

The fibrin ferment can be obtained from either the clot or the serum of blood. He obtained it from the clot by receiving the blood into vessels containing three times its volume of water. This was set aside for a few minutes and stirred with sticks. The fibrin thus obtained was washed under a tap for about ten minutes until free from pigment. The ferment is then extracted by adding from five to ten volumes of water to the fibrin and allowing it to stand twenty-four hours. It is then filtered. In this connection it may be stated that he demonstrated that coagulation is hastened by contact with tissues—especially unwashed tissues—while foreign matters, such as cotton, wool, etc., do not influence coagulation. Coagulation in his experiments was markedly increased by the addition to the blood of fresh lymph from blisters.

ADMINISTRATION OF CALCIUM SALTS.

Wright accepts in part only Wooldridge's statement that his tissue fibrinogen would coagulate blood. He claims it coagulates only venous blood and retards coagulation in arterial blood and is dangerous because of its tendency to induce thrombosis. He confirmed Horbaczewski's claim that nuclein increased leucocytosis and that leucocytosis increased coagulation in a series of hemophilics exhibiting subnormal leucocyte count. In his hands the calcium salts, especially the chlorid and lactate, CO_2, magnesium carbonate, cow's milk, because of the calcium contained in it, and nuclein increased the coagulability of the blood, while oxygen, fruit acids, oxalates, alcohol and fasting retarded coagulation.

By the administration of calcium salts in chilblains, swollen joints and urticaria from eating unripe fruit and fish or the injection of antitoxins, he was able to relieve the symptoms and hasten coagulation. By adding a weak solution (¼ to ½ of 1 per cent.) of $CaCl_2$ to the extravascular blood of hemophilics he was able to reduce the clotting time markedly. These same patients responded to the internal administration of calcium equally well.

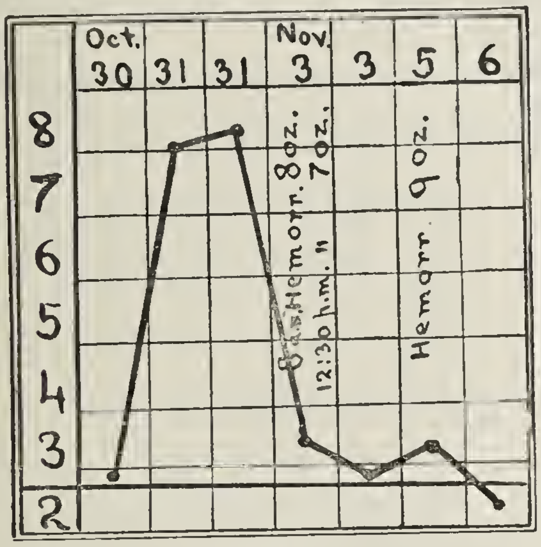

Fig. 1.—*Reaction to Hemorrhage.*—A. F., female, aged 23. October 30, fourteenth day of disease, coagulation time, 2:45; calcium content 1-500; leucocytes 7800. October 31, at 3:35 p.m., coagulation 8:00; calcium content 1-1000; leucocytes 6200; at 4:10 p. m. gave 1 dram calcium lactate; at 5:10 p. m., coagulation 8:05. November 3, hemorrhage of 8 oz. at 8:00 a. m. and 7 oz. at 12:30 p. m.; at 3:50 p. m. coagulation 3:10; calcium content 1-500; leucocytes 8400. Calcium lactate was given at 8:00 a. m., and 12:00 m. 20 gr., and at 4:00 p. m., 40 gr., at 5:00 p. m. coagulation 2:55; calcium content 1-1000; leucocytes 8000. November 4, hemorrhage of 3 oz. at 8:00 p. m. and 4 oz. at 9:00 p. m. November 5, hemorrhage of 9 oz. at 6:30 a. m. November 6, at 3:45 p. m. coagulation 2:20; calcium content 1-800; leucocytes 7600. In all these charts the figures in the vertical column represent minutes. The heavy line between 2 and 3 is normal.

Early in his work he recommended large doses of calcium and stated that the effect was soon lost because of the rapid elimination of the calcium by way of the kidneys. Later his experiments would seem to prove that the secondary effect of calcium in large doses is to lengthen coagulation time, and his conclusion was that the greatest acceleration of coagulation is obtained with small doses of calcium, though a large dose will show marked reduction of the coagulation time within one hour.

The hemorrhage of typhoid, he said, could be promptly controlled by the administration of large doses of calcium and prevented by small doses over a longer time. He claimed a greater difference in the coagulation time of the active stage and convalescent stage than any other observer thus far noted. Assuming that the calcium salts of the blood are essential to coagulation, Wright attempted to determine whether the increased coagulation caused by the ingestion of calcium was associated with a definite increase of calcium in the blood by estimating the calcium content of the blood in terms of ammonium oxalate before and after treatment. His experiments seemed to show the entrance of calcium into the blood. He thought calcium lactate more effective because it was more readily absorbed. He condemned the treatment of aneurism by the administration of potassium iodid and light diet because of the retarded coagulation associated with fasting.

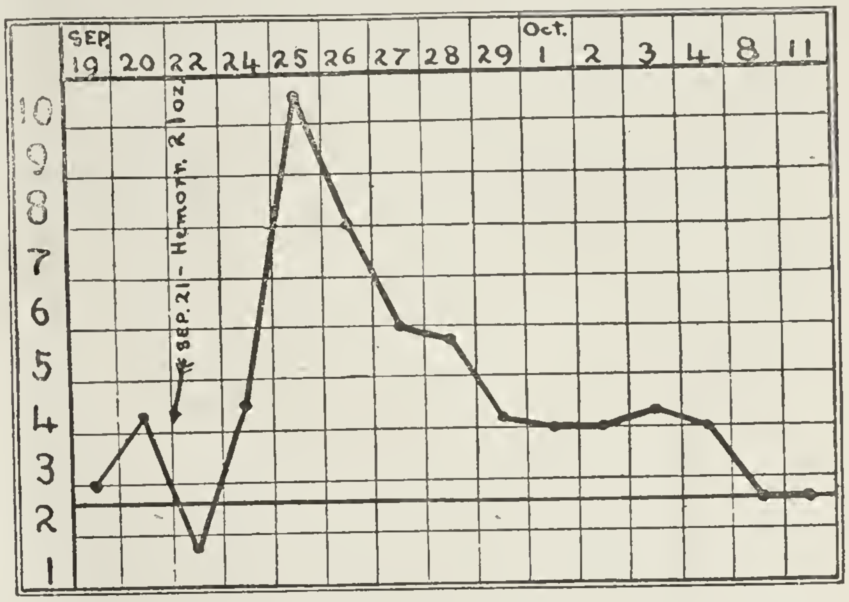

Fig. 2.—*Reaction to Hemorrhage.*—E. McC., female, aged 22; September 19, coagulation time 3:00; September 20, 4:10; September 21, hemorrhage 21 oz.; September 22, coagulation time 1:45; gelatin given; September 24, 4:20; September 25, 10:30; September 26, 8:00; September 27, 6:00; September 28, 5:45; September 29, 4:15; October 1, 4:00; October 3, 4:15; October 11, 2:30. From September 19 to September 23 calcium chlorid, 10 gr. every 3 hours, was given; from September 23 to September 25 calcium lactate, 10 gr. every 3 hours, was given day and night; from September 25 to September 29, calcium lactate, 20 gr. every three hours was given.

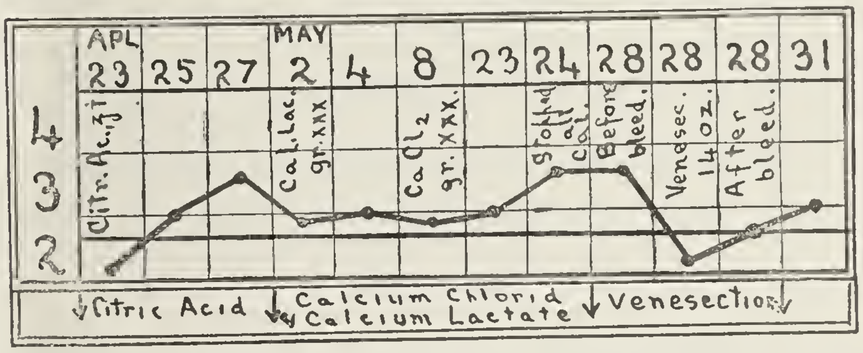

Fig. 3.—*Plethora.*—M., male, aged 72. Coagulation time before giving citric acid 2:10; after, 3:30. Coagulation before giving calcium 2:50, after, 3:30. Coagulation before venesection, 3:30; after, 2:15 partial, 2:30 complete. Amount removed by bleeding, 14 oz.

In view of these rather remarkable statements made by Wright we have employed his technic in detail in determining the coagulation time and the calcium content of the blood with a view to confirming his observations. We regret that we have not been able to make observations on the blood of hemophilics. Our opportunities for observing typhoid have been, we think, exceptionally good. For determining the coagulation time

Wright's coagulometer was employed. An estimation of the calcium content of the blood was arrived at by mixing equal parts of blood and solutions of ammonium oxalate of graded strengths (1 to 500, 1 to 800, 1 to 1,000, 1 to 1,600, 1 to 2,000, 1 to 3,200). A definite quantity of blood, as 5 cm., was drawn up into a capillary tube, then an equal amount of ammonium oxalate (1 to 500) was drawn into the same tube—the blood and oxalate being separated by an air bubble. The contents of the tube were then blown out on a watch crystal and thoroughly mixed. This mixture was then drawn into the tube and, after noting the time, laid aside for an hour. In the same manner other tubes were then filled with blood and ammonium oxalate, 1 to 800, 1 to 1,000, etc.

At the expiration of the hour the contents of these tubes were blown out on white filter paper and that strength of ammonium oxalate which just prevents coagulation of the blood was used to express the calcium content of the blood in terms of ammonium oxalate.

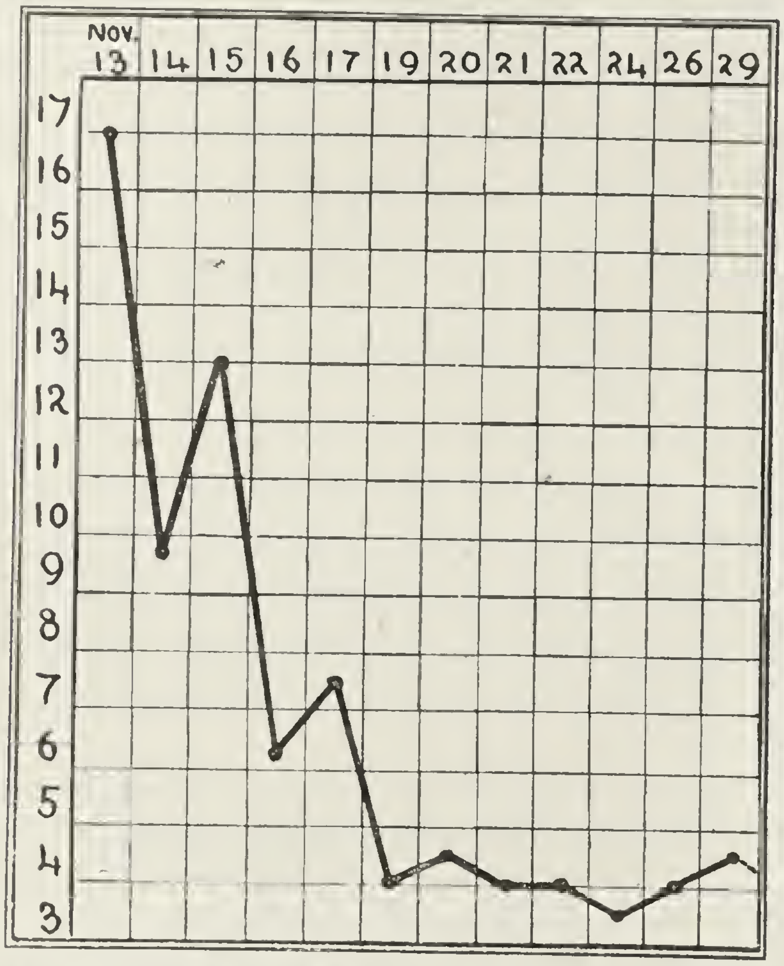

Fig. 4.—*Coagulation Time in Typhoid.*—Chart shows fall of coagulation time running with fall of temperature.

THE AUTHORS' OBSERVATIONS.

In addition to observing the coagulation time and calcium contents, we have noted the leucocyte count. Our conclusions are based on 386 observations made on 127 patients. In the Episcopal Hospital of Philadelphia 91 patients were selected from a large service and 302 observations noted. The majority of the 91 cases were typhoid patients, chosen from 150 cases of typhoid fever because of the stage of the disease or of some interesting symptom, as melena, epistaxis, etc. Eighty-four observations were made on 36 patients in the Samaritan Hospital, most of the patients being in the convalescent stage of typhoid fever.

While we can confirm the statements of both Vierordt and Wright that the blood during the active febrile stage of typhoid fever is slow to clot, we have not observed so marked a difference between the clotting time of the active and convalescent stages as was reported by Wright. Neither have we noted any decided inclination for the blood of the convalescent to go to the other extreme and coagulate more quickly than normal. We are, however, prepared to give the opinion that such condition exists where phlebitis and thrombosis develop.

The average coagulation time during the active febrile stage of typhoid fever as determined in 61 cases was found to be 3 minutes and 33 seconds. In 41 of these 61 cases a tendency was shown to slow clotting at all observations and none were as low as 2 minutes and 45 seconds during the active fever. The average time for coagulation in these 41 cases was 4 minutes and 6 seconds. Frequent observations of the clotting time will enable the physician to predict accurrately a hemorrhage.

EFFECT OF HEMORRHAGE ON COAGULATION TIME.

In this series of 61 cases we were able to make frequent observations on the effect of hemorrhage on the coagulation time. Figures 1 and 2 are charts typical of numerous observations showing the marked effort on the part of Nature to stop the hemorrhage by quickly lowering the coagulation time.

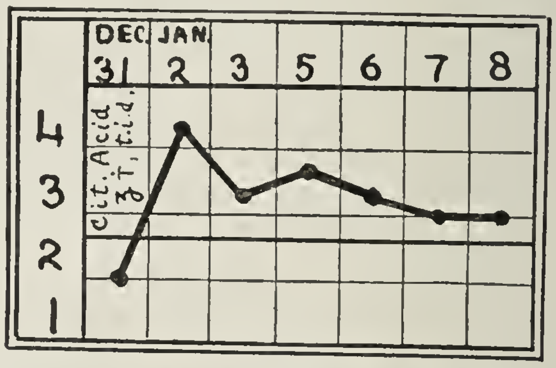

Fig. 5.—*Typhoid Fever Convalescent.*—M. H., aged 36, female. December 31, given three dram doses of citric acid.

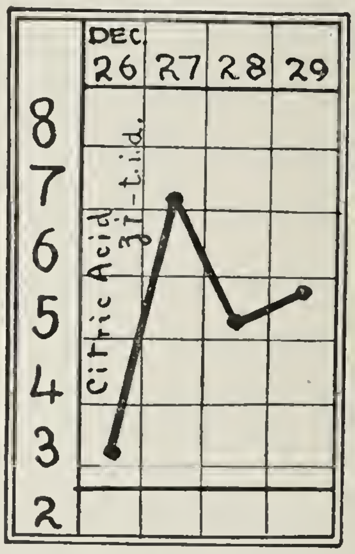

Fig. 6.—*Typhoid Fever.*—L. M., female, aged 16. November 26, the twenty-first day of disease, given 1 dram citric acid three times during the day.

Figure 1 shows a normal coagulation time of 2 minutes and 45 seconds on the fourteenth day of the typhoid, rapidly lengthening out to 8 minutes on the fifteenth day. Calcium produced no effect, but a hemorrhage of 15 ounces caused it to drop to 3 minutes and 10 seconds. At this point 1 dram of calcium lactate seems to have reduced it to 2 minutes and 55 seconds, but in our opinion this drop of 15 seconds was simply the continued effect of the hemorrhage.

In the second case (Fig. 2) a decided hemorrhage of 21 ounces quickened the clotting time to 1 minute and 45 seconds. Treatment could not keep it near normal, and we see it rapidly ascending to 10 minutes and 30 seconds and then coming down by lysis with the temperature until it is normal, when convalescence is reached.

TABLE A.

CALCIUM CHLORID ONE DRAM GIVEN AND COAGULATION TIME, CALCIUM CONTENT AND NUMBER OF WHITE BLOOD CORPUSCLES NOTED IMMEDIATELY BEFORE ADMINISTRATION AND ONE HOUR AFTER.

Case	Before Treatment.			After Treatment.		
	Coag.	Cal. Cont.	W. B. C.	Coag.	Cal. Cont.	W. B. C.
M. M., typhoid............	4 :45	1-2000	4600	3 :35	1-800	5000
H. G., typhoid............	2 :30	1-800	7800	2 :20	1-1000	8200
L. D., typhoid............	2 :50	1-1600	8400	2 :40	1-1000	8000
M. M., rheumatism and swollen joints...	5 :30	1-1000	11000	4 :20	1-750	11200
S. P., rheumatism and swollen joints...	3 :30	1-800	7500	4 :00	1-500	7800

CALCIUM LACTATE EFFECT OBSERVED ONE HOUR AFTER ADMINISTRATION.

Case	Coag.	Cal. Cont.	W. B. C.	Coag.	Cal. Cont.	W. B. C.
S. P., rheumatism and swollen joints...	3 :30	1-800	7600	4 :00	1-500	7800
A. F., typhoid	8 :00	1-1000	6200	8 :05	1-500	7800

TABLE B.

OBSERVATIONS ON CALCIUM LACTATE ADMINISTERED OVER PERIODS OF DAYS.

Before Treatment.				After Treatment.			
Case.	Coagulation.	Cal. Content.	W. B. C.	Dosage.	Coagulation.	Cal. Content.	W. B. C.
J. K., typhoid	6 :15	1-500	.....	1 dram, 7 hours after.........	7 :30	1-1000	.....
A. E., typhoid	2 :15	....	.....	10 gr. every 3 hours for 12 days.	3 :20	.....	.....
Mrs. P., abortion, sec. anem....	9 :00	....	6600	1 dram 3 times daily for 2 days.	2 :30	.....	14000
R. G., typhoid	2 :55	....	.....	10 gr. every 3 hours for 27 days.	3 :05	.....	.....
Mrs. E., typhoid ulcer	3 :15	....	.....	1 dram 3 times daily for 3 days.	2 :30	.....	.....
Mr. M., plethora	2 :50	....	.....	30 grs. 3 times daily for 22 days.	3 :30	.....	.....
J. H., typhoid	3 :10	....	.....	10 or 20 grs. every 3 h. for 2 dys.	5 :00	.....	.....
E. M., typhoid	4 :30	....	.....	10 or 20 grs. every 3 h. for 4 dys.	6 :00	.....	.....

TABLE C.

OBSERVATIONS ON CALCIUM CHLORID ADMINISTERED OVER PERIODS OF DAYS.

Before Treatment.				After Treatment.			
Case.	Coagulation.	Cal. Content.	W. B. C.	Dosage.	Coagulation.	Cal. Content.	W. B. C.
J. D., injured finger..........	4 :00	....	10200	½ dr. twice daily for 4 days..	3 :30	.....	.....
M. R., jaundice	3 :00	....	.....	1 dr. twice daily for 1 day.....	2 :30	.....	.....
Mrs. H., hemor. endometritis..	1 :05 at 18.5 C.	....	4000	1 dr. 3 times daily for 15 days..	1 :10	.....	4200
M. M., typhoid	2 :45	....	.....	1 dr. 3 times daily for 4 days..	2 :40	.....	.....
M. F., typhoid	3 :00	....	.....	1 dr. 3 times daily for 5 days..	2 :45	.....	.....
Mrs. R., cystitis	2 :45	....	.....	1 dr. 3 times daily for 5 days..	2 :30	.....	.....
Mrs. Y., carcinoma, hemorrhage.	5 :30	....	15000	30 gr. 3 times daily for 8 days..	3 :00	.....	9600
Me., epistaxis	5 :00	....	.....	30 grs. 3 times daily for 5 days..	6 :00	.....	.....
R., jaundice	8 :00	1-800	7600	1 dr. 3 times daily for 3 days..	8 :15	1-1000	8400
J. H., typhoid...............	5 :00	....	.....	10 gr. every 3 hours for 2 days..	7 :00	.....	.....

Following a typhoid hemorrhage, if the coagulation time dropped to normal and remained down, the patient was considered safe from another hemorrhage for the time, but if the coagulation time did not drop to normal or began to rise again soon after the reaction to hemorrhage the patient was considered in imminent danger of another hemorrhage. Hastened coagulation was thus noted following hemorrhage in typhoid on numerous occasions, following hemorrhage accompanying abortion, hemorrhage from carcinoma of the uterus and in some experiments, as shown in Figure 3. Mr. M., who suffered from vertigo due to a plethoric condition, gave a coagulation time of 3 minutes and 30 seconds. He was bled 14 ounces and the clotting time immediately dropped to 2 minutes and 15 seconds. This chart is especially instructive, as it portrays most graphically the ability of citric acid to lengthen coagulation time, the inability of calcium to reduce it and then the striking and prompt reduction in time due to the venesection.

It was also noted that the temperature and humidity of the atmosphere influenced the coagulation time noticeably and uniformly, a hot day with heavy atmosphere causing the coagulation time to shorten, while a cool day had the opposite effect. All typhoid patients who retained appetite were allowed to eat. They were given toast, soft boiled eggs, roasted potatoes, cereals, thickened broths, tea, coffee, cocoa, as they desired and milk sparingly, in most cases none at all. The patients, it was noted did not lose control over the clotting time of their blood. Many times it did not go above normal, and it was observed that these cases escaped such accidents as hemorrhage. The average coagulation time for convalescent typhoids, as observed in 23 cases, was 2 minutes and 35 seconds.

NORMAL COAGULATION TIME.

According to our findings the normal coagulation time is from 2 minutes and 30 seconds to 2 minutes and 45 seconds by the method which we employ. It will readily be noted then that the coagulative powers of the typhoid return to normal during convalescence. Figure 4 shows how closely the loss of clotting power follows the rise of temperature during the disease and that the return to health is accompanied by a return to normal temperature and normal clotting power. The case shown in Figure 4 ran a typical course and the patient was without drug treatment, with the exception of hydrochloric acid 10 minims three times a day. It has been demonstrated that the mineral acids do not influence coagulation.

In cases showing abnormally long clotting time calcium chlorid, calcium lactate, calcium acetate, calcium iodid, thyroid extract, gelatin, junket, milk and nuclein were used separately and together to shorten the time, all to no avail.

Calcium chlorid and calcium lactate were administered in large doses (1 dram doses three times daily) and in small doses over longer periods of time, with like negative results.

Table A shows the observations noted where 1 dram doses of calcium were used and the coagulation time, calcium content and leucocyte count noted one hour later.

Hypodermic injections of calcium were not employed, but the administration of calcium by mouth does not seem to increase the calcium content of the blood.

Tables B and C also set forth the results obtained by administering calcium lactate and calcium chlorid over periods of days:

The average of a large number of observations noted in the coagulation time of the blood in various pathologic states were:

Specific meningitis	3.10
Coal gas poisoning	4.05
Gastric ulcer	4.10
Salpingitis	5.15
Alcoholic gastritis	3.10
Apoplexy	3.05
Carcinoma	4.35
Jaundice	6.30 to 8.30
Rheumatism	3.00 to 4.00
Pneumonia	2.47
Nephritis	2.25
Diabetes	2.55
Exophthalmic goiter	2.45

We were not a little surprised and were greatly disappointed at our uniform failure to influence the coagulation time of the blood in the direction of hastening it by means of the calcium salts or any other remedy employed. Our results with citric acid were more promising, as the charts in Figures 5 and 6 showed, and we feel that in all conditions where thrombosis threatens, citric acid should be employed. This holds especially in heart disease with broken compensation and for a brief period during the convalescence from typhoid and even in pneumonia.

CONCLUSIONS.

1. During the febrile stage of the infectious diseases coagulation is noticeably retarded.

2. The clinical employment of the calcium salts has no direct or invariable effect on the coagulation time of the blood, either in large doses one hour after its administration or in small or large doses at any subsequent period, even extending over two or more weeks.

3. In our hands the calcium content of the blood, as determined in terms of ammonium oxalate, proved unreliable.

4. We were unable to show definite relationship between leucocytosis and coagulation time.

5. Nucleic acid uniformly failed to produce an increase in the number of leucocytes and also failed to hasten coagulation. (Parke, Davis & Co.'s nucleic acid after the formula of Vaughn & McClintock was employed in 1 dram doses hypodermatically.)

6. We have shown conclusively the reaction of the coagulation time to hemorrhage.

7. Though not as striking as some of our other results, we have been able to show that citric acid prolongs the coagulation time, and it seemed, even when the difference in time before and after its use was not a very material one, that the viscosity of the blood was lessened.

DISCUSSION.

Dr. C. B. Lowe, Germantown, Pa., thought that the investigations pointed to the fact that calcium salts and citric acid are of little value in coagulation of the blood. He considered Dr. Robertson's work with the cereals in typhoid of very great practical value, of quite as much value whether the blood coagulates on the administration of calcium salts or not.

Dr. Myer Solis-Cohen, Philadelphia, has found that Wright's statements seem perfectly true until one investigates them. He tested the coagulability of the blood in fifty cases and was unable to corroborate any of Wright's statements in regard to the clotting time in diseased conditions. His experience coincides with that of Dr. Robertson, the average clotting time being two minutes, twenty-four seconds. In ordinary cases of typhoid the coagulability was unchanged, but when tested shortly after a hemorrhage the clotting time was considerably increased. Of course, there are many sources of error, due in large measure to the technic. It is believed there is a substance in the skin that increases the coagulability; it is known that pressure about the wound will increase the coagulability. A possible explanation of the increase in the coagulability following severe hemorrhage may be that the blood in the body must absorb fluid in order to get back its proper volume, and in so doing may draw fluid from the tissues. This fluid may have an influence in diminishing the clotting time, it having been shown by Wright and others that the admixture of fresh lymph and blister fluid decreases the coagulation time of the blood.

Dr. O. M. Hoyt, Philadelphia, made some experiments with Dr. Loeb, studying about 75 rabbits, and using different quantities of calcium chlorid, injected intravenously. Calcium chlorid in certain quantities seemed to decrease slightly the coagulation time, but not to any marked extent.

Dr. Harry A. Duncan, Philadelphia, emphasized that in these 127 cases they followed Wright's work so that, if possible, they might confirm it, and that in addition to getting the coagulation time, Wright endeavored to determine whether the calcium salts had been taken into the blood, and whether the coagulation time had been increased by the administration of the calcium salt. With that in view, Wright made up a series of solutions of ammonium oxalate 1 to 500 to 1 to 4,000. Equal amounts of blood and each of these solutions were thoroughly mixed and drawn into capillary tubes, where they were allowed to remain one hour. That solution just preventing coagulation, was taken as the calcium content of the blood in terms of ammonium oxalate. Wright, as a result of his investigations, said that the calcium content was increased, that there was a greater amount in the blood after the administration than before. Duncan and his associates were unable to confirm this observation. Further, Wright made the statement, confirming other writers, that a high leucocytosis would increase coagulation, and that the administration of nuclein, which was supposed to increase the leucocyte count of the blood, would correspondingly increase the coagulation time of the blood. Nuclein did not increase the coagulation time. In cases of high leucocytosis, as in pneumonia, Duncan could not determine that the coagulation time was hastened. Wright, in his first paper, said that large doses of calcium chlorid were necessary to produce a result. Duncan administered large doses and took coagulation time one hour afterward, as Wright did, in a series of cases, and could not notice any increase in the coagulation powers. Dr. Duncan administered calcium over long periods of time, in a series of cases, and was not able to notice any increase in the coagulation time. Wright's observations were based on a very small number of cases, and Dr. Duncan's cases were picked cases. He endeavored when he administered calcium to pick out a case that had a long coagulation time. He was not able to ascertain that calcium chlorid does increase the coagulation time.

Dr. W. E. Robertson, Philadelphia, pointed out that the chief value of work of this kind, if it is confirmed by others, is that it serves to warn us of a false sense of security in giving chlorid of calcium, feeling that we will get good results. Many surgeons spoken to since these experiments were made expressed surprise; they had placed implicit confidence in calcium salts and in gelatin. What Robertson and Duncan attempted to show is that citric acid and calcium salts have a diametrically opposite effect, the calcium to increase coagulation, the citric acid to decrease it. They found no effect from the calcium salts, but found very positive effect from citric acid. The citric acid seems to be of value where thrombosis is threatened, and even where the instrument failed to show change in the coagulation time, yet they believe that the citric acid lowered the viscosity of the blood in one case. The patient had an epistaxis following the administration of citric acid. He had not had nose bleed for several years prior. The citric acid certainly seems to make the blood flow more freely. They were also unable to produce leucocytosis by the nucleic acid produced after the formula of McClintock and Vaughan.

Dr. G. Morton Illman, Philadelphia, said that it is well to note that the majority of the observations were on typhoid fever cases, and that the authors thus had an opportunity to observe the action of calcium on the coagulation time at all stages of a prolonged infection in which a favorable action of the calcium could have been of great benefit in preventing hemorrhage by promptly shortening the coagulation time, as claimed by Wright. No favorable action of the calcium could be observed, however, at any stage of the disease. It is admitted on all sides that tissue juices increase the clotting time of the blood. Is this not an argument, then, in favor of feeding typhoid patients, especially those having a long coagulation time? In feeding the body we supply the tissue juices which are essential to quick coagulation, and quick coagulation stops hemorrhage. The authors were able to confirm some previous observations (as shown by the charts) and also to make a few original notes, especially the prompt reaction of the coagulation time to hemorrhage, the coagulation time occasionally bearing a relation to the temperature and, in fact, that a long coagulation time is not of necessity followed by hemorrhage.

MILK AND ITS RELATION TO HUMAN TUBERCULOSIS.

JAMES T. GORTON, M.D.
YONKERS, N. Y.

During the last decade the scientific world has awakened to the fact that pulmonary tuberculosis in the human being is curable; and to the fact, also, that the milk supply is uniformly bad all over the world. Side by side two great world-wide movements are rapidly gaining impetus; the one for the stamping out of human tuberculosis, the other for improving the common milk supply. When the relationship between the percentage of milk infected with tubercle bacilli and the death rate from tuberculosis is more firmly established I am convinced that one campaign will include both these movements.

When it is considered that the staple article of diet of all human beings under five years of age, or roughly speaking 10,000,000 children in the United States, is cow's milk, and that experimental tests point to the presence of tubercle bacilli in the milk from nearly all dairies in every state in the union, and show approximately one-third of the 29,000,000 milch cows of this country to be tuberculous, we should have no difficulty in seeing just where the milk problem and the antituberculosis crusade merge.[1] All over the country we are building sanatoria for the treatment of incipient phthisis; and already the movement is under way to build sanatoria for incurable consumptives, so that in a few years the greatest human menace to the public health no longer will be free to scatter disease-laden sputum.

But how about the tuberculous cow? Is she to be allowed to infect the milk and thus our children? We have sufficient evidence to indict and convict the tuberculous dairy cow; we have sufficient knowledge of cattle breeding to rid our dairy herds of tuberculosis effectually, and to keep them tubercle-free.

With these ever-growing problems so prominent, no superficial treatment of these subjects will be satisfactory; all of their many phases must be considered.

IMPORTANCE OF PURE MILK.

The regular delivery of pure milk to the consumer means much more than even the average physician realizes. Milk is a natural culture medium, and it is bacteria, more than anything else, that we have learned to look for and object to as contaminating it. Dr. George W. Goler and the City of Rochester have proven that pure milk at a reasonable and moderate cost can be assured to the consumers of any community, if only its production, transportation, and vending be properly and honestly supervised.

In order to accomplish the desired results the department of health must be in deadly earnest; it must be intelligently and capably managed; and its powers must reach in an unbroken chain from the producer to the consumer. Armed with drastic ordinances for the protection of the community's milk consumers, with power to forbid the sale of substandard milk within the city, town, or village limits; with power to punish, and to punish adequately, each and every detected sale, or attempted sale, of milk that falls below the requirements, the board of health has the situation within its grasp. The argument frequently is advanced that no health board has any jurisdiction outside of its own geographical limits, but this loses its force as a plea for inadequate milk inspection when it becomes understood that any board of health can refuse a market for milk that it is not permitted to see produced.

PURE MILK AND PURE WATER.

The time is coming when the character of a city's milk supply will be the subject of just as careful investigation by the intelligent prospective homeseeker as is the status of that city's water supply to-day. We bathe in the water; use it for cleaning, for power, and for drinking. But we can boil it before we drink it. By proper filtration most of the bacteria can be removed from the water, thus rendering it safe for drinking.

We can filter milk, also, but this only removes the grosser particles of dirt which may be innocuous. We can boil it, too, and by so treating it render it harmless as a disease carrier, but harmful and dangerous alike to life and health for a young and delicate infant.

The duty of the municipality is to insure to its citizens pure, clean wholesome milk, unaltered by preservatives or heat. It sounds like an easy task, but the detail work necessary to insure a supply of milk of uniform quality and constantly low in bacteria is really appalling.

WHERE THE DANGER LIES.

I think I am correct in assuming that most medical men who are interested in the subject in a general way, believe the danger from tuberculous infection of milk to lie in cattle having pulmonary or udder tuberculosis. Until within a few months my own investigations led me to believe that unless a cow suffered from tuberculosis of the milk producing organs, or was permitted to infect the drawn milk by coughing into it bacilli-laden sputum from a diseased respiratory tract, she was not a menace to the milk. This belief is probably fostered by the frequently repeated statement that a cow may be far advanced with tuberculosis and still have no trace of tubercle bacilli in her milk at any time provided her udder and teats be free from disease. It is now generally conceded that tubercle bacilli do not gain entrance to the milk in a healthy udder from the general circulation.

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[1] The above facts and figures were gleaned from bulletins of the Bureau of Animal Industry of the United States Department of Agriculture

The following information, gleaned for the most part from a bulletin[2] of the United States Department of Agriculture, Bureau of Animal Industry, clears up this whole matter, and leaves very little room for doubt that a cow affected in any organ or to any degree is not only a positive danger in the milking stall, but a menace to the rest of the herd. Starting with the premises, first, that the tuberculin test is now universally accepted as a nearly infallible means of diagnosis, and second, that all tuberculous cows are dangerous the following experiments and findings are offered as proof: The dangerously tuberculous cow is described as an animal expelling tubercle bacilli from her body either with her milk, urine, feces or saliva, or in a vaginal discharge. Examinations of many specimens from diseased cattle made by the U. S. Experiment Station show that the commonest way is in the feces. Every case of bovine tuberculosis in which the animal was examined and found to be expelling bacilli in any way showed them in the feces.

INFECTED MANURE.

Almost any unfiltered specimen of milk procured under the ordinary conditions obtaining on the average dairy farm will be found to contain particles of cow manure. This manure may get into the milk pail by dropping off from an uncleaned belly or udder; it may be switched into the milk by a dirty tail; it may be carried into the pail or the milk by flies; or it may fall as dust into both milk and pail. All these causes of contamination, except the last named, can be eliminated by the painstaking dairyman, but the danger of dust infection of milk is almost beyond human control. Cow manure is dried, ground to powder or dust, and as dust circulates freely in the air of the cow stable, while with the excrement any contained tubercle bacilli are dried and float in the air, lodging in all parts of the stable, to be constantly stirred up by air currents and the movements of the cows and their attendants.

It is thus fair to assume that air borne bacilli from the intestinal canal of one cow may enter the lungs of another cow in the same barn and thus infect her, or may drop into the milk of the second cow and infect it. It seems reasonable, therefore, to conclude that the greatest danger from the tuberculous cow lies in the infectious character of the material that passes from her bowels. It is only fair to say, at this point, that this danger has been seriously considered for several years, and, to minimize this danger, there are now on the market and in use in a small way visor-topped milk pails with small partially protected openings as well as milking machines.

An investigation of the milk supply of the city of Washington, D. C., by the U. S. Public Health and Marine-Hospital Service showed fecal matter in 121 of 172 samples of milk taken at random. In other words, 70 per cent. of the milk of Washington contained cow manure. No figures are given as to the percentage of samples of Washington milk[3] found to contain tubercle bacilli, nor are there figures showing the number of cows supplying milk to that city and the percentage of tuberculosis among them. Still I think it is fair to say that the presence of cow manure in milk from a tuberculous dairy herd is sufficient evidence that the milk contains pathogenic bacteria—tubercle bacilli.

HOW THE INTESTINES BECOME INFECTED.

The source of the tubercle bacilli that appear in the feces of diseased cattle was not shown in the bulletin and on applying to Dr. Schroeder for information on this point he wrote me that in all cases that had gone to autopsy to date a tuberculosis of the lungs was found. "The tuberculous material is coughed up from the lungs and swallowed, and many of the germs in it pass through the stomach and intestines and out per rectum." Diseased cows passing enormous numbers of bacilli per rectum were shown in some instances to keep fat and look well for years. Many such animals rarely if ever cough and have no physical signs of disease. One series of federal tests made with infected milk from some of these apparently healthy cattle proved interesting by showing the extreme susceptibility of young calves.

PREVALENCE OF BOVINE TUBERCULOSIS.

The prevalence of tuberculosis among dairy herds has been variously estimated at anywhere from 10 per cent. to 90 per cent. of all our milch cows. One figure is obviously too low and the other quite as evidently too high. The most reliable figures obtainable indicate that about 33 per cent. of our dairy cows have the disease. The best evidence of the existence of a high percentage of tuberculosis among milch cows is the claim of some dairymen that a milk famine, national in its scope, would follow the condemnation and slaughter of all tuberculous dairy animals.

One German authority states that tubercle bacilli are present in 10 per cent of all the milk in that country. Experiments made by the New York City Health Department have shown 10 per cent. of the milk entering that city in cans to be so infected. Studies of the milk supply of Manchester, England, showed from 3 per cent. to 12 per cent. of its milk supply to be so contaminated at different times. We can see, therefore, that our statistics show nearly the same condition of milk the world over.

In a statement issued at Albany, Feb. 15, 1907, the Citizens' League of the State of New York declared that there is imperative need for state meat inspection and regulations to restrict the spread of bovine tuberculosis, and pointed out that until there is such an inspection the purity of the state's milk supply never can be assured. Such inspection, aside from its value in protecting the consumer from infected meat, would be of undoubted aid to the state department of health in a campaign for pure milk.

HOW TO CONTROL BOVINE TUBERCULOSIS.

When a human being shows manifestations of tuberculosis we can with delicate scientific tests, which daily are nearing perfection, settle the diagnosis and, should he prove to be diseased, set about so teaching him and caring for him as to prevent his being a source of danger to others during a long and slow convalescence. But we can not so teach or care for the dangerously tuberculous cow. We can, however, kill the animal and thus end its likelihood of spreading the disease; or it can be isolated from the healthy members of the herd and preserved, if valuable, for breeding purposes, and the milk specially treated before it is used. The time undoubtedly will come when an early recognition of tuberculosis in a milch cow will permit of the animal being restored to perfect health.

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[2] Schroeder, E. C.: The Unsuspected but Dangerously Tuberculous Cow.

[3] From 7 to 8 per cent. contain living, virulent bacilli.

The state cannot force a citizen to submit to examination for tuberculosis, but it can enact a law for the annual testing of all milch cows and the prompt isolation of all animals that react, and such a law can be enforced. The economic problem of ridding our dairies of diseased cattle is the one thing that stands in the way of radical and sweeping action by the state. The individual farmer cannot afford to stand the loss of even a small part of his herd, and the public is not yet ready to pay the cost of destroying all tuberculous cattle by general taxation. Nor is the public willing at this time to pay a price for milk which will permit the farmer to produce it in the most approved manner, and to so house and care for his dairy animals that tuberculosis will be eradicated.

RELATIONSHIP BETWEEN HUMAN AND BOVINE TUBERCULOSIS.

The whole significance of the presence of the tubercle bacillus in milk hinges on the question of the intertransmissibility of human and bovine tuberculosis. If Koch's announcement of July, 1901, is correct and there is no connection between this disease in man and in the milch cow, although the bacilli found in each are practically identical, then we need pay no attention to the tubercle bacillus in our milk..

While many authorities describe distinctive differences between bacilli that have developed in cattle and those found in human beings, they do not deny the ability of the germs from one to cause disease in the other. Koch's doubt as to the identity of the two arose from difficulty he experienced in transmitting human tuberculosis into cattle. von Behring and others answer with the accepted fact that certain germs will lose their virulence for some species of animals after passing through certain others, but yet prove still more virulent to a third species. It is far from a proven fact that the bovine bacillus loses its virulence by passing through man. In considering the results of the experiments on animals which I am going to quote the fact must be kept in mind that the adult animal is always far more resistant to the invasion of most infections than is the young of the same species.

A recent article[4] sheds a great deal of light on the present status of our knowledge of this whole subject. The author goes into detail concerning experiments conducted in 1905 by Schiveinitz, Dorset and Schroeder, on hogs, cattle and monkeys. Every animal used in the experiments was proven tubercle-free by the tuberculin test, and all animals were kept under the conditions necessary to make such work reliable from a scientific standpoint.

In the experiments on hogs the cultures used were taken from children and cows, and the conclusions reached were that tubercle bacilli of human origin possess as great pathogenic power for hogs as do bacilli of bovine origin. In the experiments on young calves cultures from both young and adult human beings were used and 33 per cent of the calves developed tuberculosis. In the experiments on monkeys with human and bovine cultures both were found to be highly infectious to monkeys.

In a series of laborious and painstaking experiments on guinea-pigs Dobroklonski found that it is entirely possible for the tubercle bacillus to pass through the normal intestinal mucosa of these animals. In discussing Dobroklonski's work Devine says:

> He is not able to say just how the entrance is effected, but draws the following conclusions: Tuberculosis may certainly infect animals through the digestive tract. For the infection to take place no lesion of the intestinal wall is necessary; no epithelial desquamation; no local change of any character; no previous inflammatory process. The tuberculosis virus—the bacilli as well as the spores—can pass through the epithelial covering of the perfectly normal intestine. The tubercle bacilli, as well as their spores, if they are not long in contact with the intestinal wall, are not capable of provoking inflammatory processes or modifications of the epithelial lining of this wall. The tubercle bacilli probably have no definite way of gaining entrance into the organism—for example by leucocytes exclusively—but they may be carried by the lymph current and later, being arrested at some places in the tissues, they there give rise to the formation of the tubercles.

In experimenting on cats Nocard proved that the young cat is especially liable to contract tuberculosis through the digestive tract.

In a series of experiments with sixteen young pigs that were fed milk from tuberculous cows only one developed a primary intestinal lesion. All the others had an infection of the mesenteric and also of the cervical glands. From this Tjaden infers that a great number of the cases of cervical tuberculous adenitis in children may be caused by tuberculous milk, and that infection through the food is not often indicated by tuberculosis of the intestines.

Cipollina in an experiment in feeding tuberculous milk to a tuberculin tested ape who succumbed to the infection, was able to prove that the ape is susceptible to bovine tuberculosis through the digestive tract, and that bovine tubercle bacilli may pass through the intestinal wall without any lesions at the point of entry.

From the findings of all these men it is safe to conclude that an easy route for tubercle bacilli to follow in forcing an entry into a healthy animal's organs is through the intestinal mucosa. It also appears that a great many animals are equally susceptible to the bacilli of bovine and human tuberculosis, and it appears, further, that young animals fall victims to tuberculosis through alimentary canal infection much more easily than do older animals. Knopf and von Behring have independently advanced the theory that it is probable that a high percentage of those who first show signs of tuberculosis during adolescence have contracted their infection during infancy or early childhood, and that the foci of disease have remained dormant during years of outdoor life only to awaken to activity at the time when maturity is approaching, and the demands on the vitality are on the increase.

A recent report from an investigating commission in England demonstrated that in the tuberculous adenitis of children 25 per cent. of the cases examined showed the presence of the bovine type of bacillus. At a recent meeting of the New York State Medical Society Dr. Wm. L. Stowell read a paper entitled "A Study of Children Fed on the Milk of Tuberculous Cows." In this paper he tells of the New York Infant Asylum inmates receiving all their milk from the institution's own herd, of which 90 per cent of the animals recently reacted to tuberculin and were slaughtered. Dr. Stowell states that the mortality of 10 per cent. (from tuberculosis) in this institution is the same as the mortality for the nation and yet these children had been fed on tuberculous milk. Only 6 of the 28 reacting cows in this herd had pulmonary tuberculosis, and only two of these were bad cases, and repeated tests and search showed tubercle bacilli in this milk only occasionally, and never in large numbers. The statement, therefore, that children fed on tuberculous milk do not die in greater numbers from tuberculosis than those not so fed is not proven in this instance.

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[4] Devine, J. F.: Milk Production, N. Y. State Journal, November, 1907.

All physicians in active general practice encounter the various frank tuberculous conditions of children, such as glands in the neck, bone and joint lesions, and meningitis. In many cases there is no known local source of infection, so that suspicion has for many years been justly directed toward the milk supply.

Having fully before us the evidence that the young of most domestic animals are readily infected by tuberculosis contracted through the ingestion of germladen milk, is it not reasonable to argue and to believe that the human young are affected in the same way? When we realize that one-third of our milch cows are tuberculous; when we consider the most likely mode of milk contamination—through the feces; when we learn the percentage of milk actually proven to contain living tubercle bacilli—frequently as high as 10 per cent.—wherever such investigations have been instituted; and when we see by experiments the probable susceptibility of young and growing domestic animals, can we any longer neglect the need of such radical, concerted, and national action as will rid our dairy animals of tuberculosis and free our milk from all danger of tubercle infection?

METHODS OF MEETING THE PROBLEM.

If every milch cow were tested with tuberculin, with adequate legal backing the proper authorities would know at once how to proceed to eradicate completely tuberculosis from our dairy herds. A great step toward pure and safe milk would thus be inaugurated, and in five years there would need be no living tuberculous milch cows. A bulletin on "Bovine Tuberculosis in Wisconsin," issued by the Agricultural Experiment Station of the University of Wisconsin clearly points out the methods of procedure by which this most desirable end might be attained, as follows:

1. All milch cows should be tested by tuberculin annually.

2. When dairymen in general have determined whether their herds have the disease or not, they can easily prevent its further spread. In case of herds now free from the disease future safety is insured by testing all animals introduced into the same. In case of affected herds, separation of reacting animals and thorough disinfection of quarters occupied by the herd will stop further progress.

3. A most important question is what shall be done with the reacting animals? By far the larger majority of animals that respond to the test have the disease in a latent form, or at so early a stage of development that neither their milk nor meat is of necessity dangerous for use. Still, inasmuch as they react to the test they show the presence of the disease germ in their systems, and as there is no simple way in which it is possible to detect just when the product may become dangerous, it is wise, of course, to regard the milk of all reacting animals as unsuitable for use until it is first treated in some manner to render it safe.

4. The calves from reacting mothers can in almost ever instance be raised in a perfectly healthy condition by removing them from the cow at birth and feeding them on boiled or pasteurized milk, or that from non-reacting animals. It has been fully demonstrated that healthy herds can thus be raised from the originally diseased animals. This often furnishes the least expensive way of controlling the disease, and meets the objection of those who insist that immediate slaughter is unnecessary. Only such infected animals should be saved, for the time being, as show no well marked physical symptoms of the disease.

5. The veterinary laws should be so revised that under the auspices of the state the owner may have the option of retaining valuable animals under quarantine in order to permit him to raise from these affected animals healthy progeny. The state should give partial compensation for the destruction of affected animals as is done at present, but only where the infected quarters have been thoroughly and efficiently disinfected. The state should require that all cattle imported for breeding or dairy purposes should be subjected to the tuberculin test before shipment or as soon as they are brought into the state.

To the regulations suggested by the University of Wisconsin I think the following should be added: No human being afflicted with tuberculosis should be allowed to handle the cattle, milk them, or feed them. The presence of such persons should not be permitted in the stables or in the milk house. Care should also be taken that persons known to be so affected should not by careless spitting infect the cow yard or pastures.

THE INCREASED RETAIL PRICE OF MILK.

If these regulations were incorporated into laws that were enforced and faithfully lived up to no great hardship would be imposed on our milk producers, and in the end they would themselves be benefited. An ideal condition of health of our dairy animals could undoubtedly be brought about in the manner described, but the financing of this undertaking by the dairy owners could only be accomplished by putting up the retail price of milk. And in order to maintain this state of affairs the price of milk would have to stay up. It has been stated on very good authority that one-half of the farmers on the Atlantic seaboard now make up a yearly deficit on their dairies from profit made on some product other than those from their cows; and that if they kept books they would unquestionably discover this fact and sell off their cows. From 1900 to 1907 the cost of grain increased 31 per cent., labor has advanced 45 per cent. in cost, and it now costs about 100 per cent. more to the farmer for each quart of milk, and yet the general advance in the retail price of milk is only 1 cent a quart, or about 14 per cent.

The many details of a careful routine of clean handling of milk from the time it leaves the barn until it reaches the consumer need not be enumerated here. There have been many schemes proposed for the elimination of danger from contaminated milk, or milk coming from a questionable source. I do not believe in permitting milk to be sold at all which is known to be infected with tubercle bacilli. Nor can I honestly say that I believe commercial pasteurization of dirty or questionable milk is the proper method of safeguarding our children and ourselves.

The Milk Dispensary of St. John's Riverside Hospital has undoubtedly lowered the infant mortality of Yonkers year after year since 1894, during the four hot months, by establishing and maintaining stations for milk for infants, at which have been sold properly modified and pasteurized milk in original feeding bottles. For use among the poor, many of whom have no ice, and most of whom are ignorant of the menace of milk bacteria, pasteurized milk in summer is undoubtedly a safer food than the highest grade of unchanged pure milk. For the reasons just given it is safe to assume that there may always be a necessity for summer milk dispensaries of this character.

Until such time as ideal conditions can be brought about in every department of milk production and vending every local board of health should require efficient pasteurization, a few hours before delivery to the consumer, of all milk which it finds unsafe for consumption as raw milk. All such milk must be put in sterile containers, and properly marked with the time and date of pasteurization and the degree and duration of temperature to which it was subjected.

In conclusion it is only fair to say that interest in the question of tubercle bacilli in milk has not in my mind minimized the gravity of the annual death rate from milk-induced gastroenteritis of children, or from milk-borne epidemics of scarlet fever, diphtheria, and typhoid. With these diseases we have an immediate evidence of the mischief done, but the entrance of tubercle bacilli into any of the glands, organs, or tissues may be unattended with any symptoms, or at least with any that are appreciable to the family or physician of the little victim. And it may be months or years later that the child so infected becomes crippled, or shows evidence of tubercular disease that may partially maim him, or end his life. It is the knowledge that practically one-seventh of us are carried off by tuberculosis, together with the uncertainty of just what percentage of the whole number so dying are infected during childhood through milk, that makes the freeing of our milk from tuberculosis so crying a necessity.

181 Park Avenue.

ACUTE GLANDERS.

REPORT OF A CASE, WITH A REVIEW OF RECENT LITERATURE, AND A COMPLETE BACTERIOLOGIC REPORT.*

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AND

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CLINICAL REPORT BY DR. MEYER.

Acute human glanders, though not uncommon in Russia, is an extremely rare disease in New York, but nine cases having been reported to the New York Board of Health during the past two years. Such a case, therefore, should be of sufficient interest to warrant publication; hence the following detailed report of a case admitted to the First Surgical Division of Mount Sinai Hospital (service of Dr. Gerster[1]), Aug. 28, 1907. Because of a suspicion that he might be a sufferer from glanders or some similar contagious disease the patient was transferred from the general to the isolation service.

A smear taken from the pus on admission showed bacilli resembling those of glanders (see below) and a tentative diagnosis of acute glanders was made. In view of the diagnosis, the New York Board of Health was notified, but the diagnostician who saw the case refused to consider it one of glanders, nor was this diagnosis ever officially admitted by the board, in spite of the suspicious character of the lesions and the conclusive bacteriologic findings. The horses in the stable over which the patient lived were thoroughly examined by them without finding any evidence of disease.[2]

History.—The patient, a Russian, 38 years old, a presser by occupation, four months in the United States, was semi-stuporous on admission, the history being obtained from friends. The most important part of the history, from the standpoint of diagnosis (viz., his residence over a stable), was not obtained until the death certificate was being signed, and then only after the most careful questioning. The history as obtained was, that the patient became suddenly ill a week before admission, with chilly sensations, general malaise, and high temperature; he soon became delirious. Two days later a painful tender swelling (not reddened) was noticed on the inner side of the left leg. The following day it was incised, but the wound showed no tendency to heal. The patient became rapidly worse, until on admission, August 28, his condition was one of extreme sepsis.

Examination.—The physical examination at this time showed: Small pustules on uvula and pillars of fauces. Joints tender and swollen. Glands, inguinal, very much enlarged. Lungs, a few râles over both chests, but no signs of consolidation. Skin: (a) Numerous small acne-form pustules surrounded by reddened areas; (b) larger pustules having flattened centers; (c) numerous shot-like swellings, freely movable under normal skin; (d) reddened indurated swellings with soft centers involving the muscles; the majority had red unbroken skin over them; on inner aspect of left leg was one that had been incised, showing a necrotic ulcer extending into muscle; there was a scanty discharge. Penis: Two large hemorrhagic bullæ on corona; left testicle enlarged and tender.

Two days before death, a dusky red area, with bluish center, appeared on the sole of the left foot (this was the first lesion on the soles of the feet). The day preceding death, the eruption became very profuse, involving every portion of the body, a great number of nodular swellings becoming soft and fluctuating (but not rupturing). A nasal discharge first appeared about this time.

A blood culture taken on the day of admission (August 28), showed *Bacillus mallei;* a culture taken two days later was also positive. Inoculation experiments gave typical results (see bacteriologic report).

Treatment.—The patient's condition on admission was such that it was apparent that no treatment would be of any avail. He was, however, put on the usual supportive and stimulating treatment; the pustular lesions were treated with Lugol's solution. An attempt was made to obtain some bullock's serum for injection, it being held that as cows are immune to glanders, their serum may contain something inimical to the growth of the *B. mallei.* Since a supply of the serum could not be obtained in time, this method of treatment could not be employed. Wherever possible, it should, however, be used, as it affords the best hope in this terrible malady.

In reviewing the literature,[3] one is struck by the failure of making even a tentative diagnosis of glanders in the early stage of the disease. The diagnoses most frequently made are pneumonia or pleurisy, acute articular rheumatism, or typhoid fever; among other early diagnoses made were cellulitis, erysipelas, influenza, impetigo contagiosum, and tertiary lues.

The main reason (aside from the comparative rarity of the disease) for failure to make a diagnosis, especially in the early stages, is due to the fact that the eruption does not usually appear until the disease has lasted some time. In the majority of the cases the diagnosis has been suspected only a few days before death, when a suggestive eruption appeared in the course of a disease not developing along the lines of the original diagnosis.

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*Read in abstract at the meeting of the Harlem Medical Association, December, 1907.

[1] To whom we are indebted for permission to publish this case.

[2] It is worth noting that 530 horses were condemned and destroyed by the New York Board of Health during 1906, and 470 during the first nine months of 1907. During the same periods there were, respectively, six and three cases of human glanders.

[3] The following literature may be referred to: Hoke: Prager med. Wchnschr., xxxii, p. 353. Presbyterian Hosp. Rep., 1904. Silkman: Med. Rec., Oct. 5, 1907. Boston City Hosp. Rep., 1905. Pest, A.: Bost. Med. and Surg. Jour., Nov. 23, 1905. Beattie, D. W.: West. Med. Review, i, p. 46. Woodcock, L. A.: Lancet, Lond., Feb. 3, 1906. Anderson: Glasgow Med. Jour., 1905, lxiv, p. 281. Stephenson: Trans. Royal Academy, Dublin, xxiii, p. 313. Cheney: California State Jour. Med., 1905, iii, p. 220. Wherry: Glanders in Manila, Bureau Public Printing, 1904, Form 24. Spencer: Lancet, Lond., 1905, i, p. 997. Ames, J. L.: Boston Med. and Surg. Jour., 1905, clii, p. 42. McFadyean, J.: Jour. Comp. Path. and Ther., 1904, p. 295. Robins, G. D.: Canada, 1906. THE JOURNAL A. M. A., 1889. Goodall: Lancet, Lond., 1905, ii, p. 589.

The case reported differed from the majority of the cases recorded in literature in that it did not markedly simulate any other disease; it resembled them in that the diagnosis could not possibly have been even suspected during the first three or four days, as the only symptoms present (according to the history) were those of sepsis. Just when the skin and joint lesions first became manifest could not be ascertained. They were not present the first two days, although they were well marked on admission, one week after the onset. While typhoid might have been suspected before the skin lesions made their appearance, the onset was not at all characteristic of this disease.

A further item of interest gleaned from a cursory review of the literature of the last three or four years is that of the number of cases reported in the United States. Out of a total of 32 cases of acute glanders reported, 18 were in the United States (4 of these in New York City,[4]) 13 in Europe and 1 in Manila. Of course, many cases are not reported in the literature.

In a typical case, with a good history, the diagnosis should not be difficult, provided one has the disease in mind. Acute glanders in man, however, is seen so seldom that it is usually not even thought of, especially when there is little in the way of skin lesions. A bad coryza, which may be the most marked local sign of glanders, is, of course, often present in grip or pneumonia. Many of the cases recorded in the literature, in which mistaken diagnoses were made, showed neither coryza nor skin lesions at the onset, this being often characterized by chill, followed by typical symptoms of pneumonia or grip or by joint symptoms simulating rheumatism. Only after a variable time had elapsed did there appear nasal symptoms or a skin eruption which suggested the possibility of glanders in any case. When, however, with a more or less septic condition, there appear on the skin indurated painful reddened areas with soft centers, with less tendency to rupture than ordinary abscesses, and which, when opened, discharge a thin serosanguinous material, the resulting ulcer having a necrotic base, usually involving muscle, and with no tendency to heal, glanders should be thought of, and all the means at our disposal should be made use of in aiding us to reach a correct diagnosis.

The injection of mallein, which is employed in diagnosing incipient or latent glanders in horses, is of no service in an attack of suspected acute glanders in man, as a positive diagnosis depends mainly on a rise of temperature (in addition to a local reaction), and this is already present. We have heretofore depended on finding the *B. mallei* in the cultures, and in the typical results obtained by inoculation. These means will, in practically all cases, enable us to reach a diagnosis, but they are time consuming, requiring from one to three days to furnish results.

Recently a new method[5] of arriving at a diagnosis has been devised, one based on the phenomenon of agglutination and precipitation, and, therefore, similar to the Widal test in typhoid.[6] This method, according to the report, is used officially in the diagnosis of glanders in horses, in Austria and Prussia, and is considered fairly accurate.

It may not be out of place here to quote from Councilman's[7] article on the diagnosis of glanders: "Taken in its entirety, the clinical history of the disease is almost characteristic, but at a given period, and, indeed, for a long time, it may be impossible to make the diagnosis." Quoting further: "The skin lesions which are so prominent in the horse appear in man only in the later stages of the disease, and abscesses in the muscles (which are very rare in the horse) are common in man and often constitute the first evidence of the disease. The acute disease begins in man with chills and high fever, which sometimes takes a typhoid form. There is often intense pain in the joints and muscles, with general weakness and malaise. This condition is followed by the development in the muscles or subcutaneous tissue of hard swellings, which rupture and discharge a thick mucoid pus mixed with streaks of blood. In some cases there is a diffuse erysipelatous inflammation of the skin, preceding the formation of pustules; or large ulcers may be formed by necrosis of the skin. Nasal discharge is not so marked as in the horse, but examination rarely fails to show nodules and ulcers; muscle abscesses are usually present. The pustules are most common toward the termination of the disease, and often appear only just before death. The acute form is almost invariably fatal, usually between the sixth and thirtieth days of the disease."

With the exception of one case of laboratory glanders, all cases we have found reported in the literature were fatal. The only treatment employed in this case (in which there was a six-day incubation period with symptoms resembling typhoid) was the ordinary surgical treatment of an abscess. The patient was ill about three months, with several relapses of three to four days' duration.

BACTERIOLOGIC FINDINGS BY DR. CROHN.

The bacteriologic findings in this case are noteworthy, particularly on account of the demonstration of the value of blood cultures in the early diagnosis of these conditions. The results obtained were as follows:

As was previously mentioned, the patient was admitted with a diagnosis of a general staphylococcemia, but did not answer, in many respects, to the typical picture corresponding to a bacteriemia of this type. At this point, the diagnosis of a general infection with the glanders bacilli was suggested, and steps were immediately taken to confirm the clinical diagnosis by laboratory means. This consisted first of smears and cultures from the pustules; second, emulsions of pustular contents for animal inoculation; third, blood cultures. The first blood culture was taken three hours after admission, and 15 c.c. of blood were withdrawn from the median cephalic vein. At the end of 48 hours, all the media showed a culture of glanders bacilli.

The smears which were taken from a number of the pustules over the body, presented the following: Gram stains of the smears showed rather indefinitely staining Gram-negative organisms. On utilizing, however, dilute carbol fuchsin or methylene blue there were seen long, slender bacilli, colored rather faintly, and having an unevenly tinted cell body, with numerous darker staining areas. The general configuration of these bacilli was suggestive of the *B. mallei*.

At the end of forty-eight hours, the cultures from the pustules showed a slight, grayish, confluent growth along the line of inoculation on all the media. Emulsions were made of some of the contents of the pustules, and four male guinea-pigs were inoculated intraperitoneally with small doses of the mixture. On the same day that the cultures from the skin lesions showed growth, the guinea-pigs which had been inoculated with material from the pustules began to react. The animals appeared sick, showed increased temperature, refused food, and evinced considerable tenderness on handling the lower part of the body. The scrotum showed considerable swelling, was distended, reddened and hot. The testicles were enlarged and painful. (This last effect of the intraperitoneal injection of glanders bacilli into male guinea-pigs is called the "Straus reaction," and is regarded as pathognomonic for this organism.) Within the next three days all of the animals had died with the picture of a general infection.

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[4] The New York City Board of Health reported six cases in 1906.

[5] Jour. Infec. Dis., May, 1907.

[6] Parke Davis & Co. furnish an agglutination outfit for this test, with full directions.

[7] Wood's Handbook.

At autopsy the animals showed multiple foci, consisting of small localized caseous areas in the parenchymatous tissue of many of the organs (spleen, liver, lungs). The tunica vaginalis of the scrotum was enormously distended, and contained purulent, greenish-yellow pus. Each testicle was enlarged from the normal size, that of a pea, to that of a rather large flat grape (1.2 to 2 cm. in diameter) and consisted of a diffuse, caseous, broken down mass of semi-necrotic material. The inguinal lymphnodes were enlarged. Microscopic sections showed the *B. mallei* in all the organs examined.

On the third day after admission, another blood culture was taken. This culture at the end of forty-eight hours, showed a positive growth of the glanders bacillus, similar to the first blood culture. The results of these two cultures may be summarized as follows: The first culture was taken on the day of admission while the patient's temperature was 103 F. The earliest colonies were seen on the plates containing serum. The average number of colonies in the first blood culture was 0.9 bacilli per c.c. of blood. The second blood culture, taken two days later, while the patient's temperature was about 102 degrees, averaged 11 bacilli to the c.c., showing a rapid increase in the severity of the infection as the powers of resistance of the individual diminished. The guinea-pigs, inoculated with cultures of the bacilli recovered from the blood, reacted similarly to those inoculated with material from the pustules, that is, showed the characteristics of a Straus reaction.

The clinical diagnosis of this case was thus corroborated in the laboratory by: First, smears from the pustules showing morphologically characteristic bacilli; second, cultures from the pustules giving characteristic growth on media; third, two positive blood cultures; fourth, inoculation of organisms recovered, into guinea-pigs, with typical Straus reaction and death. (Unfortunately, the family refused permission for autopsy on the deceased).

The interest in this case lies particularly in the fact that we were able to confirm the clinical diagnosis by two positive blood cultures. This is important since it should be remembered that the organisms are difficult to demonstrate and isolate from the pustules of the skin. Gram stain alone may be unsuccessful, dilute carbol-fuchsin or Loeffler's methylene blue are more satisfactory. A search through the literature reveals the fact that in many of the undoubted cases of acute and chronic glanders, considerable difficulty was found in staining and recognizing the organisms in the skin pustules. In such a case, and where animal inoculation is impossible or unsatisfactory, a blood culture will, in a very large proportion of cases, make the diagnosis.

In our case the blood cultures were taken early in the course of the disease (first day of observation); positive growth was seen within forty-eight hours after the culture was taken, and the organism was identified with facility on the media and later by animal inoculation. The value of a positive culture early in the course is readily apparent from the fact that many cases of acute glanders simulate clinically the picture of typhoid fever and are often differentiated from it with difficulty. Not only in differentiating from typhoid fever, but also, when the case is seen early, from pneumonia, from acute articular rheumatism, from staphylomycosis, etc., the blood culture is a desideratum and presents a rapid and practical diagnostic value. In acute glanders, in about 50 per cent. of the cases, positive blood cultures, where attempted, were obtained early in the disease. Pappenheimer,[8] Coleman and Ewing, Lewis and Duval, and Pilcher[9] have recently reported success in similar cases.

THE OCCURRENCE OF GLANDERS IN MAN.*

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CLINICAL REPORT BY DR. BEVAN.

During October, 1907, I was called to Milwaukee to see three cases which had puzzled the attending physicians and which presented interesting and difficult problems. There were three brothers, farmers, who lived near each other in central Wisconsin, and the son of one of the men involved in the case. One of the brothers, a man of about 35 or 40 years of age, had traded for a horse, which had been brought down from the northern part of the state. This horse had at the time, or soon after his purchase, developed a swelling under the jaw. The new owner lanced this swelling, and soon after he developed an infected hand. The hand infection was followed by general systemic infection, multiple abscesses and death within a few weeks.

The other horses on the farm were taken ill, and some horses were borrowed from a brother, who lived six miles away on another farm. The borrowed horses also developed the same illness and were then returned to their owner. The owner, the second brother, was shortly afterward taken ill with an acute illness resembling somewhat acute articular rheumatism. In the meantime a son of the man who had died was seized with similar symptoms, and another brother, who had had some trouble with a knee-joint for some time, suddenly, after a slight injury, developed an enormous, acute, painful swelling of the knee, with temperature, but without any severe, general symptoms.

By this time the families of the patients were in a panic; no one seemed to know what ailed them, and the three individuals were sent to St. Joseph's Hospital, in Milwaukee, and I was called as I had had some experience with lumpy jaw and blastomycosis, and these lesions were considered as possible causes of the small epidemic. I took with me one of the house staff at the Presbyterian Hospital, Dr. W. W. Hamburger, who had done some creditable laboratory work in both actinomycosis and blastomycosis.

On examination I found the following facts:

CASE 1.—*History.*—A man, aged about 40, had had trouble with his knee before the other cases occurred, but who rather suddenly developed an enormous swelling after a trifling injury about the time the other patients were taken ill.

Examination showed a man in fair health, somewhat anemic and below normal weight, with a great swelling of one knee looking somewhat like an enormous Charcot joint. There was no syphilitic history or ear marks of syphilis, only the history of slight swelling and then after slight injury the sensation of something giving way, and the great pain and swelling pointed clearly to a pathologic fracture, due, probably, to sarcoma. Later, the limb was amputated and sarcoma was found. This case was shown to be entirely independent of the other cases and simply a coincidence. It was, however, for a short time, somewhat confusing, as the belief was general that it was due to the same disease from which the others suffered.

CASE 2.—*History.*—This man was a few years younger than his brother, in Case 1. A short time after the return of his horses from his brother's farm, they were taken ill. Shortly after, he himself was taken ill, without any apparent cause. He had no scratch or visible point of infection. He was seized with a high fever, which varied from 100 to 104 F., and which still continued when I saw him about four weeks after the onset. He had a slight cough and a very offensive breath. He had had severe pains and swelling about his joints, especially his wrists. These swellings seemed to be about rather than in the joint proper. He was conscious and had had no delirium. He had developed a number of subcutaneous and muscular abscesses; these had been opened and packed with iodoform gauze. One of the abscesses near the right sternoclavicular articulation had, after being incised, left an ulcer covered with gray, unhealthy granulation which showed little tendency to heal. The man was weak, had lost weight, and presented a fairly typical picture of pyemia.

CASE 3.—*History.*—This boy, aged 14, was the son of the man who had lanced the lump under the horse's jaw, and who had died in a few weeks. He had been ill several weeks, had the same high, irregular, pyemic temperature as the patient in Case 2, varying from 100 to 104 F. He had no visible point of infection. He had had pains and swellings about his joints, and a single abscess in the triceps muscle of the left arm. The attending physician had that morning incised the abscess and found several ounces of pus, some of which he had saved for us.

We made smears of the pus from Case 2 from the ulcer near the right sternoclavicular articulation and found it negative. We made smears from the pus from the abscess in the boy's arm and found a few bacilli, consistent with being the bacilli of glanders, and what was suggestive was that there were no other micro-organisms.

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[8] Pappenheimer: Proc. N. Y. Path. Soc., p. 173.
[9] Pilcher: Am. Surg., 1907, xlv, p. 444.
* Read before the Chicago Medical Society Jan. 8, 1908.
*From the laboratory for clinical research of the Presbyterian Hospital.

Analyzing all the facts in the case, I ventured the clinical diagnosis of glanders and advised rigid quarantine and great care on the part of the attendants in order to prevent the spread of the disease. We made a number of cultures and secured a quantity of pus from the abscess opened the morning of our visit. Dr. Hamburger will report on these examinations (*vide infra*).

During the last few years I have had in my service at the Presbyterian Hospital, or I have seen in consultation and have, for the most part, had the cases worked up in my laboratory, about thirty cases of the supposedly rare forms of infection—actinomycosis, blastomycosis and glanders. There have been more than twenty cases of actinomycosis, six or seven cases of blastomycosis and three cases of glanders. I feel confident that the great majority of these cases would have been overlooked if we had not been constantly on the lookout for them and made routine examinations of pus and tissue. I think that if my statements are true, we must necessarily conclude that these infections are much more common than is generally supposed and that they are very frequently overlooked.

What does it mean when a small group of men like Dr. J. N. Hyde and his associates, Drs. Montgomery and Ormsby, within a few years recognize 60 or 70 cases of blastomycosis, with ten or more cases of general infection? It means that they have learned to recognize these cases, which a few years before were diagnosed and treated as something else—tuberculosis, pyemia, etc.

I had never before recognized a case of glanders, but now, in thinking over some of the obscure infections which I have seen, I feel positive that I handled at least two other cases without recognizing the condition—one in a cowboy, which simulated smallpox, and another in a Jewish boy from the Ghetto, with the picture of pyemia. Each of these patients died without a definite diagnosis being made.

The lesson to be learned from these cases is: Conduct your own clinical laboratory and make routine examinations of pus and tissue, and these supposedly rare infections will be shown to be more common than we have believed, and, what is more important in actinomycosis and blastomycosis, the recognition will mean proper treatment and usually cure, and in glanders the recognition will mean proper quarantine and safeguards against the infection of others. Six or eight laboratory workers have died from infections acquired while working with glanders.

The limited epidemic, which I thus briefly report, was of mild type; almost all the horses recovered, and only one of the three patients succumbed. The other two were, from recent reports, improving and seemingly well on the road to recovery.

BACTERIOLOGIC REPORT BY DR. HAMBURGER.

The diagnosis of glanders may be divided into the clinical and the biologic. As the clinical facts are the ones which the physician must first collect and analyze, I shall briefly speak of them as a preliminary to the laboratory findings.

Councilman[1] defines glanders as "an infectious disease caused by the *B. mallei* and characterized by foci of inflammation, often assuming a nodular form, in the skin, subcutaneous tissue, muscles and lungs. The disease is most common in the horse; the cases in man arise by infection from the horse or some member of the equidæ." To this must be added the cases of infection in laboratory workers, of which I will say more later.

The disease was first described under the name "malleus" in the fourth century (Hecker[2]). Schilling published the first reliable observation of the disease in man in 1821, and this was followed, in 1837, by Rayer's[3] monograph on the human form of the disease. In 1840 the contagiousness of the disease, which had always been so considered by the early writers, was definitely established by animal inoculation.

Glanders in man appears in both the acute and chronic form, similar to the disease in horses. The acute disease begins usually with an abrupt chill and fever, although a slow typhoidal onset has been observed. There is often intense pain in joints and muscles, with general malaise and weakness. Pilcher,[4] in a report of two cases in New York, in 1907, speaks of the significance of the extreme degree of prostration, out of proportion to the physical signs; also of the early signs of muscle pain from deep abscesses, and the early involvement of various larger joints.

This condition of onset is followed by the development in the muscles and subcutaneous tissues of hard swellings, which rupture and discharge a thick mucoid pus, streaked with blood, forming multiple, variously sized pustules and ulcers, the latter being slow and chronic in their course, showing no tendency to heal and being surrounded by the classical bluish-red areola. The acute form is almost invariably fatal, death occurring usually from the sixth to the thirteenth day of the disease.

The chronic form is not nearly so characteristic, and, therefore, more difficult to diagnose. There is usually an infection from a local lesion of the extremities, followed by a lymphangitis extending to the neighboring lymph nodes. Later, various subcutaneous and muscular abscesses appear. In nearly all of the chronic cases reported, the disease passes into the acute form shortly before death. Sims Woodhead[5] places the mortality of the disease at 40 per cent; Butler[6] at 50 per cent.

The occupation of the patient is of the utmost importance in arriving at a clinical diagnosis. Coachmen, soldiers, veterinarians, hostlers, farmers and more recently laboratory workers are those liable to the disease and in whom it is most frequently encountered.

The disease must be differentiated from typhoid, pyemia, rheumatism, erysipelas, variola, syphilis, tuberculosis and anthrax (Edwards[7]), and to establish this positively we must call in the assistance of the laboratory worker. The eruptive stage may resemble smallpox, but the glanders pustules appear in successive crops and ulcerate rapidly; they are not umbilicated and not as uniform as variolous pustules. The chronic type may offer special difficulties. Certain types of syphilis closely resemble chronic glanders. Even the destructive changes about the nose are simulated. The differentiation may rest on the effect of specific treatment. In tuberculosis the lungs are generally the chief seat of the disease; the nose and skin usually escaping (Ravenel[8]). A number of biologic methods may be employed to definitely fix the etiology of any suspected case. I shall first describe the technic used in this instance and then briefly review the various methods suggested by Wherry,[9] Councilman, Ravenel, Moore and Taylor,[10] and others.

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[1] Glanders, Ref. Handb. Med. Sciences, 1902.

[2] Geschichte der Heilkunde, Berlin, 1829.

[3] De la Morve et la Farcine chez l'homme, Paris, 1837.

[4] Glanders in the Human Subject, Ann. Surg., July, 1907, p. 444.

[5] Allbutt's System of Medicine, 1897, ii, p. 513.

[6] Diagnostics of Internal Medicine, 1905, p. 745.

[7] Text-Book on Medicine, 1907.

[8] Glanders, Osler's Modern Medicine, iii, p. 42.

METHOD OF DIAGNOSIS.

The bacteriologic procedures by which these cases were diagnosed as glanders were carried out as follows:

An aspirating syringe, lying in a sterile basin containing 30 c.c. of pus, was examined. It was found to contain a translucent, opalescent, mucoid pus of extreme viscosity. This material had been withdrawn from the elbow abscess of the boy six hours before. Smears were made and stained with Loeffler's alkaline methylene blue, in the usual manner. The microscope showed many polynuclear pus cells, embedded in a thick meshwork of fibrin. After tedious searching, a single extracellular bacillus was discovered. After another fifteen minutes' search a second, free-lying organism of similar morphology was found. These bacilli appeared as slender, straight rods, larger than *B. coli* and somewhat thicker than *B. tuberculosis;* with rounded ends; some irregularity of protoplasmic staining. There was no evidence of cocci or other bacilli.

Some of the pus was placed in a 10 per cent. potassium hydrate solution, and a cover slip dropped on, and a search for blastomycetes instituted, with negative results.

With the platinum loop several abscesses were scraped and smears made and stained, with no bacteria being revealed. These abscesses had been opened earlier, at various periods during the course of the disease, curetted, packed with iodoform gauze, etc.

Cultures from pus and abscesses were made into bouillon, slant glycerin agar, and blood serum, and the remainder of the pus was placed in a bouillon tube. Four hours later, during which time the cultures were exposed to extremes of heat and cold in their journey from Milwaukee to Chicago, these tubes were placed in the incubator and allowed to remain over night.

Sixteen hours after the inoculation, the bouillon and glycerin agar tubes showed evidence of beginning growth, but of too slight extent to be identified. The bouillon containing pus was inoculated into a male and female guinea-pig and a rabbit.

With a few exceptions, all of the tubes showed evidence of growth after forty-eight hours, particularly the agar slant cultures. Some of the cultures, particularly those inoculated from old abscesses, showed a mixed staphylococcus growth. The cultures in forty-eight hours showed a short slender bacillus, sometimes occurring in pairs, with barred-stained protoplasm, and marked polar staining; gram negative; in short, approaching very closely the morphologic characteristics of *B. mallei.*

The male pig was inoculated intraperitoneally after the method of Strauss. Within forty hours enlargement and tenderness of the testicles became manifest. This progressed until on the fifth day the scrotum was swollen to eight or ten times its normal size. The pig was killed on the seventh day with chloroform. Autopsy revealed a small, round, circumscribed area of induration in the skin and peritoneum around the injection point. The testicles were swollen and indurated, the right one more so than the left (Fig. 7). They were with difficulty separated from the scrotal tissues because of adhesions. A glass pipette plunged into the right testicle revealed abundant, yellow-white, mucoid pus, which was smeared and stained after tube inoculations had been made. The smears showed barred-stained, gram-negative bacilli (Fig. 4.) The tube cultures, after twenty-four hours, revealed the same organism as that isolated from the original pus. No other lesions were found in peritoneum, spleen, liver, or other organs. Cultures from heart's blood were sterile.

The female pig was inoculated subcutaneously. Four days later, a small subcutaneous nodule was noted at the injection point. This became steadily larger, till on the twelfth day it broke through the skin, forming an irregular, unhealthy-looking, necrotic ulcer the size of a five-cent piece. This was excised at autopsy two days later. The rabbit showed no pathologic changes.

A summary of the growth of the organism on the various nutrient media is as follows: *Agar.*—Moist, whitish, translucent streak appears within twenty-four hours. This gradually extends to cover the entire surface within four to five days, closely resembling the growth of *B. coli. Bouillon.*—Supernatant liquid, clear. On shaking, a stringy white precipitate rises in a vortex-like column which quickly settles down. This heavy, coherent growth in bouillon is very characteristic. *Milk.*—No changes in four days. Then faint acidity occurs, which steadily increases until coagulation occurs on the eighth day with expression of clear straw-colored liquid. *Potato.*—Growth practically diagnostic. Faint, yellow, semi-translucent, honey-like growth in twenty-four hours. This darkens daily, until on the fourth or fifth day, it has assumed the characteristic yellow brown to chocolate color. Growth extremely tenacious and viscous; growth increases to entirely cover slant surface of potato. A note from the department of bacteriology, University of Chicago, to which a subculture of the organism was sent, confirmed the above findings.

Microscopically the organism varied greatly, according to the age of the culture, media, etc. Young organisms appear as short, rather thick rods, with rounded ends, frequently occurring in pairs, with irregular barred-staining protoplasm (Fig. 2). Older cultures in which the media had become dry, assumed elongated, thread-like proportions—involution forms (Fig. 3). Still other cultures assumed a coccus-like structure, making one think, at first glance, of a staphylococcus contamination (Fig. 1). The bacilli stain faintly with methylene blue. I found carbolthionin and carbol-fuchsin the most satisfactory for routine staining.

A number of other things were attempted, such as the histology of the glandered testicle and cutaneous ulcer, the staining of bacteria in tissue, the causes of variation of morphology, in confirmation of the work of Wherry, Duval and White,[11] and Frothingham.[12]

These purely technical things are not within the province of this paper and will, therefore, not be discussed.

A few phagocytosis experiments were made, and these have not been attempted before, so far as I know. A 24-hour agar growth was suspended in salt solution and a part of it put with washed white corpuscles and the mixture allowed to incubate for fifteen minutes in the usual manner. To a second portion was added an equal amount of serum taken from a pool of normal blood. Smears made showed abundant bacteria in the field, all extracellular in the first case, and many intracellular in the second where the opsonin-containing serum had been added (Figs. 5 and 6). This places *B. mallei* in the line with all other opsonophilic bacteria and suggests the advisability of determining malleo-opsonic indices in chronic cases, with the injection of mallein during the negative phase, etc. It would seem, at first glance, that chronic glanders in man, covering a period of from six months to three years, might be hastened to recovery by the cautious administration of the requisite dose.

The diagnostic methods, classed as biologic, usually employed in determining glanders may be divided into (1) animal inoculation, (2) injection of mallein, (3) the agglutination method.

(1) *Animal Inoculation.*—In 1886 Strauss[13] first demonstrated that when material containing *B. mallei* is injected intraperitoneally into the male guinea-pig the animal develops, on the second or third day, an orchitis, with formation of nodules in the testes and scrotal

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[9] Glanders: Its Diagnosis and Prevention, Bull. 24, Bureau of Government Laboratories Biological Lab., Manila, 1904.

[10] The Agglutination Method of Diagnosis in the Control of Glanders, Jour. Infect. Dis., Suppl. No. 3, 1907, p. 84.

[11] Histological Lesions of Experimental Glanders, Jour Exp. Med., October, 1907, p. 352.

[12] Diagnosis of Glanders by the Strauss Method, Jour. Med. Research, June, 1901, p. 331.

[13] Compt. rend. Acad. d. Sc., 108, p. 530, Rev. Veter, Jour., 1889.

peritoneum. After the development of a definite orchitis the animal is chloroformed and the testicle examined grossly and microscopically, smears and cultures being made, if pus is present. Frothingham, in a review of 123 cases in horses and 2 in man, concludes as follows in regard to the test: "I believe that this method of diagnosis is the most valuable one at our command. A positive test means everything, a negative nothing, though several negative tests are of great importance. The method might be more valuable could we inoculate animals by nature more susceptible to glanders—certain field mice, for instance. Under present conditions and being obliged to use the guinea-pig, I feel that the best results will be obtained if three or four pigs are used for each test, each pig to receive an injection of ½ to 1 c.c. of the suspension, a small proportion of which should remain in the subcutaneous tissue and all the rest to be introduced into the peritoneal cavity."

(2) *Injection of Mallein.*—Mallein was first prepared in 1888 by Helmen, a Russian veterinarian. Its diagnostic value was first demonstrated by Kalming, of Dorpat, in 1891. Mallein is prepared after the manner of tuberculin by growing a freshly isolated culture of *B. mallei* in glycerin bouillon for from four to six weeks. The culture is then sterilized in the autoclave on three successive days and filtered through a Pasteur filter. Before use it is diluted with a 1 per cent. solution of carbolic acid. This solution is then injected into the suspected animal (in the horse usually in the subcutaneous tissue of the neck), resulting (when the test is positive) in a specific and definite local and general reaction. (As this test is practically never used in man, I shall not go into detail regarding this reaction. Those interested should consult V. A. Moore's text on the "Pathology and Differential Diagnosis of Infectious Diseases of Animals.") Although mallein is not used for the diagnosis of human cases, because of the ease by which diagnosis may be reached through other means, there is no reason why it should not be used in chronic or suspected cases where the diagnosis is obscure.

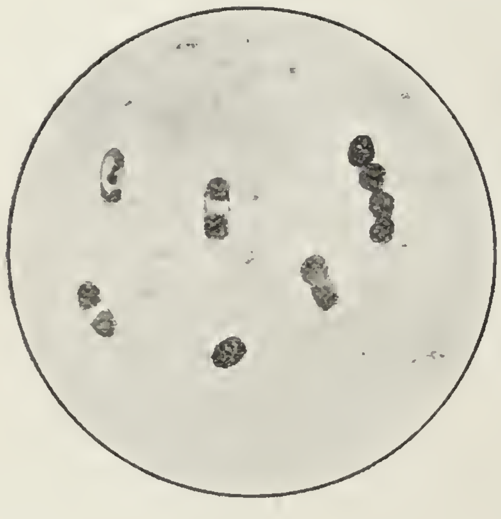

Figure 1.

Fig. 1.—*B. mallei.* Young 24-hour growth on potato. Coccus-like growth.

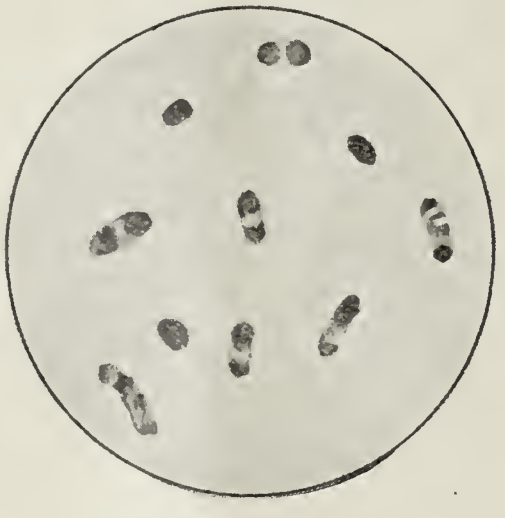

Figure 2.

Fig. 2.—*B. mallei.* 72-hour growth on potato. Barred and polar stained bacilli.

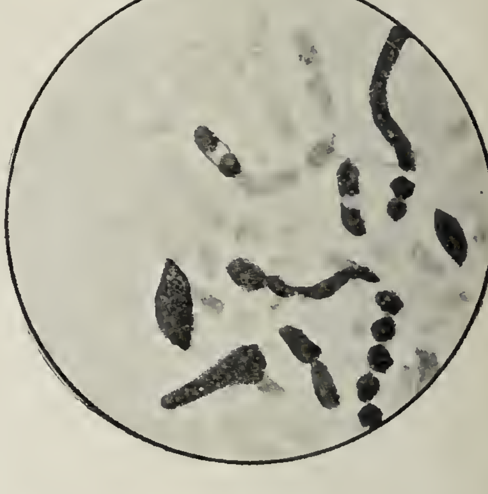

Figure 3.

Fig. 3.—*B. mallei.* 10-day growth on potato. Leptothrix forms. Beginning involution.

(3) *Agglutination Method.*—This method of diagnosis was first applied to glanders by M. Fadyean[14] in 1896. The method was modified to some degree by Schütz and Miessner,[15] and is thus used in the diagnosis of glanders generally in Prussia. Schnürer,[16] in Austria, uses this method for the diagnosis of glanders in suspected cases for the Austrian army. McKee, of the Memorial Institute, speaks of it as being the most accurate method in controlling horses used for the preparation of diphtheria antitoxin. The reaction is made the same as that in any agglutination test. The serum of glandered horses agglutinates *B. mallei* in dilution as high as 1 to 1,600. The reaction is well marked, both macroscopically and microscopically, in dilution up to 1 to 1,000. Normal horse serum agglutinates slowly in dilution up to 1 to 300.

Moore and Taylor conclude as follows regarding this method: "The diagnosis of glanders by the agglutination method is easier and quite as accurate as by mallein. It has this advantage, that it can be used in those cases where there is a rise of temperature and consequently where mallein could not be employed." As in the case of mallein, this method may be employed in doubtful cases in the human being where other means have failed. This has not been done, so far as I know, mainly because of the infrequency of the disease and its usual recognition by the various other means at our disposal.

GLANDERS INFECTION IN LABORATORY WORKERS.

My attention was focused on this through the repeated thoughtful and urgent admonitions given me by many of the older men in the clinical and pathologic departments who had heard I was working with a recently isolated strain of *B. mallei.* As a result, the following precautions were taken: A long-sleeved operating gown, together with rubber gloves, was always worn while working with cultures or animals. Cultures were destroyed as soon as their usefulness was at an end. Animals were kept in a specially labeled cage, separate from the other laboratory supply. The cage was immediately fumigated and carbolized after the animals had been removed. Autopsy instruments and boards were boiled immediately after use. Postmortem material not to be kept was thrown at once into the furnace. By following these procedures methodically no infection resulted and fortunately no mishaps occurred.

VIRULENCE OF GERM.

There are a number of interesting facts in connection with the virulence of *B. mallei.* It is known that it is one of the most easily destroyed of all micro-organisms; heating to 55 or 60 degrees C. for a few minutes destroys them, and they are extremely susceptible to the action of germicides. In pure cultures the bacilli die usually at the end of a few weeks and they lose their virulence by the eighth day. I found both of these statements true. Repeated attempts at transplanting cultures three and four weeks old produced no pathologic results, not even the mildest orchitis when injected intraperitoneally. The *B. mallei* has a larger harvest of deaths from the ranks of labôratory workers than any other pathogenic micro-organism. Every worker in pathologic or bacteriologic fields of any experience can cite personal observations. One of the men at the University of Chicago knows of six cases, all of which proved fatal. I have endeavored to compile a list of cases from the literature, but have failed, because of the fact that among the large number of case reports of glanders in man, only one or two amplify the title by the statement, “a case of laboratory infection.” I shall, therefore, speak briefly of a few cases.

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[14] Preliminary Note on the Sero-Diagnosis of Glanders, Jour. Comp. Pathol. and Therap., 1896, 9, p. 322.

[15] "Zur Serodiagnose der Rotzkrankheit," Arch. f. wiss. u. Tierheilk., 1905, 31, p. 353.

[16] Zur diagnostischen Verwertung der Rotzagglutination, Centralbl. f. Bakt., 1905, 39, p. 180.

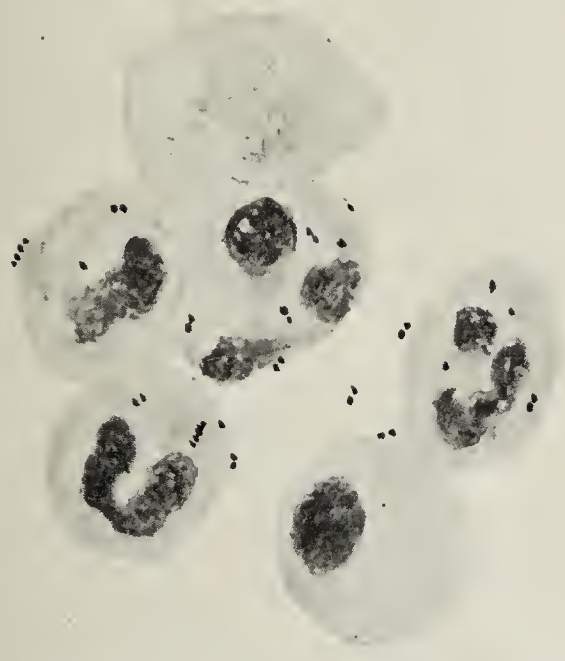

Fig. 4.—Experimental glanders. Guinea-pig. Smear from pus from suppurative orchitis. Coccus-like bacilli and pus cells.

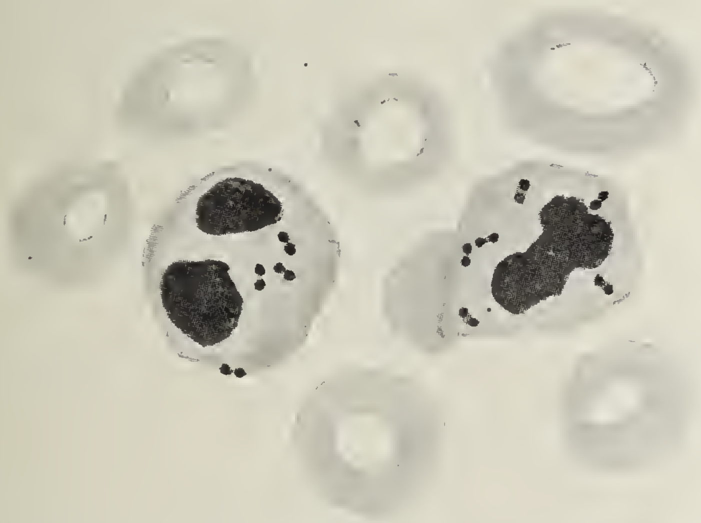

Fig. 5.—Phagocytosis experiment. Preparation of washed leucocytes; normal human serum and 24-hour growth of *B. mallei*. Bacteria within leucocytes.

Kalming, the man who first demonstrated the value of mallein, in the course of his laboratory experiments became infected with the bacilli and died of glanders. Aufrecht, a pathologist of note, infected himself at autopsy. Zowadski reports an interesting case which, although not strictly a case of laboratory infection, is so closely allied that it may be included as such. The report describes the case of a physician who infected himself from opening a supposed pyemic abscess of the leg, which was shortly followed by death of both patient and physician. The assistant bacteriologist of the Minnesota State Board of Health infected himself in 1904 while working with *B. mallei*.[17] After a long illness he finally recovered.

The most recently reported case of laboratory infection appears in the *Prager Medizinische Wochenschrift*, July 4, 1907, from the medical clinic of v. Jaksch.[18] Here is discussed the case of Mathias Prettner, a government veterinarian, who received his infection from contact with peritoneal pus while performing an autopsy on an inoculated animal. A note in the history tells that the patient's father, likewise a veterinarian, died from glanders some years previously. The article closes with “the case is to be added to that large number of laboratory infections in which Alexander Knorr and Hoffman v. Wellenhof are likewise to be included.”

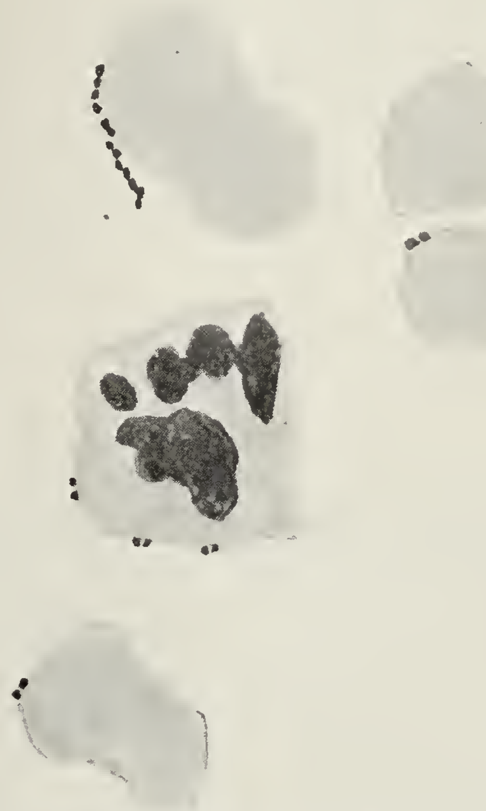

Fig. 6.—Phagocytosis experiment. Preparation of washed leucocytes and bacteria. Bacteria extracellular.

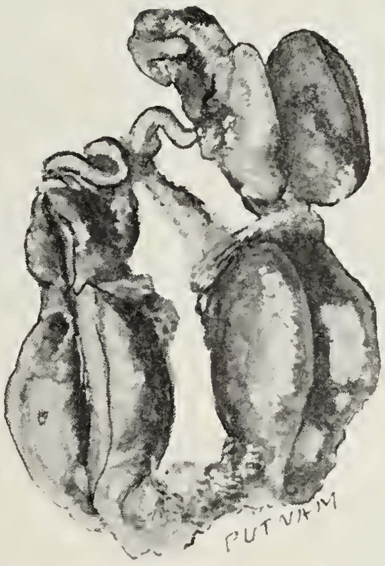

Fig. 7.—Experimental glanders. Guinea-pig. Strauss reaction showing testicular abscesses.

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[17] Pyemic Glanders in the Human Subject, Ann. Surg., 1904.

[18] Hoke, Ed.: Ein Fall von akutem Rotz, Prag. med. Wehnschr.; 1907, 33 p, 351.

Diagnosis by Exclusion.—In commenting on dermatologic diagnosis, Dr. L. Duncan Bulkley says: “In cases which are not at all doubtful, use the analytical method of diagnosis, noting down any and all eruptions which might look like the one under consideration, and then, by a process of exclusion, eliminate one after the other, until the one is found which answers all or most of the requirements.”

THE SUCCESSFUL TREATMENT OF CATARRHAL DEAFNESS.

WITH ESPECIAL REFERENCE TO CONDITIONS IN THE FOSSÆ OF ROSENMÜLLER.*

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It might reasonably be supposed that since Manuel Garcia invented the laryngoscopic mirror, more than half a century ago, nothing of importance could remain to be learned of the commoner pathologic phenomena occurring in the larynx and nasopharynx. A little more than two years ago, in glancing over a report of a discussion on some nasopharyngeal subject, my attention was arrested by a line or two casually mentioning the occasional pathologic existence of adhesive bands across the fossæ of Rosenmüller, from the cartilaginous ring of the Eustachian orifice to the nasopharyngeal walls. These formations had often been observed by me, but I had failed to grasp their significance. I consulted many text-books, but no reference was made to these bands. In April, 1906, I reported[1] six cases of this condition, with astonishingly gratifying results following treatment. Since that time I have operated on about 100 cases. On the whole, the results have been remarkable.

PATHOLOGY.

These formations in the fossæ of Rosenmüller consist apparently (1) of mucofibrous bands, or webs (like the web of a duck's foot), generally in a perpendicular plane to the long axis of the fossa, and (2) of masses of what seem to be granulation tissue or hypertrophied glandular (lymphoid) tissue, similar to the familiar soft adenoid, lying above, between and below these bands, sometimes quite filling the fossa. Their etiology is, perhaps, uncertain, but as they are found almost invariably in persons who have passed the period of adolescence, and in whom a lymphatic tendency has existed, it is not unreasonable to consider them as being, to some extent, the residua of an old adenoid, which may or may not have been operated on. Any catarrhal inflammation, attended by swelling of the membranes, might create a starting point for the formation of the adhesions.

It is well to remember, too, that the Eustachian orifice is moved physiologically, and that the tube is opened for middle-ear aeration by the act of swallowing. Any acute or chronic swelling, causing postnasal obstruction and mouth-breathing would necessarily favor the formation of adhesions, because the very act of mouth-breathing, by rapid evaporation of saliva, makes the act of deglutition much more infrequent, thus leaving the swollen adjacent structures in the nasopharynx in more undisturbed contact. The normal movement of the Eustachian orifice is inward, upward and backward, and this is accomplished chiefly by the levator and tensor palati muscles during the act of swallowing, and in phonation of some of the consonant sounds, and also by the act of yawning. The natural object of this movement is to open the tube for the access of air into the middle ear. In this movement, the tubal orifice is opened in irregular triangular fashion, and the tube is stretched longitudinally, thus opening the lumen, which lies, while at rest, in a collapsed position. The normal excursion of the tubal end is astonishing to one who will observe it, as can often be easily done, through a widely patulous nostril. It is from one-quarter to three-eighths or even one-half of an inch, the two orifices sometimes almost meeting in the middle of the nasopharyngeal space.

It is very clear that these adhesions and granulations in the fossæ exercise a marked inhibitive influence on the range of the tubal excursion. Hence, in these cases there is an incomplete, or perhaps total absence of opening of the tube at the intervals necessary for middle-ear aeration, and there is provided a good and sufficient cause for the appearance of catarrhal deafness.

DIAGNOSIS.

The diagnosis of the condition is easy by means of the rhinoscopic mirror. Occasionally, when the fossæ are almost or quite filled with formations which happen to present a more or less smooth surface, the appearance will be that of very shallow or absent fossæ. A mistake should not be made. The fossa is never absent and never very shallow in the adult. At least three-eighths of an inch of natural depth is always present, and sometimes considerably more.

The granulations or glandular hypertrophies sometimes extend down below the end of the fossa, and appear, on oral examination, as reddish elevations or thickenings just behind the posterior faucial pillar. This appearance is often given the name of lateral pharyngitis, and its treatment by the ordinary routine has heretofore been rather unsatisfactory.

If the patient has a wide open nostril all the way through, anterior rhinoscopy will show a limited excursion of the tubal orifice during the act of swallowing. Inspection of the tympanic membranes will show a lessened or absent light reflex, a ground-glass, lusterless appearance, with more or less depression. The hearing will usually be perceptibly dulled, and if the condition is of long standing it may be almost lost. Bone conduction of sounds will be good, while air conduction is seriously impaired, showing that the disorder is of the passages and not of the perceptive apparatus.

SYMPTOMS.

The subjective symptoms are numerous and sometimes very distressing, and one or another of them may completely overshadow, in the indications for its suppression, the deafness which may or may not be very slight. Prominent among these is tinnitus aurium, which is often entirely relieved by appropriate attention to these formations.

It seems probable that the lesions in the fossæ offer a considerable reflex symptomatology, and that they cause direct symptoms in neighboring structures by pressure on the muscles, the stylo-pharyngeus, the palato-pharyngeus, and the constrictors of the pharynx. Thus, as a result of this irritation, there is sometimes present a periodic or occasional laryngeal irritability and congestion, with hoarseness or an irritating cough, for which no cause can otherwise be assigned. I have seen one case where this symptom persisted and progressed for several years. The cough was severe and distressing, and the voice raucous. A diagnosis of chronic bronchitis had been made, and, finally, tuberculosis was suspected. The whole gamut of therapeutics was run. Recovery occurred after the removal of the adhesions in Rosenmüller's fossæ.

A bronchial inflammation may be set up by the constant cough, as probably occurred in this case. A feeling of stuffiness and fullness in the ears is often complained of, often with a tense, drawn, uneasy feeling extending from the ears down the throat and neck, behind the angles of the jaws. There may be a deep dull pain around and through the ears, perhaps radiating toward one or more adjacent parts. Sometimes the patient will be quite unable to locate the discomfort with precision, though more than once I have heard a patient exclaim as the adhesions were broken up: "Ah, Doctor, you got right to the spot! I have frequently had an insane desire to run my own fingers up behind there and tear something loose," or words to that effect.

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* Read before the Tri-State Medical Association of the Carolinas and Virginia, Charlotte, N. C., Feb. 18, 1908.

[1] Jour. S. C. Med. Soc., May, 1906.

There is always present in some degree a form of postnasal catarrh. Even if the catarrh existed prior to the lesions, which is likely, the latter would increase the catarrhal tendency, for the bands across the fossæ form little pockets which are ideal lodging places for mucus and dust and infection of any sort that may be inspired by the patient. There is frequently a sensation of popping or cracking in the ears while swallowing, or yawning, or moving the jaws. There may be a persistent and irresistible desire for frequent yawning. I have seen one case where frequent, long continued and distressing attacks of sneezing could be controlled only after clearing out the fossæ. A subjective sense of a lump or obstruction in the throat, that can not be swallowed, may be noted. Itching in the external auditory meatus is not unusual.

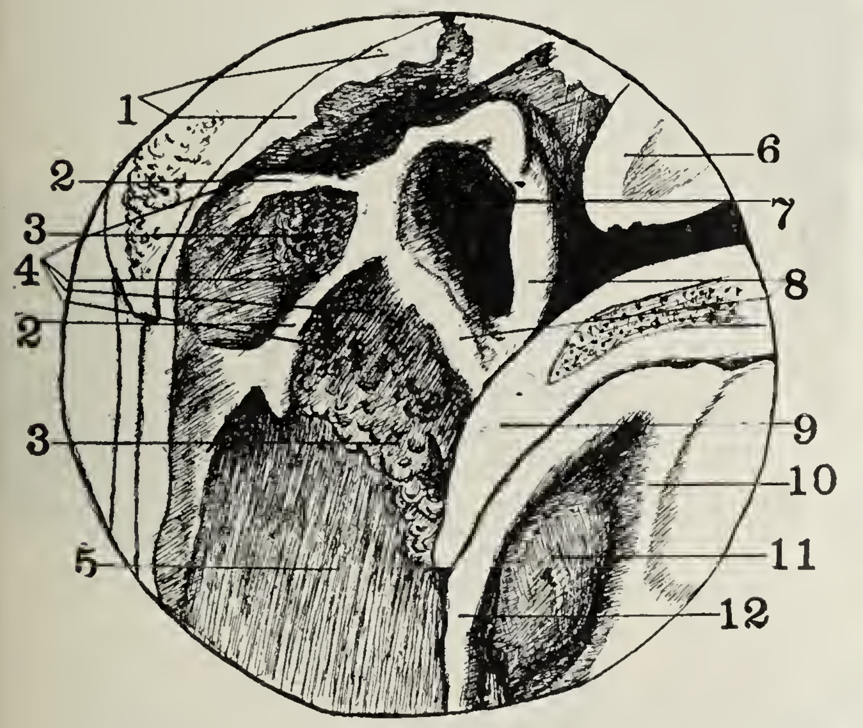

Fig. 1.—Sagittal section of nasopharynx (enlarged), showing left side (author's illustration). 1. Nasopharyngeal vault, rudimentary adenoid. 2. Fibromucous bands of inflammatory origin, attached anteriorly to the posterior lip of Eustachian ring, and posteriorly to the latero-posterior wall of the nasopharynx. 3. Masses of granulation or lymphoid tissue in the fossa. 4. The fossa of Rosenmüller. 5. Lateral pharyngeal wall. 6. Posterior end of left inferior turbinate. 7. Eustachian orifice. 8. Cartilaginous Eustachian ring. 9. Uvula. 10. Left anterior faucial pillar. 11. Faucial tonsil. 12. Posterior faucial pillar.

Symptoms of vertigo may be present. Distinct mental depression and the phenomena of nervous derangement may result from the constantly recurring attention of the patient to the unlocated and therefore unrelieved uneasiness and annoyance.

TREATMENT.

The treatment of the condition is simple and painless. After thorough cocainization the operator, facing the patient and slightly to his right, passes the right index finger (palm of the hand up) through the mouth, behind the soft palate and into the postnasal space (Fig. 2). After locating the landmarks of the space, the finger tip is placed over the top of the cartilaginous ring of the tubal orifice into the upper end of the crescentic fossa. Pressing the finger firmly and deeply into the fossa, it is swept backward and downward throughout the fossa's length, breaking down all resisting tissues, repeating the movement if necessary, and not failing to break up the mass of granulations which frequently occupies the extreme lower end of the fossa behind the posterior faucial pillar. By inclining the finger to the opposite side it can then be treated in the same fashion, thus attending to both sides without withdrawing the finger. After the bleeding, which is usually slight, has ceased a cotton-tipped, curved, postnasal probe, dipped in a 5 to 10 per cent. silver nitrate solution or a 30 per cent. argyrol solution, is firmly swept through the fossæ. This application should be repeated every forty-eight hours for ten days or two weeks.

RESULTS.[2]

Results are excellent, sometimes brilliant, even apparently miraculous, and often immediate. I have several times seen the hearing of a patient improve from 200 to 300 per cent. within a half-hour of the operation. The improvement is a permanent one, which usually improves still further under persistent catheterization and routine applications. The latter should always be carried out faithfully in these cases. It should be stated, however, that there seems to be a relatively constant point in the loss of hearing, which, if exceeded, must provoke a prognosis of arrest of the progress of the dis-

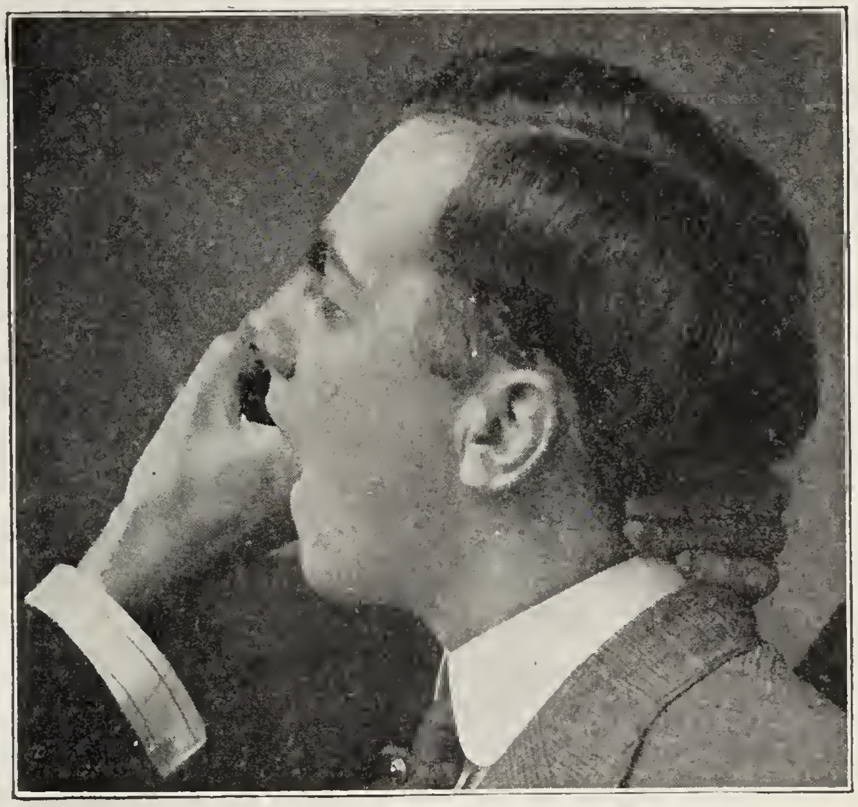

Fig. 2.—Correct position for operation.

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[2] Since taking up this subject, I have found in the current medical literature of the past few years the following articles bearing on these conditions in the fossæ of Rosenmüller. It is striking to note that all the writers reported brilliant results following proper attention to these conditions.

Phillips, W. C.: Manhattan Eye and Ear Hospital Reports, N. Y., 1894, i, 98.
Myles, R. C.: Trans. Am. Otol. Soc., 1897, vi, 506.
Goodwillie: N. Y. Med. Jour., Aug. 24, 1889, 208.
Graef, C.: Post-Graduate, N. Y., 1903, xviii, 784.
Royet: Bull. de Laryngol., Otol. et rhinol. Par., 1904, vii, 248.
Grazzi, V.: Ann. d. mal. de l'oreille, du larynx, etc., Par., 1899, xxv, Part 2, 390.
Zanfel: Arch. f. Ohren., 1880, xv.
Politzer, A.: Diseases of the Ear, 1902.
Royet: Rev. hebd. de laryngol., etc., Par., July 7, 1906.
Brunk, T. L.: Laryngoscope, August, 1906.
Jervey, J. W.: Jour. S. C. Med. Soc., June, 1906.
Pynchon, E.: Laryngoscope, March, 1907.
Bryant, W. S.: Med. Rec., June 8, 1907; Feb. 8, 1908.

case rather than of an increasing hearing power. According to my experience, it can be stated in a general way that if the hearing has become dulled to a point where the ordinary watch can be heard ticking only on contact with the auricle, little is to be expected in the way of increasing hearing. But the progress of the disease is checked, and when we consider the usual distressing course of this condition that is a good deal to accomplish. The most favorable and remarkable results are obtained in those cases where the watch can still be heard four to five inches or more away from the auricle. Of course, the more recent the impairment of the hearing has been in these cases the brighter is the outlook.

Just as gratifying, and often equally as brilliant, are the results of this treatment when the other common symptoms mentioned above are dependent on these lesions. Of course, if a long-standing symptom, such as chronic irritative cough, has produced organic changes elsewhere we can not expect immediate disappearance of the trouble, but the removal of the cause will surely pave the way for the cure.

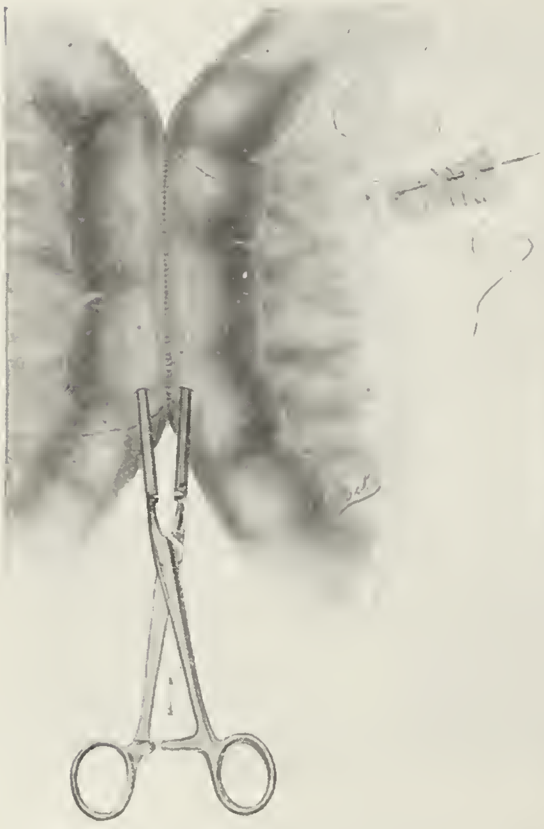

Fig. 1.—Bodkin points of forceps blades at beginning of insertion. The back half of the enclosing suture inserted.

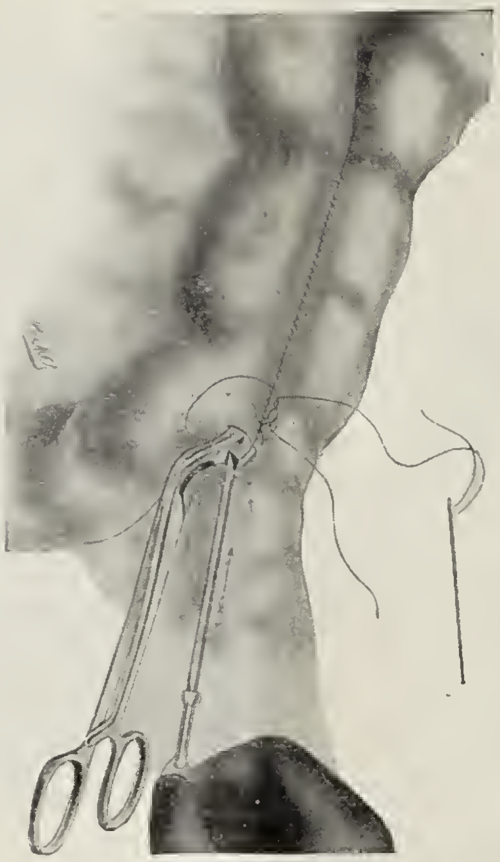

Fig. 2.—Completion of suture circuit. Last stitch loosely drawn around blades. Insertion of enterotome.

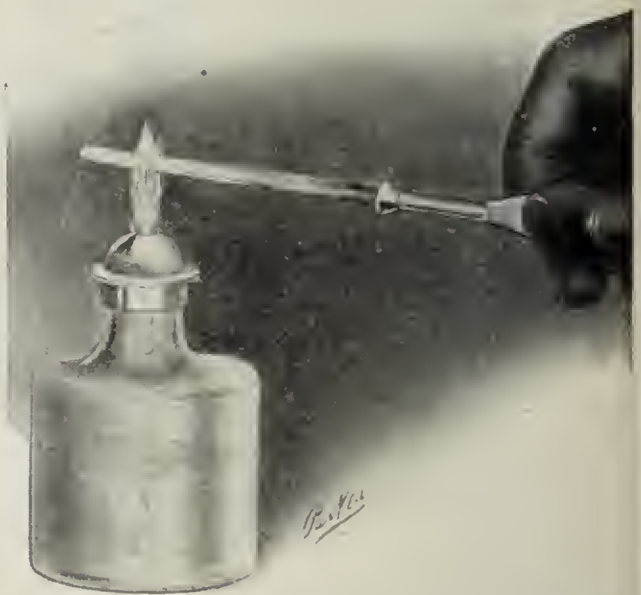

Fig. 3.—Cautery blade to follow cutting blade, being heated in alcohol flame preparatory to use.

RAPID AND ASEPTIC ANASTOMOSIS OF THE HOLLOW VISCERA BY A NEW METHOD.

E. WYLLYS ANDREWS, M.D.
CHICAGO.

To be able to unite two hollow viscera rapidly without exposing the lumen of either is an ideal technic which many have believed unattainable. Asepsis, speed and simplicity of operating are attained by the McGraw ligature, but not a rapid anastomosis. The fact that the opening is not produced until the elastic ligature can cut through prohibits its use in purely intestinal work or where obstruction must be relieved promptly.

The first device to overcome this objection was the method of Dr. Werelius of Chicago who used a silk cord in place of the rubber of McGraw. The ends of this cord were allowed to hang out between two stitches and at the last moment were drawn back and forth with a sawing motion until the included walls were cut through. As this cutting took place in tissue surrounded by an encircling suture no leakage was possible.

If we analyze the results obtained by the McGraw ligature we find that in spite of certain great drawbacks they involve new and important principles never obtained before in abdominal surgery. These are:

1. Exclusion of mucosa: No hole but the needle puncture is made in the viscus, hence no clamps are needed and no leakage can occur.

2. Anemia of the tissue divided. No bleeding can occur because of the pressure and because no cutting is done.

3. Saving of time: In my clinic the time of the visceral part of the work ranged from four and one-half to eight and one-half minutes.

To offset these advantages several serious drawbacks are met:

1. It does not create at once an opening. This limits its use practically to stomach work.

2. It crumples and puckers the bowel and stomach wall so that the surrounding Lembert stitch becomes irregular and may narrow the opening. By care we can avoid this, but it is a drawback. Any new method yielding the large immediate opening of the Kocher or the Moynihan gastro-enterostomy and having the safety and celerity of the McGraw ligature would be a step in advance; even if it gave only the half-sized opening of the channel in the Murphy button it would do as well. The method and new appliances about to be described seem to me to accomplish all these aims.

The device consists essentially of forceps having blades equal to the length of the openings desired in the viscera, these blades being bodkin pointed, like the McGraw needle, and rather slender.

They are thrust into the two opposing organs after the preliminary suture exactly as the McGraw needle is used. When the handles are closed, as in Figure 1, they act as clamps holding the parts in a straight line instead of crumpled up and shortened as the rubber ligature holds them. This makes an excellent splint and guide for placing the anterior part of the suture. The latter is now continued until it meets the starting point, when one loop of the last stitch is made to surround blades near their point of insertion (Fig. 2).

After locking the blades hard enough to crush the walls and hold them firmly a slender chisel-pointed blade is thrust through the two grooves which form a sort of tunnel in the closed blades (Fig. 2). This cuts a linear opening entirely through the walls of both viscera. For the sake of greater asepsis and hemostasis I have sometimes followed this by the cautery blade shown in Figure 3. In other cases I have omitted this, but have had no cases of hemorrhage or infection in either method.

Figure 4 shows a simpler and earlier form of the forceps which I used for about two years in over sixty cases on the human subject, but did not publish a description of it. A similar appliance is described by Flint,[1] who had independently hit on the same idea. The devices are so similar that this form (Fig. 4) might with propriety be called Flint's forceps.

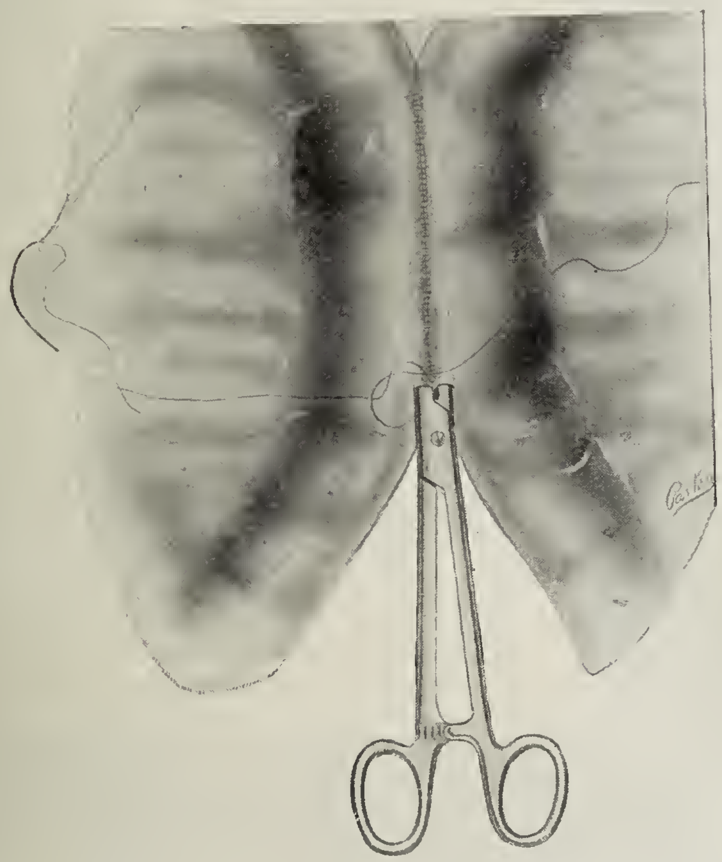

Fig. 4.—Scissors form of enterotome. Stitches employed as in Figure 1.

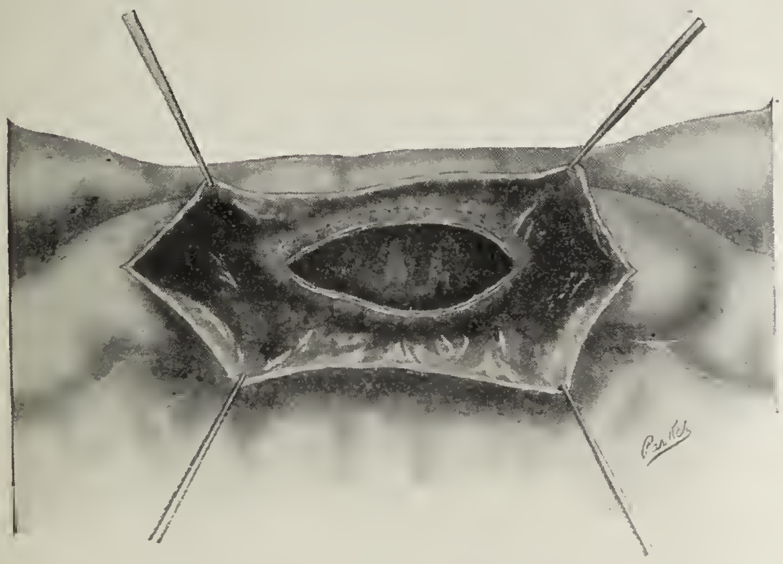

Fig. 5.—Bowel laid open to show results of enterostomy.

A drawback to the use of sharp scissors-like instruments is that they may cut the encircling stitch unless great care is used. A number of the forceps of this form have been sent out by the instrument-makers under my name, and it has been the experience of myself and several teachers that a novice in using them is liable to cut the stitch and let the viscera fall apart on one side. This can always be avoided by turning the loops of bowel over and looking at the back suture before making the blades cut through, to make certain that no part of it is caught in the blades.

A more serious feature of both forms as well as the Werelius cutting ligature is the possibility of hemorrhage. Nearly all experienced observers raise the question at once as to how this is avoided or detected. I believe it is a substantial danger and drawback, but one which can be avoided entirely by care. No large arteries like those in the stomach wall should be crossed by the line of anastomosis in this or any type of operation. The line of opening should be between parallel branches.

The crushing action of the improved forceps and the subsequent use of the heated probe tend to make the work bloodless, but our main dependence should be on careful deep suturing. Each vessel should have a continuous loop of linen thread thrown about it as the stitch line crosses it. In fact the whole suture should be deep and mattress-like; something between a Lembert and a Connell stitch, resulting in a clamp-like grip of the thread almost as effectual as the Murphy button in compressing all the coats in its loops.

In experimental and teaching work this is by far the most rapid method of anastomosis. It can be done on inflated animal gut in from three to five minutes, the stitching being fine enough to be air and water tight, i. e., about eight stitches to the inch.

In actual operations two or three times as many minutes should be spent in order to get a fine closely set suture, every loop of which goes deeply into the visceral walls and occludes every vessel of dangerous size. Intestinal and stomach clamps are not to be employed.

Clinical Notes

UNRECOGNIZED FRACTURES OF THE HIP.

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This article is prompted by the belief that fractures of the hip in adults occur more often than is usually admitted, and that not infrequently the true condition is masked by a diagnosis of sprain or bruise. That these fractures are often unrecognized can be attributed mainly to two reasons:

1. The trivial fall causing the injury, such as stumbling over an obstruction when walking.
2. The fragments are often impacted and with such an inappreciable amount of shortening that the medical attendant fails to detect it. Feeling no crepitus or unnatural mobility, he assumes that the injury is only to the soft parts.

Within the past two months three patients with recent fractures of the femur have limped into my office unassisted, except by a cane. One sought electric treatment for pains about the joint, the others came for Roentgen diagnosis. As I consider these cases of some interest, I will give a brief report of each, with comments:

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[1] Eine neue Methode zur Herstellung von Anastomosen am Magendarmtrakte, Archiv f. klin. Chirurgie, 1906, lxxx, 4, 988.

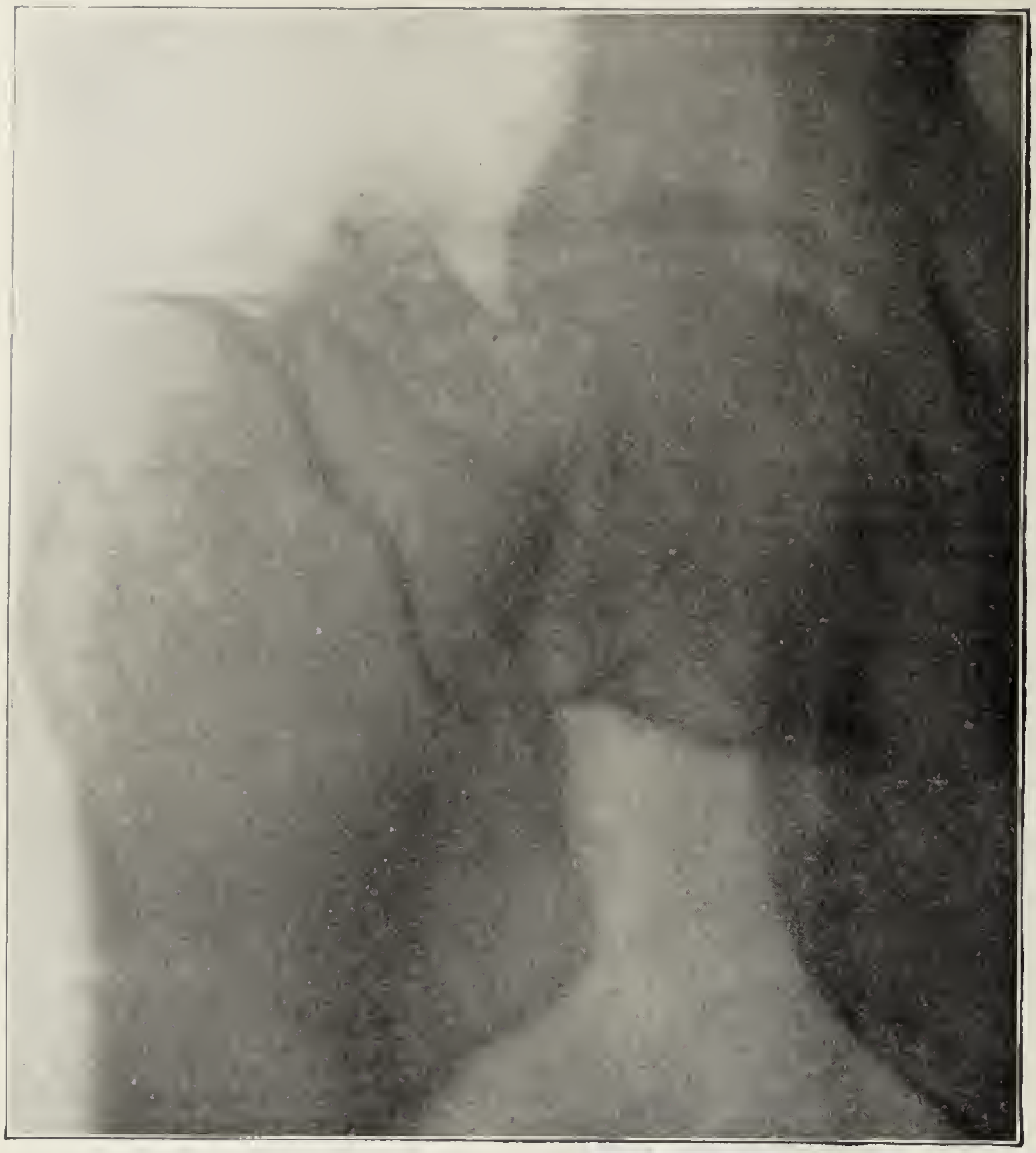

Fig. 1.—Fracture of neck of left femur.

Case 1.—Man, about 40 years of age, in good physical condition, was wrestling with a friend. Both fell to the ground, side by side. The friend got up, unhurt. The patient arose with great difficulty, said he felt weak, and had an acute pain in the hip on which he had fallen. Supported by the friend, he walked three blocks to a physician's house. As there apparently was no reason to suspect a fracture, he was given a hurried examination. A liniment and a few days' rest in bed were prescribed. After a week the patient returned to work. The hip was somewhat swollen and painful, but the man was able to get about fairly well with a cane. However, after six weeks of more or less suffering, he was directed to my office for electric treatment. A radiogram of the injured side showed impacted fracture of the femoral neck (Fig. 1). At present there is nearly an inch shortening, and patient still complains of pain from irritation produced by using the leg too much. The soft parts about the joint are enlarged; bony union is firm. Result good, considering treatment.

Case 2.—Woman, aged 48, either fell over a chair on to the floor or out of bed to the floor, striking the side of the thigh and hip. The fall was insignificant, but the pain and discomfort were so acute that the patient went to bed and called a physician. On examination he pronounced it an injury to the ligaments of the hip. Hot applications were advised for a few days, after which the patient was told to get up and exercise the leg. This caused severe pain, and the patient complained that the leg would not bear her weight. The doctor assured her that the pain would leave as soon as she began to walk a little. As improvement seemed so tardy, the patient's daughter, a trained nurse, called in several physicians. They corroborated the first physician's diagnosis. One, however, said it was hysteria. Electric treatments were advised for the latter condition. Meanwhile the hip was still painful, more swollen and unwilling to support that side of the body. Exercise and electricity were applied every day. The hip getting worse and the patient failing generally, she was advised to go to California for her health.

In Los Angeles the lady presented herself to Dr. E. H. Garrett for treatment, who, in turn, referred her to me for *x*-ray diagnosis. Figure 2 shows a complete fracture of the femoral neck, with impaction.

Case 3.—This gentleman, in stepping out of his automobile, fell to the street and injured his hip. Dr. E. J. Cook, on examination under anesthesia, found the femur dislocated, the head lying on the anterior lip of the acetabulum. No crepitus nor other signs of fracture could be detected. Reduction was made successfully. The patient was put to bed and treated according to the condition found. Ample time being allowed for the repair of the soft structures, the patient was permitted to get out of bed. On attempting to walk, it was evident that the amount of pain, discomfort and weakness present was

Fig. 2.—Fracture of neck of right femur, with impaction.

out of all proportion to the comparatively slight injury incurred. Therefore, Dr. Cook instructed the patient to have a Roentgenogram of the injured side taken, which is shown in Figure 3. Imagine our surprise to find a fracture, and one so thoroughly impacted that it remained intact during the manipulations necessary to reduce the dislocation. In the plate can be seen the reason for the rigidity of the fragments and the insignificant shortening. The neck of the femur is only partly telescoped, the head rotating just far enough upward to permit the sharp angle of the lower fragment to be driven into the center of the upper frgament as a wedge. The lesser trochanter has become firmly braced against the lower angle of the upper fragment, thus preventing any upward displacement of the shaft.

It would seem from these cases, then, that we may conclude:

1. It is not always safe to pass lightly on what appears to be a minor injury of the hip joint, especially when found in middle life and after.

2. An examination under anesthesia can not always be depended on. Here, if anywhere, the integrity of the joint is maintained by the impaction, and if sufficient force is used to elicit crepitus, the result may be disastrous to the patient.

3. The easiest way to determine the extent of the injury, and to remove all questionable doubts in such cases, is to make a Roentgen diagnosis. There is no longer any reason for denying the patient this means of verification, for competent radiographers may now be found everywhere.

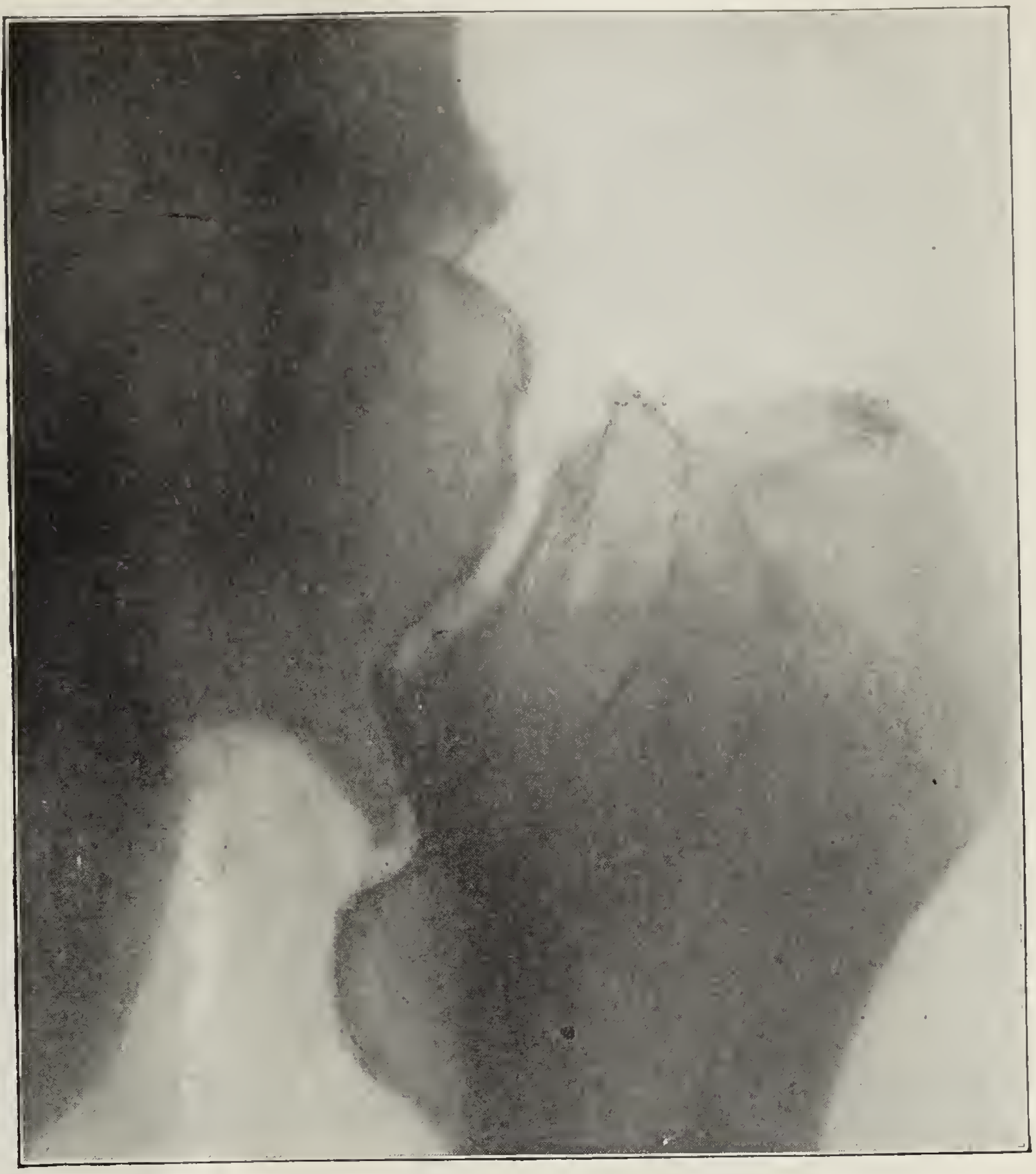

Fig. 3.—Fracture of neck of right femur, with impaction.

MUSCULOCUTANEOUS NEURITIS FOLLOWING RUPTURE OF BICEPS.

PHILIP SCHUYLER DOANE, M.D.

CHICAGO.

The following case illustrates a rather unusual injury, and also a definite cause of a neuritis, the etiology of which was purely traumatic. The history of the injury, the development of the neuritis, its progress and cure, after the repair of the ruptured muscle, tend to prove the correctness of the above assertion.

Patient.—P. L., of German extraction, aged 55, a building contractor, came to me four months ago.

History.—The patient, a man of excellent habits, and having always enjoyed good health, complained of great pain in upper right arm. In July, 1907, while on a ladder, some twenty feet from the ground, he fell, and in falling, grasped with the right hand a projecting beam. This broke his fall, but immediately after a sharp pain was felt in right shoulder and arm. There was no evidence of other injury. The arm became swollen at and about the shoulder, the swelling extending to the elbow, with some pain and loss of function in the arm. Little or no attention was given to the injury until after the tenth day, when an intense pain started in the arm, which grew progressively worse. This pain was so intense as to cause him to lose sleep at night, but was less during the occupations of the day. At no time was he compelled to use his arm in manual labor, but with some difficulty he found he could sign checks, letters, etc. At this time he consulted a physician, who for one month used the electric current on his arm, shoulder and back. This treatment was given to relieve the pain, which was continuous and most severe. At the end of one month the condition was much worse, and it was at this time that he came to my attention.

Examination.—He was emaciated, had a pinched expression and was extremely neurotic. Physicial examination was negative save for the right upper arm. Just above the bend of the elbow on the inner aspect of the arm was found a firm mass, globular in shape and about 5 cm. in diameter, movable in all directions to a moderate degree, but less so downward. This mass (Fig. 1) was thought to be muscular tissue, and a part, if not all, of the biceps. The mass itself was not tender, but immediately above it and to its outer lower aspect there was marked tenderness to pressure. There was some anesthesia along the outer aspect of the forearm extending to the wrist. Extension and resisting flexion of the forearm caused great pain. There was little or no strength in his grip, and he could not abduct his arm beyond 45 degrees. Rotation at the shoulder and elbow joints was normal when performed slowly. There was a marked depression in the fleshy part of the arm just above this mass, and a slight backward displacement of the head of the humerus was detected.

Diagnosis.—Because of the absence of pain along the median nerve, it was determined that this must be a case of neuritis of the musculocutaneous, secondary to a rupture of the biceps at one or both of its upper attachments, and following the contraction of the ruptured muscle. It must be borne in mind that the musculocutaneous nerve arises from the outer cord of the brachial plexus opposite the lower margin of the pectoralis minor muscle. It at once enters the coracobrachialis, through which it passes downward and outward, into or between the biceps to the outer side of the arm, where it divides into an anterior and posterior branch. It supplies these muscles, and of course throws off filaments into the body of the muscle.

Treatment.—Because of the general condition of the patient an operation was not considered advisable at this time, and a cure of the neuritis was undertaken by relieving the contraction of the torn muscle, by applying a snug bandage about the arm, below the ruptured muscle, the muscle thus being drawn upward to a considerable extent. The arm was then bandaged to the body in such a way as to relax the muscle and hold it quite motionless. Constitutional treatment was also instituted, and after two months the neuritis had entirely disappeared. The general condition of the patient was then excellent, and the question was put to him as to the advisability of wearing a snug bandage and sling for an indefinite period, or to undergo an operation, with the hope of replacing the muscle in such a way as to relieve him permanently of the possibility of a return of the neuritis. He selected the operative treatment, and although 55 years of age, his general physical condition was so good the operation was thought advisable. On careful examination before operation a rupture of the long head of the biceps was positively determined, but the condition of the short head was not definitely fixed.

Operation.—On Dec. 28, 1907, I operated at the Henrotin Memorial Hospital. The incision was carried from the lower border of the insertion of the pectoralis major muscle, parallel with the fibers of the biceps, downward for a distance of about three inches. Dissection was carried directly down to the ruptured muscle, and it was found that the long head had been torn from its attachment at the upper border of the glenoid cavity, and had so contracted that the surface of attachment had become invaginated into the belly of the muscle (Fig 2). The short head was intact except at one point where its sheath showed scar tissue, as if it too had been partially ruptured. Not finding it possible to replace the contracted muscle and tendon into their original positions, I dissected the tendinous portion free from its invagination and adhesions, and brought it up on the belly of the short head. The sheath of the short-headed biceps was then split and the long head planted well upward into it, care being taken to suture its freshened tendon surface to the freshened tendon surface of the short head (Fig. 3). Interrupted catgut sutures were used in the muscle suture and the wound closed and sealed. The arm was then placed in a flexed position in a supporting plaster cast. At the end of the third week the cast was removed and the arm carried in a sling. This was in time dispensed with, and the full use of the arm urged.

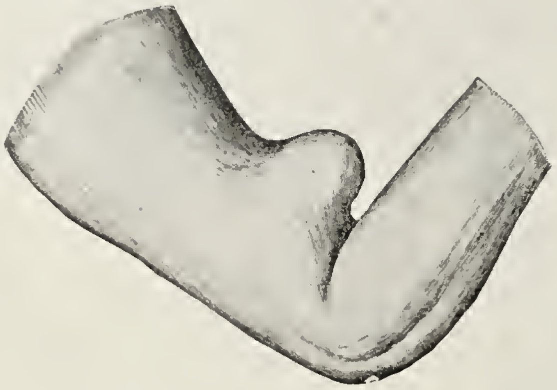

Fig. 1.—Rupture of long head of biceps, showing tumor due to contraction of the ruptured muscle.

Postoperative History.—The result has been more than was hoped for. There has been no return of the neuritis, and the functions of the arm are almost normal. Elevation of the arm at right angles with the body is not yet complete, but greatly improved. Rotation, extension and flexion are normal, excepting as to strength, but it is too early to expect a full return of it, considering the long period of disuse to which the arm was subjected. The occupation of the patient does not require of him any manual labor, but if it did I feel confident that within a few weeks he would be able to perform any work he might have done previous to the rupture of the biceps and the subsequent neuritis.

Looking up the literature on the subject of rupture of the biceps, it was found that Schreiber and Hofmeister state that this affliction occurs chiefly in men, and that the long head is most commonly affected. Maydl collected 18 cases in which the long head was ruptured in over 50 per cent.

Loos collected 66 cases of rupture of the biceps, 2 of which were in women. Among 56 of these cases only 2 occurred in the short head, 1 of both heads, 3 of the common belly, and 3 of the distal tendon, in contrast to 49 of the long head. Petit found the tendon of the long head ruptured in only 43 out of 83 cases.

There are several points in this case which are of interest: 1. The neuritis was not due primarily to direct injury of the nerve, but resulted from the contraction of the ruptured biceps. 2. The electric current caused the muscle fibers to contract still more, thus aggravating the neuritis. 3. The neuritis was cured when the dragging on the nerve by the ruptured muscle was relieved. 4. The function of the arm is restored practically to its normal condition, with the biceps acting as a one-bellied muscle attached to but one head.

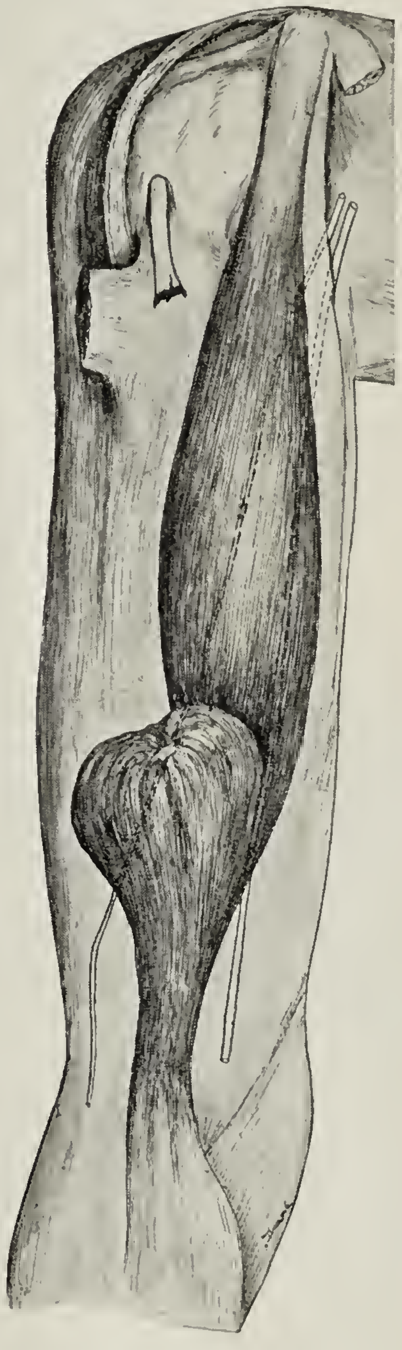

Figure 2.

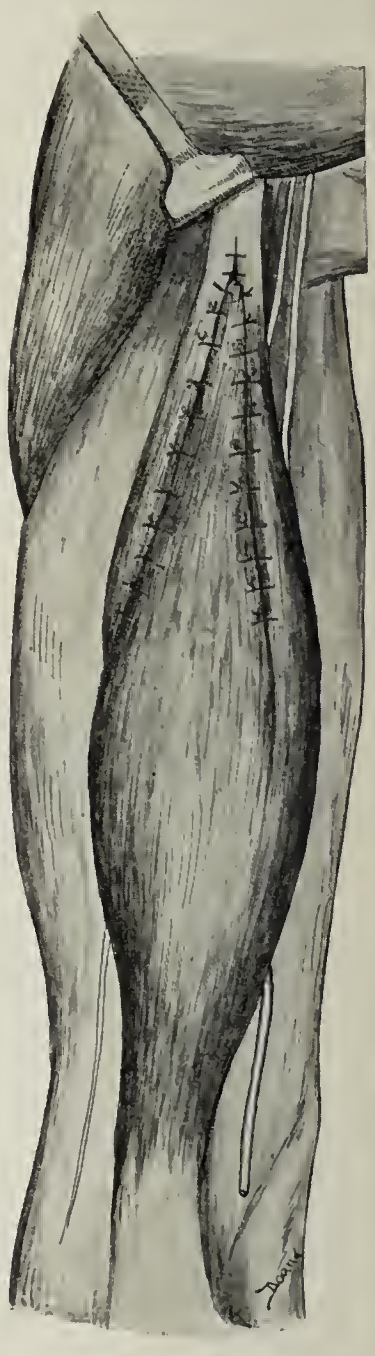

Figure 3.

Fig. 2.—Invagination of the ruptured biceps muscle.

Fig. 3.—Position of the ruptured long head of biceps after suturing into unruptured short head.

Bills Against Michigan Estates.—There is a law in Michigan that bills against an estate of a deceased person which do not exceed $20, if disallowed by the commissioners, can not be appealed. A Detroit doctor recently presented a bill against an estate for $10, which the commissioner disallowed and it could not be appealed. The duty of Detroit doctors is obvious. They should not render a bill against a Michigan estate for less than $20.—*Lancet-Clinic.*

TWO CASES OF GONORRHEAL ARTHRITIS.

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PITTSBURG, PA.

Two cases of septic arthritis, gonorrheal in origin in which both patients were operated on; one terminating fatally, the other in complete recovery, may serve as an illustration of the advantage of prompt surgical interference in this complication of gonorrhea, when contrasted with the so-called expectant plan of treatment. In the case of the patient who died, there was a delay of twelve days from the onset of the septic temperature until the knee joint was opened. In the other case, two days after the septic temperature appeared, both knee joints were opened. In one patient it was an initial attack; in the other, the man had probably lost count of the number of attacks.

Case 1.—Patient, aged 36, unmarried, a structural ironworker by trade, weight 220 pounds, robust, and the picture of health; had used alcohol to excess on occasions, but could not be called an habitual drinker.

History.—Previous venereal history was negative. The initial symptoms appeared Nov. 15, 1907, within four days after suspicious exposure. He was treated in Chicago and the discharge stopped in two weeks. For one week symptoms were absent.

December 8: He came to me with a renewal of the discharge and some preputial edema; he denied venery since first symptoms. Under treatment by urethra irrigations and urinary antiseptics the discharge again cleared up in four days. Two days after he first applied for treatment he reported with a slight pain in the calves of his legs and in one or two metacarpophalangeal joints. The next day the pain in his calves had increased so as to interfere with walking, and additional joints on his hands were involved, but he ascribed his symptoms to the grip, then present in his boarding house. Temperature was 101.

December 12: He was unable to report. His right knee was swollen, hot and painful, with extension of inflammation to the periarticular structures: it was extremely tender on pressure. Pain and swelling in the metacarpophalangeal joints were subsiding: urethral discharge had stopped. Temperature was 102. He was removed to the hospital that night.

Hospital History.—During the first week's stay in the hospital there was a decided amelioration of all symptoms, under symptomatic treatment with icebags and fixation of the infected knee. The urinalysis showed: Acid reaction, reddish amber color; heavy sediment of urates, specific gravity 1.030; albumin and sugar negative microscopic examination, excess amorphous urates and some uric acid. With the clearing up of the genitourinary symptoms all the infection had apparently centered in the right knee joint, and there seemed to be some grounds for doubt as to whether the arthritis was gonorrheal or ordinary rheumatism.

December 19: The man began to run a septic temperature; at the end of two weeks this changed to a pyemic temperature, with remarkably large daily fluctuations, and continued so, although he was under active stimulation until his death.

Treatment.—At the beginning of his septic state three dry cups were used on the knee joint and a posterior splint was applied. Fluctuation persisted, although the pain had subsided and tenderness was elicited only on rather strong pressure at the head of the tibia.

Operation.—December 31, I opened the joint under cocain anesthesia and evacuated about two ounces of seropurulent fluid; double drainage was inserted and the joint cavity flushed with a 1 to 6,000 solution of bichlorid of mercury, followed by a saline solution. Further than a slight drop in temperature this procedure was without effect on the man's general condition. Two days later he had daily, sometimes bi-daily chills, followed by drenching sweats, a condition that was typically pyemic, and it daily became more apparent that he was losing ground. Drainage from the joint was insignificant. A long and careful search of a smear of the pus from the joint failed to reveal bacteria of any kind.

Subsequent Treatment.—Four days before his death, Jan. 14, 1908, I injected under the right breast one cubic centimeter of gonococcic vaccine, containing 50,000,000 dead bacteria, more in the hope than in the belief that it would do good, but feeling reasonably sure that, at least in the desperate condition in which the patient then was, it could do no harm. Apparently it had no influence whatsoever. The use of the vaccine is only mentioned incidentally for, as a test for this treatment, it could not be considered fair.

Case 2.—Patient, aged 34, acknowledged gonorrhea four years ago, with a fairly constant discharge since.

History.—He had a prostatic abscess, with symptoms of stricture; abscess burst in perineum Jan. 13, 1908; this was opened freely, together with a scrotal abscess, at the Mahoning Valley Hospital on the next day. Recovery was uneventful.

February 8: I found him with a double orchitis. He was removed to the hospital. Three days later he complained of pain and tenderness in both knees, in his insteps, over one internal malleolus and particularly in the soles of his feet. On February 15 there was effusion in both knees with a slight rise in temperature; the next day he complained of his left elbow. The only distinctive feature of a urinalysis was the great number of pus cells and bacteria present. The orchitis had subsided.

Operation.—February 17, under general anesthesia both knee joints were opened and drained. Fluid was seropurulent, about an ounce in each joint. Microscopic examination showed the pus cells but no bacteria. All his symptoms immediately began to clear up and in one month he left the hospital with a good pair of knees.

PRIMARY TYPHOID CHOLECYSTITIS AND CHOLANGITIS.

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Comparatively few cases of this rather anomalous condition appear in literature. In view of this fact the following case seemed worthy of reporting. It occurred in the service of Dr. S. Solis Cohen at the Philadelphia General Hospital. I feel greatly indebted to Dr. Cohen for the privilege of reporting the same.

Patient.—J. R., aged 52 years, male, white, laborer, was admitted to the Philadelphia General Hospital Dec. 23, 1907. His chief complaint, on admission, was intense itching of the skin.

Family History.—Parents both deceased; causes of death unknown. No brothers or sisters. No history of tuberculosis, cardiac, renal or malignant disease was obtainable.

Past Medical History.—He had morbilli, pertussis and varicella in childhood. Since that time he has never been confined to bed by illness. When 20 years of age, he had a chancre and specific urethritis. Duration of treatment is unknown. He used tea, coffee, alcohol and tobacco to excess.

Present Illness.—Five weeks previous to admission he fractured several ribs on the left side. Since that time he had suffered with gastric disorders. Vomiting attacks occurred every day; they were unaccompanied by pain, and seemed to bear no distinct relationship to the taking of food. These symptoms he attributed to the fractured ribs. The bowels were obstinately constipated. On the day of admission he suffered with headache, drowsiness and chilly sensations. At this time he first noticed the yellowish discoloration of the skin, which was attended with intense itching.

Examination.—Patient was a well-nourished middle-aged male. His physiognomy was not expressive of any severe pain or discomfort. The skin of his entire body was of a deep golden yellow color. The pupils were equal and reacted to light and accommodation. Ocular movements were good. Conjunctivæ were markedly icteroid. The tongue was moist and heavily coated with a yellowish-white pultaceous fur. No tremor, deviation or anomaly of protrusion was present. Pulse was comparatively infrequent, rhythmic, of moderate volume and tension, and the artery was sclerosed. The thorax was emphysematous in type. Expansion was generally diminished, but equal in all directions. Lungs were hyper-resonant throughout. Breath sounds were of weak, vesicular type; expiration was prolonged. A few crepitant râles were audible at both bases. The apex of the heart was visible and palpable in the fifth intercostal space in the midclavicular line; the impulse was feeble. The entire area of cardiac dulness was slightly increased transversely. Soft blowing systolic murmur was audible in the mitral area, was transmitted to the left axilla. It almost replaced the first sound. Pulmonic second sound was considerably accentuated. Examination of the abdomen revealed slight distention. Slight increased resistance and considerable tenderness were present in the right hypochondrium. The liver extended two finger-breadths below the costal margin, its edge being readily palpable. The gall bladder could not be felt. The spleen was slightly enlarged to percussion, but was not palpable.

Course of Disease.—The temperature on admission was 100 F. For the next four days it ranged between 100 and 101 F. It then ascended and for five days ranged between 102 and 104 F. Defervescence occurred by lysis, the temperature reaching normal on the sixteenth day from the time of admission.

Blood Examination.—On the day of admission the hemoglobin was 5.5 per cent.; erythrocytes, 2,890,000; leucocytes, 8,200; differential count, polymorphonuclear, 60 per cent.; small lymphocytes, 8 per cent.; large lymphocytes, 32 per cent. Three marked positive Widal reactions were obtained.

Feces.—Typhoid bacilli were isolated in considerable number.

Urinalysis.—On day of admission the urinary findings were as follows: Color, dark amber; reaction, acid; specific gravity, 1.023; slight trace of bile; no albumin or sugar. Microscopic examination disclosed triple phosphate, uric acid, epithelial cells, bacteria and débris.

On admission this case presented the evidences of an ordinary catarrhal cholecystitis and cholangitis. The positive Widal reaction, the absence of a leucocytosis, the marked increase in the large lymphocytes and the presence of the typhoid bacilli in the feces, led to a diagnostic infection of the gall bladder and ducts with the Eberth's bacillus. As is well known, cholecystitis and cholangitis are rather frequent as complications or sequelæ of enteric fever.

Primary typhoid cholecystitis and cholangitis—that is, inflammation of the biliary tract, without other evidence of past or present typhoid infection—are comparatively rare. In reviewing the literature on the subject I find that Pratt[1] was the first to call especial attention to this condition. He reported two cases, one of which was gangrenous and associated with a localized peritonitis. Similar cases have been reported by Cushing,[2] Richardson,[3] Mitchell,[4] Stockton and Lyte,[5] Burley,[6] Stewart,[7] and Kelly.[8] The preceding case well illustrates the necessity of making careful examination of the blood and feces, for if this is not done, the essential underlying etiological factor will remain unrecognized.

I am confident that these cases occur far more frequently than the literature on the subject would lead us to believe. Careful examination of the blood and feces not being made in all cases, the origin of the disease is attributed to other factors than the typhoid bacillus.

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[1] Am. Jour. Med. Sc., November, 1901.
[2] Johns Hopkins Hosp. Bull., 1898, ix, 91.
[3] Boston Med. and Surg. Jour., Dec. 2, 1897.
[4] Maryland Med. Jour., 1901, xliv, 13.
[5] New York State Jour. Med., 1902, ii, 232.
[6] Am. Med., October, 1903.
[7] Am. Med., 1904, vii, 1019.
[8] Am. Jour. Med. Sc., September, 1906.

ANGIONEUROTIC EDEMA OF THE GENITALS.

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Angioneurotic edema is a condition interesting enough to warrant the reporting of cases, and this patient presents clinical aspects rather striking and probably without the common experience of most of us. To transcribe his clinical history in full would be to write a monograph—even to relate essentials details is no easy task, but the following outline contains the salient features.

History.—Mr. X., age 27, single. Family history unimportant, except that both his aged parents suffer with chronic organic cardiac disease. A young man in good circumstances, he has been in the front rank in athletics, and has indulged in the usual life of young men of the day, but not to any great excess. No serious diseases, other than repeated attacks of gonorrhea, until three years ago.

Three years ago, while in New York, the patient called me to see him. He had been under treatment by a physician for a chronic gonorrhea, but at this time he was feeling very miserable, suffering particularly with nocturnal fever and joint pains, commencing about 4 o'clock every afternoon. A look at him disclosed a typical macular syphilide over his trunk. As he had been under the physician's regular observation for his gonorrhea, it was all the more remarkable that there had been no sign nor history of primary lesion. (The patient since informed me that while under treatment for the gonorrhea the physician was accustomed to take the sounds directly from the instrument cabinet to the urethra without sterilizing hands, penis, urethra or sounds. Thus the possibility of intraurethral chancre could not be excluded, in fact was made very reasonable.) I concurred in the diagnosis of syphilis.

Treatment.—The patient's course since then has been devious. Rigorous anti-luetic treatment was instituted and carried out. He returned to his home in San Francisco in a few months, and went under the care of Dr. H. B. Reynolds.

Subsequent History.—One year later I was with the patient at Lake Tahoe, whither he had gone to rest from rigorous mercurial treatment and to seek climatic relief from the intense headaches with which he had become afflicted. While occupying a seat one day he became suddenly completely paraphasic, and on attempting to walk had a staggering gait. He was removed to San Francisco at once, and there in consultation with Drs. Herbert Moffitt, E. C. Sewell and H. B. Reynolds, it was agreed after extended and thorough examination that he probably had a luetic meningitis, though the sudden onset spoke for intracranial arterial disease. (The symptoms completely disappeared before the patient's arrival in San Francisco, an interval of twenty-four hours.)

For one year following, the patient was bed-ridden in a hospital for what was actually a profound psychasthenia with many hysterical features. He was obsessed with phobias, was neurotic in the extreme, and insisted on having an attendant constantly with him. His physical symptoms were protean, headaches, nausea, diarrheas of violent nature, universal pains, in fact the whole gamut of possibilities.

At the end of the year I returned to San Francisco and found him just about on his feet again. (This was two years ago.) In a few months he was approximately a normal individual, physically and mentally, was back at his tennis and planning to finish his law course at Columbia University.

Six months ago I was called to see the patient. He had a violent diarrhea, a very high temperature (103.5) and a dicrotic pulse; no enlarged spleen nor rose spots. After three days in bed with high fever he became well over night, the temperature falling by crisis.

Present Illness.—Four months ago the patient called me at 3 a. m. While indulging in sexual intercourse a few hours previously he suddenly felt as though some insect with a sharp mandible had bitten him on the left side of his scrotum. On arriving home he found the skin of that side of the scrotum quite red; he put on at once Pond's extract and camphor, but the itching became intense and large bullæ formed. I saw him in a few hours and diagnosed a dermatitis from the irritants applied. The skin of the left side of the scrotum was swollen and red and bore large vesicles containing seropurulent fluid. Under or in spite of treatment the condition subsided in about a week, and I was extremely puzzled as to what the initial trouble had been.

A few weeks later, while lying in bed, he experienced the identical sensation in the scrotum and foreskin and sent for me. I found the entire scrotum and foreskin enlarged to elephantine size, red, edematous, but no lesions of any kind. Frightful itching was present. Antiprurities and purges were given, and the condition subsided in a day. The testicles themselves could be made out and were normal.

Since then the patient has had three attacks, all similar in their feature to the second attack, i. e., with no vesicular formation. Parasitic disease was excluded, and it was palpable in the attacks following the first that we were dealing with an angioneurotic edema.

A suggestive feature in the case is that shortly before the onset of these attacks, the patient had gone through a typhoid-like seizure of short duration and subsiding suddenly. Could not this case in its latter features belong to that growing field of clinical entity, the erythemas and purpuras with visceral crises? If so, what relation, if any, has it to the luetic infection, or better still, did he ever have lues?

To settle these questions would require a more detailed history, for abundant as the above data are, they represent but a small portion of those at hand. The angioneurotic edema is the main reason for the publication of the case. Its general clinical aspects, however, assume a remarkable interest for those in touch with the patient.

943 Van Ness Ave.

CASE OF LEFT SCROTAL HERNIA CONTAINING THE CECUM AND APPENDIX.

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PITTSBURG.

The following case is reported because of the comparative rarity of the anatomic findings, beyond which it presented no points of special interest.

History.—Patient, aged 3 years, a twin and a 7 months child. The parents informed me that the hernia was present at birth, but it is fairly reasonable to suppose that it may have appeared soon after birth. They also stated that the hernia varied in size, but never disappeared entirely. The child was well nourished and apparently normal, except that it had never walked, and in the recumbent position had developed eversion of both legs to practically 90 degrees.

Examination.—The left side of the scrotum was filled with a mass the size of a lemon, a part of which was easily reduced, with audible signs of gas. I was not, however, able to accomplish complete reduction, either at that time or later, under anesthesia, and as the remaining mass felt doughy, I diagnosed a hernia of the small bowel and omentum.

Operation.—On opening the sac the small bowel, which was thought to be the ileum, was found uppermost. On attempting to draw this up from the bottom of the scrotum, some resistance was encountered, but after a little perseverance the adhesions gave way, and the entire cecum and appendix presented, and the underlying loop of gut proved to be part of the ascending colon. The cecum was thick and friable, and tore on attempted reduction, which was very difficult, necessitating one suture. The cecum and appendix were very much congested. The appendix measured 7 cm. in length and 8 mm. in diameter after three days' hardening in alcohol.

Owing to the length of time taken by the appendectomy, and the reduction of the thick-walled, friable cecum, it was not deemed wise to subject the child to farther examination at the time, and the herniotomy was completed in the usual manner. Subsequent examinations, however, revealed nothing abnormal and the child made an uninterrupted recovery.

FOREIGN BODY REMOVED FROM RIGHT BRONCHUS BY LOW TRACHEOSCOPY.

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BALTIMORE.

History.—March 6, I was hastily called to see Mary P., aged 10 years, who for some time had suffered from laryngeal dyspnea, which had gradually increased in severity until radical measures were necessary. She was taken to a laryngologist who promptly made a diagnosis and inserted a No. 3 hard rubber tracheotomy tube into the trachea to give better breathing space. He dilated the stenosis successfully so that the patient was much improved.

At 2 o'clock in the afternoon March 6 the tube was removed, cleaned and replaced. Two hours later, while eating cake, she had a sudden attack of coughing and cyanosis which passed off in a few moments. A little later, the attack was repeated. The nurse, much alarmed, immediately summoned a physician, who attempted to remove the tube. He succeeded in getting only the outside plate; the tube was missing. In the absence of the attending laryngologist I was asked to see the patient.

Examination.—She was lying on her back, breathing with some difficulty and coughing incessantly. Finding her in no immediate danger, I turned my attention to the plate, and found that in some way the tube had become unscrewed until it was almost off the plate. During the acts of swallowing the cake it had evidently dropped into the trachea, giving rise to the sudden cough and cyanosis. Immediate operation for the removal of the tube was advised.

Operation.—The patient was chloroformed, with the mask over the nose and mouth, and the tracheotomy wound was cleaned and enlarged for half an inch. Jackson's 5 mm. tracheoscope was passed through the tracheal wound, the mucous membrane touched with cocain and adrenalin, blood and secretion wiped away and careful search made for the missing tube. After we had reached almost to the bifurcation, the dark edge of the foreign body could be seen. The tube had worked its way down into the right bronchus while the upper end was in the trachea close to the bifurcation. With each pulsation of the heart the dark edge moved from side to side. Forceps were introduced through the tracheoscope, the edge of the tube was seized, and tube and forceps were pulled out together through the tracheal wound. The entire operation lasted about fifteen minutes. The patient was nauseated the next day, but with this exception recovery was uneventful. There was not the slightest rise of temperature.

919 North Charles Street.

Staining of the Negri Bodies.—L. Frothingham, in the *American Journal of Public Hygiene*, states that the stain should be made freshly every day, as the Negri bodies fail to take up the red readily after the solution is from six to eight hours old. The Negri bodies stain from a pale pink to a purplish red, and often contain numerous minute dark blue dots. The cells stain more or less blue, the red blood corpuscles not at all or are yellowish in color, rarely pinkish. He calls attention to the fact that not infrequently the Negri bodies in the Purkinje cells stain a very pale pink, while those in impressions of the cornu Ammonis, made on the same slide and stained at the same time, are deeply stained. He has observed this same peculiarity in the sections.

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SATURDAY, MAY 16, 1908.

THE CHEMISTRY OF THE MUMMIES.

The influence of time on matter has always a rare fascination for the scientific mind, most particularly so when it concerns the products of human endeavors. Egypt has furnished us with our most valuable information on this subject, and recently the Government School of Medicine at Cairo has been putting out some most intensely interesting reports concerning observations on the anatomic conditions of mummies from different periods.

We have found especially absorbing a study of the biologic chemistry of mummies by W. A. Schmidt,[1] in which the most modern methods of analysis have been applied to the oldest human materials that now exist. Mummies of different ages were examined, some dating back to prehistoric times, before even the Egyptians began the practice of embalming, some 6,000 years ago. Yet even in these most ancient of materials the original composition of the tissue elements has been so well preserved that cholesterin, fatty acids, neutral fats, and even unaltered, heat coagulable proteins still remain in condition to be identified by chemical tests, although most of the protein has been transformed into proteoses and other decomposition products. A very large proportion of all mummy tissues consists of free fatty acids, and the fact that organs which do not contain much fat, such as the spleen and lungs, were found in these mummies to contain from 30 to 60 per cent. of fatty acids, seems to Schmidt to be unequivocal evidence that these fatty materials must come from proteins, constituting an example of true fatty degeneration of proteins. He is apparently unaware of Zillner's studies[2] of the corresponding changes in the process of adipocere formation, which showed that during postmortem disintegration the fatty matters diffuse away from their normal sites and infiltrate tissues where fat does not ordinarily exist, hence destroying the value of such evidence as that of Schmidt that tissue proteins sometimes are transformed into fat.

Although these mummy proteins retain their chief chemical characteristics they do not react to the precipitin test for human proteins, showing that the constituent of tissues that gives the precipitin reaction with immune serum is more labile than are the ordinary chemical characters. However, it has recently been reported by Friedenthal[3] that animals immunized to elephant's blood produce precipitins that react with the blood obtained from a Siberian mammoth which had remained frozen in the ground since the diluvial period; this indicates how much better preservation is afforded by continuous freezing than by drying. Schmidt was unable to secure the usual reactions for hematin even with the contents of the blood vessels of the mummies, and he believes that the positive findings reported previously are erroneous; even in the well-preserved tissues of the mammoth, blood could not be demonstrated with the spectroscope. In a review of Schmidt's article Halliburton[4] recalls the fact that the presence of chitin, which is a characteristic constituent of the shells of crustaceans, has been demonstrated in the carapace of a fossil eurypterid.

The mystery of Egyptian embalming which has been made to fascinate us in many novels and tales of "popular science," is ruthlessly demolished by our friend, the German scientist. Their methods as disclosed by ancient papyri and modern science were substantially as follows:

The brain was dug out through the nose with a hook-like instrument, and all the viscera except the heart were removed after opening the abdomen; the body thus deprived of its most easily decomposed parts was left in a bath for about two months, the constituents of this bath being nothing more remarkable or mysterious than sodium chlorid. In other words, the body was well pickled in brine, after which the cavities were washed out with palm wine and stuffed with aromatic substances and with cloth or clay to preserve the shape. After the body had been thoroughly dried by exposure to air, it was then enveloped in bandages, supplemented by gums or resinous materials. Arsenic, mercury and other mineral preservatives are never found in Egyptian mummies.

According to Schmidt, the real reason for the success of the Egyptian embalmers did not lie in their methods, but in the Egyptian climate, which caused a rapid and permanent desiccation of the pickled bodies, while the external bandages protected them from such extraneous destroyers as worms and beetles. As a matter of fact the bodies of the dead in prehistoric Egyptian periods were not protected by bandages, etc., but were merely buried in the dry sand, and yet now after 6,000 years they are found still fairly well preserved.

At another period the process of embalming consisted only in the pickling and drying, without the use of bandages, yet these simple methods have produced excellently preserved mummies. And thus vanishes another mystery of the ancients! A "lost art" has been rediscovered.

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[1] Ztschr. f. allg. Physiol., 1907, vii, 369.

[2] Vierteljahrschr. f. gericht Med., 1882, xlii, 1.

[3] Deutsche med. Wchschr., 1904, p. 901.

[4] Nature, March 19, 1908, p. 465

COMMENCEMENT ORATIONS.

During next month scores of commencement orations will be delivered to graduating classes at medical schools. As a rule the men who are selected to deliver such orations are extremely busy with the practical side of medicine and so can not devote the time to making their addresses all that they would wish. An excellent opportunity is provided in these addresses for impressing on the minds of those who are about to take up the practice of medicine some of the condensed wisdom gleaned from experience by our medical forefathers, who had learned many things that can not be obtained from books nor secured by attendance at lectures or laboratory exercises. Advice, of course, is easy to give and hard to take. The old saying that experience is a dear teacher, but every one must learn by his own experience, still remains absolutely true. Aphorisms that are the results of others' experience are not likely to benefit the young as much as might be desired, yet some of the expressions that may readily be borrowed from our colleagues of the olden-time, may, if heard at so impressive a moment as the graduation exercises, come back with redoubled force at moments of doubt and difficulty in the future.

There are few books so full of suggestion for one who wants a stimulus in this regard as dear old Dr. John Brown's "Spare Hours." The original British edition was published under the name of *Horæ Subsecivæ*, but the American edition[1] rejoices in the translated title. The third series contains a group of articles, nearly all on medical subjects, beginning with Dr. Brown's well-known essay on Locke and Sydenham, the great English philosopher, and the English Hippocrates, who were close personal friends. Those who know Dr. Brown only through "Rab and His Friends" and perhaps "Marjorie Fleming" have a pleasure before them if they dip into "Spare Hours." We know no book from which so much that is suggestive, so much that is of the rarest value, so much that contains the condensed experience of many of our English medical forefathers may be obtained so readily or so pleasantly as from this. Those who feel the preparation of an oration for commencement day as an incubus will have their burden lightened by a few hours of pleasant reading in this charming classic of medical biography and its borderland.

The motto of the book is the famous lines from Cowper, than which nothing could be more appropriate for a commencement day theme.

"Knowledge and Wisdom, far from being one,
Have oft-times no connection. Knowledge dwells
In heads replete with thoughts of other men;
Wisdom in minds attentive to their own.
Knowledge is proud, that he has learnt so much;
Wisdom is humble, that he knows no more."

The preface contains many hints on the value of medical experience as compared to the value of medical knowledge. It closes with quotations from Dr. Latham's "Clinical Medicine," in which he says: "In our day there is little fear that students will be spoiled by the recommendation of their instructors to be content with a scanty knowledge and trust to their own sagacity for the rest. The fear is of another kind, and it is well-grounded, namely, that many men of the best abilities and good education will be deterred from prosecuting physic as a profession in consequence of the necessity indiscriminately laid on all for impossible attainments."

There are many other expressions from distinguished authorities in surgery that bring out this fact very clearly. Probably none that we know does it better than the following paragraph from Professor Syme, which occurs in his letter to Sir James Graham on the medical bill. Syme wrote:

"Medicine, throughout all its departments, is a science of observation; memory alone, however retentive, or diligently assisted by teaching, is unable to afford the qualifications for practice and it is only by digesting the facts learned, through reflection, comparison and personal research, that they can be appropriated with improving effect; but when the mind is loaded with the minutiæ of elementary medical and collateral study, it is incapable of the intense and devoted attention essential to attaining any approach to excellence in practical medicine and surgery. It has, accordingly, always appeared to me, that the character of medical men depends less on what passes during the period of studentship than on the mode in which they spend the next years, when, their trials and examinations being over, the whole strength of a young and disciplined intellect may be preparing itself for the business of life."

It must not be thought, however, that the suggestive material for medical addresses afforded by these "Spare Hours" may be obtained only from the quotations which Dr. Brown has collected so well. He himself was a profound thinker on medical subjects and especially on all that related to practical medicine and medical education. Though he wrote more than half a century ago there are many expressions in his article on Locke and Sydenham that deserve cordial consideration at the present moment. For instance:

"The great problem in the education of young men for the practice of medicine in our times, is to know how to make the infinity of particulars, the prodigious treasures of mere science, available for practice—how the art may keep pace with, and take the maximum of good out of the science." And a little further on he adds: "Now, everything, at least most, is done in public, in classes; and it is necessarily with the names of things rather than the things themselves, or their management, that the young men have chiefly to do. The memory is exercised more than the senses or the judgment; and when the examination comes as a matter of course, the student turns back to his teacher as much as possible of what he has received from him and as much as possible in his very words."

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[1] Houghton, Mifflin & Co., Boston

It would be impossible, however, by a few quotations to give more than a faint idea of the valuable and suggestive thoughts that are contained in this single volume.

THE REGISTRATION OF BIRTHS.

Of all the advances made in medicine during recent decades, no step has been more fraught with benefit to the common weal than the birth of a science of public health. The first step in this direction, and one that was absolutely essential to its development, was the institution of what is known as vital statistics, i. e., an efficient official registration of births and deaths, with the causes of the latter, and of infectious diseases. The science of epidemiology, also, itself a subordinate part of the science of public health, took its rise with that of vital statistics. In this country, until recently, very little effort was made, save in large cities, to establish an official statistical record. By the growth since 1895 of what is known as the registration area of the United States, the vital statistics now cover a total of 48.7 per cent. of the entire population, so far as mortality returns are concerned. But in the "Report of Mortality Statistics," for 1906, of the Departments of Commerce and Labor, Bureau of the Census, there is to be noted an inquiry as to why there is no registration area for births. The bureau, with a view to answering this question, sent out an inquiry to all states and to all cities of 50,000 population or over in 1900, concerning the status of the registration of births therein. After eliminating replies which for one reason or another were inadequate, the reasons for the inadequacy of birth returns assigned by registration officials in 64 state or city areas show, on analysis, that in no less than 41 the inadequacy is attributed to the "negligence," "unwillingness," "failure," "indifference," etc., of physicians. In one case this attitude of the physicians is emphasized by the statement, "no difficulty from midwives, but considerable from physicians." Occasionally a reason is given for the laxity of the physicians, such as an objection to do clerical work for nothing, or the fact that the physician witholds the report in order to obtain the name, and ultimately forgets it altogether.

The American Medical Association, at the New Orleans session in 1903, in a series of resolutions, urged on local medical societies the important duty of coöperating in the endeavor to obtain satisfactory registration laws in states that do not yet possess them, as well as on physicians individually to endeavor to promote the accuracy and value of such statistics wherever they are collected. The question of uniform laws for the regulation of vital statistics was discussed at the Conference on Medical Legislation held in Chicago, in December, 1907, at which a model bill was presented, which is receiving the consideration of the National Census Bureau, the American Public Health Association, the American Statistical Association, and the Conference on Uniform Laws of the American Bar Association. This bill will be presented at a session of the Section on Hygiene and Public Health at the session of the American Medical Association next month. The committee appointed by the House of Delegates last year to consider this subject will also present its report at the coming session. But from what has been quoted above it is clear that physicians as a body are not sufficiently alive to the importance of vital statistics for the advancement of medical science, otherwise we can hardly think that indifference or the absence of a fee would cause them to neglect any part of so important a public obligation. The person in whom the duty of reporting a birth primarily and morally inheres is, of course, the parent. The assistance of the physician is sought by the state as a reinforcing element only, since he is, as it were, a responsible and permanent link between the parents and the central authorities.

Notification, then, devolves on him as a public duty; for it must not be forgotten that the physician receives valuable privileges from the state, and every privilege invariably involves a corresponding obligation. It would seem, however, that the special assistance he can render to the state is fulfilled when he has advised the authorities of the fact of the birth, at a given time and place, of a male or female child, a plural birth, etc., which information should be given on the day of its occurrence; further prosecution of the inquiry is the part of the authorities. If the physician's duties are to be carried to the extent of making him a registration officer of the law, then it would seem only fair that he should be paid a fee appropriate for his service. But in any event, and until such measures can be taken as shall put this duty on an equitable basis, he should surely not grudge some little trouble in the interests of scientific medicine itself, to aid in the development of so important a part of medical science.

HYDROPHOBIA.

It is reported that epidemic rabies exists at present in one or more states of the Union, and there are probably few states that have not a few cases of this disease among dogs at all times, while instances of human infection are not unknown in any section. In this respect the United States compares unfavorably with Europe. The total annual mortality from hydrophobia in this country is from 100 to 300. In England the muzzling order has been followed by a complete disappearance of the disease. According to Dr. Hart,[1] the disease among dogs is increasing. In and about the city of Washington its frequency during the last ten months has been alarming; in 1907 a positive diagnosis of rabies was made in 44 cases, and of these 33 were found in the District of Columbia or its immediate neighborhood. These 33 animals bit 16 people, 46 dogs, 2 horses and 2 cows. Nor is the diseases less common in other parts of the country; Dr. Hart well observes that the preventive measures at present being taken are altogether inadequate.

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[1] Hart, G. H.: Rabies and Its Increasing Prevalence, Bureau of Animal Industry, Washington, D. C.

There is an unfortunate tendency on the part of some to deprecate the importance of rabies and hydrophobia on account of their rarity, while others have been led by the frequent mistakes in diagnosis to deny the existence of these affections altogether. No doubt in consequence of popular excitement and ignorance of the real symptoms of the disease not a few animals—and possibly some valuable ones—are unnecessarily destroyed during the heated term. A homeless mongrel, for instance, is worried and kicked about by a gang of young toughs; this with the heat, the dust, the noise, the starvation and what not else, sends the poor beast barking through the streets. The development of a "mad dog scare" is then accomplished when someone has been bitten by this frightened creature, for which viciousness he is duly shot or battered to death. Even dogs which run amuck are not necessarily rabid. Still, notwithstanding the experience of some who have never met with the disease in the course of an extensive acquaintance with dogs, it must be admitted that rabies exists although rare. The fact that the agents of the Society for the Prevention of Cruelty to Animals have been bitten some 15,000 times without the development of a single case of hydrophobia is probably due to their ability to distinguish between a peevish dog and a rabid one. Under the influence of fear of the consequences persons bitten by dogs which are not rabid are apt to develop a pseudohydrophobia or lyssophobia which, although it is not fatal, is likely to be the cause of much suffering. For the prevention of this condition, if for no other reason, it is imperative that the true status of every dog which has bitten a human being should be determined.

It is computed that, even from the bites of rabid animals, but 16 per cent. of the victims at most develop true hydrophobia. The immunity of the others is attributable largely to the protection afforded by clothing, to the slight extent of some of the wounds, and especially to the fact that a nerve has not been injured. Nevertheless, the disease is so dreadful and (when it has passed the incubation period) so invariably fatal, that common sense precautions against it are essential.

Immediately on the receipt of a bite from a suspected animal the local treatment familiar to physicians should be instituted. The older method of sucking the wound has been objected to on account of danger of infection to the operator and possibly to the patient, but we see no objection to the application of suction by means of a mechanical suction apparatus. Even after twenty-four hours the wound should be cauterized after excision of the ragged edges.

The procedure to be followed in case of the suspected animal is nearly as important and apparently not so well understood. Boards of health should have authority to require that all animals suspected of being rabid should on reasonable evidence be turned over to them for observation, and they should provide a place where such animals can be kept under observation until death or recovery. On the death of the animal its head should be sent at once to a competent pathologist or to the nearest health department. Or its skull may be broken open, the brain removed and placed in a jar containing alcohol, half and half, and the whole may be sent to the laboratory, where within five minutes the presence of characteristic lesions may be demonstrated. A rabid animal should not be killed if it is practicable to confine it, but should be allowed to die a natural death. The development of the disease may make the diagnosis certain in cases in which if the animal were killed immediately after the bite even microscopic examination may be futile. The presence of the Negri bodies is to be regarded as positive evidence of the disease, but their absence does not necessarily show its absence. When the occurrence of the disease in the dog has been demonstrated the Pasteur treatment should at once be instituted for those bitten.

COLD-STORAGE EDITORIALS FOR MEDICAL STUDENTS.

In their attempt to stem the tide of public opinion against the use of "patent medicines" and to discredit, so far as possible, the work done by Samuel Hopkins Adams in the "Great American Fraud" series, the nostrum mongers seem to have reached the end of their literary tether. Medical students throughout the country are receiving for their instruction and delectation a reprint, in pamphlet form, of an "editorial" (save the mark!) from a long since defunct "medical journal." The article is entitled "Collier's Methods Exposed" and consists of an attempted refutation of the various counts made by Mr. Adams against headache powders, cephalgine, antikamnia, etc. Inasmuch as fully three times as much space is devoted to a "refutation" of the charges against antikamnia as is given to any other nostrum mentioned, one questions whether the Proprietary Association of America or the Antikamnia Chemical Company is paying for these reprints. The article in question was originally published in the *St. Louis Medical and Surgical Journal.* This publication, while posing as a medical journal, warmly espoused the cause of the "patent medicine" men, "performing the unsavory work of the Proprietary Association with the Proprietary Association's approved methods of falsehood and fraud." It died, presumably from a lack of reputable readers, in July, 1906, the reprint under discussion being its agonal editorial spasm. That the "editorial" is of the vintage of '05 is a fact that is carefully concealed, however, in the current reprint and the space on the title page which in the original contained the date, is in the reprint (otherwise an exact reproduction) occupied by the words "St. Louis, Mo." It is possibly hypercritical to call attention to such trivial deceptions as these on the part of a firm or organization whose very existence rests on fraud and misrepresentation. One wonders, however, if it is possible that the awakening of the public conscience to the nostrum evil has made it difficult to find medical editors who are willing to stultify themselves by taking up cudgels in behalf of nostrums. Has it come to the pass where cold-storage editorials of questionable antecedents have to be pressed into service to bolster up a losing cause? To medical students, whose acquaintance with medical journalism is necessarily limited, the name of the *St. Louis Medical and Surgical Journal* may mean much or little. To physicians of maturer years and fuller experience the connection of this journal with any article would be that article's greatest condemnation.

GLANDERS IN MAN.

Dr. Bevan's suggestion in his article in this issue that chronic glanders may be a frequently unrecognized disease in man is worthy of attention. Most cases, even those following an acute course, simulate other disorders at the outset, and usually a correct diagnosis is possible only after some days. Even then any but a characteristically developed case might escape recognition, and such cases are hardly the rule, especially in the more chronic forms. It is easy to understand, therefore, how an incorrect diagnosis is possible even late in the course of the disease. Glanders was recognized for centuries as a disease of the horse, and must have often occurred in the human subject under the insanitary conditions existing during the middle ages. At present it is safe to say that few general practitioners are habitually alert to detect it, and there are consequently many chances for an incorrect diagnosis. The importance of the subject, easily underestimated at a casual glance, may be understood by considering the comparative frequency of the disease in horses, the susceptibility of some other domestic animals to the infection, and, above all, its virulence in man. It is reassuring, however, to know that the prognosis may not be absolutely bad in the chronic cases. Moreover, we have learned from experience with some other disorders that the more prevalent the disease the more numerous the cures. Perhaps this may be true in the case of glanders as well. Glanders is not a pleasant subject for laboratory investigation, but any facts as to its curative treatment or the production of immunity will be worth learning. We have not yet reached the "horseless age," and until we do glanders is a real peril to the human species—possibly not so rare a one as we have supposed.

AN INEXPENSIVE DAY CAMP FOR CONSUMPTIVES.

The Mattapan Day Camp,[1] opened by the Boston Association for the Relief and Control of Tuberculosis on June 5, 1907, and closed on Feb. 1, 1908, is remarkable as showing what can be done with meager equipment. It consisted of a lean-to kitchen with pantry, having a laundry and wood and coal room attached, a dining tent, and five small tents, of which two were used as rest tents for the more ailing patients, one was a women's dressing room, another was occupied by the caretaker and the fifth was used as a storage room. There was also a shack, 10 by 18 feet, for the matron's use and for medical quarters. The laboratory consisted of a table with a shelf holding an ordinary paper pail with 6 feet of rubber tubing attached, and an ordinary iron pail for a sink. A sputum incinerator was constructed from a cast-iron ash barrel with draft holes at the bottom, in which the paper bags and crêpe-paper napkins for sputum were burned. There were as few rules as possible, the most important one being the prohibition of expectoration on the ground. The staff consisted of a physician in charge, two assistants, a visiting throat specialist, a graduate nurse matron and an assistant nurse. There were in addition a cook, two helpers, and two patients as caretakers. The patients came to the camp at 9:30 a. m., spent the day in reclining chairs, at recreation or light work, and left in the evening. The capacity of the camp was 75 a day; its cost, 51 cents a day for each patient. A further valuable measure was a routine examination by the visiting nurse of the home condition of the patients and the state of other members of their families. The value of such a camp as an educational institution can hardly be overrated, and the comparatively small expense, both in its creation and up-keep, makes it possible everywhere.

THE FITZ FESTSCHRIFT.

The custom, which, as its name suggests, originated in Germany, of publishing on some anniversary of an honored master a collection of contributions to science by his pupils and admirers, has found an increasing appreciation in this country. The *Boston Medical and Surgical Journal* for May 7 forms such a *Festschrift* to Reginald Heber Fitz, M.D., LL.D., Hersey professor of the theory and practice of physic in Harvard University, in honor of his sixty-fifth birthday. Dr. Fitz's connection with the development of medical education, and the general soundness and conservative judgment of his own studies, are too well known, and, indeed, have been too widely honored, both in this country and abroad, to need repetition here. Besides a biographical notice of Dr. Fitz, accompanied by an excellent portrait, the volume contains twenty-five contributions of merit from his former house pupils at the Massachusetts General Hospital and assistants in the department of theory and practice of physic, Harvard University, and a list of Dr. Fitz's contributions to medical literature. It is not necessary here to refer further to the articles, as they will be enumerated, and in some cases abstracted, under Current Literature in due course. The *Festschrift* is a credit to all concerned. The illustrations are particularly commendable. They comprise thirteen full-page plates of photomicrographs illustrating articles on multiple myeloma, primary sarcoma of pleura, and the origin of urinary casts.

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[1] Townsend, McCarthy and Houghton: Boston Med. and Surg. Jour., April 30, 1908, p. 575.

Medical News

CALIFORNIA.

State Society Meeting.—At the thirty-eighth annual meeting of the Medical Society of the State of California held in San Diego, April 21-23, Dr. Wesley W. Beckett, Los Angeles, was elected president; Drs. Fred Baker, San Diego, and Edward G. McConnell, San Francisco, vice-presidents; and Dr. Philip Mills Jones, secretary-treasurer (reelected). The society took a most determined stand for pure food and improved sanitary conditions for municipalities and cities.

Communicable Diseases.—There are 5 cases of smallpox in Sonora, all of mild type.——The Vallejo public schools and library have been closed on account of the prevalence of smallpox. At the pesthouse and detention camp there are now 17 cases.——Two cases of smallpox of mild type are reported in East San José.——The public schools of Lodi have been closed on account of the prevalence of scarlet fever.——Diphtheria is reported to be epidemic in the Southern California Hospital for the Insane, San Bernardino, where 60 cases have appeared among attendants and patients, with five deaths.

Personal.—Dr. Frank L. Adams and family, Oakland, have returned, after a year abroad.——Drs. Joseph D. Davidson and J. Lawrenee Maupin have succeeded Drs. William T. Burks and Asbury N. Loper, resigned, as members of the Fresno Board of Health. Dr. Asbury N. Loper has been appointed health officer of Fresno, vice Dr. Thomas M. Hayden, resigned.——Drs. Charles L. Coleman, San Leandro, and Samuel H. Buteau, Oakland, are making a tour of inspection of hospitals of the East.——Drs. Joseph F. Tapley, Nelson C. Bissell and George W. Stratton have resigned as members of the Board of Health of Marysville.——Dr. Elmer E. Stone, medical superintendent of the Napa State Hospital, is making an inspection of the insane hospitals of the East, to study the methods in force there in the care and treatment of the acute insane.——Dr. Lucius J. Huff has been appointed assistant police surgeon of Los Angeles, vice Dr. Joseph B. Tanner, deceased.——Dr. and Mrs. Horatio S. McGavren, Sacramento, have returned after a year abroad.——Dr. Constante A. Nahl, Hobart Mills, who has been ill for a long time, has recovered and resumed practice.

ILLINOIS.

Cornerstone Laid.—At a meeting of the Canton Physician's Club, May 1, it was decided to accept the invitation of the Misses Graham to take charge of the program in connection with the laying of the cornerstone of the new Graham Hospital. The cornerstone was formally laid May 6.

Appropriations for State Board.—Among the few bills passed by the House of Representatives last week, was one appropriating to the State Board of Health, $3,000 for special research into the cause and prevention of tuberculosis, and a second, appropriating $1,000 for the treatment and care of indigent persons afflicted with hydrophobia. This latter was introduced at the instance of the State Board of Health.

Chicago.

Annex Ready.—The annex to Mercy Hospital recently completed at a cost of $250,000 was taken in use May 7 by the hospital and will be formally dedicated June 1. The new building is a five-story, fire-proof structure, containing space for the administration offices, reception and waiting rooms, and 90 private rooms for patients.

Medical Visitors.—Prof. August Martin, Berlin, Germany, who visited Chicago this week, delivered an address before a joint meeting of the Chicago Medical Society and Chicago Gynecological Society, May 13, and held clinics at several hospitals.——Mr. B. G. A. Moynihan, chief surgeon of the Leeds (England) Infirmary, delivered an address at a special meeting of the Chicago Medical Society, May 14.

New Hospital Rules Favored.—The ordinance to regulate hospitals drafted by Dr. George Hunt of the Health Department has been recommended for passage by the council committee on health. The proposed ordinance provides for an advisory board of three experts whose duties shall be to regulate hospitals, provide requirements for new institutions and otherwise supervise places where the sick are cared for.

Personal.—Dr. Otto T. Freer has been elected a member of the Royal Society of Medicine of London.——Dr. Thomas A. Woodruff has been elected president of the Calumet Club.——Dr. Gustav Kolischer was operated on May 2 for appendicitis and is reported to be doing well.——Dr. Thomas J. Roberson, who has been critically ill with pneumonia, is now reported to be convalescent.——Dr. Edward F. Garraghan has returned after a five-weeks' trip to the Pacific Coast.

Deaths of the Week.—During the week ended May 9, 531 deaths were reported, 5 fewer than for the preceding week, and 186 fewer than for the corresponding week of 1907, the respective annual death rates per 1,000 being 12.78, 12.90 and 17.74. Pneumonia and consumption, each caused 77 deaths: heart diseases, 48; cancer and violence (including suicide) each 26; acute intestinal diseases 25; nephritis, 10; nervous diseases, 20; measles, 10; diphtheria, 7; influenza, 5; typhoid fever, 4, and scarlet fever and whooping cough, each 2.

Contagious Disease Situation.—There were reported to the Health Department during the week ended May 9, 576 cases of contagious disease distributed as follows: Measles, 337; scarlet fever, 56; diphtheria, 46; tuberculosis, 38; typhoid fever, 35; whooping cough, 26; chickenpox, 20, and smallpox, 4. The improvement over the corresponding week of last year is most marked in regard to diphtheria and scarlet fever in which there were 20 and 43 fewer cases this year respectively. A localized epidemic of typhoid fever is reported in West Pullman, due in all probability to contaminated milk, supplied from one dairy in Morgan Park, outside of the city limits.

Advertising Physician Sued.—Acting on the request of the State Board of Health, State Prosecuting Attorney White has brought suit against Dr. F. T. Riley, 210 State street, for improper advertising of medical treatment. Dr. Riley is said to be the successor of the well-known doctors, Scott & Davis, whom the State Board of Health forced to discontinue operations. It is the intention of the State Board of Health to prosecute other physicians who advertise in violation of the city ordinance enacted a few years ago, which prohibits advertising "remedies or alleged cures . . . for the prevention or treatment of uterine diseases, or of diseases peculiar to females, or of venereal diseases, or of diseases of the genital organs, or of nervous debility, impotence, sterility or barrenness, or of gonorrhea, gleet, stricture, syphilis or affections of the prostate gland."

INDIANA.

New Building for Epileptic Village.—Plans have been received for a custodial building to be erected for the Indiana Village of Epileptics, New Castle, during the coming summer. The new building will cost about $20,000, will be a brick structure, two stories high and will accommodate 25 patients.

Communicable Diseases.—Two rooms of Hibbard school at Richmond have been closed on account of the prevalence of smallpox.——Several cases of smallpox are reported at Red Bridge.——Smallpox has developed in Green Township, Noble County, where the public schools have been closed.——Thirty-two cases of smallpox had been reported to the city board of health, Indianapolis, in the first three weeks of April.——Measles and whooping cough are reported to be epidemic at Walton.——There are about 50 cases of measles in and around Leesburg.——Measles is reported from Earlham College, Richmond.

Personal.—Dr. C. A. DeLong has been elected secretary of the Gary Medical Society, vice Dr. J. H. F. Prentiss, resigned.——Dr. Noble P. Howard, Greenfield, is reported to be seriously ill.——The house of Dr. R. S. Wilson, Bern, was destroyed by fire April 21, with a loss of about $2,500.——Dr. and Mrs. Walker Schell, Terre Haute, have returned after nine months in Europe.——Dr. Mary D. Hudson, Evansville, sailed for London last week.——Dr. Samuel R. White, Laud, was thrown from his automobile April 24 and suffered a sprain of the shoulder.——Dr. William F. Houk, Crown Point, has been appointed local surgeon of the Pennsylvania System, vice Dr. John K. Blackstone, resigned.

IOWA.

Hospital Corps Formed.—A hospital corps has been formed in Iowa City for the Fifty-fourth Infantry, N. G. Iowa, under the command of Capt. Charles S. Grant, to supersede the corps which the U. S. Army officer inspecting the command recommended to be mustered out at Davenport. All the members are students in the University of Iowa College of Medicine.

Life Insurance Fees.—At a recent meeting of the Dubuque County Medical Society the following action was taken in regard to life and accident insurance company fee bills, more specificially for services to those injured by accident:

> *Resolved*, That the society does not feel called on to even consider the items of a fee bill originally outside the profession; that it is not the province of any person or company to fix rates at which self-respecting physicians and surgeons should render services; and that the society considers it grossly unprofessional for any member to sign or to enter into any such agreement.

Smallpox.—Four new cases of smallpox are reported from Davenport.——An epidemic of smallpox has closed the Osage public schools, churches, library and all buildings where public gatherings are held.——In the case of Dr. Samuel C. Kirby, Grand Junction, which has been pending in the district court of Green County for seven years, and in which the plaintiff brought suit against the mayor of the city for $5,000, claiming that although he was not sick with smallpox, he was held in quarantine for that disease; the court has ordered the jury to return a verdict in favor of the defendant.——Five new cases of smallpox have appeared in the Haverhill neighborhood.——Three cases of smallpox are reported in a shirt factory in Council Bluffs.

Personal.—Dr. Edwin E. Harris, Tabor, is planning to go abroad soon for a year of study.——Dr. Grant J. Ross, Sioux City, has been appointed examining physician to the board of commissioners for the insane of Woodbury County, vice Dr. Frank J. Murphy.——Dr. Charles S. McCarty, Hawarden, was thrown from his buggy in a runaway accident April 3, breaking his nose and dislocating his shoulder.——Dr. George L. Day, Lone Tree, has been appointed health officer for the town and for Fremont Township.——Dr. Wilbert E. Harriman, Ames, who has been seriously ill at his father's home in Hampton, is reported to be improving.——Dr. Ambrose E. Wanamaker, Hamburg, has been elected secretary of the Fremont County Medical Society, vice Edwin E. Harris, Tabor.——Dr. Robert Evans, Fort Dodge, has started for Europe.

KENTUCKY.

Professor Martin in Louisville.—Prof. August Martin, Berlin, who is visiting this country and who will attend the sessions of the American Medical Association and the American Gynecological Society, was the guest of Dr. William H. Wathen during his stay in Louisville. He received much attention from the medical profession there and operated at Dr. Wathen's clinic in the Kentucky School of Medicine Hospital and also at St. Anthony's Hospital, demonstrating his methods of conservative surgery on the female genital organs. On April 17, a banquet was given at the Seelbach in his honor.

Hospital Commission Appointed.—The mayor of Louisville has appointed a commission of physicians of the city as a preliminary step toward the building of a new hospital. The following physicians met with him April 8 and were organized into a commission to submit plans and suggestions, which may be used as working model for the architects selected to make the final plans: Drs. Joseph B. Marvin, Cuthbert Thompson, Henry Enos Tuley, H. Horace Grant, Lewis S. McMurtry, Sidney J. Meyers, Cornelius Skinner, Louis Frank, and James S. Chenoweth. The commissioners elected Dr. Marvin chairman and adjourned subject to his call.

Personal.—Dr. James A. Robertson, Fort Thomas, was stricken with cerebral hemorrhage; April 3.——Dr. Samuel H. Garvin, Louisville, physician at the Jefferson County jail, is reported to be seriously ill with sewer-gas poisoning.——Dr. F. M. Stone, Fountain Run, is reported to be dangerously ill at his home.——Drs. William O. and David Y. Roberts, Louisville, have been appointed surgeons for the Louisville division, Louisville terminals, and South Louisville shops of the Louisville & Nashville Railroad, in addition to their present duties as surgeons of the Louisville, Cincinnati and Lexington division.——Dr. Leigh R. Gordon has returned to his home in Lexington from St. Joseph's Infirmary, Louisville, where he underwent a serious surgical operation.——Dr. Isaac A. Shirley, Winchester, has been appointed surgeon of the Mountain Central Railroad.

MARYLAND.

Personal.—Dr. Joseph R. Owens, treasurer of Maryland Agricultural College, was elected mayor of Hyattsville for the third consecutive time, May 4.——Dr. James F. H. Gorsuch, Fork, has been appointed health officer of Baltimore County, and Drs. Arthur H. Mann, Harry F. Shipley, Henry A. Naylor, Harry M. Slade, Benjamin F. Price, T. Ross Payne, R. C. Massenburg, J. T. Payne, John B. Norris, Eugene W. Heyde, William E. McClanahan, Frank H. Ruhl, Joseph B. Webster, and John W. Harrison have been appointed district health officers.——Dr. Guy Steele, Cambridge, and Charles H. Conley, Adamstown, have been appointed examining physicians for the State Tuberculosis Sanitarium, Sabillasville.

Baltimore.

Pure Milk Ordinance Signed.—The mayor signed the pure milk ordinance May 6, and it becomes effective June 1.

Hospital Incorporated.—The Italian Hospital has been incorporated in West Baltimore with a capital of $10,000. Dr. Aristide W. Giampietro is at the head of the institution.

Personal.—Drs. Charles F. Bevan and George J. Preston have been elected attending physicians, and Drs. John Ruräh and William F. Lockwood consulting physicians and Dr. Harry Friedenwald has been made ophthalmic and aural surgeon in the Nursery and Child's Hospital.——Dr. Henry C. Houck has been seriously ill with septicemia due to an operation, but is said now to be improving.——Dr. H. Warren Buckler has been appointed examining physician for the State Tuberculosis Sanitarium, Sabillasville.——Messrs. Louis Simon and Siegmund Kann have given a cottage for incipient cases of tuberculosis, as an addition to the Epstein Memorial Tuberculosis Hospital at "The Farm," Reisterstown, near Baltimore. The main building will be dedicated June 11 and will accommodate 25 patients. It is a two-story structure, and more than $12,000 a year toward its support has already been subscribed.

MASSACHUSETTS.

Personal.—Dr. Samuel H. Durgin has been re-elected a member of the Boston board of health, and the board at its organization re-elected him chairman.——Dr. Henry Ehrlich has been elected chairman by the trustees of the bath department of Boston.——Dr. W. D. Walker, Andover, has been re-elected school physician.——Dr. Charles P. Emerson, Methuen, has been appointed chief superintendent of the Clifton Springs (N. Y.) sanitarium.——While responding to a call in Charlestown recently, a relief hospital ambulance and electric car collided, throwing out three men in the ambulance, and injuring the ambulance surgeon, Dr. Atchison, who fractured three ribs.

MICHIGAN.

Legacy for Kellogg.—Charles E. Wood of Washington, D. C., has bequeathed to Dr. John H. Kellogg, Battle Creek, a sum estimated at over $1,000,000, to be used in the erection and maintenance of a sanitarium at Atlantic City, N. J.

Personal.—Dr. Orton Clark has been elected president of the board of poor and health commissioners of Kalamazoo: Dr. David J. Levy has been re-elected health officer, and Dr. Walter den Blyker, city physician.——Dr. John J. Mulheron, Detroit, has announced his permanent retirement after practicing medicine 40 years.——Dr. Luke M. Ryan has been appointed health officer of Caro.——Dr. Starr K. Church has been re-elected health officer of Marshall.——Dr. Bartlett H. McMullen, Cadillac, has been appointed division surgeon of the Ann Arbor Railway.——Dr. Joseph B. Griswold, Grand Rapids, on his retirement from the presidency of the board of health was presented by the board with a gold-mounted umbrella.——Dr. George E. Moore, Ironwood, has been elected health officer of Gogebic County.

Communicable Diseases.—The health officer of Grand Rapids reports that he now considers the smallpox situation under control, as no new cases from the old sources are expected.——Waverly Township, Van Buren County, has at present 11 cases of smallpox of mild type.——There are said to be 15 cases of smallpox in Sciota Township Shiawassee County.——The school at Grawn has been closed because of 6 cases of smallpox among the pupils.——Several cases of smallpox are reported in the townships of Casco, Glenn and Ganges, Allegan County.——An epidemic of smallpox is said to prevail in Condis Township, Shiawassee County.——Scarlet fever is reported to be increasing at Manchester.——Watervliet has an epidemic of measles. More than 100 cases have been reported in and around the village.

NEBRASKA.

Free Dispensary.—A free dispensary is to be installed at the City Mission Hospital, Omaha. Dr. Edward A. Van Fleet will be in charge.

Smallpox.—Thirty cases of smallpox are reported from Norfolk.——Lincoln reports three cases of smallpox in the family of an Eddyite.

Commencement.—The sixteenth annual commencement exercises of the John A. Creighton Medical College, Omaha, were held May 1, when a class of 41 was graduated.

Personal.—Dr. William L. Cameron, Palmyra, is taking treatment in the Pasteur Institute, Chicago, for hydrophobia.——Dr. Nina R. Smith, Homer, has been obliged to give up her practice on account of ill health.

Free Antitoxin.—The State Board of Health announces, under date of April 4, that arrangements have been completed to supply indigent persons suffering from, or threatened with, diphtheria, with standard antitoxin, always fresh and reliable, and to be furnished to health officers and boards of health at wholesale prices. The circular also gives instructions for obtaining antitoxin and the proper method of its administration.

NEW JERSEY.

Contagious Diseases.—Ten new cases of typhoid fever with one death were reported in Trenton during the past week. ——Scarlet fever and measles are epidemic in Swedesboro.

Personal.—Dr. John B. Cassady, Burlington, who has been seriously ill in John Hopkins Hospital, Baltimore, has returned home greatly improved.——Dr. William H. Iszard has been appointed food and drug inspector of the Camden Board of Health vice Dr. A. T. Sellers.——Dr. Fred S. Hammond of the State Hospital, Trenton, has been elected pathologist of Mercer Hospital.

Vital Statistics.—During the month ended April 15, 3,134 deaths were reported in the state, a decrease of 519 from the corresponding period of last year. Chief among death causes were diseases of the nervous system, 428; diseases of the circulatory system, 382; pneumonia, 354; tuberculosis, 332; diseases of the respiratory system, 235; nephritis, 219; diseases of the digestive system, 181; cancer, 128; infantile diarrhea, 77; diphtheria, 48; scarlet fever, 46; suicide, 44; typhoid fever, 37; cerebrospinal meningitis, 36; measles, 26; whooping cough, 17, and smallpox, 1.

Health Measures Approved.—Among the measures approved by the legislature and governor, as a result of the Hahn investigation committee, are the bills abolishing the State Sewage Commission and vesting its powers and authority in the State Board of Health. The latter board, as at present constituted, is also abolished and a new body of 6 members, to be appointed by the governor, is created. Other bills approved, give the State Board of Health full power and authority to prosecute measures to stop epidemics in state institutions, regardless of local boards of health. Another bill provides for the transfer of inmates from one state institution to another as occasion may require, and prohibits the commitment to the State Reformatory of any person above the age of 30 years or who may have been previously convicted of any offense carrying a prison penalty. The latter reforms came as the result of the revelations at the Rahway Reformatory and the State Hospital for the Insane, Trenton.

NEW YORK.

New York City.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended May 2, 482 cases of tuberculosis with 178 deaths; 425 cases of diphtheria with 45 deaths; 1,652 cases of measles with 41 deaths; 855 cases of scarlet fever with 60 deaths; 36 cases of typhoid fever with 8 deaths; 12 cases of cerebrospinal meningitis with 14 deaths; 158 cases of varicella; 27 cases of whooping cough and 1 case of smallpox, a total of 3,648 cases and 346 deaths.

Lack of Accommodations for Tuberculous Patients.—Dr. Linsly R. Williams, chairman of the section on public health, New York Academy of Medicine speaks very forcibly of the overcrowding existing in institutions for tuberculous cases under the care of the Department of Charities. In 1905 there were admitted to the Metropolitan Hospital Tuberculosis Infirmary, 2,929 patients; in 1906, 2,531; in 1907, 2,798. The largest number of patients in the hospital at any one time during the present year was 801, and these figures were for a building meant to accommodate not over 680 patients. In March, 1908, 121 patients slept on the floor. There is a waiting list at the Montefiore Home of 41 and at the Bedford Sanitarium of 25. There were 144 patients on the waiting list for Riverside and 74 for Otisville. There is overcrowding at Bellevue Hospital, at Seton and at St. Josephs. The section on public health passed the following resolution:

Realizing the fact that the total number of tuberculosis cases in this city is steadily increasing and that there has been no marked increase in the number of beds for tuberculosis cases, and that the overcrowding now existing in several institutions in this city is a wrong to the sick poor, as well as a disgrace to the community; be it

Resolved, That the section on public health respectfully requests the council of the Academy of Medicine to bring this matter before the next meeting of the Academy of Medicine.

In 1900 there were 11,927 cases of tuberculosis reported in Greater New York, with 8,154 deaths, and in 1907 there were 19,725 cases reported wth 8,199 deaths. In consideraton of the above facts, be it further

Resolved, That the Academy of Medicine deplore this great lack of accommodation for advanced tuberculous cases in this city and earnestly request the board of estimate and apportionment to take the proper steps to relieve this immediate need. Be it further

Resolved, That copies of the above statement of facts, with the resolution, be sent to the mayor, the comptroller and the president of the board of aldermen.

NORTH CAROLINA.

To the Chicago Session.—Arrangements are being perfected to run through Pullman cars from some point in North Carolina direct to Chicago without change to the coming session of the American Medical Association. Members of the profession desiring to become members of the party are asked to place themselves at once in communication with Dr. Dan Seveir of Asheville.

Pellagra.—According to Dr. Edward J. Wood, Wilmington, several cases of pellagra have been observed in the city during the past few months, Dr. Wood himself having observed 10 cases. Dr. James McKee has seen a few cases in his service in the wards of the State Hospital for the Insane, Raleigh. Dr. John McCampbell, Morganton, has also observed cases in the wards of the State Hospital for the Insane at that place.

Prevalent Diseases.—The State Board of Health reports the following diseases prevalent during April: Measles in 33 of the 98 counties of the state; whooping cough in 28 counties; scarlet fever (of mild type) in 11 counties; diphtheria in 18 counties; typhoid fever in 17 counties; influenza (of very mild type) in 37 counties; pneumonia in 67 counties, but with low mortality; and about 350 cases of smallpox in 25 counties.

Personal.—Dr. Lewis M. Gaines, who for the past three years has been professor of anatomy and physiology in the Medical Department of Wake Forest College, has returned to Atlanta, Ga., to practice. He has been appointed associate to the medical department of the Presbyterian Hospital and attending physician to the Free Dispensary for the Home Treatment of Tuberculosis.——At the annual meeting of the directors of the State Hospital for the Insane, Raleigh, Dr. L. Julian Picot, Littleton, was elected second assistant physician to succeed Dr. Edwin B. Ferebee, resigned. Dr. Charles L. Jenkins was re-elected first assistant physician in charge.

PENNSYLVANIA.

Philadelphia.

Personal.—Mr. Carl R. Steinke, Atlantic, Iowa, has been elected president of the undergraduate medical association of the University of Pennsylvania.——Drs. George G. Ross and William S. Higbee sailed for Europe May 1, and Dr. William J. Taylor, May 3.——Dr. E. O. White has returned from Vienna.——Drs. S. Weir Mitchell and George E. de Schweinitz were elected directors of the Library Company of Philadelphia on May 4.——Dr. Andrew A. Cairns, chief medical inspector of the bureau of health for eight years, resigned May 8.

Tuberculosis Crusade.—As the result of a meeting representing the Pennsylvania Society for the Prevention of Tuberculosis and the Central Labor Union, plans were made whereby tracts will be distributed to members of the trades unions of the city, and placards of instruction will be placed in all factories and meeting places of local branches of the various unions. All unhygienic conditions will be reported to the society and means will be instituted to abolish such conditions. Plans were also formed by which workmen suffering with tuberculosis will be given light outdoor employment.

Health Report.—The total number of deaths reported for the week ended May 9 aggregated 451, a decrease of 62 from the previous week, and a decrease of 109 from the corresponding week of last year. The principal causes were: Typhoid fever, 10; measles, 14; scarlet fever, 3; pertussis, 6; diphtheria, 5; consumption, 71; cancer, 22; diabetes, 4; apoplexy, 15; heart disease, 33; acute respiratory disease, 66; enteritis, 10; hepatic cirrhosis, 6; appendicitis, 6; Bright's disease, 42; premature birth, 9; congenital debility, 5; suicide, 5; accidents, 7, and marasmus, 6. There were 175 cases of contagious diseases reported, with 18 deaths, as compared with 208 cases and 28 deaths reported in the preceding week.

College of Physicians' New Home.—The new home of the College of Physicians, the cornerstone of which was placed April 29, will be a two-story structure of red brick and light limestone. The floors and wainscoting will be of marble and the building will be fireproof throughout. The first floor will contain the lecture rooms, secretary's office and rooms for the nurses' directory. This floor will also contain a part of the museum and a part of the book stack, which will ascend in seven tiers all the way up the building to the roof. A marble staircase will lead to the second floor, directly to the "Hall of Portraits." This hall will be the meeting room of the college and will be 71 by 48 feet. This room will contain portraits of eminent fellows of the college during the 121 years of its existence. The rear of this room will contain a reading room and periodical room, each 60 by 33 feet. The library, which will be housed in this building, is the third largest medical library in the world.

WISCONSIN.

Personal.—Dr. Mazyck P. Ravenel, professor of bacteriology in the University of Wisconsin, has been appointed director of the State Hygienic Laboratory.——Dr. Guy C. Wauffle, Janesville, has been elected city health officer.——Drs. Edward E. Evans and Mathias W. Dvorak. La Crosse, have sailed for Europe.——Dr. Theodore Koch has been appointed health officer of Baraboo.——Dr. Herbert E. Ellsworth, Appleton, has been elected physician of Appleton and of Outagamie County.

Smallpox.—A dozen or more cases of smallpox have developed on the east side of Peshtigo.——The State Industrial School, Waukesha, has been placed under quarantine on account of an epidemic of smallpox.——Seventeen families in Pittsville have been quarantined on account of smallpox.——The president of Beloit College is ill with smallpox and 13 girls, inmates of Stowell Cottage, are under quarantine.——Four schools in Chippewa County have been closed on account of the prevalence of smallpox.——Several cases of smallpox are reported in Colby.——A number of cases of smallpox are reported in and near Black River Falls.

Endorses Efforts Against Consumption.—At a meeting of the Wisconsin Board of Medical Examiners, held April 15, the following resolutions were unanimously adopted:

> Whereas. We consider it to be the duty of all public organizations and especially those composed of physicians, to express their sympathy with the endorsement of the efforts being made to stay the ravages of the "white plague" and we desire to aid, if we can, in arousing interest of the citizens of Wisconsin in the great international movement now in progress, to educate the people everywhere concerning this terrible disease and the best methods to be employed in curing it and preventing its further spread by contagion; therefore be it
>
> *Resolved*, That being aware of the tremendous ravages of consumption, and convinced of the truths that tuberculosis (consumption) is a communicable disease, we hereby record our endorsements of the efforts that are being made by the National Society for the Study and Prevention of Tuberculosis, the International Congress on Tuberculosis, and the Wisconsin committee of the international congress to stamp out the disease.

GENERAL.

Monument to Yellow Fever Heroes.—Dr. John C. Hemmeter, Baltimore, in a recent issue of *Janus*, a historical medical journal published in Holland, urges that the monument to be erected to Dr. Walter Reed in Washington, include Drs. Lazear and Carroll, who were also members of the yellow fever commission.

Therapeutists Elect Officers.—At the ninth annual meeting of the American Therapeutic Society, held in Philadelphia, May 9, the following officers were elected: President, Dr. Frederick H. Gerrish, Portland, Maine; vice-presidents, Drs. Alexander D. Blackader, Montreal, Que.; Howard Van Rensselaer, Albany, N. Y., and Robert P. Morris, New York City; secretary, Dr. Noble P. Barnes, Washington, D. C.; treasurer, Dr. A. Ernest Gallant, New York City; council, chairman, Dr. W. Webb Wilcox; vice-chairman, Dr. Edward D. Fisher, New York City; Drs. A. Ernest Gallant, New York; Robert Reyburn, Washington; Frances P. Morgan, Washington; Thomas E. Satterthwaite, New York City; John B. White, New York City; Howard H. Barker, Washington; Oliver T. Osborne, New Haven; John V. Shoemaker, Philadelphia; D. Olin Leech, Washington; Eli H. Long, Buffalo, N. Y.; James C. Wilson, Philadelphia, and Alexander McPhedran, Toronto, and committee on admissions: Drs. Thomas E. Satterthwaite, Oliver T. Osborne and D. Olin Leech. The retiring president, Dr. John V. Shoemaker, tendered the association a reception at his residence May 8. The annual banquet was held at the Bellevue-Stratford May 9. A reception was also tendered the association by the Philadelphia Branch of the American Pharmaceutical Association at the same place May 7. It was decided to hold the next meeting of the association at New Haven, Conn., May 6-8, 1909.

Society Meetings.—At the annual meeting of the American Surgical Association, held in Richmond, Va., May 4-6, a tribute was paid to Dr. Hunter McGuire, a former president of the body, and Philadelphia was decided on as next place of meeting. The following officers were elected: President, Dr. Charles B. de Nancrede, Ann Arbor, Mich.; vice-presidents, Drs. Arpad G. Gerster, New York City, and Leonard Frieman, Denver; councilors, Drs. William H. Carmalt, New Haven, Conn., Albert Van Der Veer, Albany, N. Y., Dudley P. Allen, Cleveland, and the president, secretary, treasurer and recorder; secretary, Dr. Robert G. LeConte, Philadelphia; treasurer, Dr. Charles A. Powers, Denver; and recorder, Richard H. Harte, Philadelphia.——At the March meeting of the Manila Medical Society 26 were present and the opsonic treatment of disease, sanitation against animal parasites and crusade against tuberculosis were discussed. At the April meeting, held in the Philippine Medical School, Dr. Paul G. Woolley presented a note on the bacteriotherapy of leprosy; Dr. W. E. Musgrave and M. T. Clegg reported 50 fatal cases of intestinal amebiasis without diarrhea, and Dr. W. W. Reno demonstrated a new hypodermic syringe.——The National Association of Pension Examining Surgeons will meet at the Palmer House, Chicago, at 10 a. m., June 1, under the presidency of Dr. G. Lane Taneyhill, Baltimore. The society has a membership of 1,027, including every state in the Union, and an attendance of from 300 to 400 is expected.——The Fifth Pan-American Medical Congress will take place at Guatemala, Central America, August 5 to 8 inclusive.——The eleventh annual meeting of the American Medico-Pharmaceutical League will be held at the Hotel Astor, New York City, May 25.

FOREIGN.

Typhoid Epidemic in Australia.—Typhoid is reported prevalent in Victoria, especially in the country districts.

Probable Discovery of Radium at New Points.—Late dispatches state that ore has been found at Kreuznach and at Marienbad which contains radium.

Epileptic Asylum for Australia.—The Wendouree Asylum, Victoria, is to be made a central institution for the care of epileptics in the state. The cost will be about $45,000.

Medical Tribunals of Honor.—For six years the authorities at Hamburg have been deliberating as to the advisability of establishing a medical tribunal of honor like those elsewhere in Germany. The question has finally been definitely settled in the negative.

Italian Association for Urology.—The Italians have organized a national association of urologists, modeled on those in France, Germany and the United States. The inaugural meeting was held recently at the Policlinico, Rome, with Prof. Durante in the chair.

Organization of the Profession in Bohemia.—As already mentioned in these columns, the association formed in Bohemia on the model of the German *Leipziger Verband* is doing good work. The remuneration of the medical officers of the sick benefit societies in various districts has been increased to the desired rates. In the Tetschen district all the physicians thus benefited turn over to the organization 10 per cent. of the increase.

Smallpox Still Epidemic in Japan.—According to *Public Health Reports*, there were 238 deaths from smallpox in Osaka, in one week recently. The disease has assumed an epidemic form at the ports of Moji and Bakan, in Shimonoseki. In Nagasaki the disease has not yet become epidemic as from January 1 to March 7, there were only 18 cases with four deaths. For the same period there were in Moji 126 cases with 117 deaths.

Inspection of Private Hospitals in Western Australia.—The Trades Union Congress recently held at Kalgoorlie passed a resolution to the effect that all hospitals should be under government control, and that the police should have power to enter such hospitals at any time for the purpose of inspection. Kalgoorlie, says the *Australian Medical Gazette*, has an unenviable reputation for illegal operations and this resolution was probably prompted by a desire to suppress any institution doing such work.

This Year's Medical Study Trip.—The German committee in charge of organizing annual medical excursions to various health resorts announces that the trip this year will be by water. The ship will leave Hamburg early in September and will touch at the islands in the English channel, the Madeira Islands, Lisbon, Morocco, Heligoland and at the Holland ports. The excursion will last between three and four weeks, and the total cost is to be between 425 and 525 marks—about $100. This includes all expense of side trips, etc. The secretary of the committee is Dr. A. Oliven, Berlin NW., Luisenplatz 2/4.

Italian Neurological Congress.—Naples was the scene, April 8, of the first Congress of Italian Neurologists. L. Bianchi presided, and C. Negro of Turin discussed the semeiology of a large number of nervous affections, illustrated by moving pictures showing the special features of tabes, sclerosis with patches, organic hemiplegia, etc. Mingazzini presented the theme of aphasia, discussing Marie's recent assertions in regard to its anatomic seat, with which he does not agree. Bianchi discussed the physiology and pathology of the frontal lobes, describing experimental research with resection of these lobes. Rossi discussed the subject of arteriosclerosis of the nerve centers and the resulting clinical manifestations. The next congress will be held at Genoa in October, 1909. The executive committee includes such well-known neurologists as Golgi, Tanzi, Morselli, De Sanctis, Negro, Lugaro and Donaggio, all connected with various universities.

Therapeutics

[It is the purpose of this department to outline an up-to-date management of disease, to suggest scientific treatment for diseased conditions, and to present prescriptions that are simple, useful and palatable. Prescriptions are written in both the metric and apothecaries' systems, but the amounts of the ingredients are NOT exact translations of one system into the other, but quantities convenient for pharmacist and physician. It should be understood that solids are weighed in grams or fractions of grams, while liquids are measured in cubic centimeters; that a teaspoon holds five cubic centimeters, i. e., more than a fluid dram, hence a 100 cubic centimeter preparation will contain twenty doses.]

Enterocolitis of Young Children.

(*Continued from page 1540.*)

Dr. L. E. La Fétra of New York completed the discussion on enterocolitis by presenting the medicinal treatment of the disease. He cautions against too warm covering for the child, believing a light, porous-meshed material or light flannel is the best clothing. This allows evaporation and radiation from the surface of the body. Stools and diapers should be scrupulously disinfected. The baby should be placed on a cot, if possible where dry, cool air can be obtained. A veranda, balcony or tent should be used, if the baby can not be moved out of the city.

He well says that Nature should not be impeded in her methods of curing this disease, but, on the other hand, she is just as poor a physician as she is "a botchy surgeon."

The two indications presented for medicinal aid are "to promote elimination and to allay inflammation." He thinks that the most valuable eliminator is an alkaline cathartic, such as Glauber's, Epsom or Rochelle salt, and prefers the sodium sulphate (Glauber's) for the younger patients. Of course, any saline should be used with care when the baby is under nine months of age, and not at all when the patient is depressed, with sunken fontanelle, low temperature, and evidence of great need of water. In such a condition of depression he prefers to use calomel and castor oil, together with colon irrigations and occasional lavage of the stomach. To the patients without depression he would give the salt every half-hour for four or five doses; "to an infant of nine months the dose is 10 grains (0.65); to a child of two years, 20 grains (1.30), in a teaspoonful of water." For older children he thinks that Epsom salt may be better, especially if "there are dysenteric stools with much blood." He does not say why.

For a child nine months old:

℞.	gm. or c.c.		
Sodii sulphatis	5		ʒiss
Syrupi zingiberis	10	or	flʒiii
Aquæ	ad 50		ad fl℥ii

M. et Sig.: A teaspoonful, in water, every half-hour for four or five doses.

Or:

℞.	gm. or c.c.		
Sodii sulphatis	10		ʒiii
Syrupi rhei aromatici	10	or	flʒiii
Aquæ	ad 100		ad fl℥iv

M. et Sig.: A teaspoonful, in water, every half-hour for four or five doses.

For a child two years of age:

℞.	gm. or c.c.		
Sodii sulphatis	10	or	ʒiii
Aquæ cinnamomi	50		fl℥ii

M. et Sig.: A teaspoonful, in water, every half-hour for four or five doses.

Or:

℞.	gm. or c.c.		
Magnesii sulphatis	10	or	ʒiii
Aquæ menthæ piperitæ	50		fl℥iii

M. et Sig.: A teaspoonful, in water, every half-hour for four or five doses.

He says that these saline laxatives are not apt to be vomited, and the bowels are cleared out more rapidly and more effectually than by calomel or castor oil, and "the watery stools flush out the ileum and colon, syphon out the toxins, and hence reduce the temperature."

When vomiting is persistent and even these salts can not be retained, he gives calomel dry on the tongue, in divided doses, as:

℞.	gm.		
Hydrargyri chloridi mitis	06	or	gr. i
Sacchari lactis	1		gr. xv

M. et fac chartulas 10.

Sig.: One powder dry on the tongue every half-hour.

He believes that castor oil has its best use in the late stages of the disease, and he then gives it in small doses in conjunction with bismuth. He does not mention the exact dose. The bismuth may be given as follows:

℞.	gm.		
Bismuthi subnitratis	10	or	ʒiiss

Fac chartulas 20.

Sig.: A powder, administered in a teaspoonful of barley water or other nutriment, every three hours.

Elimination through the skin should be encouraged by frequent bathing, at least twice daily, using warm water unless there is high temperature. He would use soap and water to cleanse the skin of a patient showing much toxemia so as to clean out the secretion from the sweat glands and aid the skin to act properly.

He believes that weak tea makes a splendid mild stimulant and slightly astringent drink. The high colon injection, not only for irrigation purposes, but to leave some salt solution in the colon for absorption, is commended. To the normal saline solution he would add a little bicarbonate of soda. The solution may be used hot or tepid, or even a little cooler than the body, depending on the temperature of the patient, and if necessary he would give such irrigations twice in twenty-four hours, especially if the patient were toxemic, unless the child should become nervously excited or wearied by the procedure. He thinks that bowel irrigation has been overdone, and therefore does not commend it to reduce the frequency of the movements of the bowels, except when there is mucus coming from the colon, with considerable rectal tenesmus. Even in this condition he would not give irrigations more than once a day unless, as above stated, it should be necessary to cause the absorption of water by injecting solutions for that purpose into the colon.

As a physiologic antidote to toxins in the system he recommends atropin, and gives it hypodermatically in 1/1000 of a grain doses every two hours until there is physiologic effect as shown by dilatation of the pupil and flushing of the face.

He finds that dilute hydrochloric acid added to the food or the drinking water, as recommended by Jacobi, is often a help in obtaining digestion of the nutriment given.

℞.	c.c.		
Acidi hydrochlorici diluti	25	or	fl℥i

Sig.: Two or three drops, in water, after proteid nutrition.

[Hydrochloric acid would not be indicated with starch foods.—Ed.]

For general stimulation, if the child is not vomiting, he uses the tincture of nux vomica or tannate of quinin, as:

℞.	c.c.		
Tincturæ nucis vomicæ	15	or	
Aquæ	ad 30		āā, fl℥ss

Sig.: One drop every four hours, for a child one year of age.

If there is vomiting, or if more stimulation is required, hypodermatic injections of strychnin in 1/300 of a grain dose (0.0002) should be used in place of the above. He also uses injections of camphor oil, which may be given as the saturated solution of camphor in sterile and filtered olive oil.

La Fétra states that when stimulation was required he has obtained good results with suprarenal extract, administered in powder or capsule. [He can not mean capsule, as these children are too young to swallow a capsule or pill. Also, no increase of blood pressure and no cardiac stimulation could be obtained after suprarenal extract had been taken into the stomach. A drop of a solution of the active principle of the suprarenals diluted with a few drops of water and placed on the tongue would give cardiac and vasomotor stimulation.—Ed.]

As soon as the temperature has fallen, the digestive tract seems clean and the toxemia is lessened, he administers a powder to soothe and heal the inflamed intestinal mucous membrane, and uses chalk, magnesia, zinc oxid or bismuth, as:

℞.	gm.		
Bismuthi subnitratis	20	or	ʒv
Zinci oxidi	5		gr. lxxv

M. et fac chartulas 20.

Sig.: One powder every two hours.

This powder may be given in a teaspoonful or two of nutriment, as above suggested. He does not use salicylate of bismuth, but often adds salicylate of soda or creosote.

It would seem much better, if salicylic acid is to be used or if creosote is advisable, to give the combination of salicylic acid and phenol as salol, which can not and does not disturb the stomach; as, for a child two years old:

℞.	gm.		
Bismuthi subnitratis	10	or	ʒiiss
Phenylis salicylatis	2		ʒss

M. et fac chartulas 20.

Sig.: One powder every three hours.

Instead of any other tannic or gallic acid preparation, he often uses the subgallate of bismuth, and uses it in the same dosage as the bismuth subnitrate, which seems too large. He advises the use for some time of these large doses of bismuth, and certain it is that large doses are needed to coat and soothe the whole intestine. On the other hand, bismuth should not be used too long, as it tends to form concretions and scybalous masses, which may prolong the inflammation and irritation beyond what would occur had bismuth not been administered in such amounts.

℞.	gm.		
Bismuthi subgallatis	10	or	ʒiiss

Fac chartulas 20.

Sig.: A powder every three hours.

If in spite of the powders the stools continue too frequent, the bowels moving after every feeding or after every drink of water, he advises the use of opium, but does not think it should be used during the period when there is marked toxemia, as he believes that bowel drainage is the way that serious toxemia is prevented. Later, when the inflammation persists and acute toxemia is not present, he uses opium in some form, as Dover's powder, or paregoric, as:

℞.	gm.		
Pulveris ipecacuanhæ et opii	20	or	gr. iii
Bismuthi subgallatis	10		ʒiiss

Sig.: One powder after each loose movement, unless the child is very drowsy.

Or:

℞.	c.c.		
Tincturæ opii camphoratæ	25	or	fl℥i

Sig.: Ten drops, in water, after each loose movement, unless the child is drowsy.

When children vomit badly, he would give morphin hypodermatically, as 1/100 of a grain (0.0006).

Of course, it is understood that the above doses should be increased or diminished, depending on the age or weakness of the child.

Like many other drugs, the dose of opium when used for children should be enough and not too much, and this is safely decided by the amount of drowsiness, the dose being not more frequent than once in two hours. The deodorized tincture of opium is one of the best preparations in which to administer opium to a child. The dose for a child two years old should be one drop every two or three hours, increased or diminished depending on the results. Acute pain and frequent movements of the bowels should not be allowed when opium will control it, although as so well stated by La Fétra, in the beginning of the disease the toxins should not be locked up in the intestines by opium.

When the fever is high, La Fétra uses hydrotherapy and fanning until the temperature comes down to 100 F. He uses lavage of the stomach and colon, irrigations of the bowel, with ice to the head and heat to the extremities, if the symptoms call for such treatment.

He cautions against too long continued colon irrigations as keeping up mucous discharges, and advises general tonic treatment in protracted cases. He would keep up the bismuth, which, however, in our opinion should not be too long continued.

If there are frequent, small, bloody stools, he finds high irrigations of a gelatin solution of advantage, or an injection of a weak suprarenal extract solution, or a 10 per cent. solution of one of the organic compounds of silver, used once a day for three or four days. If there is great bowel distention due to paralysis of the intestines, he puts a little turpentine into the irrigations and applies turpentine stupes to the abdomen, and gives strychnin hypodermatically.

Owing to the age of the patient and the great tenderness of the skin it would seem that the same object of pleasant warmth to the abdomen could be obtained with a spiced poultice, or even with a flaxseed poultice, care being taken not to put too much weight on the abdomen.

If there is much rectal tenesmus, he finds irrigations with a demulcent, as starch paste or a bland oil, or a gelatin solution, of advantage. Suppositories are not well retained by young children. If the rectum is prolapsed he advises anointing it with a 5 per cent. cocain ointment. Owing to the uncertainty of the amount of cocain that may be absorbed, the use of cocain in a child likely to become collapsed seems inadvisable.

Pharmacology

THE BROADER AIMS OF THE COUNCIL ON PHARMACY AND CHEMISTRY.

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CLEVELAND, OHIO.

(*Continued from page 1541.*)

VIII. THE PRETENDED DELAYS OF THE COUNCIL.

Last week I presented evidence that the Council has already considered practically all the worthy proprietary products on the American market—I feel quite safe in saying *all* the products of any importance. It is perfectly true, however, that some of these products have not been finally disposed of. This fact has been seized on by some of the enemies of the Council whose interests have been involved. It has been asserted that the Council is so overwhelmed with work that a new product is "held up" in committees so long that a progressive practitioner can not afford to await the decisions. I wish to present the extent and also the cause of these delays, so that the members of the profession may be able to decide the justice of these charges.

Up to March 4, 1908, the Council had considered about 700 proprietary articles. Of these nearly 600 had been finally accepted or rejected, and about 100 were still under consideration. This seems a fairly large proportion of "unfinished business."

Where does the fault lie? The active work of the Council had, at the date mentioned, extended over about two and a half years, so that the disposition of the products submitted had proceeded at the rate of about 250 articles a year. The Council could easily have acted on twice this number and would not have hesitated to give this time if by so doing it could have "cleaned up" all the articles under consideration. As a matter of fact, however, the hundred unclassified products have required fully as much time for their proper consideraton as the six hundred which were classified. This time has been given; and as much more time as was needed could and would have been given if this alone would have produced the desired result.

A product which plainly and fully complies with the rules can be and almost always is, accepted within a month after it is submitted—surely not a very serious delay. On the other hand, some products have been under consideration for a year, and even longer, but in every case positive final action has been delayed to give the manufacturers an opportunity to remove conflicts with the rules or to submit evidence to substantiate claims which appeared extravagant or untrue. Every delay is referable to one or both of these two causes. In view of this, it is ungracious, to use no harsher term, for manufacturers to complain of these delays. There is but one way of avoiding such delays, and that is by adhering to the simple policy of definitely refusing every product which infringed with the rules, or which was not backed by adequate evidence. The Council would be more than satisfied to adopt this policy, for it could thus clear its docket within two weeks, and save itself over half of its labors and perplexities. The persons, however, who would be the first to protest against this elimination of delay are the very ones who now pose as martyrs of such delays—the manufacturers.

So far as the practitioner is concerned, he may feel assured that any delays are for good cause, and that he is amply justified in suspecting every proprietary product until it has been accepted by the Council. For the probability is that very few of the hundred will be finally accepted.

(*To be continued.*)

The Danger of Self-Prescribing.

The *Ohio State Medical Journal* quotes the following ediitorial from the *Ohio State Journal* of Columbus, as an "encouraging sign of the times and an evidence that the leaven is working in the minds of thinking people."

SOMEWHAT CRIMINAL.

> Practicing medicine is a pretty dangerous thing for the patient, if the man doesn't know anything about the science, and sometimes it is rather dangerous for the alleged practitioner himself, as was the case with a fellow out in Massachusetts who sold a person two bottles of "catarrh cures" that contained cocain. The catarrh curist was arrested, fined $50 and put in jail—a practical lesson to all who have no business to deal in medicine.
>
> Then, there was that woman, mentioned in the papers the other day, who gave the little girl attending her daughter's party some of her headache medicine, and then put the child to bed to sleep it off. The child went to sleep and never wakened again. . . .
>
> Sometimes these little medicine adventures do not result fatally. But most of them, if ignorantly taken, manage to get around among the organs somewhere and do more or less damage. It is about as bad to deal haphazard with powerful cures as it is to go meandering about a magazine with a lighted candle.

The commentator wisely says: "In time we hope that our daily papers will be bold enough to actually name the specific 'catarrh cures' which contain cocain and the headache tablets which kill the unwary. In the meantime, such articles as these will help to educate the people and to crystallize public opinion."

The last year has shown a gratifying change in the attitude of many lay journals. We hope that in time the majority of editors and publishers may realize that they have a public function to perform, and that it is their duty to lead in all movements to protect the public health rather than to exploit the public to their own advantage by opening their columns to the advertisements of dangerous or fraudulent preparations.

Correspondence

"Straus Milk" Not "Dirty Milk."

New York, May 5, 1908.

To the Editor:—The valuable article on "The American Association of Medical Milk Commissions" by Dr. Otto P. Geier, in The Journal, May 2, 1908, contains statements concerning certain conditions about which Dr. Geier has apparently been misinformed. He refers to the milk distributed from the milk depots established by Mr. Nathan Straus in New York City as being "dirty milk," also as "milk from an unknown source and of unknown quality." Dr. Geier is apparently not aware of the fact that the Straus milk depots of New York City have used milk certified by the Milk Commission of the Medical Society of the County of New York; that the farms on which it is produced are regularly inspected by the inspector of the commission, and that this milk is chemically and bacteriologically examined in the laboratories of the department of health of this city.

By giving this statement the same publicity that you have given Dr. Geier's article you will be simply securing fair play for Mr. Straus, who has, I believe, done a very important work at a time when no one else was willing to do it, and has exerted a material influence in the great reduction in infant mortality which has taken place in this city.

Rowland G. Freeman, M.D.,
Secretary of the Milk Commission.

Free Dental Services for the Poor.

New York City, April 25, 1908.

To the Editor:—In February, 1907, the Children's Aid Society consented to furnish a room in one of its industrial schools for the purpose of establishing a free clinic where dental services could be obtained by the needy poor. A few dentists, who were interested in furthering this service for those unable to pay for it, agreed to give their time and to persuade others to join in the work, if the Children's Aid Society would equip the room and buy the necessary material. This has been done, and a staff of about forty dentists has been organized, who serve without pay. Two or three members of this staff are on duty every afternoon except Saturday and Sunday.

The room equipped for this purpose is in a school where about 500 children are taught at 552 West Fifty-third Street. The needs of the pupils here have been so great that they have formed a great majority of patients for the institution thus far, though it is open to the general public.

The service has been divided into classes. The older and more experienced members are known as consulting dentists, the middle aged as visiting dentists, and the younger men as attending dentists; the arrangements being such that there is always an older and more experienced man present with the younger one.

The original stimulus for this clinic came about through the researches of the New York committee of physical welfare of school children. The investigations of this committee seemed to show that between 75 and 90 per cent. of the public school children of New York City had diseased teeth. The record of examinations conducted thus far at this clinic proves these figures correct. The record of the first ten months up to Jan. 1, 1908, shows that 555 children have been examined; 2,362 cavities have been found in permanent teeth; 370 cavities have been found in deciduous teeth; 447 teeth have been extracted; 284 fillings have been inserted, including amalgam, cement and gutta-percha. Two hundred teeth have been treated, and in many instances after making the root canals aseptic, they have been filled, besides much instruction has been given in the care and cleansing of the teeth. Among the 555 patients examined not one has been found who did not need dental services.

When the importance of keeping the teeth and mouth healthy is considered, and the neglect of these important organs among the masses is observed, one may obtain some idea of the crying need of such a clinic as this in connection with almost every hospital in the country, and it is to be hoped that there may be a quickened sense of responsibility on the part of the dental profession in this matter, and a helpful cooperation on the part of the medical men and such societies, organizations and hospitals as may be able to further the efforts to provide for the dental necessities of the worthy poor.

While these forty men are working hard, the work they can do to alleviate the pressing needs of the people in this direction is but as a grain of saud on the beach.

Herbert L. Wheeler.

The Midwives of Chicago.

Springfield, Ill., May 4, 1908.

To the Editor:—I have read with interest the very complete and comprehensive report of the joint committee of the Chicago Medical Society and Hull House on "The Midwives of Chicago," as published in The Journal, April 25, 1908. The report and the conclusions of the committee give evidence that the members are thoroughly conversant with the laws regulating the practice of midwifery in the State of Illinois, and the powers and limitations of the State Board of Health in connection with these laws.

Little exception can be taken by the State Board of Health to the findings and conclusions of the committee other than in reference to the illegal practice of midwives, and to substitution in examination. It seems to me that if the committee had obtained knowledge that the Polish midwife referred to was practicing in violation of the law, the fact should have been reported to the State Board of Health at once, rather than to the readers of The Journal in a belated report. For all we know this self-same midwife may be yet practicing without legal authority. And if the committee learned that "a clever Polish midwife" substituted, in the examination, for other midwives "who lacked both the knowledge of English and the knowledge of midwifery," I think that the State Board of Health should have been advised, in order that it might have revoked the licenses of the midwives who failed to appear for examination, and, if possible, that of the midwife by whom they were substituted. But the State Board of Health believes that the committee has been incorrectly informed in this connection.

In connection with the laws regulating the practice of midwifery, the committee says: "In Illinois, as in most states of the Union, the regulations of midwife practice are the same as they were when the State began the control of midwifery."

It will be of news to this committee, as it will be of interest to the readers of The Journal, that in but few states other than Illinois are there "regulations of midwife practice." and in but few states does the law permit "the control of midwifery."

A few years ago I made a very careful investigation, for the purpose of determining how many states had laws or regulations controlling the practice of midwives. I made inquiries of every examining and registration board in the United States. I found that only ten states outside of Illinois, had any laws whatever on the subject of midwifery, and in some of these states no attempt was made to enforce the law. In these states as in others which lack specific laws, midwives practiced, as they still practice, "without let or hindrance," to use the language of the secretary of the registration board of a leading eastern state.

The proposed conditions outlined by the committee in its conclusions are ideal, but the committee, in common with the State Board of Health, and all others who have given this matter intelligent consideration, realizes the "difficulty in securing, first, the enactment of such rules, and then their execution."

But there is no reason why the law should not empower the State Board of Health to require a midwife to present evidence of adequate preliminary education, and satisfactory proof of obstetrical experience. Still, the present law does not permit the board to do this.

It is not feasible for the State Board of Health to subject candidates to a practical examination in obstetrics, and it is not possible, under the law, for the board to demand either evidence of adequate preliminary educational qualifications or of practical experience in obstetrics.

The qualifications of applicants for midwife licenses, as provided for in the act to regulate the practice of medicine in the State of Illinois, approved April 24, 1899, which said act was enacted at the instance of the legislative committee of the Illinois State Medical Society, and was approved by the Chicago Medical Society, are as follows: 1, Good moral character; 2, ability to pass the examination provided for in the statute.

The statute does not provide that such applicant shall have had any previous experience, and the State Board of Health is without authority to refuse a license to any candidate who has the qualifications prescribed by the statutes, on the ground that she had not had adequate preliminary education, or practical experience in obstetrics. The law merely empowers the State Board of Health to subject the applicant to an examination.

In conclusion I will say that the State Board of Health recognizes the inadequacy of the law, and would welcome an amendment that would permit the board not only to exact certain preliminary educational qualifications, and evidence of practical experience, but also to inspect and control midwives after licensure.

James A. Egan, Secretary.

Fresh Air in Prevention and Treatment of Disease.

Chicago, May 9, 1908.

To the Editor:—Apropos of the editorial in The Journal, April 4, 1908, on "Fresh Air in the Prevention and Treatment of Disease," I wish to call attention to the fact that during the epidemic of typhus fever in New York City in the winter and spring of 1881, patients with the disease were treated in tents erected on Blackwell's Island and fully exposed to the breezes from the river and harbor. The drug treatment was purely expectant. The mortality rate, as I recall it, was about 12 per cent., a very low rate as compared with that of previous epidemics. I would also call attention to the fact that the efficacy of the "tent treatment" of infectious disease was proved at Bellevue Hospital during the Civil War. A large number of cases of "pyemia" were brought to Bellevue for treatment one cold winter. The majority of the favored ones treated in the hospital proper died. Those who, because of overcrowding of the hospital, were housed in tents did well, in the majority of cases.

G. Frank Lydston.

Apomorphin in Eclampsia.

Hartshorn, Okla., May 4, 1908.

To the Editor:—Dr. Morgan, in his article on "Treatment of Eclampsia" in The Journal, May 2, 1908, makes no mention of apomorphin in that condition, and I do not remember ever having seen this drug mentioned in this connection. I have used it in 1/10 grain doses, repeated if necessary in an hour, with uniformly good results; and some of my colleagues have also used it with the same results in most cases. This amount, 1/10 grain, is sufficient, and no ill effects have yet resulted in my practice. I would advise every physician who fails to control this condition with other drugs to give apomorphin a trial

Robert I. Bond.

Association News

RAILROAD RATES.

Provisions for Reduced Fares for the Chicago Session.

The following rates have been made by the passenger associations indicated for the Chicago session of the American Medical Association, June 2 to 5, 1908:

New England Passenger Association, including the following railroads: Boston & Albany; Boston & Maine; Canadian Pacific; Central Vermont; Grand Trunk; Maine Central; New York, New Haven & Hartford; Quebec Central & Rutland Railroad: One and one-half fare for the round trip, going and returning by the same route. Tickets on sale May 28, 29, 30 and June 1; returning, good up to and including June 12.

Trunk Line Association, including the following railroads: Baltimore & Ohio; Chesapeake & Ohio; Delaware, Lackawanna & Western; Erie; Grand Trunk; Lehigh Valley; New York Central; New York, Ontario & Western; Pennsylvania; Philadelphia & Reading; and West Shore: One and one-half fare going and returning by the same road. Tickets on sale May 28, 29 and 30, good for return trip up to and including June 12.

Central Passenger Association, including the lines operating in Michigan, Ohio, Indiana and Illinois, one and one-half fare. Tickets on sale May 28, 29, 30 and June 1. Good returning up to and including June 12.

Invitation to Physicians to Stop Over at French Lick, Ind.

Physicians and their friends en route to Chicago from southern states are invited to be the guests of the French Lick Springs Hotel Company on May 31 and June 1. Tickets from any of the southern points reading via Louisville and the Monon Railway entitle the holder to stop-over privileges at French Lick, Ind.

GENERAL ENTERTAINMENTS.

Various Functions—Formal and Informal—Arranged for Members and Guests.

(The Chicago membership pin or guest's badge of the Association will be necessary for admission.)

Tuesday, June 2.

No special entertainments are provided for Tuesday. The Committee of Arrangements has set apart this evening for section dinners, entertainments, etc., and alumni reunions. The following are reported as having been arranged:

Section on Ophthalmology, at the Chicago Athletic Club.

Section on Obstetrics, at the Auditorium Hotel.

Section on Surgery and Anatomy, at the Lexington Hotel.

Section on Neurology, dinner at the Stratford Hotel.

Section on Laryngology and Otology, at the Auditorium Hotel.

Section on Pediatrics, dinner at the Calumet Club.

There will be general alumni headquarters in the parlor, on the second floor of the Auditorium, for all the medical colleges in the United States. All members of the American Medical Association should register there as soon as possible on their arrival in the city.

On Tuesday evening, June 2, the following alumni reunions will take place:

Albany Medical School.—Meet at 6 p. m. in general alumni headquarters and adjourn from there for their reunion.

Dartmouth Medical College.—Meet at 6 p. m. in general alumni headquarters and adjourn from there for their reunion.

Detroit College of Medicine.—Reception at 8:30 p. m. at 438 LaSalle avenue.

Harvard Medical School.—Dinner and reunion at 6 p. m. at the Great Northern Hotel.

Jefferson Medical College.—Smoker at 8 p. m. at the Chicago Automobile Club.

Johns Hopkins University.—Dinner and reunion at 6:30 p. m. at the Auditorium.

Kentucky School of Medicine.—Dinner and Musical at 6:30 p. m. at the Auditorium.

Long Island College Hospital.—Reunion and dinner at 7 p. m. at the Tom Jones Café.

McGill University.—Banquet and reunion at 6:30 p. m. at the Great Northern Hotel.

University of Maryland.—Smoker and buffet luncheon at 8:30 p. m. at the Victoria Hotel.

Medico-Chirurgical College.—Reunion and supper at the Tom Jones Café.

University of Michigan.—Supper and smoker at 6:30 p. m. at the Grand Pacific Hotel.

University of Nebraska School of Medicine.—Dinner and reunion at 6:30 p. m. at the Tom Jones.

Northwestern University Medical School.—Annual alumni meeting, banquet and reunion at 6 p. m. at the new Illinois Athletic Club.

Medical College of Ohio.—Reunion, smoker and entertainment at 8 p. m. at the Bismarck Hotel.

University of Pennsylvania.—Smoker at 8 p. m. at the Chicago Athletic Club. Alumni who can attend please notify Dr. H. Diefenderfer, 7150 Euclid avenue, by May 20.

College of Physicians and Surgeons.—Informal reception and buffet luncheon at 8:30 p. m. at the Great Northern Hotel.

Rush Medical College.—Class reunion and supper a la carte at 6 p. m. at the Sherman House; smoker and annual alumni business meeting at 8 p. m. Monday evening, June 1, alumni theater party at the LaSalle.

Tulane University.—Dinner and reunion at 6:30 p. m. at the Union Restaurant.

Western Pennsylvania Medical College.—Reunion and Dutch luncheon at 7 p. m. at the Tom Jones Café.

Women Alumnæ, Woman's Medical Society of Illinois, Medical Woman's Club of Chicago.—Banquet and reunion at the Midday Club, First National Bank Building, at 6 p. m.

Wednesday, June 3.

On Wednesday evening a reception will be given to the President of the Association, Dr. Herbert L. Burrell, in the Coliseum, Fifteenth Street and Wabash Avenue, from 8:30 to 10 o'clock. Dancing from 10 to 12. Music by the First Regiment Band, under the conductorship of J. F. Hostrawser.

Thursday, June 4.

A concert and smoker will be given at the Coliseum, from 8:30 to 12 o'clock. Music by the First Regiment Band.

The management of the Illinois Steel Company, at South Chicago, will furnish guides to those who desire to go through their mills. These can be reached by the Illinois Central Railroad. Trains leave the suburban stations at Van Buren and Randolph streets, on the Lake Front.

Messrs. Armour & Co., Swift & Co., and Libby, McNeill & Libby have extended an invitation to the members of the American Medical Association to witness a demonstration of the government inspection of meat and killing of cattle. On Saturday morning, June 6, a special train of the South Side Elevated Railway will leave Congress Street Station at 9 o'clock.

Arrangements for the Reception and Entertainment of Visiting Ladies.

The Ladies' Committee extends a cordial welcome to all visiting ladies and offers the following information for their pleasure and entertainment:

A room has been set apart in Exhibition Hall for the use of the ladies, where members of the committee may be seen each day from 10 a. m. until 2 p. m.

For those desiring a ride through Lincoln Park, on the North Side, and Washington and Jackson parks, on the South Side, automobiles will leave the Art Institute, Michigan Avenue and Adams Street, hourly from 10 until 4 o'clock, each day. A greatly reduced charge will be made members and guests of the American Medical Association. On the South Side are to be seen Chicago University and the Field Museum, in Jackson Park; on the North Side the Academy of Sciences and conservatories, in Lincoln Park.

The Art Institute of Chicago extends the privilege of the institute to members and guests of the American Medical Association during the days of the meeting from 9 a. m. until 5 p. m. The badge must be shown in lieu of a ticket.

An escort will be provided for ladies wishing to visit the University of Chicago, the Historical Society or Hull House.

Tuesday, June 2.

There will be an informal gathering of the ladies in the rooms of the Fortnightly Club, the Chicago Woman's Club and the Chicago College Club, from 2 until 4 p. m. The rooms are located on the eighth, and ninth floors of the Fine Arts Building, Michigan Avenue, near Congress Street. Mrs. Alexander F. Stevenson, president of the Fortnightly Club; Mrs. Edward L. Upton, president of the Chicago Woman's Club, and Mrs. Normal F. Thompson, president of the College Club, assisted by ladies of the committee, will receive. Musical programs will be rendered and tea served.

Wednesday, June 3.

There will be a reception in honor of Mrs. Herbert L. Burrell at the South Shore Country Club, from 2:30 until 4:30

p. m. Trains on the Illinois Central Railroad leave the Van Buren Street Station at 2:00, 2:40, 3:00 and 3:40 p. m., returning every forty minutes. Round-trip tickets can be purchased at the ladies' headquarters in Exhibition Hall, until noon, Wednesday. Music will be furnished by Ulrich's orchestra, under the direction of Mr. Albert Ulrich.

THURSDAY, JUNE 4.

There will be a reception in the Art Institute from 2 until 5 p. m. Mr. Charles L. Hutchinson, president of the Art Institute; Mr. W. M. R. French, director of the Art Institute; Mr. Lorado Taft, for the Chicago artists, and Mr. Ralph Clarkson, for the Municipal Art League, assisted by ladies of the committee, will receive. Music by members of the Theodore Thomas orchestra, under the direction of Mr. Albert Ulrich, will be rendered in the rotunda from 2 to 3:30 p. m. There will also be an Orchestral Concert by the same orchestra at the Fullerton Memorial Hall at 4 o'clock.

Medical Temperance Lunch.

This lunch will take place at the Auditorium Hotel, Chicago, June 3, at 1 p. m. The object is to have an informal gathering of all persons interested in the medical side of the temperance question, and after a light lunch, to listen to various speeches and remarks on the different phases of this subject. The occasion is purely voluntary and represents no society or special theory and has no object to promote any one phase of the problem. The first occasion of this kind at Atlantic City last year called out nearly 200 persons who, after a slight repast, listened with great pleasure to remarks from leaders of the profession, and expressed a warm desire to have a similar gathering at each annual session of the American Medical Association. A number of eminent medical men have promised to be present and speak on this occasion, and the meeting will be limited to two hours. For further information address Dr. T. D. Crothers, Hartford, Conn.

CLINICS AT CHICAGO.

A Partial List of Clinics at Various Hospitals and Colleges at the Chicago Session.

The following schedule is a list of clinics to which members of the American Medical Association are invited during the week preceding the Chicago meeting. Programs containing these clinics and those to be held during the two weeks following the meeting may be obtained in pamphlet form at the offices of all hospitals and colleges giving clinics and demonstrations, or by addressing A. J. Ochsner, Chairman Committee on Clinics.

HOSPITALS AND COLLEGES.

Below is given a list of the hospitals and colleges at which clinics will be held. The address of each hospital and college is given and directions for reaching each from down town.

ALEXIAN BROTHERS' HOSPITAL, Belden Ave., corner of Racine Ave. Take Fullerton Ave. car or Lincoln Ave. car and transfer on Fullerton.

AUGUSTANA HOSPITAL, 480 Cleveland Ave., corner Lincoln Ave. Take Sedgwick St., Lincoln Ave. and Lincoln and Wells St. car; get off corner of Garfield and Lincoln Aves.

CHICAGO COLLEGE OF MEDICINE AND SURGERY, 333 South Lincoln St. Take West Harrison St. or Ogden Ave. car; or Metropolitan Elevated train; get off at Lincoln St. or Ogden Ave. station.

CHICAGO EYE, EAR, NOSE AND THROAT HOSPITAL, Franklin and Washington Sts. In the down-town district.

CHICAGO MATERNITY HOSPITAL, 1033 North Clark St. Take Clark St. or Evanston Ave. car; get off at Belden Ave.

CHILDREN'S MEMORIAL HOSPITAL, 606 Fullerton Ave. Take North Clark St. or Lincoln Ave. car; get off at Fullerton Ave.

COOK COUNTY HOSPITAL, Harrison and Honore Sts. Take Harrison St. car and get off at Honore St.; or take Metropolitan Elevated and get off at Ogden Ave.

ENGLEWOOD HOSPITAL, 6001 Green St. Reached by the South Side Elevated, Englewood branch, to Halsted St., walk three blocks north and one west; or Halsted St. car to Sixtieth St.

EVANGELICAL DEACONESS HOSPITAL, 80 Wisconsin St. Take either Lincoln Ave. or Lincoln and Wells St.; or Sedgwick St., and get off at Wisconsin St.

GERMAN HOSPITAL, 754 Hamilton Ct. Take Lincoln Ave. or Larrabee St. cars and get off at Hamilton Ct.

HOME FOR CRIPPLED CHILDREN, 46 Park Ave. Take West Madison St. car and get off at Paulina St.

COLLEGE OF PHYSICIANS AND SURGEONS, West Congress St. and Ogden Ave. Take Ogden Ave., West Harrison St. or Van Buren St. car, or Metropolitan Elevated; get off at Lincoln St.

MERCY HOSPITAL, Calumet Ave. and Twenty-sixth St. Take Cottage Grove and Indiana Ave. car, and get off at Twenty-sixth St.

NORTH CHICAGO HOSPITAL, 1220 North Clark St. Take North Clark St. or Evanston Ave. car; get off at Wrightwood Ave.

NORTHWESTERN UNIVERSITY MEDICAL SCHOOL, 2431 Dearborn St. Take South State St. car; get off at Twenty-fifth St., or South Side Elevated train and get off at Twenty-second St.

POLICLINIC HOSPITAL, 174 East Chicago Ave. Take either North Clark-Lincoln Ave. or Lincoln and Wells St. car; get off at Chicago Ave.

PRESBYTERIAN HOSPITAL, Congress and Wood Sts. Take Harrison St. car and get off at Wood St., or Metropolitan Elevated; get off at Ogden Ave.

RUSH MEDICAL COLLEGE. Same as for Presbyterian Hospital.

POSTGRADUATE HOSPITAL, 2400 Dearborn St. Take South State St. car; get off at Twenty-fourth St.

ST. LUKE'S HOSPITAL, 1426 Indiana Ave. Take Indiana Ave., Cottage Grove Ave. or South State St. car; get off at Thirteenth St. and walk east.

ST. MARY'S OF NAZARETH HOSPITAL, 545 North Leavitt St. Take Division St. car to Leavitt; cross town lines, Robey St. and Western Ave.

UNIVERSITY HOSPITAL, Lincoln and Congress Sts. Take Ogden Ave., Harrison or Van Buren St. cars; get off at Lincoln St.; or Metropolitan Elevated to Ogden Ave.

WESLEY HOSPITAL, 2449 Dearborn St. Reached by the State St. car line; get off at Twenty-fifth and State Sts. and walk one block west.

WEST SIDE HOSPITAL, 819 West Harrison St. Take Harrison St., Ogden Ave or Van Buren St. cars; get off at Lincoln St.; or take Metropolitan Elevated train and get off at Ogden Ave.

WILLARD HOSPITAL, 333 South Lincoln St. Take West Harrison St. or Ogden Ave. car, or Metropolitan Elevated; get off at Lincoln St. or Ogden Avenue.

HEADINGS.

To facilitate matters the clinics have been arranged under the following headings:

1. Medicine
2. General Surgery
3. Orthopedic Surgery
4. Gynecologic Surgery
5. Obstetrics
6. Neurology
7. Dermatology
8. Pediatrics
9. Ophthalmology and Otology
10. Genitourinary Surgery
11. Rhinology
12. Rectal Surgery
13. Electrotherapy
14. Pharmacy
15. Anatomy
16. Pathology
17. Hospitals

MEDICINE.

MONDAY, MAY 25.

Hospital and Instructor.	Hours.	Capacity Seat.	Capacity Stand.
Cook County, Goodkind	10:00 11:00	300	..
Cook County, Tice	11:00-12:00	300	..
Policlinic, Patton	4:00- 6:00	75	25
Rush Medical College, Billings	9:00-11:00	500	..
Postgraduate, Goldsmith	11:00-12:00	30	50
Postgraduate, Portis	3:00- 4:00	30	50
St. Mary's, Pietrowicz	10:00-11:00	50	..
West Side, Michel	2:00- 4:00	25	..
Provident, Grulle	8:00-11:00	...	10
Northwestern, Walls.	10:00-12:00	200	..

TUESDAY, MAY 26.

Hospital and Instructor.	Hours.	Capacity Seat.	Capacity Stand.
Cook County, Herrick	9:00-11:00	300	..
Chi. Col. Med. & Surg., Seufert	3:00- 4:00	90	20
Chi. Col. Med. & Surg., Pietrowicz	3:00- 4:00	90	20
Policlinic, Williamson	5:00- 6:00	75	25
College P. and S., Williamson	1:00- 3:00	200	50
Mercy, Edwards	10:00-12:00	500	50
Cook County, Herrick	9:00-11:00	500	..
Postgraduate, Elliott	3:00- 4:00	30	50
Postgraduate, Mack	1:30- 2:30	30	..

Hospital and Instructor.	Hours.	Capacity Seat.	Capacity Stand.
St. Mary's, Orth	8 :00-10 :00	50	..
St. Mary's, Pietrowicz	8 :00-10 :00	50	..
West Side, Wiggin	10 :00-11 :00	25	5
West Side, Calloway	10 :00-11 :00	25	..
Provident, Smith	11 :00-12 :00	...	10
Provident, Krost	11 :00-12 :00	...	..
Wednesday, May 27.			
Cook County, Sippy	9 :00-11 :00	300	..
Cook County, Portis	4 :00- 6 :00	300	..
Policlinic, Fisher	4 :00	75	25
St. Luke's, Preble	8 :00- 9 :00	65	25
Postgraduate, Goodwin	9 :00-10 :30	50	50
Postgraduate, Carr	3 :00 4 :00	50	50
Postgraduate, Turck	1 :00- 3 :00	50	50
Cook County, Sippy	9 :00-11 :00	500	..
St. Luke's, Preble	8 :00- 9 :00	65	25
St. Mary's, Stolz	10 :00-11 :00	50	..
Provident, Schoenfeld	8 :00-11 :00	...	10
Provident, Kindig	8 :00-11 :00	...	10
Michael Reese, Goodkind	8 :00-12 :00	30	20
Michael Reese, Rubel	8 :00-12 :00	30	20
Thursday, May 28.			
Cook County, Patton	9 :00-10 :00	300	..
Policlinic, Williamson	5 :00- 6 :00	75	25
Northwestern, Mix	11 :00-12 :00	130	25
Postgraduate, Portis	3 :00- 4 :00	50	50
Postgraduate, Goldsmith	11 :00-12 :00	...	..
Postgraduate, Mack	1 :30- 2 :30	50	..
Rush Medical College, Billings	9 :00-11 :00	500	..
St. Mary's, Pietrowicz	10 :00-11 :00	50	..
University, Heintz	11 :00-12 :00	75	..
Friday, May 29.			
Cook County, Preble	8 :00-10 :00	300	..
Cook County, Mix	8 :00-10 :00	300	..
Policlinic, Patton	4 :00- 5 :00	75	25
Postgraduate, Elliott	3 :00- 4 :00	50	50
Postgraduate, Turck	1 :00- 3 :00	50	50
Rush Medical College, Herrick	9 :00-11 :00	500	..
St. Mary's, Orth	8 :00-10 :00	50	..
St. Mary's, Pietrowicz	8 :00-10 :00	50	..
West Side, Wiggins	10 :00-12 :00	25	..
Cook County, Harpole	8 :00-10 :00	300	..
Saturday, May 30.			
Policlinic, Fisher	4 :00- 5 :00	75	25
Policlinic, Williamson	5 :00- 6 :00	75	25
Postgraduate, Goodwin	9 :30-10 :30	...	..
Postgraduate, Carr	3 :00- 4 :00	50	50
Postgraduate, Pierce	2 :00- 3 :00	50	50
Rush Medical College, Sippy	9 :00-11 :00	500	..
St. Mary's, O'Malley	11 :00-12 :00	60	..
Cook County, Babcock	8 :00- 9 :00	300	..
Provident, Miller	8 :00-10 :00	...	10
Provident, Smith	8 :00-10 :00	...	10
Monday, June 1.			
Cook County, Goodkind	10 :00-12 :00	300	..
Cook County, Tice	11 :00-12 :00	300	..
Cook County, Williamson	1 :00- 3 :00	300	..
Policlinic, Patton	4 :00- 5 :00	75	25
Postgraduate, Goldsmith	11 :00-12 :00	50	50
Postgraduate, Portis	3 :00- 4 :00	50	50
Postgraduate, Turck	1 :00- 3 :00	50	..
Rush Medical College, Billings	9 :00-11 :00	500	..
St. Mary's, Pietrowicz	10 :00-11 :00	50	..
West Side, Michel	2 :00	25	..
Provident, Grulle	8 :00-11 :00	...	10
Provident, White	8 :00-11 :00	...	10
Mercy, Edwards	10 :00-12 :00	500	..
St. Joseph's, Small	10 :00-12 :00	...	15
GENERAL SURGERY.			
Monday, May 25.			
Cook County, Davison	8 :00-10 :00	300	..
Postgraduate, A. B. Kanavel	11 :00-12 :00	300	..
Postgraduate, Cubbins	3 :00- 4 :00	300	..
St. Mary's, F. Laibe	8 :30	50	..
College P. and S., T. A. Davis	1 :00- 3 :00	250	50
West Side, Blayney	1 :00- 3 :00	50	5
Willard, Fowler	11 :00-12 :00	90	20
Willard, Walsh	11 :00-12 :00	90	20
North Chicago, Beck	9 :00-12 :00	...	10
Policlinic, Harris	11 :00-12 :00	75	25
Presbyterian, Bevan	11 :00- 1 :00	500	..
Provident, Gillmore	2 :00- 5 :00	...	10
Provident, Williams	8 :00-11 :00	...	10
Provident, Hepburn	2 :00- 5 :00	...	10
Augustana, Ochsner	8 :00-10 :00	60	..
Mercy, E. W. Andrews	10 :00-12 :00	400	..
Tuesday, May 26.			
University Hospital, Davison	1 :00- 3 :00	76	..
Postgraduate, Besley	10 :00-11 :00	300	..
St. Mary's, Percy	8 :00-10 :00	40	..
Augustana, Ochsner	8 :00-12 :00	60	..
West Side, Cowley	11 :00-12 :00	50	5
Willard, Shaw	10 :00-11 :00	90	20
Willard, Steckable	10 :00-11 :00	90	20
Children's Memorial, Kerr	3 :00- 4 :00	...	20
College P. and S., Williamson	1 :00- 3 :00	300	..
College P. and S., Dannin	1 :00- 3 :00	300	50
College P. and S., Ochsner	8 :00-10 :00	300	50
North Chicago, Beck	9 :00-12 :00	...	10
Policlinic, Hessert	11 :00-12 :00	75	25
Wesley, Schroeder	3 :00- 5 :00	200	..
Presbyterian, Murphy	11 :00- 1 :00	500	..
Cook County, Bouffleur	11 :00- 1 :00	300	..
Michael Reese, Eisendrath	8 :00-10 :00	30	..
Wednesday, May 27.			
Postgraduate, Sullivan	10 :00-11 :00	300	..
Postgraduate, Cubbins	3 :00- 4 :00	...	..
St. Mary's, Schmitz	9 :00-11 :00	50	..
Augustana, Ochsner	8 :00-12 :00	60	..
College P. and S., Harsha	1 :00- 3 :00	250	50
Children's Memorial, Ryerson	3 :00- 5 :00	20	..
North Chicago, Beck	9 :00-12 :00	50	10
Policlinic, Smith	9 :00-12 :00	50	..
Policlinic, Rischar	11 :00-12 :00	75	25
Mercy, Murphy	9 :00-12 :00	500	..
Provident, Burrough	2 :00- 5 :00	...	10
Provident, Jones	2 :00- 5 :00	...	10
Alexian Bros., Allport	9 :00-10 :00	...	25
University, Fuller	1 :00- 3 :00	25	..
Thursday, May 28.			
Cook County, Davis	10 :00-12 :00	300	..
University, Steele	1 :00- 3 :00	75	..
Postgraduate, Kanavel, Richter and Besley	12 :00	300	..
St. Mary's, Ochsner	10 :00-12 :00	50	..
St. Mary's, Percy	10 :00-12 :00	50	..
Augustana, Ochsner	8 :00-12 :00	50	..
Cook County, Eisendrath	10 :00-12 :00	300	..
West Side, Novashelsky	11 :00-12 :00	300	..
Willard, Rogers	10 :00-12 :00	90	20
Willard, Stewart	10 :00-12 :00	90	20
College P. and S., Davis	10 :00-12 :00	324	..
North Chicago, Beck	9 :00-12 :00	...	10
Policlinic, Harris	11 :00-12 :00	75	25
Policlinic, Morf	11 :00-12 :00	75	25
Presbyterian, Bevan	11 :00- 1 :00	500	..
Presbyterian, Lewis	11 :00- 1 :00	500	..
Mercy, Andrews	10 :00-12 :00	400	..
Augustana, Ochsner	8 :00-10 :00	60	..
Friday, May 29.			
Presbyterian, Murphy	11 :00- 1 :00	300	..
Willard, Henderson	11 :00-12 :00	90	20
Willard, Wardle	11 :00-12 :00	90	20
Children's Memorial, Kerr	8 :00- 9 :00	20	20
Cook County, Halsted	10 :00-12 :00	300	..
Cook County, Andrews	2 :00- 4 :00	300	..
Cook County, Besley	10 :00-12 :00	300	..
North Chicago, Beck	9 :00-12 :00	...	10
Postgraduate, Besley	10 :00-12 :00	300	..
Postgraduate, Cubbins	3 :00- 4 :00	300	..
Policlinic, Hessert	11 :00-12 :00	30	..
Presbyterian, Lewis	11 :00- 1 :00	400	..
St. Mary's, Kuflewski	9 :00-10 :00	60	40
College P. and S., Ferguson	2 :00- 4 :00	250	..
College P. and S., Brown	2 :00- 4 :00	250	..
Augustana, Ochsner	8 :00-12 :00	60	..
Wesley, Plummer	3 :00- 5 :00	200	..
Saturday, May 30.			
Augustana, Ochsner	8 :00-12 :00	60	..
Cook County, Eisendrath	10 :00-12 :00	300	..
Cook County, Humiston	10 :00-12 :00	300	..
Mercy, Murphy	9 :00-12 :00	550	50
North Chicago, Beck	9 :00-12 :00	...	10
Postgraduate, Sullivan	10 :00-11 :00	300	..
Postgraduate, Richter	4 :00- 5 :00	...	..
Policlinic, Smith	11 :00-12 :00	75	25
Policlinic, Rischar	11 :00-12 :00	75	25
Rush Medical College, Graham	2 :00- 4 :00	500	..
Rush Medical College, Senn	2 :00- 4 :00	500	..
St. Mary's, Mueller	8 :00-10 :00	40	..
University, Steele	1 :00- 3 :00	75	..
University, Fuller	1 :00- 3 :00	75	..
Provident, Hall	8 :00-11 :00	...	10
Provident, Fox	8 :00-11 :00	...	10
Provident, William	2 :00- 5 :00	...	10
Provident, McKiesik	2 :00- 5 :00	...	10
Michael Reese, McArthur	8 :00-12 :00	30	20
Michael Reese, Andrews	8 :00-12 :00	30	20
Michael Reese, Eisendrath	8 :00-12 :00	30	20
Michael Reese, Friend	8 :00-12 :00	30	20
Michael Reese, Greensfelder	8 :00-12 :00	30	20
Jenner Medical Coll., Breakstone	3 :00- 5 :00	150	..
Monday, June 1.			
Willard, Fowler	11 :00-12 :00	90	20
Willard, Walsh	11 :00-12 :00	90	20
Cook County, Davison	8 :00-10 :00	300	..
Englewood, Bacon	9 :00-11 :00	...	25
North Chicago, Beck	9 :00-12 :00	...	10
Policlinic, Harris	11 :00-12 :00	75	25
Policlinic, Kerr	11 :00-12 :00	75	25
Policlinic, McMartin	11 :00-12 :00	75	25
Rush Medical College, Bevan	11 :00- 1 :00	500	..
Rush Medical College, Lewis	11 :00-12 :00	500	..
St. Mary's, Laibe	8 :30	50	..
West Side, Davis	1 :00- 3 :00	250	50
Provident, Williams	8 :00-11 :00	...	10
Alexian Bros., Allport	9 :00-10 :00	...	15
Mercy, Andrews	10 :00-12 :00	550	..
ORTHOPEDIC SURGERY.			
Monday, May 25.			
Cook County, Ryerson	3 :00- 4 :00	300	..
Postgraduate, Hardon	10 :00-11 :00	30	50
Policlinic, Ryerson	1 :00- 2 :00	75	25
Policlinic, Morton	1 :00- 2 :00	75	25
Tuesday, May 26.			
St. Mary's, Mueller	8 :00-10 :00	40	..

WEDNESDAY, MAY 27.

Hospital and Instructor.	Hours.	Capacity Seat.	Capacity Stand.
Policlinic, Ryerson	1:00-2:00	75	25
Policlinic, Morton	1:00-2:00	75	25

THURSDAY, MAY 28.

Postgraduate, Hardon	10:00-11:00	30	50
Cook County, Porter	9:00-10:00	100	..

FRIDAY, MAY 29.

Policlinic, Ryerson	1:00-2:00	75	25
Policlinic, Morton	1:00-2:00	75	25
Home Crippled Children, Ridlon	1:00-3:00	...	25

SATURDAY, MAY 30.

Cook County, Porter	9:00-10:00	300	..

MONDAY, JUNE 1.

Cook County, Ryerson	3:00-4:00	...	..
Policlinic, Ryerson	1:00-2:00	75	25
Postgraduate, Hardon	10:00-11:00	30	50

GYNECOLOGIC SURGERY.

MONDAY, MAY 25.

Policlinic, Banga	10:00-11:00	75	25
West Side, Corbett	3:00-4:00	20	5
Wesley, Watkins	8:00-10:00	200	..
Postgraduate, Ries	9:00-10:00	300	..
Mercy, W. S. Barnes	8:00-9:00	300	..

TUESDAY, MAY 26.

Policlinic, Keyes	3:00	75	25
Policlinic, Barrett	10:00	...	..
West Side, Moorhead	9:00	20	5
Postgraduate, Martin	9:00-10:00	300	..
Postgraduate, Goldspohn	10:00-12:00	300	..
Mary Thomson, Waite	2:00-4:00	...	35
Mary Thomson, Conklin	2:00-4:00	...	35

WEDNESDAY, MAY 27.

Policlinic, Lewis	10:00-11:00	75	25
Presbyterian, Webster	11:00-1:00	100	..
St. Luke's, Frankenthal	9:00-11:00	70	..
West Side, Thompson	10:00-11:00	50	5
Michael Reese, Banga	8:00-12:00	...	8
Chi. Coll. Med. & Surg., Tucker	10:00-11:00	90	20
Chi. Coll. Med. & Surg., McDermot	10:00-11:00	90	20

THURSDAY, MAY 28.

Policlinic, Banga	10:00-11:00	75	25
Policlinic, Keyes	3:00-4:00	...	..
West Side, West	9:00-11:00	50	5
West Side, Davis	1:00-3:00	....	..
Postgraduate, Ries	9:00-10:00	300	..

FRIDAY, MAY 29.

Mercy, Andrews	8:00-10:00	400	..
Policlinic, Barrett	10:00-11:00	75	25
Policlinic, Keyes	3:00-4:00	...	..
West Side, Moorhead	9:00-10:00	20	5
Wesley, De Lee		300	..
Postgraduate, Martin	9:00 10:00	300	..
Mary Thomson, Waite	2:00-4:00	...	25
Mary Thomson, Braunwarth	2:00-4:00	...	25

SATURDAY, MAY 30.

Policlinic, Lewis	10:00-11:00	75	25
Presbyterian, Webster	11:00-1:00	100	..
West Side, Van Hoosen	8:00-10:00	250	50
Postgraduate, Goldspohn	10:00-12:00	300	..

MONDAY, JUNE 1.

Englewood, Hagens	11:00-1:00	...	25
Evangelical, Goldspohn	9:00-10:00	...	10
Policlinic, Banga	10:00-12:00	75	25
West Side, Corbett	3:00-4:00	20	5
Postgraduate, Martin	9:00-10:00	300	..
Wesley, Watkins	2:00-4:00	225	..

OBSTETRICS.

MONDAY, MAY 25.

Maternity, Davis	10:00-12:00	6	..
University, Bacon	10:00-12:00	6	..

WEDNESDAY, MAY 27.

Maternity, Davis	10:00-12:00	6	..
University, Bacon	11:00-12:00	6	..

FRIDAY, MAY 29.

Maternity, Davis	10:00-12:00	6	..
University, Alrutz	11:00-12:00	6	..
Michael Reese, Carry	8:00-12:00	...	8
Michael Reese, Schram	8:00-12:00	...	8
Michael Reese, Simon	8:00-12:00	...	8
Provident, De Lee	2:00-5:00	10	..
Provident, Robeson	2:00-5:00	10	..

SATURDAY, MAY 30.

University, Davis	11:00-12:00	6	..
University, Goldstine	11:00-12:00	6	..

MONDAY, JUNE 1.

Maternity, Davis	10:00-12:00	6	..
University, Bacon	10:00-12:00	6	..

NEUROLOGY.

MONDAY, MAY 25.

Policlinic, Walker	2:00-4:00	75	25
Postgraduate, Grinker	4:00-5:00	30	50

TUESDAY, MAY 26.

College P. & S., King	3:00-4:00	200	50

WEDNESDAY, MAY 27.

Hospital and Instructor.	Hours.	Capacity Seat.	Capacity Stand.
Policlinic, Healy	2:00 3:00	75	25
Postgraduate, Grinker	4:00-5:00	30	50
Rush Medical College, Brower	9:00-11:00	100	..
St. Mary's, Heym	11:00-12:00	40	..

THURSDAY, MAY 28.

Cook County, Kuh	4:00-6:00	....	..
Cook County, Bassoe		...	..
Alexian Brothers, Heym	10:00-11:00	25	..
Michael Reese, Kuh	9:00-12:00	25	..
Michael Reese Hecht	9:00-12:00	25	..

FRIDAY, MAY 29.

Willard, Heym	10:00-11:00	90	20
Willard, Atkinson	10:00-11:00	90	20
Policlinic, Gill	2:00-3:00	75	25
Cook County, Brown	4:00-6:00	...	..
Postgraduate, Grinker	4:00-5:00	30	50

MONDAY, JUNE 1.

Chicago Policlinic, Walker	2:00-3:00	75	25
Postgraduate, Grinker	4:00-5:00	30	50

DERMATOLOGY.

MONDAY, MAY 25.

Cook County, Pusey	2:00-3:00	100	..
Policlinic, Anthony	9:00-11:00	75	25
Rush Medical College, Hyde	2:00-4:00	500	..
Rush Medical Coll., Montgomery	2:00-4:00	500	..
West Side, Ormsby	4:00-5:00	25	5
West Side, Mackay	4:00-5:00	25	..
Postgraduate, Rogers	2:00-4:00	50	..

TUESDAY, MAY 26.

Cook County, Ormsby	2:00-3:00	100	..
Willard, Fischkin	2:00-3:00	90	20
Willard, Beck	2:00-3:00	90	20
Willard, Welfeld	2:00-3:00	90	20
Postgraduate, Baum	2:00-4:00	50	..

WEDNESDAY, MAY 27.

Policlinic, Campbell	9:00-10:00	75	25
Postgraduate, Baum	2:00-4:00	50	..

THURSDAY, MAY 28.

Policlinic, Anthony	9:00-10:00	75	25
Rush Medical College, Hyde	2:00-4:00	500	..
Rush Medical Coll., Montgomery		...	..
West Side, Ormsby	4:00-5:00	25	5
West Side, Mackay		...	..
Postgraduate, Rogers	2:00-4:00	50	..

SATURDAY, MAY 30.

Policlinic, Campbell	9:00-10:00	75	25
Postgraduate, Baum	2:00-4:00	50	..

MONDAY, JUNE 1.

Cook County, Pusey	2:00-3:00	...	..
Policlinic, Anthony	9:00-10:00	75	25
Rush Medical College, Hyde		...	..
Rush Medical Coll., Montgomery	2:00-4:00	500	..
West Side, Ormsby	4:00-5:00	25	5
Postgraduate, Rogers	2:00-4:00	50	

PEDIATRICS.

MONDAY, MAY 25.

Northwestern, Walls	10:00-12:00	96	..
Postgraduate, Black	4:30-5:30	30	50
Michael Reese, Abt	8:00-12:00	...	20
Michael Reese, Lockner	8:00-12:00	...	20
Michael Reese, Hess	8:00-12:00	...	20

TUESDAY, MAY 26.

Cook County, Butler	4:00-5:00	...	..
Policlinic, Quinlan	9:00-10:00	75	25
Postgraduate, Allen	4:30-5:30	30	50
Rush Medical College, Dodson	9:00-11:00	100	..
University, French	2:00-3:00	76	..
University, Maselska	2:00-3:00	76	..
West Side, Hatfield	1:30	25	5
West Side, Frende	10:00-12:00	25	..

WEDNESDAY, MAY 27.

Cook County, Abt	4:00-5:00	...	..
Policlinic, Kleinpell	3:00-4:00	25	5
Postgraduate, Krost	4:30-5:30	30	50
West Side, Strauch	1:00-2:00	25	5

THURSDAY MAY 28.

Postgraduate, Allen	4:30-5:30	30	50
Postgraduate, Silverthorn		...	..
West Side, Benson	1:00-2:00	500	25

FRIDAY, MAY 29.

Policlinic, Quinlan	9:00-10:00	75	25
Postgraduate, Black	4:30-5:30	30	50
Rush Medical College, Dodson	9:00-11:00	100	..
University, French	2:00-3:00	76	..
University, Maselska			
West Side, Hatfield	1:30	25	5
West Side, French			

SATURDAY, MAY 30.

Cook County, Koehler	1:00-2:00	...	..
Willard, Wolfe	10:00-11:00	90	20
Willard, Romenger	10:00-11:00	90	20
Policlinic, Kleinpell	3:00	75	25
Postgraduate, Krost	4:30-5:30	30	50
West Side, Strauch	1:00	25	5

Monday, June 1.

Hospital and Instructor.	Hours.	Capacity Seat.	Capacity Stand.
Postgraduate, Black	4:30- 5:30	50	50

OPHTHALMOLOGY AND OTOLOGY.

Monday, May 25.

Willard, Barr	2:00- 3:00	90	20
Willard, von der Heydt	2:00- 3:00	90	20
Policlinic, Wilder	9:00-10:00	75	25
Policlinic, Hager	9:00-10:00	75	25
Policlinic, Fiske	3:00	75	25
Postgraduate, Patillo	9:00-10:00	30	50
Postgraduate, Coleman	4:00- 5:00	30	50
Rush Medical College, Wilder	2:00- 4:00	500	..
West Side, Baum	3:00- 4:00	25	..
Ill. Eye & Ear Infirm., W. A. Waner	2:00- 4:00	...	10

Tuesday, May 26.

Policlinic, Mahoney	9:00-10:00	75	25
Policlinic, Pierce	3:00- 4:00	75	25
Policlinic, Menhardt	3:00- 4:00	75	25
Postgraduate, Suker	9:00-10:00	30	50
Postgraduate, Hawley	4:00- 5:00	30	50
Provident, Thomas	9:00-12:00	...	10
Ill. Eye & Ear Infirm., C. H. Beard	2:00- 4:00	...	10
Ill. Eye & Ear Infirm., W. H. Barr.	2:00 -4:00	...	10

Wednesday, May 27.

Chi. Coll. Med. and Surg., Good	3:00- 4:00	90	20
Chi. Coll. Med. and Surg., Schultz.	3:00- 4:00	30	20
Policlinic, Wilder	9:00-10:00	75	25
Policlinic, Hager	9:00-10:00	75	25
Policlinic, Hall	3:00- 4:00	75	25
Postgraduate, Suker	4:00- 5:00	30	50
College of P. and S., Gamble	3:00- 4:00	...	..
Provident, McKinley	9:00-12:00	...	10
Ill. Eye & Ear Infirm., O. Dodd	2:00- 4:00	...	10
Ill. Eye & Ear Infirm., D. C. Ovault	2:00- 4:00	...	10
Mercy, Tivnen	8:00- 9:00	300	..

Thursday, May 28.

Policlinic, Mahoney	9:00-10:00	75	25
Policlinic, Fiske	3:00- 4:00	75	25
St. Luke's, Allport	2:00- 6:00	65	25
St. Luke's, Wood	2:00- 6:00	65	25
Postgraduate, Patillo	9:00-10:00	30	50
Postgraduate, Hawley	4:00- 5:00	30	50
St. Luke's, Allport	2:00- 6:00	30	..
St. Luke's, Wood	2:00- 6:00	30	..
St. Luke's, Woodruff	2:00- 6:00	30	..
St. Luke's, Guilford	2:00- 6:00	30	..
West Side, McCreigle	1:00- 3:00	25	5
Provident, Albio	9:00-12:00	...	10
Provident, Mann	9:00-12:00	...	10
Ill. Eye & Eye Infirm. E. V. L. Brown	2:00- 4:00	...	10
Ill. Eye & Ear Infirm., von der Heydt	2:00- 4:00	...	10
Ill. Eye & Ear Infirm., Wilder	2:30- 3:30	...	10

Friday, May 29.

Policlinic, Wilder	9:00-10:00	95	25
Policlinic, Hager	9:00-10:00	95	25
Policlinic, Hall	3:00- 4:00	75	25
Wesley, Allport	2:00- 4:00	200	..
Wesley, Wood	2:00- 4:00	200	..
Postgraduate, Patillo	9:00-10:00	30	50
Postgraduate, Coleman	4:00- 5:00	30	50
Rush Medical College, Wilder	2:00- 4:00	500	...
Rush Medical College, Shambaugh.	2:00- 4:00	500	..
Wesley, Allport	2:00- 4:00	30	..
Wesley, Wood	2:00- 4:00	30	..
Wesley, Woodruff	2:00- 4:00	30	..
Wesley, Guilford	2:00- 4:00	30	..
West Side, Noble	2:00- 4:00	25	5
Provident, Aculist	9:00-12:00	...	10
Ill. Eye & Ear Infirm., Woodruff	2:00- 4:00	...	10
Ill. Eye & Ear Infirm., Remner	2:00- 4:00	...	10

Saturday, May 30.

Policlinic, Mahoney	9:00-10:00	75	25
Policlinic, Pierce	3:00- 4:00	75	25
Postgraduate, Hawley	9:00-10:00	30	50
Postgraduate, Suker	4:00--5:00	30	50
Ill. Eye & Ear Infirm., E. V. L. Brown	2:00- 4:00	...	10
Ill. Eye & Ear Infirm., von der Heydt	2:00- 4:00	...	10

Monday, June 1.

Willard, Barr	2:00- 3:00	90	30
Willard, von der Heydt	2:00- 3:00	90	30
Policlinic, Wilder	9:00-10:00	75	25
Policlinic, Hager	9:00-10:00	75	25
Policlinic, Fiske	3:00- 4:00	75	25
Postgraduate, Patillo	9:00-10:00	30	50
Postgraduate, Coleman	4:00- 5:00	30	50
Rush Med. College, Wilder	2:00- 4:00	500	...
West Side, Barr	3:00- 4:00	25	..
Ill. Eye & Ear Infirm., Werner	2:00- 4:00	...	15

GENITOURINARY SURGERY.

Monday, May 25.

Policlinic, Schmidt	4:00- 5:00	75	25
Policlinic, Friedrich	4:00- 5:00	75	25
Rush Medical College, Belfield	4:00- 6:00	75	..
Rush Medical College, Patton	4:00- 6:00	75	25
Rush Medical College, Herbst	4:00- 6:00	75	25

Tuesday, May 26.

Hospital and Instructor.	Hours.	Capacity Seat.	Capacity Stand.
Policlinic, Belfield	4:00- 6:00	75	25
Policlinic, Patton	4:00- 6:00	75	25
Rush Medical College, Herbst	3:00- 4:00	75	75
Provident, Stewart	2:00- 5:00	...	10
Provident, Mowry	2:00- 5:00	...	10

Wednesday, May 27.

Policlinic, Schmidt	4:00- 6:00	75	25
Policlinic, Friedrich	4:00- 6:00	75	25
Provident, Weber	2:00- 5:00	...	10

Thursday, May 28.

Chi. Coll. Med. & Surg., Nagel	3:00- 4:00	90	20
Chi. Coll. Med. & Surg., Berthing	3:00- 4:00	90	20
Policlinic, Belfield	4:00- 6:00	75	25
Policlinic, Herbst	4:00- 6:00	75	25

Friday, May 29.

Policlinic, Schmidt	4:00- 6:00	75	25
Rush Medical College, Belfield	4:00- 6:00	75	..
Rush Medical College, Herbst	4:00- 6:00	...	..
West Side, Kreissl	1:00- 2:00	25	5
West Side, Nagel	1:00- 2:00	25	5

Saturday, May 30.

Policlinic, Whalen	4:00- 5:00	75	25
Rush Medical College, Herbst	3:00- 4:00	75	75

Monday, June 1.

Policlinic, Schmidt	4:00- 6:00	75	25
Policlinic, Friedrich			
Rush Medical College, Belfield	4:00- 6:00	75	25
Rush Medical College, Patton	4:00- 6:00	75	25
Rush Medical College, Herbst			

RHINOLOGY.

Monday, May 25.

Chi. Eye, Ear, Nose and Throat, Woodruff	11:00- 1:00	30	..
Policlinic, Robertson	11:00- 1:00	30	..
Policlinic, Bick	11:00- 1:00	30	..
North Chicago, Beck	3:00- 5:00	...	10
North Chicago, Hughes	3:00- 5:00	...	10
Postgraduate, Stein	2:00- 3:00	50	..
Postgraduate, McGuire	3:00- 4:00	50	..
Chi. Eye and Ear Infirm., Davey	2:00- 4:00	15	..
Michael Reese, Pierce	9:00-10:00	12	..
Michael Reese, Frank	9:00-10:00	12	..

Tuesday, May 26.

Chi. Eye, Ear, Nose and Throat, Wiffern	11:00- 1:00	30	..
Policlinic, Freer			
Northwestern, McGuire	10:00-12:00	96	..
Northwestern, Marquis	10:00-12:00	96	..
Postgraduate, Campbell	2:00- 3:00	50	..
Postgraduate, Head	3:00- 4:00	50	..
Ill. Eye & Ear Infirm., Boettcher	2:00- 4:00	...	15
Ill. Eye and Ear Infirm., Hager	2:00- 4:00	...	15
Michael Reese, Morgenthau	9:00-10.30	12	..
Alexian Bros., Holinger	9:00-10:00	...	25
Ill. Eye & Ear Infirm., Barr	2:00- 4:00	20	..
Ill. Eye & Ear Infirm., Beard	2:00- 4:00	20	..

Wednesday, May 27.

Chi. Eye, Ear, Nose and Throat, Hoffmann	11:00- 1:00	30	..
Policlinic, Robertson	11:00- 1:00	30	..
Policlinic, Bick	11:00- 1:00	30	..
College of P. and S., Harper	3:00- 4:00	250	50
College of P. and S., Gamble			
North Chicago, Beck	3:00- 5:00	...	10
North Chicago, Hughes	3:00- 5:00	...	10
Rush Medical College, Whalen	2:00- 4:00	500	..
Rush Medical College, E. F. Ingals.	2:00- 4:00	500	..
West Side, Guthrie	2:00- 4:00	10	3
Postgraduate, Stein	2:00- 3:00	50	..
Postgraduate, Macguire	3:00- 4:00	50	..
Ill. Eye & Ear Infirm., Pierce	3:00- 4:00	50	..
Ill. Eye & Ear Infirm., Meinhardt.	2:00- 4:00	...	15

Thursday, May 28.

Chi. Eye, Ear, Nose and Throat, Gardiner	2:00- 3:00	30	..
Policlinic, Freer	2:00- 3:00	30	..
West Side, Hawley	1:00- 2:00	10	..
Postgraduate, Campbell	1:00- 3:00	50	..
Postgraduate, Head	3:00- 4:00	50	..
Ill. Eye & Ear Infirm., Davey	3:00- 4:00	...	15
Ill. Eye & Ear Infirm., Spiece	2:00- 4:00	...	15
Michael Reese, Pierce	9:00-10:00	12	..
Michael Reese, Frank	2:00- 4:00	...	..

Friday, May 29.

Chi. Eye, Ear, Nose and Throat. Woodruff	11:00- 1:00	30	..
Policlinic, Robertson			
Policlinic, Bick			
College of P. and S., Ballenger	10:00-12:00	250	50
Wesley, Menger	10:00-12:00	200	..
West Side, Gorwin	2:00	10	..
Postgraduate, Stein	2:00- 3:00	50	..
Postgraduate, Macguire	3:00- 4:00	...	15
Ill. Eye & Ear Infirm., Boettcher	2:00- 4:00	...	..
Ill. Eye & Ear Infirm., Hager	2:00- 4:00	...	..
Michael Reese, Morgenthau	9:00-10:00	12	..

SATURDAY, MAY 30.

Hospital and Instructor.	Hours.	Capacity	
		Seat.	Stand.
Chi. Eye, Ear, Nose and Throat.. Wiffern	11 :00- 1 :00	30	..
Policlinic, Freer	11 :00- 1 :00	30	..
College of P. and S., Brown	3 :00- 4 :00	250	50
Postgraduate, Campbell	2 :00- 3 :00	50	..
Postgraduate, Long	3 :00- 4 :00	50	..
Ill. Eye & Ear Infirm., Pierce	2 :00- 4 :00	...	15
Ill. Eye & Ear Infirm., Meinhardt	2 :00- 4 :00	...	15

MONDAY, JUNE 1.

Chi. Eye, Ear, Nose and Throat, Tydinger	3 :00- 6 :00	30	..
Policlinic, Robertson			
Policlinic, Bick			
North Chicago, Beck	3 :00- 5 :00	10	..
North Chicago, Hughes			
Postgraduate, Stein	2 :00- 3 :00	50	..
Postgraduate, Macguire	3 :00- 4 :00	50	15
Ill., Eye & Ear Infirm., Davey	2 :00- 4 :00	...	15
Ill. Eye & Ear Infirm., Spiece	2 :00- 4 :00	...	..

RECTAL SURGERY.

TUESDAY AND THURSDAY, MAY 26 AND 28.

Policlinic, Pennington	2 :00- 3 :00	75	25

ELECTROTHERAPY.

MAY 20, 27, 29 AND JUNE 1.

West Side, J. H. Carpenter	1 :00	25	5

ANATOMY.

WEDNESDAY, MAY 27.

College P. and S., Havelin	9 :00-10 :00	100	..
College P. and S., White	9 :00-10 :00	100	..

FRIDAY, MAY 29.

Policlinic, Gronnerud	8 :00-10 :00	500	..
Policlinic, Parkes	8 :00-10 :00	500	..

SATURDAY, MAY 30.

Policlinic, Gronnerud	8 :00-10 :00	500	..
Policlinic, Parkes	8 :00-10 :00	500	..

MONDAY, JUNE 1.

Policlinic, Gronnerud	8 :00-10 :00	500	..
Policlinic, Parkes	8 :00-10 :00	500	..

PATHOLOGY.

MAY 25, JUNE 20.

(*Exhibit in Pathology and Pathologic Anatomy in Library Building.*)

Rush Medical College, Daily	9 :00- 4 :00		

TUESDAY, MAY 26.

Michael Reese, Herzog	8 :00-12 :00	...	300

MONDAY, MAY 25.

Cook County, Evans	8 :00-10 :00	300	..
College P. and S., Cooke	9 :00-11 :00	50	..

SATURDAY, MAY 30.

Cook County, Harris	8 :00-10 :00	...	..

MONDAY, JUNE 1.

Cook County, Le Count	11 :00-12 :00	300	..

Queries and Minor Notes

ORIGIN OF THE SYMBOL OF ÆSCULAPIUS.

NEWBURGH, N. Y., April 27, 1908.

To the Editor:—Will you please tell me the origin and meaning of the insignia of Æsculapius — the rod with the serpent entwined?

M. E. D.

ANSWER.—The serpent in oriental lore is the symbol of foresight and wisdom, a fact familiar to all readers of the Hebrew scriptures. It has always played a considerable part in medicine and religion, both before and after their separation. Early Greek medicine, no doubt, had its origin in oriental sources. The Æsculapius of the Greeks corresponded with Eshmoun of the Phœnicians and Serapis of the Egyptians, both of which gods had the serpent as a supporter, Serapis particularly as a symbol of health. This conception of the serpent appears to have been derived from the belief that it perpetually renewed itself by casting its slough. An illustration of this attribute of renovation is seen in the brazen serpent (Numbers, xxi, 8) that healed those bitten by the fiery serpents. The serpent was always cherished about the temples of Æsculapius. Livy tells us that when the Romans, in 461, B. C., being afflicted with a pestilence, sent an embassy to the temple at Epidaurus, the serpent came out to them—which was taken as an interposition of the god in their favor—and of its own accord went to their ship and accompanied them back to Rome. It took refuge on an island in the Tiber, on which a temple to Æsculapius was erected in the following year. Serpents were also sent from Æsculapian temples to other places, in response to calls for aid in time of pestilence. Moreover, according to one myth, Æsculapius, the son of Apollo by the nymph Coronis, sprang in the figure of a serpent from a crow's egg. The serpent, therefore, is the commonest of all the emblems of Æsculapius (and consequently of the healing art) being sometimes held in his hand, sometimes encircling his body, sometimes twined round his staff, and sometimes coiled below his statue. It symbolizes the foresight and wisdom of the physician and his function of restoring to health.

ANATOMIC JOURNALS FOR MEDICAL STUDENTS.

We named some anatomic journals in THE JOURNAL, May 2. Dr. C. R. Bardeen, dean of the College of Medicine, of the University of Wisconsin, calls attention to the *American Journal of Anatomy* and the *Anatomical Record*, both of which are published under the auspices of the Wistar Institute of Anatomy of Philadelphia. The *American Journal of Anatomy* is a strictly scientific and technical journal, but the *Anatomical Record* is of a more popular character and might appeal to medical students especially interested in anatomy.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending May 9, 1908:

Williams, A. W., captain, medical corps, relinquished leave of absence and proceeded to duty at Fort H. G. Wright, N. Y.

Grissinger, J. W., captain, medical corps, left Fort Ethan Allen, Vt., on leave of absence for two months.

Brownlee, C. Y., captain, medical corps, left Pacific Branch, U. S. Military Prison, Alcatraz Island, Cal., for duty as surgeon of the transport *Sheridan*.

Morse, A. W., captain, medical corps, left Fort Leavenworth, Kans., on leave of absence for ten days.

Craig, E. J., dental surgeon, ordered to Fort Omaha, Neb., for temporary duty.

Whinnery, J. C., dental surgeon, arrived at Fort Stevens, Oregon, for temporary duty.

Whiteley, J. H., cont.-surgeon, granted leave of absence for fifteen days.

Harmon, D. W., cont.-surgeon, ordered to Fort Michie, N. Y., for temporary duty.

Drake, P. G., cont.-surgeon, left Fort Ethan Allen, Vt., on leave of absence for ten days.

Wall, F. M., cont.-surgeon, left Fort Oglethorpe, Ga., for duty at Rifle Range, Catoosa Springs, Ga.

Whiteley, J. H., cont.-surgeon, granted leave of absence for fifteen days.

Lincoln, H. F., cont.-surgeon, ordered to San Francisco to accompany Troop G, 14th Cavalry, to duty in Sequioa National Park.

Stephenson, A. V., cont.-surgeon, and McAlister, J. A., Jr., dental surgeon, left San Francisco on the *Sheridan* for Philippine service.

Kress, C. C., cont.-surgeon, arrived at Fort Bliss, Texas, for duty.

Navy Changes.

Changes in the medical corps of the Navy for the week ending May 9, 1908:

Cook, F. C., surgeon, orders to the *North Carolina* revoked; ordered to continue duty at the Naval Academy.

Warner, R. A., asst.-surgeon, detached from the Naval Hospital, Pensacola, Fla., and ordered to Washington, D. C., May 7, for examination for promotion and then to await orders.

Miller, J. T., asst.-surgeon, detached from the *Franklin* and ordered to the *North Carolina* when commissioned.

Strite, C. E., asst.-surgeon, ordered to the *Franklin*.

Jones, A. McK., acting asst.-surgeon, detached from the naval recruiting station, Des Moines, Iowa, and resignation accepted to take effect May 1, 1908.

Melhorn, K. C., McGuire, L. W., asst.-surgeons, appointed asst.-surgeons from April 11, 1908.

McMurdo, H. B., asst.-surgeon, appointed acting asst.-surgeon from April 15, 1908.

Belknap, J. L., asst.-surgeon, detached from the naval training station, Newport, R. I., and resignation accepted to take effect May 6, 1908.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and noncommissioned officers of the Public Health and Marine-Hospital Service for the seven days ended May 6, 1908:

Kerr, J. W., assistant surgeon-general, detailed to represent the service at the meeting of the National Association for the Prevention of Tuberculosis, to be held in Chicago, June 4-6, 1908; also directed to attend the meeting of the National Association of the Milk Commissions at Chicago, June 1, 1908.

Carmichael, D. A., surgeon, granted leave of absence for 14 days, from May 27, 1908.

McIntosh, W. P., surgeon, directed to proceed to Vanceboro and other points in Maine for special temporary duty, on completion of which to rejoin his station.

Gardner, C. H., passed asst.-surgeon, detailed as a member of a Revenue-Cutter Service Retiring Board, to meet at San Francisco, May 12, 1908.

Hobdy, W. C., passed asst.-surgeon, detailed as a member of a Revenue-Cutter Service Retiring Board, to meet at San Francisco, May 12, 1908.

Foster, A. D., passed asst.-surgeon, granted leave of absence for one day, April 16, 1906, under Paragraph 191, Service Regulations.

Drew, A. D., acting asst.-surgeon, granted leave of absence for 30 days, from June 3, 1908.

Holland, D. J., acting asst.-surgeon, granted leave of absence for 5 days, from May 4, 1908, under Paragraph 210, Service Regulations.

Keatley, H. W., acting asst.-surgeon, granted leave of absence for 1 day, April 30, 1908, under Paragraph 210, Service Regulations.

Stanton, J. G., acting asst.-surgeon, granted leave of absence for 27 days, on account of sickness, from April 4, 1908.

Stuart, A. F., acting asst.-surgeon, granted leave of absence for 21 days, from May 15, 1908.

Walker, T. D., acting asst.-surgeon, granted leave of absence for 4 days, from May 1, 1908.

Wetmore, W. O., acting asst.-surgeon, granted leave of absence for one day, April 24, 1908, under Paragraph 210, Service Regulations.

Wilson, J. G., acting asst.-surgeon, leave of absence reported to have been granted Acting Asst.-Surgeon Wilson for two days in March, 1908, amended to read for one day only.

BOARD CONVENED.

A board of medical officers was convened, May 2, 1908, to meet at Seattle, Wash., to make physical examination of an officer of the Revenue-Cutter Service. Detail for the board: Passed Asst.-Surgeon N. W. Glover, chairman; Asst.-Surgeon C. W. Chapin, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended May 8, 1908:

SMALLPOX—UNITED STATES.

California: San Francisco, April 11-18, 15 cases.

District of Columbia: Washington, April 15-25, 2 cases.

Illinois: Chicago, April 15-25, 7 cases; Galesburg, April 18-25, 3 cases; Rock Island, 1 case; Springfield, April 16-23, 3 cases.

Indiana: Ft. Wayne, April 18-25, 1 case; Indianapolis, April 19-26, 24 cases.

Iowa: Ottumwa, April 18-25, 8 cases.

Kansas: Topeka, April 11-25, 31 cases.

Louisiana: New Orleans, April 18-25, 5 cases, 1 death.

Michigan: Detroit, April 16-25, 3 cases; Grand Rapids, 5 cases; Kalamazoo, April 11-18, 3 cases; Port Huron, 1 case.

Missouri: Kansas City, April 18-25, 16 cases; St. Joseph, 16 cases; St. Louis, 7 cases.

Montana: Butte, April 14-21, 1 case.

Nebraska: Nebraska City, April 19-25, 5 cases.

Ohio: Cincinnati, April 17-24, 13 cases; Toledo, April 11-18, 1 case.

Tennessee: Nashville, April 18-25, 3 cases.

Texas: Galveston, April 17-24, 1 case; San Antonio, April 11-25, 21 cases.

Virginia: Richmond, April 18-25, 1 case.

Washington: Spokane, April 11-18, 12 cases.

Wisconsin: La Crosse, April 18-25, 5 cases; Milwaukee, April 11-25, 3 cases; Racine, April 18-25, 4 cases.

SMALLPOX—FOREIGN.

Algeria: Algiers, March 1-31, 2 deaths.

Arabia: Aden, March 30-April 6, 1 death.

Brazil: Manaoas, March 21-28, 2 cases; Para, March 28-April 11, 2 cases, 1 death.

Canada: Halifax, April 18-25, 4 cases; Toronto, March 21-April —, 18 cases; Winnipeg, April 1-18, 1 case.

Ecuador: Guayaquil, March 28-April 4, 2 deaths.

Cairo: March 25-April 8, 12 cases, 4 deaths.

France: Paris, April 4-11, 5 cases; Toulon, March 1-31, 8 cases.

Great Britain: Leith, April 4-11, 1 case.

India: Bombay, March 24-31, 67 deaths.

Italy: General, April 9-16, 67 cases; Catania, April 9-16, 1 case; Naples, April 4-11, 1 case (imported).

Japan: Kobe, March 21-28, 23 cases, 13 deaths; Osaka, 238 cases, 96 deaths.

Malta: March 21-April 4, 3 cases, 1 death.

Mexico: Aguas Calientes, April 12-19, 3 deaths; Monterey, April 5-12, 1 death; Vera Cruz, April 13, 1 case (imported).

Russia: Moscow, March 28-April 4, 43 cases, 13 deaths; Odessa, 1 case; St. Petersburg, March 21-April 4, 42 cases, 16 deaths.

Spain: Almeira, March 1-31, 1 death; Cadiz, 1 death; Denia, April 3-10, 10 cases, 3 deaths; Valencia, April 5-12, 30 cases, 3 deaths; Vigo, April 4-11, 1 death.

Straits Settlements: Penang, March 11-21, 1 death; Singapore, March 7-14, 1 death.

Turkey: Constantinople, March 22-April 2, 20 cases.

Zanzibar: March 7-14, 1 death.

YELLOW FEVER.

Barbadoes: Bridgetown, April 18, 1 case, 1 death.

Brazil: Manaos, March 21-April 4, 6 cases, 6 deaths; Para, March 28-April 11, 10 cases, 8 deaths.

Cuba: Santiago, May 2, 1 case.

Ecuador: Guayaquil, March 28-April 4, 5 deaths.

CHOLERA.

India: Bombay, March 24-31, 1 death.

PLAGUE.

China: Amoy, April 25, present.

Ecuador: Guayaquil, March 28-April 4, 35 deaths.

Egypt: Provinces: Assiout, March 20-21, 5 cases, 2 deaths; Beni Souef, March 21, 1 case; Fayoum, March 20-26, 2 cases, 2 deaths; Galyoobeeyah, March 21, 1 case, 1 death; Garbieh, March 23-26, 2 cases; Kena, 4 cases, 2 deaths; Minieh, March 23, 2 cases.

India: General, March 14-28, 16,529 cases, 13,839 deaths; Bombay, March 24-31, 491 deaths; Rangoon, March 14-21, 30 deaths.

Peru: Callao, March 14-21, 4 cases, 1 death; Catacaos, 5 cases; Chepen, 1 case, 1 death; Chiclayo, 20 cases, 14 deaths; Chosika, 1 case, 1 death; Eten, 11 cases, 7 deaths; Lima, 10 cases, 7 deaths; Mollendo, 5 cases, 4 deaths; Monsefu, 8 cases, 5 deaths; Pisco, 1 case, 1 death; Trujillo, 84 cases, 38 deaths.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Pure Milk in Cincinnati.

The milk commission of the Academy of Medicine of Cincinnati is doing excellent work for the purification of the milk supply of that city. Two pamphlets have been prepared for distribution; one contains information regarding the milk supply of the city, with photographs of local dairies, showing the difference between a properly managed dairy and one in which no attention is paid to cleanliness; the second contains a strong argument for legislative enactment regulating the dairy business. Beside these pamphlets, a large amount of literature has been sent out during the past four months and much material on the subject has appeared in the local papers.

One of the difficulties which the commission encountered was the opposition of wealthy distillers of the city. In spite of this fact the bill regulating the milk business in Ohio passed both the Senate and the House. The secretary of the commission writes:

"This bill was inspired by our former health officer, who waged a relentless fight for clean milk during his administration, and who found that the feeding of distillery waste stood in the way of any improvement whatever. All of our citizens rejoice with us to-day. We consider this a signal victory for the medical profession of our city. We have not only carried our point, but have likewise educated our citizens most decidedly on this all important question."

The increasing interest in clean milk which is being manifested in many of our large cities should be stimulated and encouraged by the local medical society. In each case the society should take the lead in educating the public and in demanding better regulation of this vital subject. The work done by the Academy of Medicine of Cincinnati is most commendable and will undoubtedly lead to marked improvement in local health conditions.

Endorse Public-Health Bills.

Resolutions have been adopted by the board of health of the City and County of San Francisco endorsing the bills (H. R. 18792 and H. R. 18794) introduced into Congress by Mr. Hepburn, providing for the protection of the public health and the enlargement and increased efficiency of the Public Health and Marine-Hospital Service. The bills are endorsed as necessary for the uniform control and eradication of epidemic diseases in the United States and all California members of Congress are urged to work for their immediate passage as being of the utmost importance to the public health of the entire United States. The bills have been referred to the Committee on Interstate and Foreign Commerce of the House of Representatives.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES.

DR. JOHN H. BLACKBURN, DIRECTOR.
Bowling Green, Kentucky.

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Eighth Month.

Fourth Weekly Meeting.

Symptomatology of Typhoid Fever.

Incubation: Usual period, variations.

Onset: Headache, anorexia, diarrhea and abdominal pain, malaise, vomiting, cough, etc.

Special Modes of Onset: With marked (1) nervous symptoms, (2) pulmonary symptoms, (3) gastrointestinal symptoms, (4) renal symptoms, (5) with complications, (6) ambulatory form.

General Description: First week, second week, third week, fourth week, fifth week.

Special Symptoms.

Fever: Average duration, usual course, variation in onset, causes of sudden changes, fever of relapse, fever of convalescence, afebrile typhoid.

Chills: Usual causes.

Skin: Characteristic rose spots, pathology, location, number, proportion of cases, differentiation. Other skin lesions, erythema, peliomata, sudamina, furuncles, bed sores.

Digestive System: Mouth and tongue. Parotitis, frequency, terminations, prognosis. Gastric disturbances. Intestinal symptoms, diarrhea, constipation, meteorism, abdominal pain. Hemorrhage, frequency, incidence, quantity, significance, symptoms. Perforation, frequency, incidence, symptoms, differentiation. Changes in spleen, in liver, in gall bladder.

Respiratory System: Epistaxis. Bronchitis. Lobar pneumonia, bronchopneumonia, hypostatic pneumonia. Pleurisy.

Circulatory System.

Pulse rate, dicrotism. Myocarditis, endocarditis. Arterial thrombosis. Venous thrombosis, distribution, incidence. Blood changes, red cells, hemoglobin, leucocytes, causes of leucocytosis.

Nervous System: Headache, stupor, delirium, mania, posttyphoid insanity, asthenic psychoses, hysteria. Menigitis, serous and purulent, *meningisme*. Neuritis, local, multiple.

Renal System: Febrile changes. Ehrlich's reaction. Bacilluria. Acute nephritis, pyelitis, cystitis.

Osseous System: Periostitis, necrosis and other changes. Typhoid spine, pathology and symptoms.

Prophylaxis.

General Measures: Control of water and food supply. Notification of cases.

Special Measures: Isolation of patient. Disinfection: (1) stools, (2) urine, (3) clothing, (4) room, (5) bedpans, etc. Flies. Attendants. Vaccination or antityphoid inoculation.

Marriages

Charles Marvin Fox, M.D., to Miss Cora Monroe, both of Chicago, May 6.

Isaac H. Jones, M.D., to Miss Emilie S. Austin, both of Philadelphia, April 22.

Harry L. McDonald, M.D., to Miss Mary Preston, both of Mitchell, S. D., April 22.

Merrick Lincoln, M.D., to Miss Mary Bowker, both of Worcester, Mass., April 29.

John J. Bartley, M.D., to Miss Margaret E. Desmond, both of Lawrence, Mass., recently.

John Blake, M.D., Detroit, to Miss Bertha Veronica Byrne of Belle River, Ont., April 29.

Charles W. Giesen, M.D., to Miss Emma Elizabeth Hudson, both of Superior, Wis., April 28.

Frank L. Schum, M.D., Huntingdon, Pa., to Miss Mary Peightol of Philadelphia, April 16.

Charles S. Judy, M.D., Miamisburg, Ohio, to Miss Ida E. Rairdon of Dayton, Ohio, April 29.

Walter Earl Taylor, M.D., Owsley, Mo., to Miss Posey Paxton of Green Ridge, Mo., April 19.

Ira A. Pace, M.D., to Miss Orpha Pettit, both of Guide Rock, Neb., at Denver, Colo., March 25.

Hubert Sidney Smith, M.D., Thibodaux, La., to Miss Effie Munson of Napoleonville, La., April 23.

G. G. Wareheim, M.D., Baltimore, to Miss Mary Gelbach of Glenrock, Pa., at Baltimore, April 21.

Leslie Clifford Love, M.D., to Miss Edith Josephine Manson, both of Montclair, N. J., April 21.

Captain Henry S. Greenleaf, Medical Department, U. S. Army, to Miss Carrie McClellan of Washington, D. C., April 30.

William John Zalesky, Passed Assistant Surgeon, U. S. Navy, to Miss Elizabeth Gibbs Dismukes of St. Augustine, Fla., April 27.

Deaths

Jacob A. Miller, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1861; for several years assistant superintendent of the Pennsylvania State Lunatic Hospital, Harrisburg; surgeon to Berdan's New York Sharpshooters and later surgeon of the Second Rhode Island Volunteer Infantry, during the Civil War; for several years physician of Lancaster County; first secretary of the Lancaster County Medical Association; for thirty years secretary of the Pennsylvania State Pharmaceutical Association; a member of the school board of Harrisburg from 1878 to 1887; died at his home April 27, from malignant disease of the throat, after an illness of five weeks, aged 71.

John W. Maddin, M.D. Medical Department, University of Nashville, Tenn., 1856; a member of the Tennessee State Medical Association and Davidson County Medical Society; surgeon of the Thirty-fifth Alabama Infantry, C. S. A.; later surgeon of the Thirtieth Texas Cavalry, and subsequently medical purveyor of the Trans-Mississippi Department in the Confederate service during the Civil War; formerly president of the Nashville Academy of Medicine and Surgery; one of the best-known practitioners of Nashville; died at his home, May 4, from congestive chill, after an illness of one day, aged 73.

William Armstrong Willoughby, M.D. Medical Department, Victoria College, Toronto, 1867; member of parliament for East Northumberland, Ont., in 1886, 1890, 1894, 1902 and 1906; minister without portfolio in the Whitney cabinet; surgeon-colonel of the Fortieth Regiment; a member of the municipal council of Colborne for eight years; reeve for seven years; member of the school board for twelve years, and 1884 warden of the united colonies of Northumberland and Durham; died at his home, April 25, from brain disease, after a prolonged illness, aged 64.

H. Byron Baguley, M.D. Medical College of Ohio, Medical Department University of Cincinnati, 1881; a member of the American Medical Association; and of the Association of Military Surgeons of the United States; chief surgeon, W. Va. National Guard with rank of lieutenant-colonel; a veteran of the Spanish-American War; surgeon to the City Hospital, Wheeling; U. S. pension examining surgeon; died at his home in Wheeling, May 1, after a long illness, aged 51.

Lyman B. Smith, M.D. New York University Medical College, New York City, 1875; a member of the American Medical Association and formerly president of the Hornellsville (N. Y.) Medical and Surgical Association; a member of the staff of St. James and Mercy hospitals; a member of the Hornell common council for two terms, and for several years a member of the local board of health; died at his home in Hornell, April 26, after a long illness, aged 56.

James Jackson Terhune, M.D. Long Island College Hospital, Brooklyn, N. Y., 1875; a member of the medical societies of the State of New York and County of Kings, and of the Associated Physicians of Long Island; formerly surgeon of the Thirteenth Infantry, N. G. S. N. Y.; a veteran of the Civil War; U. S. pension examining surgeon; died at his home in Brooklyn, April 30, from hypertrophy of the heart, after a prolonged illness, aged 64.

Edward P. Russell, M.D. University of Vermont, College of Medicine, Burlington, 1866; a member of the Vermont State and Addison County medical societies; a veteran of the Civil War, and for nearly 40 years a practitioner of Middlebury, Vt.; for 30 years a member and for most of that time chairman of the local board of pension examining surgeons; died at his home April 29, from nephritis, after an illness of four weeks, aged 67.

William Wright, M.D. McGill University, Montreal, 1848; for more than thirty years a member of the faculty of his alma mater, in which he served as demonstrator of anatomy, professor of medical jurisprudence and professor of materia medica; for nearly twenty-eight years attending physician and surgeon at the Montreal General Hospital, and a clergyman of the Church of England, died recently at his home in Montreal, aged 80.

Arthur Gordon Oven, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1883, and also a graduate of the law school of the University; a member of the American Medical Association; a prominent practitioner, and one of the foremost citizens of Petoskey, Mich.; died at his home, April 18, from perforation of the intestine, due to duodenal ulcer, from which he had suffered for several years, aged 56.

Horace Marshall Holmes, M.D. Berkshire Medical College, Pittsfield, Mass., 1852; a member of the Massachusetts Medical Society; president of the Berkshire District Medical Society in 1881 and 1882; a member of the legislature in 1878 and 1879; for several years a school committeeman, member of the local board of health and town physician; died at his home in Adams, May 3, after an illness of several weeks, aged 81.

George Joseph Grimes, M.D. Bellevue Hospital Medical College, New York City, 1868; a member of the American Medical Association; in 1892 first vice-president of the Medical Association of Georgia; city physician of Columbus, Ga., in 1881 and 1883; president of the local board of health from 1886 to 1891; died in his apartment in Columbus, from acute nephritis, April 28, after a prolonged period of invalidism, aged 61.

Aloysius Schapringer, M.D. University of Vienna, Austria, 1872; of New York City; a member of the medical societies of the State and County of New York; German Medical Society of the City of New York, New York Academy of Medicine, and Association of Medical Alumni of Mount Sinai Hospital; ophthalmic and aural surgeon to the German Hospital and Dispensary, New York City; died Dec. 19, 1907, aged 60.

Joseph F. Griffin, M.D. Medical Department of the Tulane University of Louisiana, New Orleans, 1856; surgeon in the Confederate service during the Civil War; afterward editor of the *Southern Cross*, published in Avoyelles Parish; for several years president of the Shreveport Medical Society, and until recently chemist of the Shreveport board of health; died at his home in that city, April 30, aged 80.

Joseph Oakley Farrington, M.D. New York University Medical College, New York City, 1857; of New York City; a member of the American Medical Association; president of the Harlem Medical Association in 1872; a member of the New York Academy of Medicine and Society of Medical Jurisprudence; died at Johns Hopkins Hospital, Baltimore, May 4, two weeks after a surgical operation, aged 78.

Theophilus T. Price, M.D. Pennsylvania Medical College, Gettysburg, 1853; a member of the Medical Society of New Jersey; for about 50 years a member of the Burlington County (N. J.) Medical Society; president of the board of health of Tuckerton, N. J., for several years; acting assistant surgeon, U. S. Marine-Hospital Service from 1879 to 1896; died in Cape May, N. J., April 28, aged 79.

Charles Homer Perry, M.D. Bellevue Hospital Medical College, New York City, 1866; a member of the Massachusetts and Worcester district medical societies and the American Academy of Medicine; assistant surgeon U. S. Navy from 1861 to 1865; one of the oldest practitioners of Worcester; died at his home, May 1, from pleuro-pneumonia, after an illness of one week, aged 73.

Alexander Cochran, M.D. College of Physicians and Surgeons in the City of New York, 1855; for several years an inspector in the Brooklyn health department; surgeon of the Fifty-Sixth Infantry, N. G. S. N. Y., and surgeon of the Eleventh Brigade throughout the Civil War; died at his home in Brooklyn, April 29, from pneumonia, after a brief illness, aged 76.

Cyrus Felton Rutledge, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1885; a member of the Oklahoma State Medical Association and Wood County Medical Society; at one time a member of the Kansas Medical Society; who had been ill with tuberculosis for several years; died from pneumonia, at his home in Alva, Okla., Dec. 9, 1907, aged 50.

Ahab K. Carmichael, M.D. Western Reserve Medical College, Cleveland, 1881; Bellevue Hospital Medical College, New York City, 1888; health officer of Meadville, Pa., in 1891; local surgeon of the Denver & Rio Grande Railroad at Trinidad, Colo.; died at his home in that city, May 1, from tuberculosis, after an illness of several years, aged 54.

J. Sanderson Christison, M.D. New York University Medical College, New York City, 1877; an alienist and criminologist of Chicago who appeared as expert in a number of celebrated cases; died in his apartments in Chicago, April 8, from gas asphyxiation, aged 58. The coroner's verdict was that the physician came to his death by his own hand.

John A. Frame, M.D. Medical College of Ohio, Medical Department, University of Cincinnati, 1872; a member of the Ohio State Medical Association and Franklin County Medical Society; a specialist on diseases of the eye; died at his home in Columbus, April 28, from cerebral hemorrhage, after an illness of four days, aged 58.

Ernest Ray Limbocker, M.D. Drake University College of Medicine, Des Moines, Iowa, 1905; of New Virginia, Iowa; a member of the American Medical Association, and secretary of the Drake Medical Alumni Association; died in the Methodist Hospital, Des Moines, May 3, from pleuro-pneumonia, after a short illness, aged 27.

John Alexander Monroe, M.D. New York University Medical College, New York City, 1868; a member of the Medical Society of the State of North Carolina and Moore County Medical Society; surgeon of the Thirty-eighth North Carolina Infantry, C. S. A., during the Civil War; died at his home in Jonesboro, April 27, aged 80.

Edward Henry Black, M.D. Transylvania University, Medical Department, Lexington, Ky., 1842; superintendent of the State Institution for Feeble-Minded, Frankfort, from 1868 to 1878; for many years a practitioner of Stamping Ground, Ky.; died at the home of his daughter in Louisville, April 5, from senile debility, aged 88.

Albert G. Craig, M. D. Medical College of Ohio, Medical Department, University of Cincinnati, 1866; an interne in the Cincinnati Hospital for a year thereafter; for twenty-eight years a practitioner of Vevay, Ind.; died at Christ's Hospital, Cincinnati, April 23, two weeks after an operation for appendicitis, aged 64.

James Sewall Raymond, M.D. Philadelphia College of Medicine and Surgery, 1852; for 17 years a practitioner of Algonac, Mich., and afterward a resident of Ogdensburg, N. Y.; for three years a member of the board of education; died in the Masonic Home, Utica, N. Y., April 24, from cerebral hemorrhage, aged 80.

James Clayton Shaw, M.D. Cleveland Homeopathic Medical College, 1881; health officer of Hoosick Falls, N. Y.; died at his home in that place April 30 from the effect of a gunshot wound of the brain, believed to have been self-inflicted while suffering from temporary mental aberration, aged 56.

Charles H. Griffin, M.D. New Orleans School of Medicine, 1867; formerly a practitioner of Ruston, La.; a Confederate veteran; an honorary member of the Claiborne Parish Medical Society; died at his home in Homer, La., April 27, from chronic nephritis, after a lingering illness, aged 68.

Rufus Hacker Hall, M.D. Bellevue Hospital Medical College, 1898; of Everett, Mass.; a member of the Massachusetts and Middlesex district medical societies; died in the Massachusetts General Hospital, Boston, April 29, from pneumonia, after an illness of about a week, aged 35.

Henry Charles Albert Kirchner, M.D. Washington University, Medical Department, St. Louis, 1878; for a short time in the United States Navy before the Mexican War; died suddenly at his home in St. Louis, May 3, from rupture of an aneurism of the aorta, aged 86.

David Coalter Gamble, M.D. Washington University, Medical Department, St. Louis, 1869; a member of the American Medical Association; clinical professor of diseases of the ear in his alma mater; died suddenly at his home in St. Louis, May 4, from heart disease, aged 63.

Leonard R. McIntyre, M.D. University of Nebraska, College of Medicine, Omaha, 1897; a member of the Illinois State and Iroquois-Ford Counties medical societies; formerly of Kankakee; died at his home in Onarga, May 3, after an illness of one week, aged 39.

Warren W. Wimberly, M. D. Georgetown University School of Medicine, Washington, D. C., 1892; died at his home in West Lake, Ga., from over-exertion and exposure, after making a professional call which necessitated fording of a flooded stream, April 27, aged 54.

Neil Dunlop, M.D. Faculty of Medicine of Queens University and Royal College of Physicians and Surgeons, Kingston, Ont., 1861; for many years a practitioner of Sydenham, Ont.; died at his home in Kingston, Ont., April 24, from paralysis, after a long illness.

Richard Stebbins, M.D. College of Physicians and Surgeons in the City of New York, 1860; a noted student of French literature and history; formerly a practitioner of Onawa, Iowa, died suddenly at his home in Omaha, Neb., April 18, aged 84.

Edward D. Whitacre (License, Iowa) 1886; for 38 years a practitioner of Hardin County, Iowa, and from 1875 to 1876 mayor of Liscomb; died suddenly at his home in Marshalltown, Iowa, April 30, from angina pectoris, aged 65.

Edmund S. F. Arnold, M.R.C.S. England, 1844; M.D. Jefferson Medical College, Philadelphia, 1848; a member of the American Medical Association; formerly of Newport, R. I.; died recently at his home in Mandarin, Fla., aged 89.

Arne Nelson (Exemption Certificate, Minn.) 1883; a member of the American Medical Association, and a well-known practitioner of northwestern Minnesota; died at his home in Fertile, May 2, from cerebral hemorrhage, aged 57.

Howard Boyd Calhoun, M.D. Jefferson Medical College, Philadelphia, 1903; police surgeon of the first district, Philadelphia; died at his home in that city, May 4, from tuberculosis of the throat, after an illness of two years, aged 30.

Otto August Jahn, M.D. University of Würzburg, Germany, 1884; Bellevue Hospital Medical College, New York City, 1896; a member of the medical societies of the State and County of New York; died in Germany, in February.

Alexander Striemer, M.D. Grand Rapids (Mich.) Medical College, 1900; a member of the Michigan State and Hillsdale County medical societies; died suddenly at his home in Hillsdale, April 25, from heart disease, aged 58.

H. F. Neel (Years of Practice, Ky.) 1893; for 44 years a practitioner of Kentucky; a Confederate veteran; at one time president of the local pension examining board; died at his home in Prestonsburg, April 20, aged 65.

Julius Nazar (**Kurkdji**) **M.D.** Jefferson Medical College, Philadelphia, 1895; of New Haven, Conn.; died at the home of his daughter in that city, March 31, from kidney disease, after an illness of forty-six hours, aged 49.

William Halsted Caswell, M.D. College of Physicians and Surgeons in the City of New York, 1888; a retired practitioner of New York City; died at his home on Shelter Island, Long Island, N. Y., May 3, aged 66.

William Clark, M.D. Cleveland University of Medicine and Surgery, 1866; for 30 years a practitioner of Berea, Ohio; died at the home of his son in Lakewood, Cleveland, May 4, from senile debility, aged 81.

Edgar B. Harris (Years of Practice, Mich.) 1901; an eclectic practitioner of New Haven, Mich., for thirty years and a veteran of the Civil War; died suddenly in Kansas City, Mo., April 25, from heart disease.

Harry M. Piper, M.D. Homeopathic College, University of Michigan, Ann Arbor, 1899; of Denver, Ind.; was struck by a train while driving over a railway crossing in that town and instantly killed, April 30.

George W. Maston, M.D. Cincinnati College of Medicine and Surgery, 1876; from 1883 to 1893 a practitioner of Albany, Ore.; died at his home in Klamath Falls, Ore., April 24, from meningitis, aged 56.

Oswald Evans Baker, M.D. College of Physicians and Surgeons, Keokuk, 1890; of Dunlap, Ill.; died in St. Francis Hospital, Peoria, April 26, from surgical shock, two days after an operation, aged 57.

Joseph Jacob Silbert, M.D. Medical School of Harvard University, Boston, 1899; of Roxbury, Boston; died suddenly from heart disease while making a professional call, May 1, aged 43.

W. Y. Leonard, M.D. Cincinnati College of Medicine and Surgery, 1864; Rush Medical College, Chicago, 1866; died at his home in Lawrence, Kan., April 28, after a prolonged illness.

Edward S. M. Parham, Sr., M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1843; died recently at his home in Fordyce, Ark., and was buried April 26, aged 90.

Eli M. Williams, M.D. Cincinnati College of Medicine and Surgery, 1858; a member of the American Medical Association; died at his home in South Haven, Kan., April 11, aged 71.

Willis L. Snyder, M.D. Eclectic Medical Institute, Cincinnati, 1893; died at his home in Muncie Ind., April 2, from aneurism of the aorta, after an illness of two years, aged 40.

Samuel R. Gray (Years of Practice, Ill.) 1877; for 40 years a practitioner of Edgar Co., Ill.; died suddenly at his home in Chrisman, April 30, from heart disease, aged 70.

James Cook Morton, M.D. Baltimore, Medical College, 1897; died at his home in Baltimore, April 27, from kidney disease, after an illness of five weeks, aged 44.

James H. Emery, (Years of Practice, Ill.) 1878; for forty years a practitioner of Blandinsville, Ill.; died at his home in Newkirk, Okla., April 28, aged 76.

Charles D. McCoy, M.D. Kansas City Hahnemann Medical College, 1901; died at his home in Independence, Mo., April 29, from tetanus, aged 56.

James Edwards, M.D. Jefferson Medical College, Philadelphia, 1847; died at his home in Morton, Pa., recently, aged 88.

Society Proceedings

COMING MEETINGS.

American Medical Association, Chicago, June 2-5.

Illinois State Medical Society, Peoria, May 19-21.
Missouri State Medical Association, Springfield, May 19-21.
Nebraska State Medical Association, Lincoln, May 19-21.
North Dakota State Medical Association, Grand Forks, May 20-21.
Iowa State Medical Society, Des Moines, May 20-22.
Rhode Island Medical Society, Providence, May 26.
Connecticut State Medical Society, New Haven, May 27-28.
American Pediatric Society, Delaware Water Gap, May 26-28.
American Gynecological Society, Philadelphia, May 26.
American Laryn., Rhin. and Otol. Society, Pittsburg, May 28-30.
American Academy of Medicine, Chicago, May 30-June 1.
American Association of Medical Examiners, Chicago, June 1-2.
American Gastro-Enterological Association, Chicago, June 1-2.
American Proctologic Society, Chicago, June 1.
American Urological Association, Chicago, June 1.
Nat. Confed. of State Med. Examining, etc. Boards, Chicago, June 1.
American Orthopedic Association, Chicago, June 4-6.
Massachusetts Medical Society, Boston, June 9-10.
American Climatological Association, Boston, June 9-11.
Maine Medical Association, Bangor, June 10-11.
Indiana State Medical Association, French Lick, June 18-19.

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

One Hundred and Tenth Annual Meeting, held in Baltimore, April 28-30, 1908.

The President, Dr. Charles O'Donovan, Baltimore, in the Chair.

Officers Elected.

The following officers were elected for the ensuing year: President, Dr. Brice W. Goldsborough, Cambridge; vice-presidents, Drs. Philip Briscoe of Calvert County, W. L. Smith of Baltimore County, and G. Milton Linthicum, Baltimore; secretary, Dr. John Ruhräh, Baltimore; treasurer, Dr. William S. Gardner, Baltimore; State Board of Medical Examiners, Drs. Herbert Harlan, Baltimore; F. B. Smith, Frederick, and W. W. Goldsborough of Caroline County; member of board of trustees, G. Lane Taneyhill, Baltimore; members of council Drs. A. H. Hawkins, L. C. Carrico, W. R. Eareckson, H. B. Gantt, Charles O'Donovan; committee on scientific work and arrangements, Drs. J. A. Chatard and F. W. Janney; committee on public policy and legislation, Drs. C. Hampson Jones, W. F. Hines and T. M. Chaney; committee on library, Drs. J. Whitridge Williams, H. B. Jacobs, C. B. Gamble, Gordon Wilson and H. W. Cushing; delegate to the American Medical Association, Dr. G. Lane Taneyhill.

Committee Reports.

Dr. Edward N. Brush, Towson, reported for the new building committee a total of $60,528.16, representing subscriptions paid and unpaid, state appropriation, interest and value of present property; of this amount about $35,000 is available for commencing the new building. The committee was authorized by the faculty to borrow a sum not to exceed $25,000 and to start building operations at once.

The committee on public instruction reported the success of the public courses of lectures on sanitation. The committee on legislation reported that the medical laws are notably deficient in many essential points. They are fragmentary and scattered and paradoxical in many sections, so as to make a legal decision often difficult, if not impossible. There is great need of codification of the present law if not for the framing of a new law.

The committee on sanitary and moral prophylaxis reported that a branch of the American society of that name had been founded in Baltimore, April 24, 1908, under the designation, "Maryland Society of Social Hygiene." A constitution has been adopted and the following officers elected: President, Dr. Charles O'Donovan, Baltimore; vice-presidents, Mr. Robert Garrett, Baltimore; Dr. Hiram Woods, Baltimore, and Dr. V. D. Miller, Hagerstown; executive committee, Judges H. Stockbridge and A. S. Niles together with the committee; treasurer, Mr. John R. Cary; secretary, Dr. D. R. Hooker.

A handsome portrait, done in oils by Corner, of the late Dr. I. Edmonson Atkinson, was presented with appropriate remarks by Drs. Samuel Theobald and Hiram Woods.

Two joint sessions were held with the Maryland State Conference of Charities and Corrections.

The annual dinner was held on the evening of April 29 and was attended by Dr. Joseph D. Bryant, President of the American Medical Association; Prof. E. A. Schäffer of Edinburgh; Hons. Arthur P. Gorman and Charles W. Linthicum of the Maryland Senate, and Dr. William H. Welch. Dr. Charles O'Donovan acted as toastmaster.

Physicians Interested in Public Affairs.

Dr. Charles O'Donovan, Baltimore, in the presidential address urged physicians to take part in legislative and public matters and to contribute their special knowledge and influence for the cause of good government and health of the community. He urged closer union between the Faculty and the State Board of Health and State Lunacy Commission. He commended the public lectures on health subjects instituted by the Faculty and urged the appointment of a committee on tuberculosis to assist in organizing and directing a campaign against the pest. He urged the continuance of efforts for pure food and particularly for pure milk.

Some Hindrances to the Higher Station of Medicine.

Dr. Joseph D. Bryant, New York City, in the annual oration, admitted that the medical profession was held in less esteem than the professions of theology or law. With reference to the neglected duties of citizenship he said that those of our profession who have no apparent concern in public affairs, who devote their time and thought wholly to the practice of their calling, negligent or indifferent to their duties as citizens and influential members of a body politic, are not adding as they ought to the enhancement of the station of medicine. Physicians, he said, should be willing to pause long enough to assume the responsibilities of counsel in public affairs or perhaps of official station, so that the best interest of the public and the profession might be wisely supported and approvingly advanced. Such a policy of action affords occasion for unselfish cooperation in the best interests of medicine and of good order and thereby often forestalls the perennial realization of persons whose ambitious desires for professional or official position are largely in excess of their availability. He stated that the citizen who contributes a part of his time and thought and individual comfort to the important and often onerous duties of a juror, bears witness to his loyalty to a government which secures to him his rights of property and person. In doing this he also contributes his mite toward the maintenance of good citizenship. While in a degree physicians may stifle their sense of public duty with the plea that the demands of an exacting and onerous profession do not permit them to give it heed, they can not, Dr. Bryant said, with any measure of fairness remain indifferent to the appeals for protection and support which medicine itself rightfully requires of those whose character and constancy are an important part of its belongings.

Incipient Tuberculosis of the Lungs and Its Diagnosis.

Dr. Gordon Wilson, Baltimore, said that the data from which a diagnosis of tuberculosis of the lungs should be made are obtained, 1, from the history of the case and, 2, from the examination of sputum, study of temperature and use of tuberculin. He then enumerated the symptoms of the incipient stage of the disease and presented briefly the approved methods of physical diagnosis. Dr. Wilson warned against the indiscriminate use of the ocular tuberculin test which is becoming so popular on account of its simplicity.

Fracture of the Neck of the Femur.

Dr. Alexius McGlannan, Baltimore, discussed the etiology, symptomatology and treatment of this condition and stated that the only treatment offering hope of perfect anatomic and functional result is fixation in extreme abduction, Whitman's method, the value of which is not sufficiently appreciated. He then detailed the method and reported eight cases.

Hydrotherapy.

Dr. Frank Brown, Baltimore, said there should be in every hospital and medical school the means of giving all sorts of baths, and there should also be a physician on the staff who gives his attention to this subject. He called attention to the fact that the University of Maryland had gone farther in this respect than any other school in Baltimore. He said that the subject had not received the attention at the hands of the profession its importance warrants.

Direct Laryngoscopy.

Dr. Richard H. Johnston, Baltimore, said that direct laryngoscopy is daily becoming more popular and that when laryngologists realize that it is far superior to the indirect method it will receive the recognition it deserves. The method of procedure was described in detail. Tracheo-bronchoscopy and esophagoscopy both as means of diagnosis and treatment are, he considers, valuable additions to the methods of examination.

Enchondroma of the Larynx.

Dr. J. J. Carroll, Baltimore, stated that cases of enchondroma of the larynx are rare. He reported a case occurring in a man of 34; the tumor was the size of a walnut and was situated just under the vocal cords. Thyrotomy with preliminary tracheotomy was performed and the tumor removed; at the time of the report the patient's condition was perfectly satisfactory, and, while the voice was bad, there was no evidence of return of the growth.

Gastric Secretion in Old Age.

Dr. Julius Friedenwald, Baltimore, has examined 27 patients, all of them over 55 years of age and in none of whom were there any symptoms indicating gastric disorder. At least two examinations were made in each case and in most three or four. His results showed free hydrochloric acid in 44 per cent. and in only 18 per cent. was the percentage of free hydrochloric acid normal. Of the males 42 per cent. presented an entire absence of free hydrochloric acid and of females 50 per cent. did the same. The general results of his observations showed that the gastric secretion has a tendency to diminish in old age and in a measure proportionate to the degree of arteriosclerosis.

Future Possibilities of Surgery of the Thorax.

Dr. J. C. Bloodgood, Baltimore, pointed out that there is at present no living pathology in diseases of the chest, and that for progress to be made in surgery of the chest, operations must be done on living animals. The difficulties and dangers of intrathoracic surgery were discussed fully and the need of experimental work in this branch was demonstrated.

MISSISSIPPI STATE MEDICAL ASSOCIATION.

Annual Meeting, held at Natchez, April 14, 1908.

The President, Dr. R. S. Curry, Columbus, in the Chair.

Report of the Secretary.

Dr. E. F. Howard, Vicksburg, in his report as secretary, stated that charters have been issued during the year to Claiborne County Medical Society and to a tricounty society consisting of the counties of Pike, Lincoln, Copiah, by order of the council; by order of the president, on certificate that the originals had been lost or destroyed, made by the county officers, to the societies in Amite, Attala, Harrison, Jefferson, Lawrence, Perry-Green, Smith and Tate. He also called attention to the fact that this association is practically without records as all it possessed were destroyed by fire in 1903, and that not even a file of the transactions since then has been kept. He suggested that a committee be appointed to compile and edit a history of the association. Dr. Howard advised taking steps to secure a duplicate of the charter which was also destroyed by fire, or take out another and said that the custodian of the records should be empowered to provide a fireproof place for their safe-keeping.

The committee to which the secretary's report was referred heartily commended the work of Dr. Howard and recommended that he be instructed to take immediate steps to secure a new charter, and to secure a safe depository for the records of the association.

Report of the Council.

Dr. James B. Bullitt, University, read this report which commended Dr. Howard for his attitude in refusing to register any physician at meetings of the association whose name has not been sent in by the secretary of the county society, but instructed him that for the present meeting all such members and delegates be registered. He was instructed, however, that in future no member or delegate be seated unless his name has been duly reported by the secretary of the county society, or unless he presents a receipt for membership dues signed by the county secretary; members so seated shall have all the privileges of the meeting, but shall not be entitled to copies of the transactions, until their membership dues shall have been received by the secretary.

Election of Officers.

The officers elected were named in The Journal, May 2, page 1431.

MEDICAL ASSOCIATION OF ALABAMA.

Proceedings of the Annual Session, held at Montgomery, April 21-24, 1908.

The President, Dr. Samuel Wallace Welch, Talladega, in the Chair.

After prayer by Rev. E. E. Cobbs, and addresses of welcome by Dr. Henry B. Wilkinson on behalf of the Montgomery County Medical and Surgical Society; by Mr. C. P. McIntyre on behalf of the city; by Hon. B. B. Comer, governor of the state of Alabama, the president's annual message was delivered.

These addresses were followed by routine reports of officers.

Early Diagnosis of Carcinoma of the Uterus.

Dr. I. L. Watkins, Montgomery, said that our present knowledge justifies the opinion that, in nearly all cases of malignant disease, there is a time when it is possible to eradicate the pathology completely. In the study of suspicious cases it is always important to get a very accurate history of the woman's habits and her condition from the time of her early menstruation. The question as to whether or not children have been born, although not conclusive, is important in estimating the value of symptoms. The conditions that will help most in the recognition of this lesion in its earliest stages are some deviations in the menstrual function or other uterine discharges, or a recurrence of a bloody discharge after the menopause. These changes may come in the form of an excess or as an intermenstrual discharge. In a woman beyond the age of thirty, these symptoms should always be regarded with suspicion.

DISCUSSION.

Dr. M. B. Cameron reported a case in which the uterus was enlarged to twice its normal size, and the os almost entirely destroyed by the cancerous growth. The woman had no symptoms except pain, and a profuse watery discharge.

Dr. John R. Howell has never been able to make a diagnosis of cancer of the uterus any too early to operate and save the life of the patient.

The Diagnosis and Medical Treatment of Gastric Ulcer.

Dr. James E. Dedman, Birmingham, drew the following conclusions: 1. Gastric ulcer uncomplicated is a strictly medical disease. 2. There are complications which arise, such as hemorrhage, anemia and persistent vomiting, which still are amenable to medical treatment. 3. As far as the treatment of the ulcer itself is concerned, absolute rest in bed for at least four weeks is imperative, and the Lenhartz diet is the best yet devised, being far superior to any form of rectal nourishment, because it readily affords rest to the stomach and at the same time supplies the patient with a highly nutritive food. 4. Drugs are of little value, as far as healing the ulcer is concerned. 5. Olive oil, on account of its caloric value and property of reducing hyperacidity, is of much value, but should not be given in cases where there is pyloric stenosis, as it retards the evacuation of the stomach contents. 6. The hemoglobin percentage should be carefully watched and some form of iron or arsenic administered to maintain it. 7. A careful dietetic régime should be enforced for practically one year, and no patient should be considered cured unless the cessation of gastric symptoms lasts for at least two years. 8. Uncured ulcers, quasi-cured ulcers, and even the cicatrices of healed ulcers offer a most inviting habitat for carcinoma later in life. 9. Persistent, unrelieved hemorrhage, painful perigastric adhesions, hyperplastic infiltrations resulting in pyloric stenosis and perforations are phases of gastric ulcer that unquestionably belong to surgery.

Surgical Treatment of Gastric and Duodenal Ulcers.

Dr. Gaston Torrance, Birmingham, after speaking of the frequency of ulcer, and discussing the etiology, pathology, symptoms and treatment, reported a perforating gastric ulcer which he closed by suture, no-loop gastro-enterostomy, with recovery of the patient. He also reported a case of rupture of the gall bladder, with severe hemorrhage from gastric ulcer; obliterating appendicitis; cholecystectomy was done, as well as Mayo's no-loop gastro-enterostomy, resecting the ligament of Treitz, followed by appendectomy, with recovery of the patient.

DISCUSSION.

Dr. Charles W. Stiles referred to the recent work of Vineberg in Pasteur's Institute, in which he shows that various gastric and intestinal parasites may act not only in wounding the intestine, but in carrying infective bacteria into the wounds. This work shows that we can have ulcers arising directly as the result of parasitic infection. In hookworm disease a slight pressure in the epigastric region gives rise to almost instant resistance on the part of the patient. This pain can be followed down toward the right, but disappears suddenly as the hand is passed towards the left.

Dr. Dyer F. Talley said that a great many lives have been saved in recent years on account of the technic developed in the treatment of stomach troubles, surgically. Medical treatment should not be too long continued, where it seems to do no good, and especially in cases where there are any urgent symptoms, such as the vomiting of blood or evidence of stenosis at the pylorus. Cases of gastric hemorrhage can be relieved by gastro-enterostomy.

Dr. Lewis C. Morris thinks that gastric ulcer primarily in all cases is a medical condition, and becomes surgical usually only when there are complications, such as perforation, hemorrhage, stenosis, etc. He related an interesting case on which he operated two years ago for hour-glass contraction. In this case there was almost complete obstruction of the stomach. He did the exact analogue of Finney's pyloroplasty on the hour-glass contraction. In recurring hemorrhages from gastric ulcer drainage is justifiable.

Malaria in Children.

Drs. B. B. Simms and H. B. Warwick, Talladega, presented a joint paper on this subject, in which they say that from their observations, many people carry in their blood the malarial parasite for many months without active symptoms of malaria, for they have observed the plasmodia from time to time for a period of from five to six months, and no paroxysm occurred. The probable reason for the absence of malarial symptoms is that the number of parasites in the body is too small, since it is estimated that there must be from two hundred to three hundred millions in the human system to produce the paroxysm. The intervention of some other disease causes the parasite to increase, thereby giving rise to malarial symptoms.

DISCUSSION.

Dr. W. H. Sanders, Montgomery, reported a case which he diagnosed as yellow fever, but which was doubted by several physicians because the woman's blood contained the malarial parasite. His diagnosis of yellow fever was subsequently verified by autopsy.

Dr. Charles W. Stiles said that when the malarial parasites are found in the blood of patients for a long time, it is usually the female parasite that is found. The sexual parasite has passed through its evolution to the point where it can not reproduce any further, and it then evolves into the male and female forms. The female form of parasite contains a great deal of nutrient material. The male parasite is composed chiefly of nuclear material, with very little nutrient material. Accordingly, the male parasite dies out in the blood, but the female parasite may last for a long time.

Dr. John P. Stewart spoke of the difficulty of differentiating the form of parasite found in the blood.

Pyuria in Women.

Dr. Henry D. Furniss, New York, in speaking of pyuria, said not all cases of purulent urine should be included. Only those cases in which pus is from the urinary tract were considered. Whenever pus is found in the urine, the first effort should be to locate its origin and determine the etiolgic factor. The majority of the inflammatory disorders of the genito-urinary system recover spontaneously after the removal of the cause. In the acute cases there is not much difficulty in locating the origin of the pus, for the local symptoms are sufficiently intense to point to the source of the trouble. If there is pus in the bladder urine, if the bladder is catheterized and carefully washed, and a second specimen obtained by means of a catheter an hour later contains the same amount of pus as the first; the inference is clear that the pus is derived from a source outside of the bladder. With the aid of the cystoscope, one can determine the nature, the extent, and often the cause, of the lesion with which he has to deal.

The Cause and Treatment of Summer Diarrhea of Infants.

Dr. W. W. Harper, Selma, said that all bottle fed babies should be put on pasteurized or sterilized fresh cow's milk, with a fat percentage at or below 3.5. Should curds appear in the stools, use skimmed or buttermilk, returning as soon as possible to whole milk. Since living lac-bacilli are now procurable in tablet form, the pasteurized milk should be sown with them during the summer months, since these bacilli inhibit the germination of the pathogenic spores which are not killed by sterilizing. They keep the intestinal tract acid which is an unhealthy media for all pathogenic germs. These lac-bacilli also reinforce the normal intestinal flora. Their good effect is felt for some time after their ingestion. The nurse and mother should be told to discontinue milk with the first loose, green, or foul stool and to send for the doctor. Give a dose of castor-oil, or small doses of calomel, if the stomach is irritable. Give boiled water for the first twenty-four hours, and rice or barley water for the second twenty-four. During the starvation period, administer tablets of lac-bacilli. At the end of forty-eight to seventy-two hours, use buttermilk which has been pasteurized and then inoculated with lac-bacilli. The infectious variety calls for symptomatic treatment.

Treatment of Deep-Seated Gonorrheal Infections With Gonococcic Vaccines.

Dr. C. W. Shropshire, Birmingham, reported three cases which he had treated by these vaccines, one of which was complicated with gonorrheal rheumatism and epididymitis. He did not use any internal medication in this case, neither was there any local treatment given. The vaccine was the only treatment given which responded well to it. In the other cases he used locally irrigation of 1 per cent. solution of carbolic acid, which he found very beneficial in keeping the urethra clean. There was no antiseptic or astringent used locally. He did not give any internal medication. He has found that the constipation which complicated the cases has been entirely relieved. He has never seen any bad effects from the injection of the vaccine, with the exception of a slight pain at the site of the injection, due to the pressure of the fluid in the tissues. He has given it in doses from 25 million killed bacteria to as large a dose as 500 million killed bacteria. When these large doses are given, they should be made in several injections at the same time, with no attempt to force over 2 c.c. of vaccine, or 100 million killed bacteria in one injection. In two cases he was unable to find the gonococci in the discharge or shreds before he gave the vaccine, but after giving the vaccine he found the gonococci present, proving that if the gonococci are buried in the deeper tissues the vaccine will cause them to be eliminated. In discharging so-called well cases, it is a good idea to give each a course of treatment with vaccine and note the reaction produced. He believes that we have a most valuable agent in these vaccines, but as yet his work has been too limited to give any positive expression on it.

Surgical Treatment of Goiter.

Dr. Dyer F. Talley, Birmingham, said there has been much discussion recently as to the best methods of treating goiter, and the internist has come to admit that in many cases, surgical treatment is not only the best, but the only treatment which offers any hope of permanent relief. Good and scientific work is being done by Rogers and Beebe in obtaining a cytotoxic serum which has been used with benefit, but this serum is difficult to prepare and may not be of uniform strength always. Benefit has been derived from the use of the milk and blood from thyroidectomized animals, and many drugs have been recommended as useful, but the improvement due to these remedies is often temporary and lasts only during treatment.

While the author's experience has not embraced many cases of goiter, the results in the few cases he has treated surgically have been so uniformly good that he regards it as being attended with as much success and satisfaction as the removal of a diseased appendix. His results are 100 per cent., both as to recoveries and the relief of symptoms for which operation is done. He attributes this success to the fact that the cases of exophthalmic goiter were seen early. Cases were related on which the author had operated.

Acute Intestinal Obstruction.

Dr. Edward W. Peterson, New York, discussed the treatment of this trouble with especial reference to intussusception, and reported five cases on which he had operated, three of which were successful, and two fatal. He believes that with a better knowledge of the mechanics and with a more thorough understanding of the pathology of the affection, will come a realization of the futility in most instances of the palliative measures. The keynote of success will bear reiteration, namely, early diagnosis and prompt radical treatment.

Psychotherapy.

Dr. Cabot Lull, Birmingham, referred to some of the qualifications desirable in practitioners who aspire to succeed with psychotherapy, and among them he mentioned (1) a diagnostic ability sufficient to enable one to exclude all organic conditions and to make a reasonably positive diagnosis of nervousness. (2) A perfectly honest, fearless and confident attitude toward the patient. (3) Some knowledge of human nature, a reasonable sympathy for suffering and mental instability, and lastly, tact. Special training in psychology is of great advantage, and this is in reach of nearly every general practitioner in a country where schools and libraries are plentiful. This will enable one to obtain possession of certain valuable data in regard to the mental status of his patients. Whatever method is adopted, the great underlying principle is the same; namely, the application of psychic remedies to psychic diseases.

Mouth-Breathing.

Dr. R. C. Young, Anniston, discussed this condition as a factor in producing deformities of the dental arches.

Dr. William G. Harrison, Birmingham, discussed some of the causes and evils of mouth-breathing. In children adenoid vegetations in the nasopharynx are responsible for a large majority of the mouth-breathers, and no examination is so satisfactory as palpation with the forefinger rapidly passed back in the throat to one side, and then insinuated behind the soft palate. He laid stress on the etiologic relationship between adenoids and middle-ear disease, saying they may produce only a catarrhal condition of the Eustachian tube or perchance a real occlusion of its inner orifice, and here one sees diminished impaired hearing. Such a child is often scolded and rebuked for inattention, when in reality the ears are at fault.

Clinical Migraine Due to Unusual Refractive Errors.

Dr. Kenneth Bradford, Birmingham, said that the prime object of his paper was to bring before the Association the important connection between organic defects in the eye and that complex functional disorder known as migraine. Continuous relief, for a period of seven months, from attacks of migraine of increasing frequency of a most aggravated type has, in the author's own case, followed immediately on the detection and correction of a rather unusual refractive error.

Epidemic of Jaundice.

Dr. D. P. Dixon, Talladega, described an epidemic of jaundice which occurred in Talladega during the summer of 1907. Out of the 200 cases reported, only 25 were children, and 8 of these were infants. The blood of the latter was examined and found to contain the malarial plasmodium. Thirty of the cases reported were among women; the other 145 occurred among men of previously good health. Fifty of the cases were among negroes. There were probably many more cases in this race that passed unnoticed. Almost all of the cases collected were among the well-fed, well-clothed and well-housed classes. The cases among children were, with the exception of the babies, entirely among boys. Not a single girl was reported as having jaundice. These boys were about 10 to 12 years of age, well developed and previously healthy lads. They were not so severely taxed as the adults in either length or intensity, although in the beginning the febrile stage was almost the same. The men affected continued at their usual occupations after the first three or four days, or after the febrile stage had passed. There were a few cases during the winter months which were more severe and lasted for a longer time, because most of these patients were indoors most of the time on account of the very severe weather, and did not get sufficient fresh air and sunshine.

In looking up the causes given by writers on this subject, the author finds that very few mention malaria as the predisposing cause. Nothnagel puts the different causes into three classes: (1) Atmospheric, telluric or climatic causes. (2) Dietetic influences. (3) Infectious causes. The third, or infectious class, according to the author's theory, played the leading part in the causation of this epidemic.

The majority of the cases of jaundice appeared gradually with headache, malaise, drowsiness, abdominal pain and cramps in the legs, and subsequently, usually vomiting; moderate temperature, although the temperature in some went as high as 104 degrees, chill and chilliness. Jaundice came on several days after the appearance of the first symptoms. Generally, by this time, the temperature was normal, and where there was no complication it did not rise again. In some the temperature at this time became subnormal and remained so for some time. The patients usually had a very slow pulse, with putty colored stools, highly colored urine, and sweat, and other symptoms seen in catarrhal jaundice. These cases usually lasted from two to eight weeks. There were very few complications. Two cases were taken with biliary colic and after the acute symptoms had subsided, became jaundiced. Another was the case of a boy with pneumonia. In another a woman just before confinement became very much jaundiced. The child was stillborn and the mother died in a few days. These last two were the only two fatal cases reported.

Public Meeting on Tuberculosis.

Several other papers were read and discussed. One evening was set aside for the discussion on tuberculosis. The meeting was held at the old First Baptist church, and was well attended by the laity. Papers were read as follows: "A Serious Condition in Alabama and How to Meet It," by Dr. Glenn Andrews, Montgomery; "Social Aspects of the Tuberculosis Problem," by Dr. S. A. Knopf, New York; "The Layman's Duty in the Fight Against Tuberculosis," by Hon. H. T. Reese, Selma; "The Duty of the Press in the Fight Against Tuberculosis," by Major W. W. Screws, Montgomery.

At one of the evening sessions two notable addresses were delivered, one by Dr. W. M. Wilkerson, Montgomery, known as the "Monitor's Address," and the "Annual Oration," by Dr. Wellington P. McAdory, Birmingham. Dr. Wilkerson spoke on "The Ethics of the Profession." He asked that both the public and the profession strive for a better understanding of each other. He appealed to the people to aid the profession in all measures looking toward the improvement of mankind; to help them with their intelligence, and to assist them with their means in all public enterprises for the physical betterment of the human race. To the members of the profession he said: "Give of your time and experience and training and substance all that may be required for the still further uplifting and ennobling of our profession, and for the good of our fellow-beings. Let no task be too difficult, no ideal so high that you do not strive to attain it. Thus let us press onward—doctors and people—hand in hand towards that goal where sickness and suffering are unknown."

Dr. McAdory, among other things, said that medicine to-day is nearly an exact science. This scientific position has not been attained in a year, a decade nor a century, but founded on nature; it has gradually developed, and each step in this development has been marked by the saving to the world countless lives and suffering. The practice of this science is the art of handling disease, and these artists are ordinarily called practitioners of medicine. He reviewed at length the great progress that has been made in medicine and surgery in the last decade or so.

The list of officers elected was given in The Journal last week. Birmingham was selected as the place for holding the next annual meeting.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Regular Meeting, held March 25, 1908.

The President, Dr. A. M. Eaton, in the Chair.

SYMPOSIUM ON PSYCHOTHERAPY.

Psychotherapy; Its Methods, Scope and Limitations.

Dr. Charles K. Mills said that the story of psychotherapy is an old one, but it is being retold by new raconteurs, with a few additions of value, and with many trimmings and adornments. The terms psychic medicine and mystic medicine are not absolutely interchangeable. In a certain sense, mystic medicine—the medicine of the savages, of the oracles, of Mrs. Eddy, of the shrine of whatever sort—has in it the psychic element. It appeals to the superstition or the imagination of the individual, playing either on his normal or his abnormal suggestibility. The psychic medicine in which the doctor should be interested continuously is one in which the use of mental influence for the relief or cure of disease is resorted to on the same scientific principles as is the use of water, medicine, electricity, the knife or the obstetric forceps.

The accepted psychotherapeutic methods of to-day were considered under the heads of: 1, The use of hypnotic procedures; 2, the appeal to suggestibility in the waking state, and 3, the resort to educational or persuasive measures. Dr. Mills is of the opinion that suggestion in patients in the state of profound hypnosis should not be resorted to, except in a very few extreme cases of hysteria, in which it should be used on the principle "of two evils choose the lesser." The use of suggestion in the waking state was commended, with some qualifications, however, as, like suggestion under hypnosis, it occasionally might result in harm. The suggester, however serviceable he may be to his suffering patient, does not always effect a permanent cure. The truth is not as DuBois expresses it, that one is cured as soon as he believes he is cured, but that he is cured when the conditions which have caused and which tend to reproduce his sickness, have been removed. In this era of the exploitation of psychic medicine, the community, and even the profession, have been confined beyond the confines of reason.

With regard to the admixture of religion and medicine for the purposes of healing, it should be said that in medicine, as in religion, faith is often essential. Harm is done, not alone to the community and to the medical profession by the psychotherapeutic efforts of enthusiastic but misled clergymen, but eventually to religion itself. Every neurologist of any considerable experience has had pass through his hands many cases of uncured disease in individuals of deep religious sentiments, who have called in their extremity on Christian Science or some similar healing cult, and who, failing to receive the benefit for which they have been led to hope, have lost their faith not only in the efficacy of the cult to heal, but also in its efficiency in matters purely spiritual. The strongest and wisest opponents of osteopathy and faith cures and divine healing and all similar and special non-medical therapeutic methods or organizations, are those who, misled by great promises consciously or unconsciously made, have come back to be cared for and treated by those who only claim for themselves the powers which are given to them through scientific study and experience with disease.

The Use of the Mental Element in the Treatment of Disease.

Dr. Charles W. Burr referred to the value of the personal element in therapeutics and divided psychotherapeutics into: Education; encouragement; waking suggestion; suggestion under the hypnotic state, and those occult and mystical and, so-called, religious means of cure. He separates encouragement from suggestion, because in encouragement there is simply a logical talk with the patient, showing him his error in what he thinks about himself, showing him that his condition points toward cure. In waking suggestion the attempt is made to act on the patient's "unconscious mind," causing him to create in his own mind without knowing that the physician has caused it, a feeling of well-being in the future.

In nervous conditions suggestion is regarded as one of the most valuable agents, but it is also considered to be capable of great harm. Concerning hypnotism in general, Dr. Burr said that there is no subject in science in which it is more difficult to attain the truth than in this study. Much has been written on it by people who have not the slightest idea of how to weigh evidence. That the student is entirely at the mercy not only of the integrity, but the intelligence of the subject of hypnotism is another difficulty in the study of the subject.

Regarding the occult means of treatment, Dr. Burr believes that there is rapidly growing up in this country a superstition, intellectually as gross as ever appeared in the world's history. The reason for this superstition is too deep a subject for present solution. While the basis of the occult means of treatment is suggestion, it differs from the suggestion used by the physician in that there is claimed for it some power outside the physician himself as being the thing that does the work, and in this, in a measure, it approaches the witchcraft of olden times. One evil of the practice of occult means is that persons who could be cured by physical means, if treated promptly, are rendered incapable of cure by the delay. As to the religious element in therapeutics, Dr. Burr believes it would be a very dangerous practice for a religious body to attempt the cure of sick people without constant medical advice.

Analysis of Psychotherapy.

Dr. F. X. Dercum considered the methods of psychotherapy under the following heads: 1, General methods, including mental rest, mental exercise and mental gymnastics; 2, special methods, including normal suggestion, direct and indirect; 3, hypnotism and suggestion under hypnotism; 4, the psychoanalytic method of Breuer and Freud. The advantages of the legitimate use of the general methods and of normal suggestion were commended. Treatment by hypnotic methods was discountenanced on the ground that hypnotism is simply the artificial induction of an hysteric state and that the affection from which the patient already suffers is thus compounded with hysteria. The fallacies on which the psycho-analytic method is based were pointed out as were also its objectionable features. Freud's theory of the origin of the obsessions through passionate acts of sexual aggression during childhood was considered and its absurdities dwelt on. The writer further pointed out that all of the functional neuroses were characterized by a more or less marked impairment of the general health, that they were more or less the expression of asthenic states and that improvement in the nervous symptoms ensued on an improvement of the general health. He also pointed out the advantage of the employment of the general psychotherapeutic measures, such as are embodied in rest, isolation and restraining, etc., while efforts to improve the general health are being carried out.

Medical Education and State Boards of Registration

COMING EXAMINATIONS.

North Carolina State Board of Medical Examiners, Winston-Salem, May 19. Secretary, Dr. G. T. Sikes, Grissom.

New York State Board of Medical Examiners, Albany, May 19-22. Chief of Examinations Division, Charles F. Wheelock, Albany.

Louisiana State Board of Medical Examiners, New Orleans, May 21-22. Secretary, Dr. Felix A. Larue, 211 Camp St., New Orleans.

Indiana Board of Medical Registration and Examination, Indianapolis, May 26-28. Secretary, Dr. W. T. Gott, 120 State House, Indianapolis.

Nebraska State Board of Health, State Capitol, Lincoln, May 27-29. Secretary, Dr. E. J. C. Sward, Oakland.

Minnesota State Board of Medical Examiners, Old Capitol, St. Paul, June 2. Secretary, Dr. W. S. Fullerton, 217 American National Bank Bldg., St. Paul.

Iowa State Board of Medical Examiners, Capital Building, Des Moines, June 4-6. Secretary, Dr. Louis A. Thomas, Capital Bldg., Des Moines.

Ohio State Board of Medical Registration and Examination, Cleveland, Columbus and Cincinnati, June 8-10. Secretary, Dr. George H. Matson, State House, Columbus.

Michigan State Board of Registration in Medicine, University Bldg., Ann Arbor, June 9. Secretary, Dr. B. D. Harison, 504 Washington Arcade, Detroit.

South Carolina Homeopathic Medical Examining Board, Columbia, June 9. Secretary, Dr. J. A. Whitman, Beaufort.

Kansas State Board of Medical Registration and Examination, Kansas City, June 9. Secretary, Dr. D. P. Cook, Clay Center.

South Carolina State Board of Medical Examiners, Columbia, June 9-11. Secretary, Dr. W. M. Lester, Columbia.

Wyoming Board of Medical Examiners, State Capitol, Cheyenne, June 10-12. Secretary, Dr. S. B. Miller, Laramie, Wyo.

Oklahoma State Board of Medical Examiners, Shawnee, June 15 (about). Secretary, Dr. J. C. Mahr, Shawnee.

Texas State Board of Medical Examiners, Waco, June 16. Secretary, Dr. G. B. Foscue, Waco.

Maryland Homeopathic Board of Medical Examiners, Baltimore, June 16. Secretary, Dr. Joseph S. Garrison, 848 W. North Ave., Baltimore.

New Jersey State Board of Medical Examiners, State House, Trenton, June 16-17. Secretary, Dr. J. W. Bennett, Long Branch.

Delaware State Medical Examining Board, Dover, June 16-18, and by the Homeopathic Board at Wilmington on same date. Secretary of the Medical Council, Dr. P. W. Tomlinson, Wilmington.

Maryland Board of Medical Examiners, Lehman's Hall, Baltimore, June 16-19. Secretary, Dr. J. McP. Scott, Hagerstown, Md.

Virginia State Medical Examining Board, Richmond, June 23-26. Secretary, Dr. R. S. Martin, Stuart.

Pennsylvania State Medical Examining Boards, June 23-26. The Regular Board meets at Philadelphia and Pittsburg; the Homeopathic at Philadelphia, and the Eclectic at Harrisburg. All applications must be filed with Dr. N. C. Schaeffer, Secrtary of Medical Council, Harrisburg.

New York State Board of Medical Examiners, Albany, June 23-26. Chief of Examinations Division, Charles F. Wheelock, Albany.

COUNCIL ON MEDICAL EDUCATION OF THE AMERICAN MEDICAL ASSOCIATION.

Fourth Annual Conference, held at Chicago, April 13, 1908.
(Continued from page 1546.)

North Dakota.—This state requires graduation of all applicants for license, has a single board of medical examiners, has reciprocity with other states, has the power to refuse recognition to disreputable schools, and requires for preliminary education a four-year high school course plus two years of work in a college of liberal arts, including physics, chemistry and biology. It has one medical college, which offers the first two years of medical course in an acceptable way.

Ohio.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has the authority to refuse recognition to disreputable schools, and requires a four-year high school education for admission to medical colleges. Ohio has nine medical schools, six of which are acceptable and three non-acceptable.

Oklahoma.—This state requires graduation of all applicants for license, has a single board of medical examiners, has no provision for reciprocity, and has authority to refuse recognition to disreputable schools, but does not require a four-year high school education for admission to medical colleges. It has two medical colleges, one acceptable and one non-acceptable.

Oregon.—This state requires graduation of all applicants for license, has a single board of medical examiners, has no provision for reciprocity, has but limited power to refuse recognition to disreputable schools, and has no provision as to preliminary education. It has two schools, one acceptable and one non-acceptable.

Pennsylvania.—This state requires graduation of all applicants for license, and has several examining boards. Here the farce is seen of graduates of some of the regular schools taking the eclectic board examination in order to secure their license. The state has no provision for reciprocity, has no power to refuse recognition to disreputable schools, and requires less than a four-year high school education as its minimum standard of preliminary education. It has seven medical colleges, five of which are acceptable and two non-acceptable.

Rhode Island.—This state does not require graduation of all applicants for license, has a single board of medical examiners, has no provision for reciprocity, has no authority to refuse recognition to disreputable schools, and has no provision for preliminary education.

South Carolina.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, and has power to refuse recognition to disreputable medical schools, but for its minimum standard of preliminary education does not require a standard four-year high-school course. South Carolina has but one medical school, which is acceptable and should receive state aid.

South Dakota.—This state requires graduation of all applicants for license, has a single board of medical examiners, does not have reciprocity with other states, has power to refuse recognition to disreputable medical colleges, and requires for preliminary education a four-year high school course plus a year in a college of liberal arts, including physics, chemistry and biology. It has one medical school, which has just been opened in connection with the State University.

Tennessee.—This state does not require graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has no authority to refuse recognition to disreputable schools, and does not have any requirement of preliminary education. Tennessee has eleven schools, one acceptable and three or four others fairly acceptable, the rest being non-acceptable.

Many students of the Tennessee schools leave at the end of the second year of a four-year course and pass state board examinations either in Tennessee or in the adjoining states of Arkansas, Mississippi or Alabama, these four being the only states in the South that do not require graduation of all applicants for license.

Texas.—This state requires graduation of all applicants for license, now has a single board of medical examiners, has provision for reciprocity, has authority to refuse recognition to disreputable schools, and requires a four-year high school course for admission to medical colleges. Preliminary credentials are passed on by the Examining Board. Texas has seven medical colleges, two of which are acceptable and five not acceptable. The board has recently withdrawn recognition from two of these.

Utah.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has authority to refuse recognition to disreputable medical schools, and requires a standard four-year high school education for admission to medical colleges. Utah has only one school, which is a part of the State University and which acceptably offers two years of the medical course.

Vermont.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has power to refuse recognition to disreputable schools, and requires a four-year high school education for admission to medical colleges. There is but one medical school in the state and it is acceptable.

Virginia.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has no authority to refuse recognition to disreputable medical schools, and has no provision for preliminary education. It has three medical schools, all of which are acceptable.

Washington.—This state requires graduation of all applicants for license, has a single board of medical examiners, has no provision for reciprocity, has only limited authority to refuse recognition to disreputable schools, and has no provision as to preliminary education.

West Virginia.—This state requires of all applicants for license graduation from a reputable medical school, it has a single board of medical examiners, has provision for reciprocity, has authority to refuse recognition to disreputable medical schools, and requires a standard four-year high school education for admission to medical colleges. It has one medical school, which offers the first two years of medicine acceptably.

Wisconsin.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has authority to refuse recognition to disreputable schools, and requires a standard four-year high school education for admission to medical colleges. It has three medical schools, one acceptable and two unsatisfactory.

Wyoming.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has but limited power to refuse recognition to disreputable medical colleges, and has no provision for preliminary education.

DEFECTS AND THE REMEDY.

This geographical review of the situation discovers many defects in laws and a large number of non-acceptable schools. It is evident that the remedy lies with the state board and the profession of each state and in the joint action of the state boards of all the states. By the united efforts of the profession and the state board, medical legislation necessary to enforce acceptable medical standards can be secured in each state, and if given proper authority, after careful inspection, the state board would be in position to withdraw recognition from schools which are not doing acceptable work. States which do not secure such efficient medical legislation are liable to become the dumping-ground of the ill-prepared graduates from the poorer schools, and the public and the profession will suffer accordingly. The states which obtain and enforce proper standards will secure high-class medical men which will result in elevating the standing of the profession and afford a better protection to the public. No public health movement in a state is of greater importance than that directed toward securing high standard medical men. In spite of the many defects which still exist when one realizes the great improvements that have taken place in the last ten years, the medical situation by contrast becomes most encouraging. A splendid wave for higher standards in medical education is sweeping over the country and is sure within a short time to reach every section and every state.

HIGHER PRELIMINARY REQUIREMENTS.

Already a large majority of the acceptable schools have adopted the requirement for preliminary education of a four-year high school course plus a thorough training in physics, chemistry and biology which, as you know, is the standard universally adopted in Europe.

The list of these schools arranged by states is as follows:

California.	Years.	Date.
Cooper Medical College	1	1910
University of California, Medical Department	3	1908
Oakland College of Med. and Surg., Oakland	1	1910
University of Southern California, Coll. of Med.	1	1910
Colorado.		
Denver and Gross Coll. of Med., Denver	1	1910
Colorado School of Med., Boulder	2	1910
Connecticut.		
Yale University, Medical Department	2	1909
District of Columbia.		
George Washington University, Department of Med.	2	1909
Georgetown University, School of Medicine	1	1910
Illinois.		
College of Physicians and Surgeons, Chicago	1	1910
Hahnemann Medical College, Chicago	1	1910
Northwestern University, Medical School	2	1909
Rush Medical College	2	1904
Indiana.		
Indiana Medical College	1	1910
Indiana University School of Medicine	1	1910

Iowa.		
Drake University, College of Medicine	2	1910
State University of Iowa, College of Medicine	2	1910
Kansas.		
Kansas Medical College	1	1910
School of Medicine, University of Kansas	2	1909
Kentucky.		
Louisville and Hospital Medical College	1	1910
Louisiana.		
Tulane University, Medical Department	1	1910
Maryland.		
College of Physicians and Surgeons, Baltimore	1	1910
Johns Hopkins University, Medical Department	Degree.	1893
Massachusetts.		
Harvard University Medical School	Degree.	1900
Michigan.		
University of Michigan, Department of Medicine	2	1909
Minnesota.		
University of Minnesota, Homeo. Department	2	1907
University of Minnesota, Department of Medicine	2	1907
Missouri.		
St. Louis University, Medical Department	1	1909
Washington University, Medical Department	1	1910
University of Missouri, Medical Department	1	1906
Nebraska.		
University of Nebraska, College of Medicine	1	1908
John A. Creighton Medical College	2	1910
New York.		
College of P. and S., New York	2	1910
Cornell University, Medical Department	3	1908
Syracuse University, Medical Department	2	1910
North Carolina.		
University of North Carolina, Medical Department	1	1909
Wake Forest School of Medicine	2	1908
North Dakota.		
University of North Dakota, College of Medicine	2	1907
Ohio.		
Western Reserve University, Medical Department	3	1901
Cleveland Coll. of Physicians and Surgeons	1	1910
Cleveland Homeopathic Medical College	1	1910
Medical College of Ohio	1	1910
Miami Medical College	1	1910
Starling-Ohio Medical College	1	1910
Oklahoma.		
University of Oklahoma, School of Medicine	1	1910
Oregon.		
University of Oregon, Medical Department	1	1910
Pennsylvania.		
University of Pennsylvania, Department of Medicine.	2	1910
South Dakota.		
University of South Dakota, College of Medicine	2	1910
Texas.		
University of Texas, Medical Department	1	1910
Utah.		
University of Utah, Department of Medicine	2	1910
Virginia.		
University of Virginia, Dept. of Med. (3 year high school +)	2	1910
West Virginia.		
West Virginia University, College of Medicine	1	1910
Wisconsin.		
University of Wisconsin, College of Medicine	2	1907

I feel confident that within a few years we can secure a fairly uniform and satisfactory medical standard throughout the United States which will result doubtless in a smaller number of schools. Those which are worthy to survive must receive the support of the state and of the medical profession. The public must be educated in the possibilities for good in modern medicine and the great need of our medical schools for state aid and private endowment. In spite of its shortcomings in its average methods of medical education, American medicine even to-day is, from the standpoint of productiveness of both laboratory and clinic, second to that of no other country, except possibly Germany; and in some things, as in the immediate care of the individual case in clinical medicine, in the purely operative side of clinical surgery and in the surgical technic, America leads the world. American medicine and American medical education have been advancing in the last twenty years by leaps and bounds. Let us unite in our efforts to raise the standards of American medicine. If we as a profession do our part intelligently and with courage; if we present the facts clearly before the American public and secure its sympathy and aid, we can look forward to the future confident that, in the coming great development of modern medicine, our country will contribute fully its part and that American medicine will be placed in a position second to none.

Following the address of the Chairman, the Secretary of the Council, Dr. N. P. Colwell, gave the following report of the work of the past year:

Report of the Secretary.

Mr. Chairman, Members of the Council on Medical Education and Visiting Delegates. Gentlemen:

The work of the Council on Medical Education for the past year and the progress made toward higher standards are as follows:

FACTS ABOUT MEDICAL STANDARDS ABROAD.

In the work for higher and more uniform standards for the United States, a knowledge of the requirements in other countries is important. A list of medical colleges of all foreign countries has been compiled, which shows a total of 174 such colleges outside the United States, while this country alone has 161. In other words, of the 335 medical colleges in all countries, the United States has 161, or 48 per cent., while the 30 other nations altogether have only 174, or 52 per cent. Again, all European medical schools are medical faculties of universities or are under the direct control of universities. There are no proprietary schools such as predominate in this country.

An offer to exchange our educational literature for the announcements of foreign schools has been largely accepted, so that we have considerable first-hand information regarding foreign medical education. Special efforts were also made to obtain accurate, authentic information, particularly from the countries in Europe, regarding preliminary education both primary and secondary, as well as collegiate and medical. Much information has been obtained, therefore, from original sources and from foreign publications. The data, thus obtained, agrees with the reports of the United States Bureau of Education, and in some instances have been confirmed by reports of the Education Department of the State of New York. The requirements in the various countries named are briefly as follows:

Argentine Republic.—Elementary education extends between the ages of 6 and 14, and secondary education between the ages of 12 and 18, thereby overlapping the elementary by two years. Twelve years of study, therefore, lead to the medical course, which covers six years, including preliminary work in physics, chemistry and biology. The complete course requires 18 years and the minimum age at the completion of the course is 24.

Austria.—Elementary education extends between the ages of 6 and 14, overlapping the gymnasium course by four years, the latter extending between the ages of 10 and 18. Twelve years of study, therefore, admit to medicine. The medical course covers six years and includes preliminary courses in physics, chemistry and biology. The total time required is 18 years and the minimum age at completion is 24.

Belgium.—Elementary education extends between the ages of 6 and 14, overlapping the work in the Royal Athénées, the secondary schools, by three years, the latter extending between the ages of 11 and 18. The time spent in the primary and secondary schools is, therefore, 12 years. An additional year devoted to physics, chemistry and biology in a college of science admits to the five-year medical course. The time necessary to complete the work is 18 years and the minimum age at completion is 24.

Brazil.—Elementary education extends between the ages of 7 and 15, overlapping the work of the gymnasium by three years, the latter extending between the ages of 12 and 19. Elementary work may be begun at the age of 6 years, and in such cases students may finish the gymnasium at 18. Twelve years of work lead to medicine, where six years of work are required, including preliminary courses in physics, chemistry and biology. The time required to complete the entire course is 18 years and the usual age at completion is 25.

Denmark.—Elementary education extends between the ages of 6 and 12, leading to the "laerdeskoler," the secondary schools, which extends between the ages of 12 and 18, a total of 12 years. The medical course covers six years, including preliminary courses in the natural sciences. Time to complete the work is 18 years and the minimum age at completion is 24.

France.—Elementary education extends between the ages of 6 and 13 or 14. The majority of students entering the secondary schools, however, obtain their elementary work from tutors or in special preparatory courses connected with the lycées. The secondary school, the lycée, has a nine-year course divided into two cycles of five and four years, respectively, and extends between the ages of 11 and 18. From age 6, therefore, twelve years of training are required to complete the primary and secondary work. An additional year devoted to the natural sciences which must be taken in a college of science admits to the four-year medical course. Entire course therefore, is 17 years and the age at completion is 23.

Germany.—Elementary study extends between the ages of 6 and 14, overlapping the gymnasium by four years, the latter extending between the ages of 10 and 18. Then follows a six-year course, which includes preliminary courses in the natural sciences, and the last year must be spent in hospital work. This gives the right to practice, but additional work is required, and a severe examination, the "examen rigorosum," must be passed to secure the degree of doctor. Eighteen years of work lead to medical practice or 19 to the Doctorate, and the age at completion is at least 24 or 25.

Great Britain.—There appears to be no connection between elementary and secondary systems of education. Elementary public schools have been provided, extending between the ages of 6 and 12 or 15. Those entering secondary schools usually obtain their elementary instruction from private tutors or in the preparatory courses of the secondary schools. At present there are no public secondary schools in Great Britain, although that country abounds in private secondary schools, having courses varying as to age limits. Taking Rugby as an example, the course extends from the age of 10 to 17. Others extend from the age of 12 to 19. There are various ages at which the student may enter the medical schools, the minimum age fixed by the General Medical Council being 16. The time spent in elementary and secondary education, therefore, ranges from 10 to 13 years. Work must then be taken in physics, chemistry and biology either in a college of science or in the medical college as a part of the regular five-year medical course. Authorities agree that only a small proportion of students enter the medical school before the 18th year and few graduate in medicine before the age of 23. Since the promotion from one grade to another depends entirely on the passing of an examination, the time to complete the medical course usually requires six or more years.

Greece.—Elementary education is given in the "demotic" schools between the ages of 6 and 10 and in the "hellenic" schools between the ages of 10 and 14, leading to the secondary schools or gymnasia, which occupy the time between the ages of 14 and 18. Twelve years are occupied, therefore, by elementary and secondary education. Two years of work in the university devoted to botany, chemistry, physics, mineralogy, geology and zoology must be completed in order to begin the four-year medical course for the degree of Doctor. To secure the right to practice, nine months of postgraduate work in a hospital must be completed. The total time requirement is 19 years, and the minimum age at completion of the entire course is 25.

Hungary.—Elementary education extends between the ages of 6 and 12 years, overlapping secondary education, which extends between the ages of 10 and 18. The 12 years' work thus completed leads to the five-year medical course, which includes preliminary work in physics, chemistry and biology. The time for the entire course is, therefore, 17 years and the minimum age at completion is 23.

Italy.—Elementary education is divided into lower elementary extending between the ages of 6 and 9 years and higher elementary extending between 9 and 12 years. Secondary education is given in the ginnasio, extending between the ages of 9 and 14 years and in the liceo which extends between the ages of 14 and 17 years. This is followed by a six-year course in medicine which includes work in the natural sciences. The complete course, therefore, is elementary study 3 years, ginnasio 5 years, liceo 3 years and medicine 6 years, a total of 17 years. The minimum age at completion of the course is 23 years.

Japan.—Ordinary elementary education extends between the ages of 6 and 10 years and higher elementary education is between the ages of 10 and 14 years, overlapping the work of the "middle school" by two years, the latter extending between the ages of 12 and 17 years. Completing the work of the middle school admits to the four-year medical course, and it is possible to complete the latter course at the age of 21 years.

Netherlands.—Elementary education extends between the ages of 6 and 12 years, leading to the gymnasium, which extends from the 12th to the 18th year. Admission is then secured to the six-year medical course, which includes work in the natural sciences. The time to complete the entire course is 18 years and the minimum age is 24.

Norway.—Elementary education extends between the ages of 6 and 12 years, overlapping the secondary, which extends between the ages of 9 and 18 years. Secondary education is divided into a six-year middle school and a three-year gymnasium. The completion of the course of the gymnasium admits to the six-year medical course, which includes work in physics, chemistry and biology. The entire time, therefore, is 18 years and the minimum age at completion is 24. This gives the right to practice with the title of physician. The degree of Doctor requires extra work and the passing of special examinations.

Portugal.—Elementary education extends between the ages of 6 and 12 years, thus overlapping the work of the lyceum, which extends between the ages of 9 and 16. This is followed by a course of one or two years in a faculty of philosophy and mathematics and then five years in medicine for the degree of licentiate in medicine and a sixth year for the degree of Doctor. The time for the entire course, therefore, is 18 years and the minimum age at completion is 24.

Russia.—Elementary education extends for 5 years between the ages of 6 and 11. Secondary education, as given in the gymnasium, extends over 7 years between the ages of 11 and 18. Completion of the secondary work admits to the 5-year medical course, which includes preliminary work in the natural sciences extending through the first two years along with other subjects. The total time is 17 years and the minimum age at completion is 23.

Spain.—Elementary education extends between the ages of 6 and 14 years, overlapping the work of the gymnasia, the secondary schools, which conduct work between the ages of 10 and 17. After completing the work of the gymnasium, one year of "preliminary study" must be taken, devoted to chemistry and natural science. Six years more gives the degree of licentiate in medicine and one more that of doctor. The complete course, therefore, requires 18 years of study and the minimum age at completion is 24.

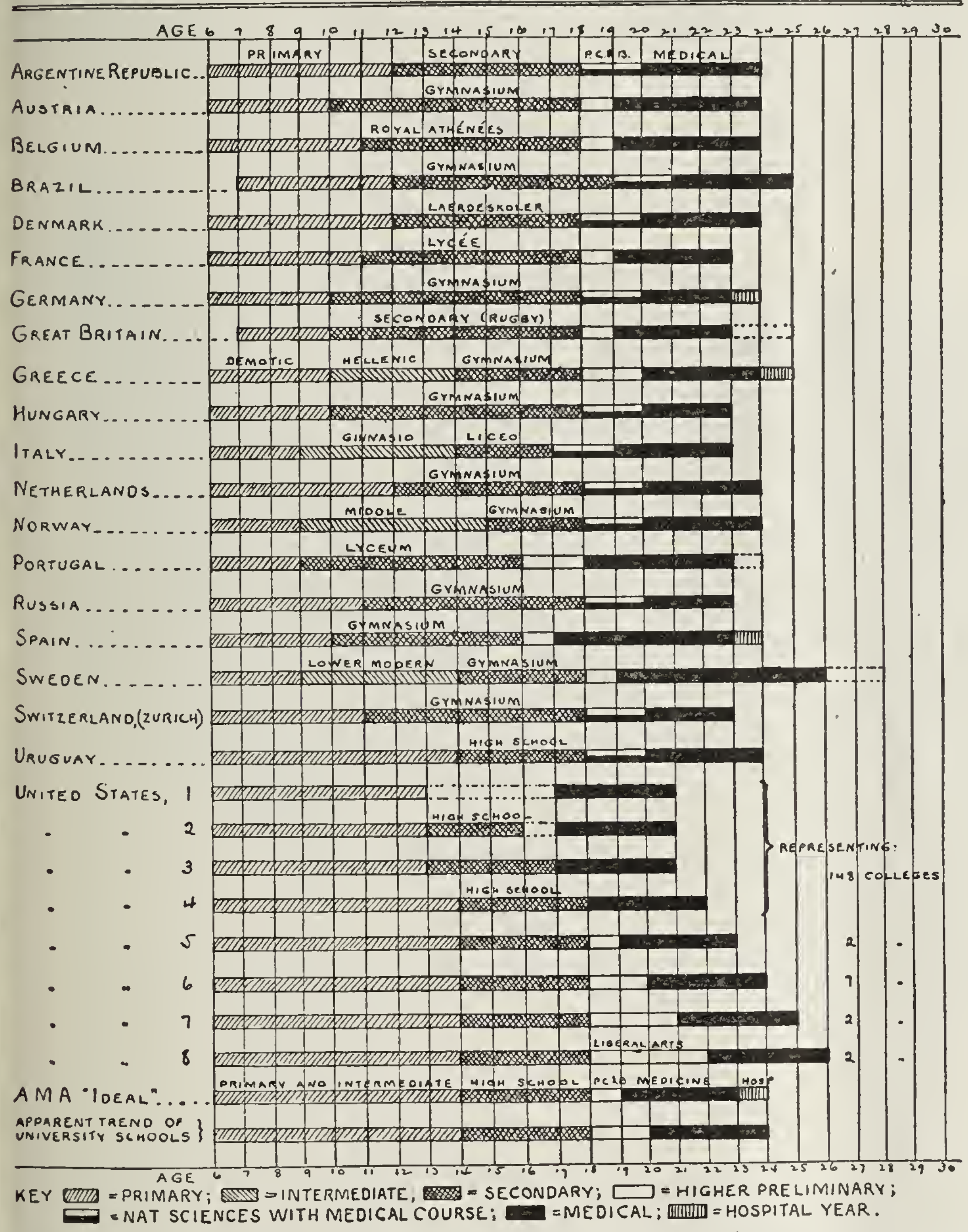
Sweden.—Elementary education extends over 7 years between the ages of 6 and 13. Secondary education consists of a five-year lower modern course and a four-year higher gymnasium, the two courses being attended by students between the ages of 9 and 18. After completing the gymnasium, one year of preliminary work in the natural sciences must be taken in a college of philosophy. Seven years more of study gives the degree of licentiate in medicine, which carries with it the right to practice. To secure the degree of Doctor requires more work and the passing of special examinations. Promotion to each succeeding grade depends on the passing of an examination, and the medical course often extends to 9 or more years. The entire course, therefore, includes: elementary work, 3 years; lower modern school, 5 years; higher gymnasium, 4 years; college of philosophy, 1 year, and medicine, 7 years, a total of 20 years. The age at completion is 26 to 28 years.

Switzerland.—The Cantons differ somewhat in the length of their secondary courses, but all agree in regard to the preliminary work for admission to medicine and the length of the medical course. Taking the Canton of Zürich as an example, the elementary work extends over 6 years between the ages of 6 and 12. The secondary schools, known as gymnasia (realschulen or lycea), have courses covering seven years, students attending between the ages of 11 and 18. Graduation from the gymnasium admits to the five-year medical course, which includes preliminary courses in physics, chemistry and biology. The entire course, therefore, requires: elementary work, 5 years; gymnasium, 7 years, and medicine, 5 years, a total of 17 years. The minimum age at completion is 23. The degree of Doctor is not essential to practice, but may be obtained by writing a special thesis and taking certain courses without necessarily requiring a longer course.

Uruguay.—Elementary education extends between the ages of 6 and 14 years, leading to the secondary, which extends from the 14th to the 18th year. A six-year medical course follows, which includes preliminary work in physics, chemistry and biology. The time to complete the entire work is 18 years, and the minimum age at completion is 24.

The requirements in sixteen countries of Europe and three countries of South America are graphically presented in Chart I, where each division of education is shown according to the ages at which students are in attendance. The shaded portions of the bands represent primary and secondary education, the black portions the medical, and the white portions represent the requirements of higher preliminary education, including work in physics, chemistry and biology. The chart allows valuable comparisons to be made and, as measured by years, shows more of a uniformity of educational standards than one would expect. It is interesting to note how sharply the line representing the age of 18 separates the secondary from higher education.

Preliminary and Medical Education in Europe and America.
Council on Medical Education Chart No. I.



VALUE OF "FOOT-RULE AND HOUR-GLASS" STATISTICS.

Let me say parenthetically that, although the expression of educational requirements in terms of years, or months, or by the ages of students does not actually measure the value of the education obtained, nevertheless a knowledge of the minimum time requirements in other countries is of importance, and a comparison with the minimum time requirements in our own country is of much value. This chart is of peculiar interest. Educators of high repute in this country have stated that the courses of study in the secondary schools of several European countries are the equivalent of a four-year high school course in this country, plus about two years of work in a college of liberal arts. I am inclined to look on such statements as unjust to some of our high grade secondary schools. Granting, however, that the statements are correct, it is of much importance for us to know that the secondary schools of Europe may be completed at the age of 18, whereas two years of work in a college of arts in this country can rarely be completed before the age of 20. In other words, if the above claims are well founded, it is important for us to know that the training of twelve years, between the ages of 6 and 18, in Germany and other European countries is the equivalent of fourteen years' training in this country between the ages of 6 and 20.

The age at the completion of the medical course in each country, as shown in the chart, with one or two exceptions, represents the lowest age at which the student can secure the right to practice medicine, disregarding the rare exceptions when the student graduates at an earlier age. The average age is one or two years higher than is shown in the chart, since the regular course of study between the ages of 6 and 24 is often broken by sickness, failure to receive promotion, or other causes.

In the majority of foreign countries secondary education begins from two to five years earlier than in this country and with a few exceptions has no direct connection with the elementary. In fact, in several European countries, in Great Britain and in France for example, it appears that the majority of students entering the secondary schools secure their elementary instruction from private tutors or in preparatory courses offered by the secondary schools, rather than in the regular elementary schools.

TRAINING IN PHYSICS, CHEMISTRY AND BIOLOGY.

Those in this country who are urging the requirement by the medical colleges of thorough preliminary work in physics, chemistry and biology will be interested in the fact that of all the countries named in the chart the United States is the only one which at present does not require this preliminary scientific work of every medical student. In some of the countries named the work is taken in the first one or two years of the medical course, along with the usual medical studies, while in others, notably in France, Belgium and Sweden, it must be taken in a college of science or philosophy. In still others, as in Austria and in Great Britain, the work may be taken either in a college of liberal arts or in the medical school.

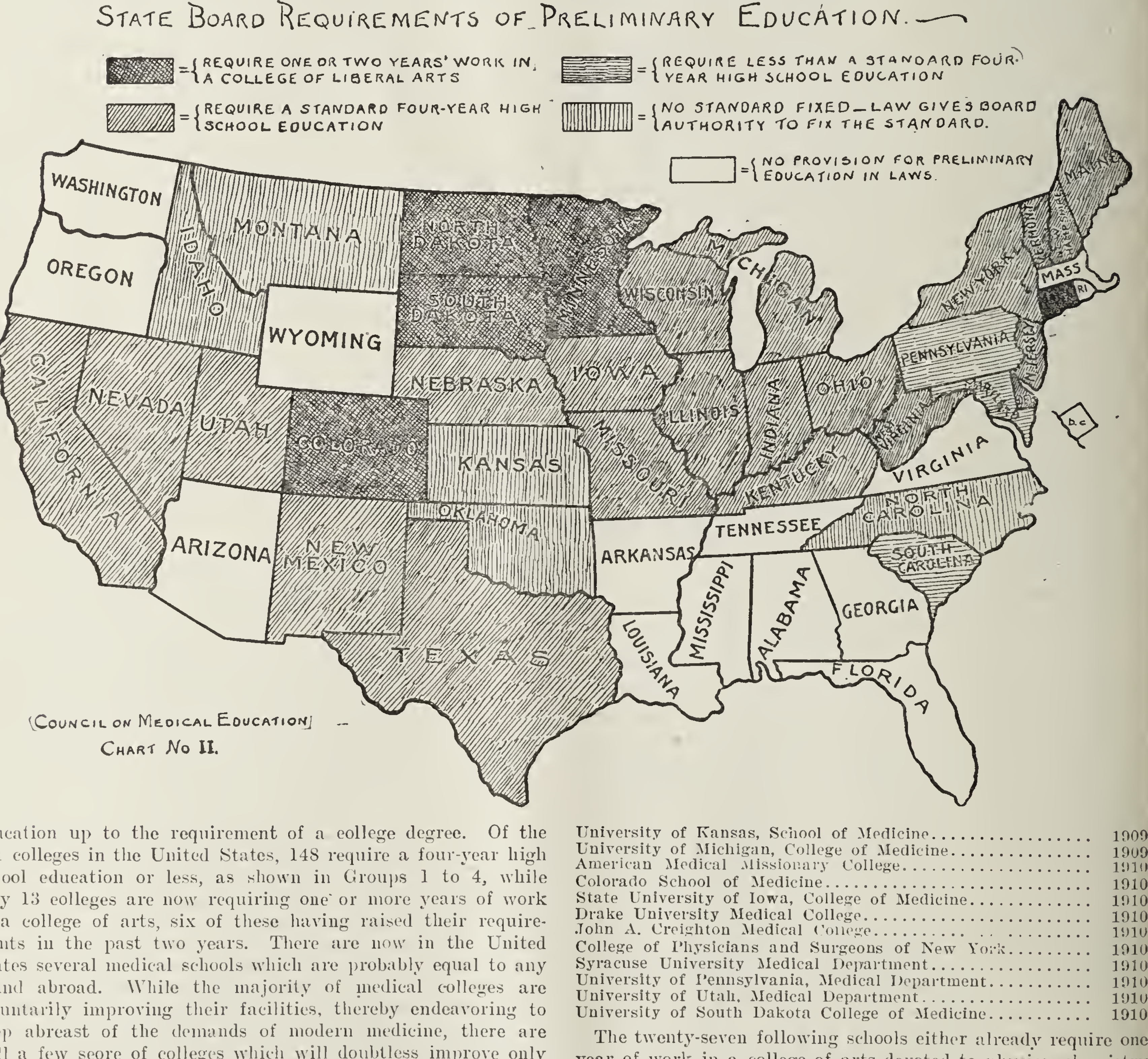
In France this work was given as a part of the regular medical course until in 1893, when it was transferred to the college of science. The question then was, not, whether this preliminary work should be required, but *where* the courses should be taught, in the medical course, in the college of science, or in a special year added to the secondary school. The final decision favored the colleges of science, because the better laboratories and the trained instructors in those colleges made it certain that the courses would be more thoroughly taught.

It is interesting to note that only one year devoted to the preliminary scientific studies is required by all but two of the countries named or else the work extends through about two years along with regular medical subjects, and in no instance is more than two years of college work devoted entirely to preliminary study. Therefore, the tendency on the part of some colleges in this country to require three or four years of preliminary work in a college of liberal arts is going rather to the other extreme.

AGREES WITH A. M. A. IDEAL.

In six of the countries named, disregarding again the rare exceptions, the earliest age at which the right to practice medicine can be secured, is 23. In three countries the age limit is 25 or beyond. But in the great majority the age limit is 24 and the entire course of elementary, secondary, college and medical education is completed in 18 years. Note that this agrees with the "ideal standard" adopted at Portland, Ore., in 1905, by the American Medical Association, as well as with the so-called six-year combined course for the degrees of B.S. and M.D., which has been adopted by a number of colleges.

The well-known diversity of standards of medical education in the United States at the present time is also shown in the chart. Preliminary standards range from a common school education up to the requirement of a college degree. Of the 161 colleges in the United States, 148 require a four-year high school education or less, as shown in Groups 1 to 4, while only 13 colleges are now requiring one or more years of work in a college of arts, six of these having raised their requirements in the past two years. There are now in the United States several medical schools which are probably equal to any found abroad. While the majority of medical colleges are voluntarily improving their facilities, thereby endeavoring to keep abreast of the demands of modern medicine, there are still a few score of colleges which will doubtless improve only as the states wherein these colleges are located adopt and enforce higher requirements.



(Council on Medical Education) — Chart No II.

ADVANCE IN ENTRANCE REQUIREMENTS.

The movement toward higher requirements of preliminary education during the past year has been steady but certain. There are 11 medical colleges which already require for admission two or more years of work in a college of liberal arts. These colleges and the dates when the requirement began are as follows:

College.	Began.
Johns Hopkins University, Medical Department	1893
Harvard Medical School	1900
Western Reserve University, Medical Department	1901
Rush Medical College	1904
University of California	1905
University of Minnesota, College of Medicine	1907
University of Minnesota, Homeopathic Department	1907
University of North Dakota, College of Medicine	1907
University of Wisconsin, College of Medicine	1907
Cornell University, Department of Medicine	1908
Wake Forest School of Medicine	1908

There are fifteen other medical colleges which have definitely announced an increase in their entrance requirements to two or more years of work in a college of arts. These colleges and the dates when the requirement will become effective are as follows:

College.	Begins.
Yale Medical School	1909
George Washington University	1909
Northwestern University Medical School	1909
University of Kansas, School of Medicine	1909
University of Michigan, College of Medicine	1909
American Medical Missionary College	1910
Colorado School of Medicine	1910
State University of Iowa, College of Medicine	1910
Drake University Medical College	1910
John A. Creighton Medical College	1910
College of Physicians and Surgeons of New York	1910
Syracuse University Medical Department	1910
University of Pennsylvania, Medical Department	1910
University of Utah, Medical Department	1910
University of South Dakota College of Medicine	1910

The twenty-seven following schools either already require one year of work in a college of arts devoted to physics, chemistry and biology, in addition to a four-year high school education, or have announced their intention to do so on or before the year given:

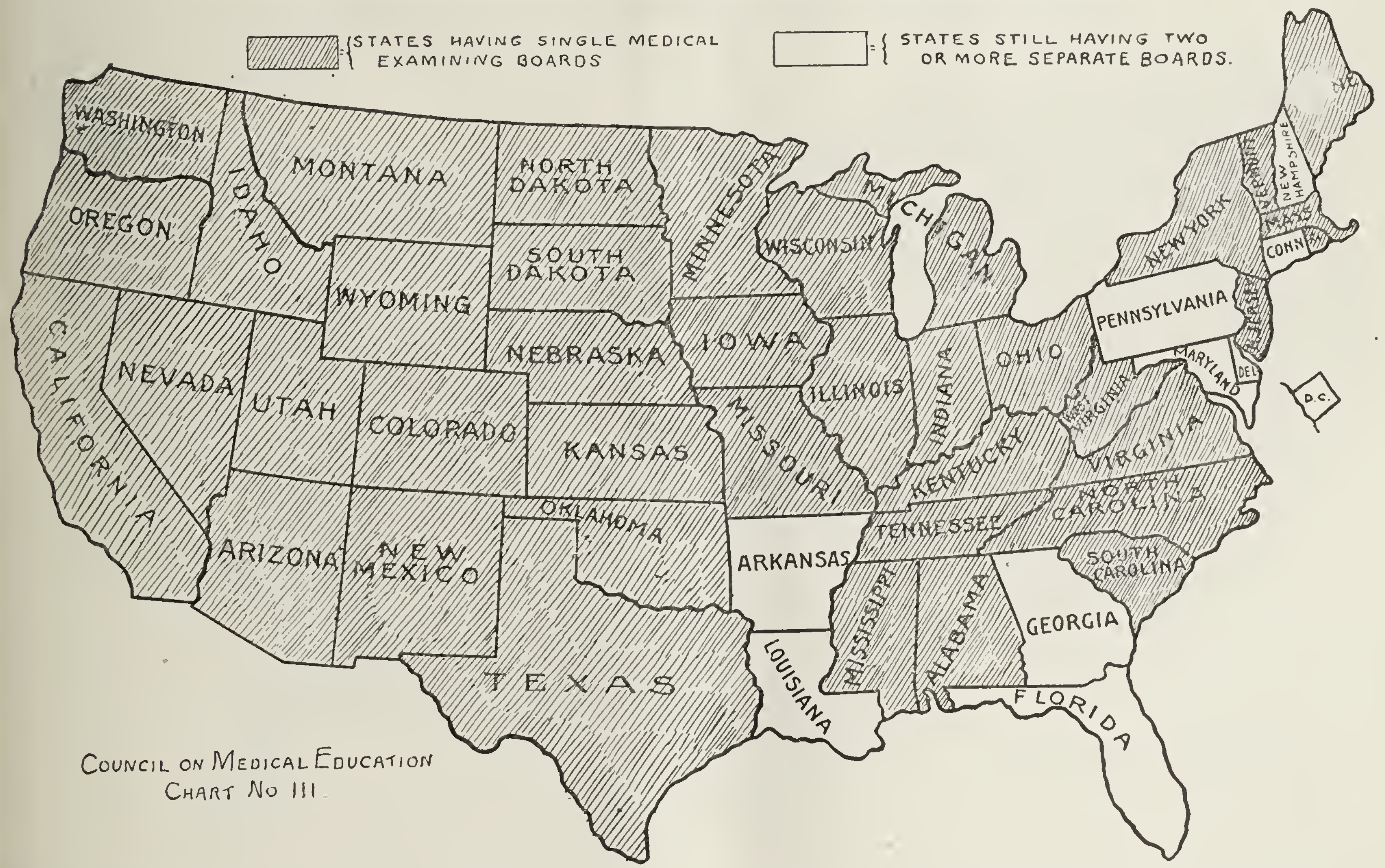
College.	In force.
University of Missouri, Medical Department	1906
University of Nebraska, Coll. of Med.	1908
St. Louis University, Medical Department	1909
University of North Carolina, Medical Department	1909
Cooper Medical College	1910

College.	In force.
Oakland College of Medicine and Surgery	1910
University of Southern California, Coll. of Med.	1910
Georgetown University, Medical Department	1910
College of Physicians and Surgeons, Chicago	1910
Hahnemann Medical College, Chicago	1910
Indiana Medical College	1910
Indiana University, School of Medicine	1910
Louisville and Hospital Medical College	1910
Tulane University of Louisiana	1910
College of Phys. and Surg., Baltimore	1910
University of Mississippi, Medical Department	1910
Washington University	1910
Medical College of Ohio	1910
Miami Medical College	1910
Starling-Ohio Medical College	1910
Cleveland Homeopathic Medical College	1910
Cleveland Coll. of P. and S.	1910
University of Oklahoma, Medical Department	1910
University of Oregon, Medical Department	1910
University of Texas, Medical Department	1910
University of Virginia (3 years high school and 2 years University)	1910
University of West Virginia	1910

Practically all these schools have expressed their intention to require that the work in physics, chemistry and biology be taken in a college of liberal arts.

About twelve medical colleges expressed their intention to make this increase in preliminary requirements, some of which were omitted because they have made no mention of such in their printed announcements. The others were omitted because it was found by inspection they were not satisfactorily equipped to teach medicine.

STATE EXAMINING BOARDS AND SECTS IN MEDICINE



COUNCIL ON MEDICAL EDUCATION
CHART No III

STATE BOARD REQUIREMENTS OF PRELIMINARY EDUCATION.

Chart II shows what preliminary education is required by the various state medical examining boards. It will be noted that five state boards have adopted a requirement of one or two years' work in a college of liberal arts. These states are as follows:

State Examining Board of	No. of Years Required.	Affects Students Matriculating.	Affects all Applicants After
Minnesota	2	1908-9	1912
Connecticut	1	1908-9	1912
North Dakota	2	1907-8	1911
South Dakota	1	1906-7	1910
Colorado	1	1908-9	1912

There are twenty-two states which now require a preliminary education the equivalent of a standard four-year high school. By a standard high school is meant one having a four-year course and which has been preceded by eight years in the primary and intermediate grades. These states are as follows:

California.
Colorado.
Delaware.
Illinois.
Indiana.
Iowa.
Kentucky.
Maine.
Michigan.
Missouri.
Nebraska.
Nevada.
New Hampshire.
New Jersey.
New Mexico.
New York.
Ohio.
Texas.
Utah.
Vermont.
West Virginia.
Wisconsin.

Five states give their respective boards authority to fix the standards of preliminary education, but as yet no definite standards have been established. These states are: Idaho, Kansas, Montana, North Carolina and Oklahoma.

Three other states, Maryland, Pennsylvania and South Carolina have standards given in the law which are lower than the standard high school.

There still remain fifteen states where no mention of preliminary education is made in the practice acts and where apparently no authority is given to the boards to establish the standard. These states are:

Alabama.
Arizona.
Arkansas.
Dist. of Columbia.
Florida.
Georgia.
Louisiana.
Massachusetts.
Mississippi.
Oregon.
Rhode Island.
Tennessee.
Virginia.
Washington.
Wyoming.

In the following eight states the preliminary credentials of medical students are inspected previous to or at the time of matriculation by the state examining boards, or by officials appointed by and responsible to them:

California.
Indiana.
Kentucky.
Michigan.
New York.
Ohio.
Pennsylvania.
Texas.

During the past year three states, New York, South Carolina and Texas, established single boards of medical examiners, leaving only ten states, as shown in Chart III, which still have two or more separate boards representing different schools of medicine. These states are as follows:

Arkansas.
Connecticut.
Delaware.
Dist. of Colum.
Georgia.
Florida.
Louisiana.
Maryland.
New Hampshire.
Pennsylvania.

Every state and territory except Alaska now requires that the applicant must pass a written examination, as shown in

Chart IV and only seven states remain which do not require that the applicant for license to practice medicine must be a graduate from a medical college chartered to grant degrees. These states are:

Alabama.
Arkansas.
Colorado.
Massachusetts.
Mississippi.
Rhode Island.
Tennessee.

RECOGNITION OF MEDICAL COLLEGES.

After considerable correspondence we are informed that twenty-nine state examining boards (shown in Chart V), have been given authority to refuse recognition to medical colleges which may not be doing satisfactory work. These are the boards of:

Colorado.
Connecticut.
Delaware.
Idaho.
Illinois.
Indiana.
Iowa.
Kansas.
Kentucky.
Louisiana.
Maine.
Michigan.
Minnesota.
Missouri.
Montana.
Nebraska.
New Hampshire.
New Jersey.
New Mexico.
New York.
North Dakota.
Ohio.
Oklahoma.
South Carolina.
South Dakota.
Texas.
Vermont.
West Virginia.
Wisconsin.

Ten other states have been given a limited authority to decide what colleges shall be in good standing. These states are as follows:

Arizona.
California.
Dist. of Columbia.
Georgia.
Nevada.
North Carolina.
Oregon.
Utah.
Washington.
Wyoming.

In California, Nevada and Utah the boards have the right to refuse recognition to colleges not holding the standards of the Association of American Medical Colleges, while in the other states named the boards must recognize a medical college so long as it is "legally chartered in the state wherein it is located." The authority in the latter case is seriously restricted since all the existing colleges are "legally chartered," however lacking they may be in equipment or in the ability to teach medicine.

At the present time there are ten states where the examining boards have not been given legal authority to protect the people of their states from the ill-prepared graduates of low grade medical colleges. These states are as follows:

Alabama.
Arkansas.
Florida.
Maryland.
Massachusets.
Mississippi.
Pennsylvania.
Rhode Island.
Tennessee.
Virginia.

In five states, Illinois, Indiana, Michigan, Missouri and Texas, action has recently been taken withdrawing recognition from eleven medical colleges, located in the states named, on the ground that the colleges were not properly equipped to teach medicine.

RECIPROCITY.

Interstate reciprocity in medical licensure is being gradually extended and the number of physicians licensed under that provision is increasing each year. At the present time only sixteen states remain, shown in Chart VI, which have made no provision for reciprocity, or which are not taking advantage of such provision. These states are:

Arizona.
Arkansas.
California.
Connecticut.
Florida.
Idaho.
Louisiana.
Massachusetts.
Mississippi.
Montana.
Oklahoma.
Oregon.
Pennsylvania.'
Rhode Island.
South Dakota.
Washington.

Alabama has lately granted the board the authority to arrange reciprocal relations with other states but thus far no such relations have been established.

Three states, Colorado, Delaware and New Jersey, will accept the license of any other state if the requirements of that state are satisfactory, regardless as to whether that state reciprocates or not. In other words, the regulations governing reciprocity in the states named contain no retaliatory clauses.

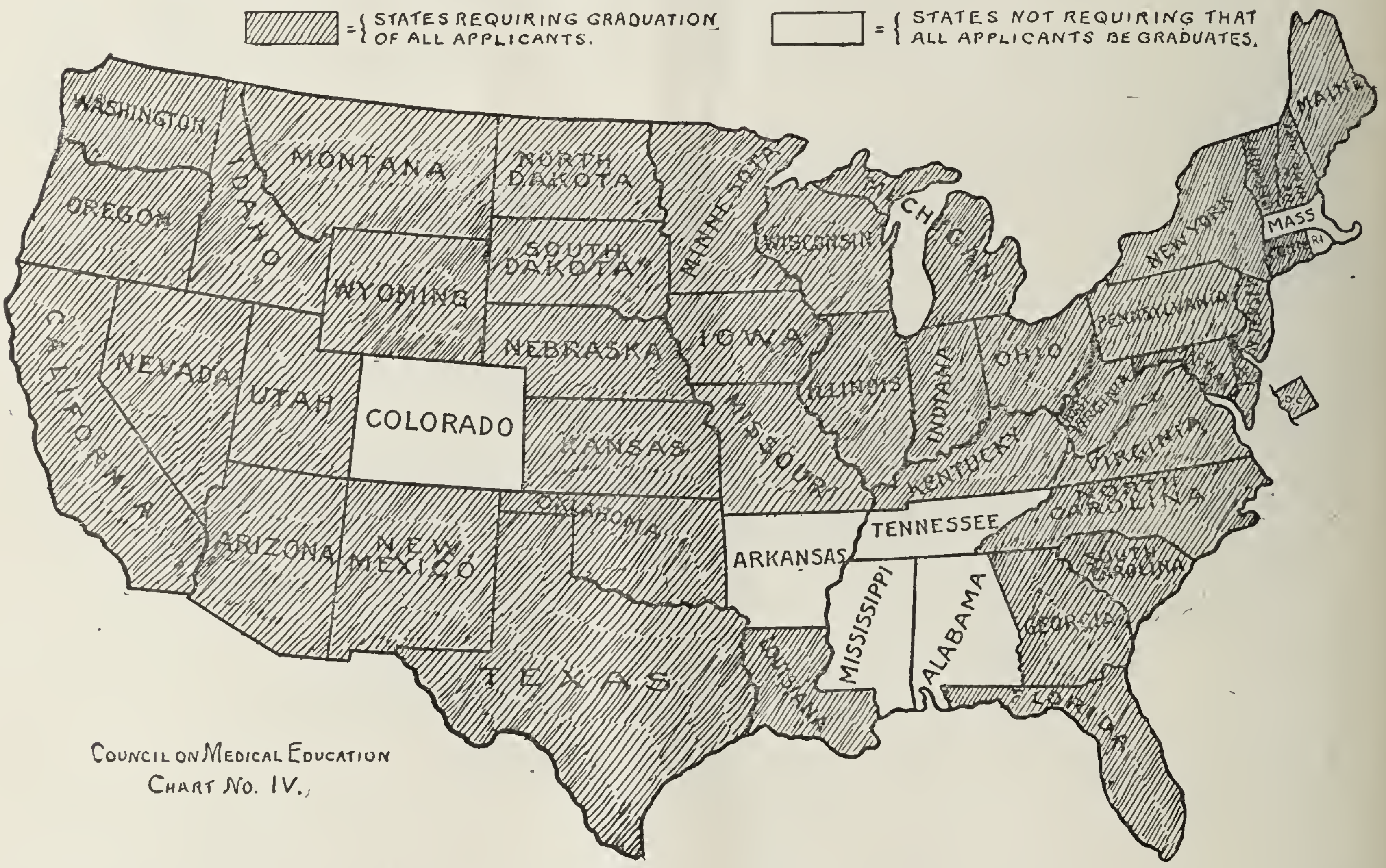
There are nine states which reciprocate only on the basis of a written examination. These states are Colorado, Delaware, District of Columbia, Illinois, New Hampshire, New York, North Dakota, Texas and Wyoming. The others reciprocate also on the basis of a diploma without examination, where the original license was issued prior to the date when a written examination was required of all applicants.

During 1907 a total of 989 licenses were issued through reciprocity compared with 685 in 1906, the increase being 304.

PROGRESS TOWARD UNIFORMITY.

Statistics could be given showing that more important laws influencing medical education have been secured during the

STATES REQUIRING GRADUATION FROM A MEDICAL COLLEGE.



COUNCIL ON MEDICAL EDUCATION
CHART NO. IV.

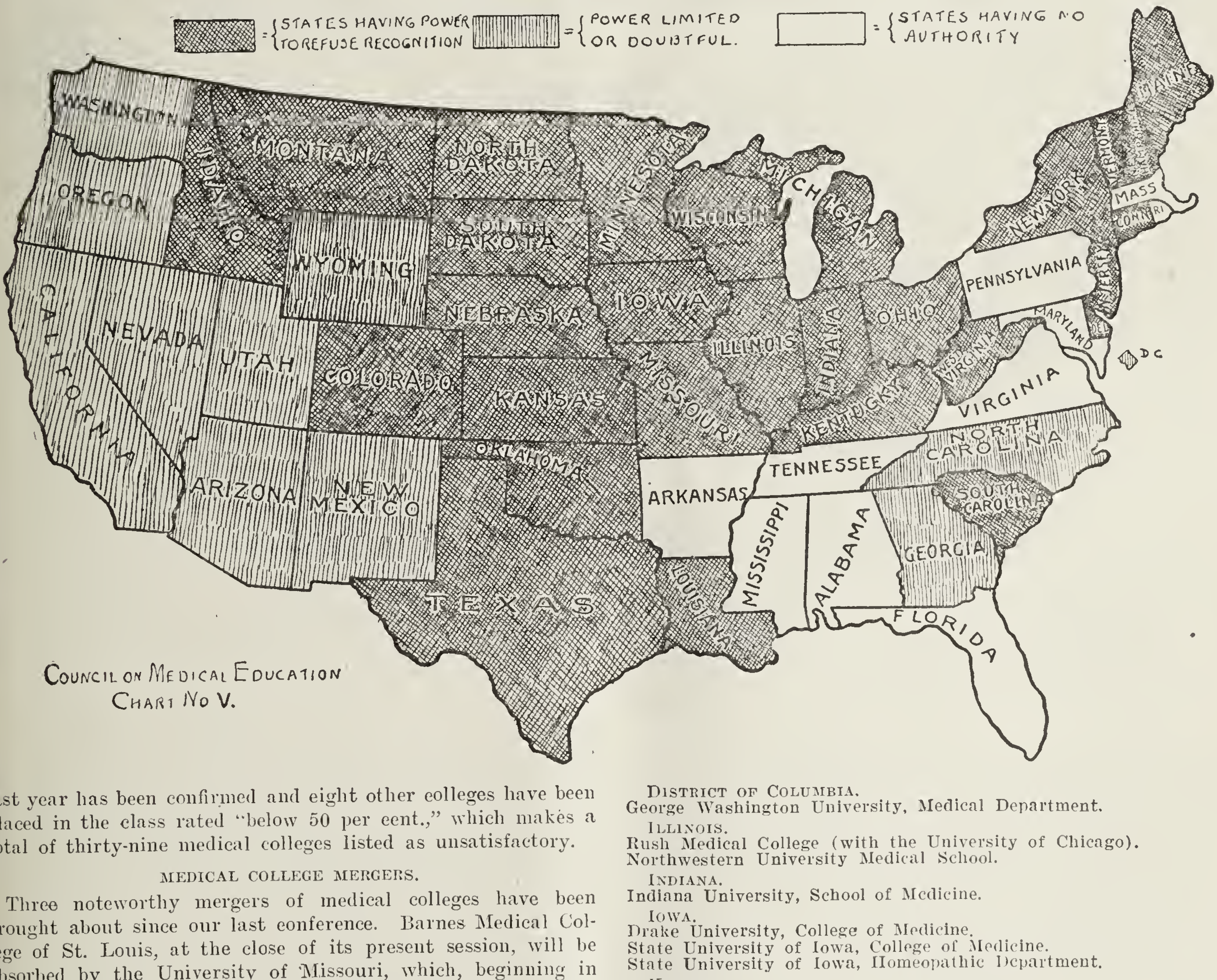
past ten years in this country than in all previous years. In the United States as a whole, therefore, progress toward fair requirements has been quite rapid.

In two respects there is entire uniformity in state laws governing medical practice. All states have boards of registration, whatever their individual names may be, and every state hereafter will require an examination of every applicant. Further, it needs but a glance at the charts here presented to note the rapid trend toward uniformity in other respects.

INSPECTION OF MEDICAL COLLEGES.

In accordance with instructions from the House of Delegates at Atlantic City last year, the work of inspecting medical colleges has been continued. The work has been done mostly in company with representatives of examining boards and inspections have been made of colleges in California, Colorado, Illinois, Iowa, Michigan, Minnesota, Nebraska, New York, North Dakota, Ohio, Oregon, South Dakota, Utah and Wisconsin. As a result of this inspection the grading of colleges made last year has been confirmed and eight other colleges have been placed in the class rated "below 50 per cent.," which makes a total of thirty-nine medical colleges listed as unsatisfactory.

STATE BOARDS HAVING AUTHORITY TO REFUSE RECOGNITION TO LOW GRADE MEDICAL COLLEGES.



Council on Medical Education
Chart No V.

MEDICAL COLLEGE MERGERS.

Three noteworthy mergers of medical colleges have been brought about since our last conference. Barnes Medical College of St. Louis, at the close of its present session, will be absorbed by the University of Missouri, which, beginning in September, will give its last two, or clinical years, at St. Louis. The Minneapolis College of Physicians and Surgeons, Medical Department of Hamline University merged with the College of Medicine and Surgery of the University of Minnesota. The Indiana Medical College, School of Medicine of Purdue University has merged into the Indiana University School of Medicine so that hereafter there will be but one regular medical school in that state. The last two, or clinical years, will be given at Indianapolis and the first two years may be taken either at Bloomington or at Indianapolis.

WHAT IT COSTS TO TEACH MEDICINE.

From about twenty of our leading colleges it has been learned that while the tuition fees from each medical student amounts to only from $75 to $180, the actual expense of teaching that student per year ranges from $250 to $600 or more each year.

THE B.S. AND M.D. DEGREES IN SIX YEARS.

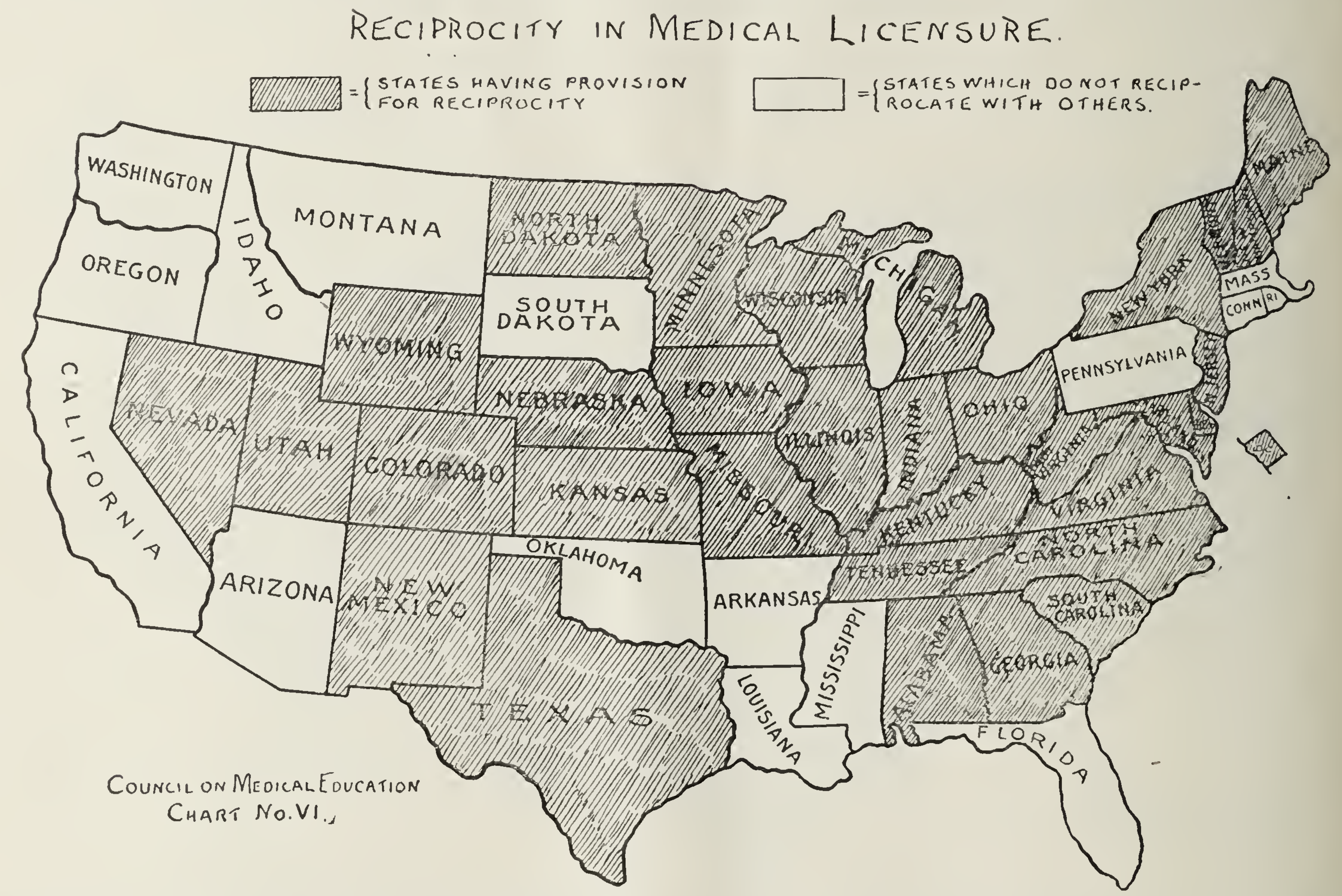
Considerable interest has been manifested of late regarding the six-year combined course for the baccalaureate and M.D. degrees. From the printed announcements it is learned that thirty-two medical colleges have made provision for this combined course. In the majority of cases it is optional. The list is as follows:

California.
University of California, Medical Department.
University of Southern California.
Connecticut.
Yale Medical School.
Colorado.
Colorado School of Medicine.
Denver and Gross College of Medicine.
District of Columbia.
George Washington University, Medical Department.
Illinois.
Rush Medical College (with the University of Chicago).
Northwestern University Medical School.
Indiana.
Indiana University, School of Medicine.
Iowa.
Drake University, College of Medicine.
State University of Iowa, College of Medicine.
State University of Iowa, Homeopathic Department.
Kansas.
University of Kansas, School of Medicine.
Maryland.
College of Physicians and Surgeons (with West Virginia Univ.).
Massachusetts.
Boston University, School of Medicine.
Michigan.
University of Michigan, College of Medicine.
University of Michigan, Homeopathic Department.
Minnesota.
University of Minnesota, College of Medicine.
University of Minnesota, Homeopathic Department.
Mississippi.
University of Mississippi, College of Medicine.

Missouri.
University of Missouri, Medical Department.
Washington University, Medical Department.
St. Louis University, Medical Department.
Nebraska.
University of Nebraska, College of Medicine.
New York.
Columbia University, Medical Department.
North Carolina.
Wake Forest College of Medicine.
North Dakota.
University of North Dakota, College of Medicine.
Oklahoma.
University of Oklahoma, College of Medicine.
South Dakota.
University of South Dakota, College of Medicine.
Utah.
University of Utah, College of Medicine.
West Virginia.
University of West Virginia, College of Medicine.
Wisconsin.
University of Wisconsin, College of Medicine.

EXTINCT COLLEGES.

After considerable correspondence a complete list has been prepared of the medical colleges which have ceased to exist, whether by merger or otherwise. Fraudulent schools have been given particular attention and the connection, if any, between any two or more of them has been traced. The complete list shows 350 medical schools, most of which became extinct, others were absorbed, and others took new names. Information regarding any extinct school can now be furnished on demand.


RECIPROCITY IN MEDICAL LICENSURE.

STATE LICENSING EXAMINATION STATISTICS.

The tabulation of statistics based on the various state licensing examinations has been continued as usual. These statistics show the successes and failures of the graduates of medical schools at the examinations, and the percentage of failures of each college. Such statistics are of much value in influencing the colleges to exercise care in the graduation of their students and as a stimulant to better work.

A series of blanks and percentage tables has been developed during the past year which will not only insure greater accuracy but will save much time in the work of tabulation.

We wish here to express our full appreciation of the kind cooperation extended to us by the various state examining boards. It has been through their courtesy that the collection of these statistics has been made possible. The reports are more complete every year, and more valuable deductions can be made.

A STUDY OF HIGH SCHOOLS.

Following the recommendations of the House of Delegates at Atlantic City last year that the Council exert its influence toward the establishing of four-year standard high schools in certain southern and western states, a careful study was made regarding high schools in the United States, and tabulated statistics were published in The Journal A. M. A. Aug. 17, 1907. It was learned that there were eight states where high schools were preceded by only six or seven years of work in the elementary and intermediate grades. These states are Alabama, Arkansas, Georgia, Maryland, New Mexico, North Carolina, Tennessee and Texas, and these states, with the exception of Texas, were also lacking in four-year high schools. A circular was sent to the leading educators of several southern and western states, suggesting the standard high school as recommended by the now famous "Committee of Ten." That committee recommended a high school course of four years, which was to have been preceded by eight years in the elementary grades and named the subjects to be included in the high school course. This same standard was adopted by the Carnegie Foundation as their minimum preliminary requirement to colleges and universities.

A law has recently been secured in Alabama providing for a high school in each county. In Texas and in Virginia an increase in the number of four-year high schools has been reported.

BUREAU OF INFORMATION.

By no means the least of the functions of the Council on Medical Education has been the establishing of a clearinghouse for information along the lines of its special work. Requests for information are pouring into the office to such an extent that to save time and much correspondence it has been necessary to issue numerous leaflets, pamphlets and reprints bearing on all branches of the work. As the demands on us for information are increasing, however, the means of furnishing such information are likewise increasing along every line of educational activity.

SUMMARY.

(a) There are 335 medical colleges in the civilized world, of which number the United States has 161, or 48 per cent.

(b) All the medical schools of Europe are medical faculties of universities, or are under the direct control of universities. There are no proprietary schools, such as are found in this country.

(c) The United States is the only leading nation which does not require a thorough preliminary education in physics, chemistry and biology of every matriculant in medical colleges.

(d) Comparison with European medical schools shows that medical education in the United States is deficient both as regards preliminary requirements and in the length of the medical course.

(e) As regards the time necessary to complete the course in medicine, the majority of European countries agree with the ideal standard adopted by the American Medical Association at Portland in 1905.

(f) Primary and secondary education in the majority of European countries may be finished after twelve years of study, agreeing with the time required to complete the public school courses in the United States.

(g) According to the claims of leading educators, the work in the secondary schools of several European countries is the equivalent of the standard high school course in the United States, plus two years of work in a university.

(h) This would seem to indicate that in the results obtained, twelve years of study in primary and secondary schools in Europe are equal to fourteen years of study in the United States.

(i) Eight more colleges have been rated below 50 per cent. as a result of inspections made by the Council during the past year. The number of colleges thus listed as unsatisfactory now reaches 39.

(j) Thirty-two reputable medical colleges offer a combined course whereby the student may obtain the baccalaureate and M.D. degrees in six years.

(k) Fifty-three medical colleges either already require for admission one or more years of work in a college of liberal arts, including courses in physics, chemistry and biology, or have voted to do so in 1910 or before.

(l) Of the medical colleges in the United States several are probably equal to any in the world, and the majority are voluntarily keeping abreast of the demands of modern medicine. There are some, however, which will probably not do so until the state examining boards adopt and enforce higher requirements.

(m) The examining boards of Minnesota and North Dakota, beginning in 1912, will require preliminary education equal to two years of university work. The boards of Colorado, Connecticut and South Dakota will require the equivalent of one year of university work.

(n) Thirty-four states have now established reciprocal relations with four or more other states. Several other state boards have been given legal authority to do so but are not taking advantage of it.

(o) More laws influencing medical education have been secured during the past ten years in this country than in all previous years, and there is a rapid trend toward uniformity of requirements.

IN CONCLUSION.

In conclusion, it should be stated that much splendid work is being done by a number of progressive organizations such as the Association of American Medical Colleges, the American Academy of Medicine and the confederations of examining boards. In addition to that work the American Medical Association, through its Council on Medical Education, is now exerting a constant, steady influence for fairer and more uniform standards of medical education, which will continue to bring good results. Respectfully submitted,

N. P. COLWELL, Secretary.

(To be continued.)

Medicolegal

Validity of City Ordinance as Well as State Law Against "Drumming for Doctors."

The Supreme Court of Arkansas, on the appeal of Burrow vs. City of Hot Springs, affirms a conviction of violating an ordinance of the city providing that any physician or surgeon engaged in the practice of medicine in this city, who, for the purpose of procuring patients, shall employ any solicitor, capper or drummer, or shall subsidize or employ any hotel or boarding-house, shall be deemed guilty of a misdemeanor, and on conviction shall be punished by a fine of not less than $25 nor more than $200, and by the revocation of his license to practice medicine or surgery; that any physician or surgeon whose license to practice shall on conviction under the provisions of this ordinance have his license revoked may appeal from the judgment of conviction, but shall not, pending appeal, be permitted to practice medicine or surgery in this city, and if he does practice, or attempt to offer to so practice pending the appeal, he shall be punished in the same manner and to the same extent as if he had never had any license to practice.

The court holds that the city council had power to pass the ordinance under statutory authority to make and publish such by-laws and ordinances, "not inconsistent with the laws of the state," as it deems necessary, to provide for the safety and to preserve the health, promote the prosperity, and improve the morals, order, comfort, and convenience of such corporation and the inhabitants thereof, it also being given authority to "prohibit, and punish any act, matter or thing which the laws of the state make a misdemeanor," and to prescribe penalties for all offenses committed in violating the ordinance, not exceeding the penalties prescribed for similar offenses against the state laws.

This court in Thompson vs. Van Lear, 77 Ark., 506, passed on what is known as the "Gantt law" (sections 5246 to 5250 of Kirby's Digest), and sustained the act as a proper exercise of the police power of the state in regulating the practice of medicine and surgery. That law makes it a misdemeanor for a physician to procure patients through what are designated "solicitors, cappers or drummers," employed by him for the purpose; and the penalty prescribed by the act was intended to prohibit the drumming by doctors, in the manner set forth in the act. The ordinance under consideration was in conformity with the Gantt law.

So much of Section 5438 of Kirby's Digest as relates to the regulation of "drumming for doctors" must be construed to refer to its regulation in some other way than that designated under the Gantt law; for drumming in the manner designated by the latter act is absolutely prohibited, and the later statute expressly repeals all laws in conflict with it. Under the decision of this court in Thompson vs. Van Lear, and the sections of the Digest (5460 to 5464), the ordinance is valid.

The court need not pass on the question as to whether or not that portion of the ordinance is valid prescribing as a part of the penalty a denial of the right to practice medicine pending the appeal. If the appellant pursued the practice of his profession in the city of Hot Springs or elsewhere in the state pending his appeal, without violating the provisions of the law with reference to "doctor drumming," and he should be convicted for so doing, then on appeal from such conviction the question as to the revocation of his license to practice pending the appeal could be properly raised. As it was he stood convicted of drumming for patients by hired agents. That was the only question the court need consider. As to that it is quite certain that the statute (Gantt law) and the ordinance in question are prohibitive.

Failure of Landlord to Furnish Physician Water in Office.

The Onondaga, New York, County Court says that the case of Rosenbloom vs. Solomon was brought to recover the rent of an office rented in a business block to be used by a physician in his business as a specialist in the treatment of the eye, ear, nose and throat. The premises were rented at a price and for a term agreed on, "with heat and water." No water was at any time furnished in the room so rented; but there was a faucet in a hallway on the same floor, but some distance away from the office so rented. The defendant vacated the premises before the rent sought to be recovered had accrued. This was, as it seems to the court, a case of a breach of a covenant rather than an eviction. In this case the landlord did not perform the agreement to furnish water. Furnishing water in a modern office building, at a point on the same floor of the building outside of the office so rented, where a tenant can go if he desires, is not a furnishing the room so rented with water. Can there be any question that a surgeon, renting an office with water for the purpose of the practice of his profession in a modern office building, understood and had the right to understand that such an agreement meant water in the room so rented? On the failure of the landlord to perform the covenant to furnish water, the tenant had the right to terminate the contract. The trial judge committed error in directing a verdict for the landlord.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

May 2.

1 *The Cancer Problem. E. C. Savidge, New York.
2 *Effects of Urban Cóngestion on Italian Women and Children. A. Stella, New York.
3 The Fifth Nerve in Relation to Ophthalmic Conditions. S. H. Brown, Philadelphia.
4 Piece of Catheter Voided During Urination. W. S. Reynolds, New York.
5 Inunction of Iodoform in Tuberculous Peritonitis. S. F. Wilcox, New York.

1. **Cancer Problem.**—Savidge considers that researches as to the cause of cancer based on bacteriologic transmission having yielded no results, nothing can be expected from either antiseptic or antitoxic treatment. Even if the theory of wandering cells from embryonal life were capable of proof, it would give us nothing of value in treatment, for we could never penetrate fetal life and anchor the displaced or wandering cell. Finally, notwithstanding the clean work of surgery, at least in uterine cases, it has been followed with prompt recurrence and speedy death. The indication of the cancer cause, which becomes more conclusive the more we study it, lies in the physical variation, in the isomeric quality of the most primitive elements entering into the composition of protoplasm. Savidge advocates a ferment theory, though nothing so simple as the application of trypsin to the local manifestations of cancer. He doubts "if the cancer problem will ever be solved by the application of a juice to a spot." A certain known, but not understood, "radial" force—of the sun, the *x*-ray, of radium—can act on products containing the asymmetrical carbon atom to change their isomeric quality as shown by polarized light. That one force can so act presupposes that other forces may so act. The natural ferments contained in the secretions of the body, digestive and protective, "digest" one series of isomers and leave the opposite series untouched. Therefore, the action of this occult "radial" force—this assailing of isomeric integrity—can change protoplasm from digestibility to indigestibility to the natural ferments, and vice versa. The local cancer product consists presumably of changed isomers allowed to grow instead of being "digested." These ferments—presumably—begin to modify long before transition from the preliminary to the final state called cancer. Therefore, even if there be no change in isomeric quality, the secretion suppression would explain the growth of the cancer weed cells that effective ferments would have removed. If there be no flaw in these significances, he declares, the cure for cancer as well as its prevention, lies in the realm of synthetic medicine.

2. **Urban Congestion.**—In a paper before the Conference on Congestion of Population, Stella describes the effects of congestion of population in cities, and shows that the evil effects are greater in the case of those who come from country life than of those who were previously town dwellers. He makes a comparison between the Italian quarter in New York, where there is a very high death rate, and the Jewish quarter, only a half a mile away, where the death rate is only one-half as great as the average death rate of the city. "Yet in the latter district there is a greater population, the tenement houses are taller, and the general sanitary conditions are worse." He attributes the difference to a certain immunity against the ills of urban life acquired by the Jews through long residence in cities. Stella discusses in detail the mortality of Italian children and their morbidity (which he attributes mainly to the lack of fresh air and congestion of bedrooms); the mortality and morbidity of Italian women; and graphically illustrates how the congestion leads to the spread of venereal diseases to innocent sufferers. He urges a better distribution of emigrants by directing their attention to the unoccupied countries rather than the cities before they decide to leave their native land, rather than after they arrive at Ellis Island; and, further, for those that remain in New York and other large cities, he urges the provision of sanitary tenements at less than present rentals, which are from 33 to 50 per cent. of their entire earnings.

Boston Medical and Surgical Journal.

April 30.

6 *Urinary Infections with a Variety of the Staphylococcus Albus. A. L. Chute, Boston.
7 *Treatment of Abnormal Rigidity of the Cervix Uteri by Deep Incisions. N. R. Mason, Boston.
8 *Mattapan Day Camp for Consumptives, Boston. D. Townsend, F. P. McCarthy and R. H. Houghton, Boston.
9 *The Plaster-of-Paris Bar or Rope. R. Soutter, Boston.
10 "Figure-of-Eight" Plaster Jacket. J. D. Adams, Boston.

6. **Urinary Infections.**—Chute reports four cases of staphylococcus infection of the urine in which the urine was alkaline but not ammoniacal. The sediment showed great masses of amorphous phosphates and sometimes even crystals of the ammonio-magnesium phosphate at the time it was passed. There was relatively little pus. Stained specimens of the urine of all these cases showed large numbers of organisms having the general morphology of a staphylococcus, and in two instances what was said to be the *Staphylococcus albus* was found on culture. The cases were rebellious to treatment. The picture was that of an infection with an organism of low virulence or pyogenic power, but showing great tenacity when it came to eradication. The chronic cases simulated to a considerable degree the phosphaturias of digestive origin, that one so often sees.

7. **Deep Incisions of Cervix Uteri.**—Mason reports two cases of rigid cervix treated by Dührssen's deep surgical incisions. He describes the technic and concludes as follows: 1. When immediate delivery is demanded in the presence of an undilated and rigid cervix, multiple deep incisions from the border of the external os to the uterovaginal junction furnish the most rapid and safest method of emptying the uterus. 2. There is no danger of the incisions tearing in patients under full term, or in patients at full term, in whom the pelvis is normal and the fetus is of moderate size. 3. There is no risk of hemorrhage when clamps are employed before making the incisions. 4. The chance of septic infection is no greater than after the lacerations occurring at the time of normal delivery. 5. The scars in the cervix and vaginal vault cause no trouble in the course of subsequent pregnancies and labors.

8. This article is dealt with editorially in this issue.

9. **The Plaster-of-Paris Bar.**—Soutter describes the method of reinforcing plaster bandages by means of the plaster bar or rope. He describes the mode of formation as follows: A very wet plaster-of-Paris bandage is rapidly unwound back and forth to the desired length. No attempt is made to rub it or to apply it to the partially applied dressing. When the roll is entirely unwound it is held at one end by one hand, while the other is grasped around it and slid down to the other end, molding it into a bar. It is then slapped into place and rubbed three or four times. This method of reinforcement is more rapid than the time it takes to describe it. By means of the "plaster rope" the bandage may be made very

light. Sometimes it is not necessary to have lightness, but large windows are needed as in cases of pussy dressings, and yet position is sometimes most important in this class of cases. The plaster is put on in the usual way, but not finished; then a lump of sheet wadding is applied at the point where the "plaster bar" is to be laid. Then the plaster is completed. When the window is cut the sheet wadding roll is removed and the bar forms an arch which is as solid as stone, permitting large windows with good margins around the wounds and plenty of room for extensive dressings.

New York Medical Journal.

May 2.

11 *Year's Progress in Tropical Medicine. J. M. Anders, Philadelphia.
12 *Etiology, Prophylaxis and Treatment of the Social Ill. S. A. Knopf, New York.
13 Psychic Phenomena of Intestinal Toxemias and Their Treatment. J. C. De Vries, New York.
14 Who Originated the Method of Rapid Paraffin Imbedding? A Reply to Dr. Pond. A. Stein, New York.
15 Abstraction of Calcium Salts from the Mother's Blood by the Fetus; Cause of Dental Disease in the Former. J. D. Drennan, St. Thomas, Ont.
16 Hysterectomy of a Five Month Gravid Uterus for Carcinoma Uteri; Recovery. W. H. Dukeman, Los Angeles, Cal.
17 Angulation of the Sigmoid. T. B. Spence, Brooklyn, N. Y.

11. **Progress in Tropical Medicine.**—Anders reviews the progress made during the past year in tropical medicine, and deals with plague, more especially in relation to its etiology and the conveyance of the bacillus; with the work of Asburton and Craig in connection with *Filaria philippinensis* and dengue; Musgrave's observations on paragonimiasis; yellow fever and the recent suggestions that the disease is due to a spirochæta; beriberi, and Hewlett and de Korte's hypothesis that it is the result of a protozoan infection; the production of a vaccine from the *Micrococcus melitensis;* and the etiology of intestinal diseases with the symptom-complex known as dysentery; gangosa; Yount and Sudler's work on human myiasis from the screw worm fly; uncinariasis, especially the recent work on anemia in Porto Rico by the Permanent Commission for the Suppression of Uncinariasis; and the work of the International Conference on Sleeping Sickness, held in London. He also notes the formation of the International Society of Tropical Medicine, during the fourteenth International Congress of Hygiene and Demography at Berlin, and the establishment of two new journals, namely *The American Journal of Tropical Medicine and Parasitology* and the *United States Naval Medical Bulletin.*

12. **The Social Ill.**—Knopf objects to the word "evil" in this connection, as it is ordinarily understood as implying wickedness or criminality, and suggests the word "ill," which figuratively means derangement, or an unwholesome condition. We should not call prostitution *the* social ill, but *a* social ill, for there are alcoholism, gambling, etc. He proceeds then to trace the etiologic factors of prostitution, such as trifling physical defects in children, which lead to masturbation. He deals with another social ill, that of child labor, either in factories or in their homes, where young children are compelled to spend a large part of the time which should be devoted to recreation in housework and other responsible duties. In this connection he refers to the work of the Local Consumers' League of New York, which meets the argument that the children's earnings are necessary for the maintenance of the family, in cases where it is proved to be correct, by giving scholarships on presenting a certificate of regular attendance at school to an amount equaling approximately as much as the children would earn if working. He deals with alcoholism and the many other factors of immorality, mentioning the lack of toilet facilities in our cities, whereby a man making use of a saloon feels obliged to take a drink in return. He advocates more play, more sleep, and less work for school children, as a neurasthenic condition in children leads to the desire for alcohol later. He considers that the Gothenburger system, which consists in the manufacture and sale of alcohol by the government, giving the dispenser of alcohol a salary so that no benefit shall accrue to him for the amount of alcohol he sells, an excellent plan, but doubts its practicability in this country. He advocates state institutions for the treatment of alcoholism, to which the habitual drunkard should be committed by law, and those desiring to free themselves from the habit could commit themselves voluntarily. He blames also the thin partitions, as well as the promiscuous mixing of sexes, in crowded quarters as tending to increase demoralization. He refers to the work of the Garden Cities Association of England in distributing the manufactories into country places, with the growing up of new industrial villages about them. He condemns the disreputable dance halls, which are the frequent occasion of a young girl's fall, but cautions the necessity for recreation, and urges that we replace them with other places of amusement. He advocates the enactment of laws with reference to refusal of marriage license to individuals afflicted with venereal disease, and particularly urges an educational crusade, not only with regard to boys, but to girls also. He refers to the present tendency toward crowding together in large cities, and thinks that something must be done to check this, by rendering life in villages and in the country more attractive by good libraries, healthful amusements, etc., so that more people should be willing to live there. He deplores the importation of girls for immoral purposes from abroad. Another point to which he draws attention is the underpayment of girl workers as clerks or saleswomen. He says that many large employers of labor who are philanthropists according to their light, would exercise truer philanthropy in paying those who work for them better wages, rather than in devoting large sums of money to the foundation of churches, hospitals, libraries and charitable institutions when they die. Regarding the social situation as a disease, he says that in other diseases when everything possible in the way of prevention has been done, the disease itself is treated. For the treatment of the ill he enumerates three methods: First, by repression; second, by giving to all those diseased the best scientific medical treatment; and third, by offering to all who wish to leave the ranks of prostitution shelter, protection and work. In regard to the first he advocates some method of segregation, to prevent the diffusion of vice throughout the city and checking the concomitant thievery and other crimes. In regard to the second, he points to the meager supply of beds in the hospitals of our cities devoted to venereal disease and urges a much larger supply. With regard to the third, he urges the establishment of institutions for the reception of those who desire voluntarily to abandon the life into which they have fallen or have been seduced.

Lancet-Clinic, Cincinnati.

April 25.

18 Diagnosis and Prognosis in Gastric Ulcer. R. H. Moss, Niagara, Ky.
19 The Appendicular Artery. B. Robinson, Chicago.
20 Urinary Infections in Children. I. A. Abt, Chicago.
21 How Several Professors Treated a Member of the Guild. G. M. Gould, Philadelphia.

Medical Fortnightly, St. Louis.

April 25.

22 Early St. Louis Medical History. W. B. Outten, St. Louis.
23 Corneal Ulcers. C. P. Frantz, Burlington, Iowa.
24 Hematology from the Clinic and the Laboratory. L. H. Warner, Brooklyn, N. Y.

Journal of Medical Research, Boston.

March.

25 *Tuberculous Infection Through the Alimentary Canal. M. P. Ravenel and J. Reichel, Philadelphia.
26 *Agglutination Studies in Tuberculosis. H. R. M. Landis, Philadelphia.
27 Factors Determining the Coagulation of Blood Serum by Bacteria. D. H. Bergey, Philadelphia.
28 Influence of Blood Serum on Autolysis. W. T. Longcope, Philadelphia.
29 *Congenital Obliteration of the Bile Ducts with Cirrhosis of the Liver. R. S. Lavenson, Philadelphia.
30 *New Method of Examination of the Feces for the Ova of Uncinaria. Report of a Case of *U. Americana* and of a Case of *U. Duodenale.* W. Pepper, Philadelphia.
31 Differentiation of *Bacillus Coli Communis* from Allied Specimens in Drinking Water. D. Rivas, Philadelphia.
32 *Experimental Observations on the Value of Intestinal Antiseptics. J. D. Steele, Philadelphia.
33 Phagocytosis in Diphtheria. B. F. Royer, P. G. Weston and G. F. Clark, Philadelphia.
34 *Syringomyelia with Syringobulbia. J. H. W. Rhein, Philadelphia.
35 *Association of Syringomyelia with Tabes Dorsalis. W. G. Spiller, Philadelphia.
36 *Study of Benign Cystic Epithelioma. M. B. Hartzell, Philadelphia.
37 *The Germicidal Property of Milk. M. J. Rosenau and G. W. McCoy, Philadelphia.

25. **Alimentary Tuberculosis.**—The authors regard the results of their experiments on guinea-pigs, on the whole, as giving confirmatory evidence of the work of others, demonstrating the importance of the alimentary canal as a portal of infection of tuberculosis.

26. **Agglutination in Tuberculosis.**—Like many others, Landis finds that the agglutinin test is valueless as a diagnostic agent in tuberculosis, but he thinks that it forms an available means of estimating the degree of immunity attained in tuberculosis by means of tuberculin and other forms of treatment. Furthermore, he states that the absence of the agglutinating reaction in fluids containing but little albumin, such as cerebrospinal fluid, renders it highly probable that the agglutinins are closely allied to the albumins.

29. **Atresia of the Bile Ducts.**—Lavenson concludes that in the congenital condition of which the two most prominent features are an obliteration of some portion of the bile ducts and a more or less extensive degree of cirrhosis of the liver, the obliteration of the bile ducts is the primary condition and the cirrhosis a result of the ensuing biliary stasis. In the majority of instances, the obliteration of the ducts is the result of an anomaly of development, a failure of the formation of a lumen, hence the term "atresia of the bile ducts" better expresses the existing condition than "obliteration of the bile ducts."

30. **Examination of Feces in Uncinariasis.**—Pepper recommends repeated centrifugalization of a small amount of much diluted feces and the subsequent microscopic search of the sediment. After each centrifugalization the supernatant dirty water is thrown away and fresh water added, the whole then being shaken up and again placed in the centrifuge. In this way all bacteria, free coloring matter, light vegetable matter, etc., are soon got rid of, and only the heavier particles, including any ova that may be present, will remain. After about six repetitions of washing, the sediment can be easily and satisfactorily examined under the low power of the microscope. There is then left no obscuring cloud of bacteria or fine granular débris, but instead each ovum or muscle fiber or crystal or vegetable fiber stands out sharp and clear. A rather peculiar fact is that the ova of the uncinaria, although sticking closely to the glass slide, do not seem to adhere to any of the other constituents of the stool. When a drop of washed sedimented feces is allowed to stand on a slide for a few minutes and then gently immersed in water and examined microscopically, the eggs are found adhering to the slide while all else has been washed away. If additional drops are placed on the slide and washed off, the slide becomes thickly studded with the eggs.

32. **Intestinal Antiseptics.**—In three cases in which bismuth salicylate was used, the daily average amount of bacteria fell within three days after the drug was given to one-half or one-quarter of that in the control observation. In two cases in which betanaphthol was given the bacteria fell after three days to about one-half of the control. In the third betanaphthol case the bacteria increased for three days and then remained about the same as the control for three days; this patient was a young woman with gastroptosis and insufficient gastric secretion, but with no decided symptoms of intestinal disturbance. In this case it is not clear why the drug failed to act, and it must not be assumed without further investigation that the action of these drugs will be the same in a diseased bowel as in a healthy one.

34. **Syringomyelia with Syringobulbia.**—The case presented paralysis of the superior oblique muscle of the right eye, transient ptosis on one side, contracted fields of vision, hemiatrophy of the tongue, hemiplegia and ataxia; there was a cavity in one anterior pyramid of the medulla oblongata, with ascending degeneration in the anterior pyramid on the same side, and leptomeningitis (syphilitic).

35. **Syringomyelia and Tabes.**—While a few cases of tabes with syringomyelia are reported, they are, with one exception (Philippe and Oberthur), all by German authors. This case by Spiller is, therefore, the first to appear in either American or English literature. Several writers have held that the association of the two processes is not merely a coincidence, but that one stands to the other in the relation of cause and effect; others have expressed themselves guardedly. Spiller regards his case as one of tabes associated with syringomyelia.

36. **Benign Cystic Epithelioma.**—Hartzell states that so-called benign cystic epithelioma is a neoplasm having its origin in the hair follicles, and in these structures alone. In view of its follicular origin the name given it by Jarisch—trichoepithelioma—is most appropriate, and should be used to the exclusion of the many others in vogue. Since, in a fair proportion of cases, destructive ulceration has been observed, as well as a tendency to recurrence after removal, the affection can no longer be regarded as a benign one.

37. **Germicidal Property of Milk.**—Rosenau summarizes his article as follows: Judged by the number of colonies that develop on agar plates, the bacteria in milk first diminish then increase in number. This so-called germicidal property of milk occurs only in the fresh raw fluid. For the most part no actual reduction in the number of bacteria occurs. However, when compared with the controls a restraining action is evident. The phenomenon, therefore, appears to resemble that of a weak antiseptic rather than that of a true germicide. When milk is kept warm (37 C.) the decrease is pronounced within the first eight or ten hours. After this the milk has entirely lost its restraining action. When the milk is kept cool (15 C.) the decrease is less marked, but more prolonged. The decrease in the number of bacteria is largely apparent, being due at least in part to agglutination. The bacterial clusters, to a certain extent, may be shaken asunder. This fact goes far to reconcile the discordant results of the various investigations on the germicidal properties of milk. Those who used dilution methods with vigorous agitation broke up the bacterial clusters and thus obtained a larger number of colonies on agar plates than those who plated directly with different technic. Some of the polymorphonuclear leucocytes in milk seem to possess the power of phagocytosis, judged by microscopic preparations. Phagocytosis, however, plays no essential part in the "germicidal" action of milk, for the decrease in numbers is quite as marked in the cell-free milk as in the sediment rich in leucocytes. The germicidal action of milk is specific. For instance, one sample restrained typhoid and *Staphylococcus pyogenes aureus*, but not paratyphoid A or B. Dilution experiments demonstrate the enfeeblement of agglutinins rather than the presence of a germicidal substance in solution. The germicidal actions of blood and milk resemble each other in some particulars. Blood serum acts more quickly and much more powerfully than milk. Freezing milk for ten minutes and then thawing it does not affect the phenomenon in question. In one experiment freezing for forty-eight hours did not influence its restraining action on typhoid, but destroyed it for *Bacillus lactis aërogenes*. Boiling milk or heating it above 80 C. destroys its "germicidal" properties. The effect of lesser degrees of heat varies with the microörganism. Thus the restraining action for *B. lactis aërogenes* is weakened by first heating the milk at 55 C. and almost destroyed at 60 C.; for typhoid it is not affected by heating the milk at 60 C. for twenty minutes, but is materially influenced at 70 C. for thirty minutes. The "germicidal" action of milk varies in different animals and in the milk from the same animal at different times. At most, the action is variable and feeble. It can not take the place of cleanliness and ice, but may be taken advantage of in good dairy methods.

American Journal of Obstetrics, New York.

March.

38 *Recent Advances in Obstetrics. E. B. Cragin, New York.
39 *Early Diagnosis of Pregnancy. E. McDonald, New York.
40 High Rectocele After Perineal Repair. R. L. Dickinson, Brooklyn, N. Y.
41 Fistula Between Fundus of Uterus and Upper Portion of Intestine. Operation; Cure. W. P. Graves, Boston.
42 *Value of Blood Observations in Gynecologic Cases. H. A. Duncan, Philadelphia.
43 *Dystocia from Ventral Fixation. O. P. Humpstone, Brooklyn, N. Y.
44 *The Hymen: Anatomically, Medicolegally and Historically Considered. E. S. McKee, Cincinnati.

45 *Causation and Treatment of Certain Forms of Metrorrhagia. A. P. Clarke, Cambridge, Mass.
46 Puerperal Hemorrhage. J. N. Bell, Detroit, Mich.
47 Treatment of Fractures. D. C. Moriarta, Saratoga Springs, N. Y.

38. **Advances in Obstetrics.**—Cragin considers recent advances in obstetrics along the following lines: 1, Better knowledge of obstetric pathology; 2, better knowledge of the mechanical problem of delivery; 3, better procedure.

1. Distinct advance has been made in the toxemia of pregnancy, as evidenced by (a) pernicious vomiting, (b) eclampsia. (a) The chief pathologic lesion in pernicious vomiting is a fatty and hydropic degeneration of the liver, apt to be diffuse, but in some cases zonal, going on to necrosis. The kidneys show more or less degeneration of epithelium of convoluted tubules. In the urine are present some or all of the following: acetone, diacetic acid, beta-oxybutyric acid, indican, a trace of albumin, sometimes bile pigment, also abnormal nitrogen ratios showing disturbance of proteid metabolism with faulty oxidation. The author's experience shows as a rule a high ammonia nitrogen, high amido acid and undetermined nitrogen, and a low urea nitrogen. (b) Eclampsia is divided into two types, the hepatic and the nephritic. In the hepatic type, aside from the convulsions, the characteristic symptoms are vomiting, perhaps of blood, with little edema; little albumin and few casts, at least until after a convulsion, often jaundice, tenderness over liver, and tympanites. In the nephritic type, headache, disturbance of vision, high tension pulse, nervous irritability, edema, marked albuminuria and casts. The two types are often combined. The nephritic type is again subdivided into two classes: (*a*) Patients who have previously suffered with nephritis and in whom the eclampsia has developed an acute exacerbation of an old type; (*b*) those whose kidneys have been previously free from disease. Regarding puerperal infection we have a better knowledge of the ease with which infection may be conveyed from an infected vulva to a sterile vagina, or changed from a localized uterine infection to a general bacteriemia.

2. As regards the mechanical problem, we have advanced in the method of measuring the fetal head in the latter part of pregnancy; the early recognition of posterior positions of the vertex and early anterior rotation of the occiput are modern advances.

3. In better procedure may be classed more complete and thorough examination of the urine in relation to pernicious vomiting, early diagnosis and hysterectomy in chorioepithelioma, the rule to keep out of the uterus unless it contains material that must be removed, frequent and careful observations of the size of the child's head, the improvement in Cesarean section, etc. The author, however, emphasizes the fact that not all that is new is better than the old. With regard to the immediate repair of lacerations of the cervix, he has seen three cases of marked puerperal infection which he could attribute to nothing else than this cause, and while in proper surroundings and conditions its advantages may be admitted, for the general practitioner the safer rule is the old one—immediate trachelorrhaphy for hemorrhage only.

39. **Diagnosis of Early Pregnancy.**—McDonald analyzes the signs present in 100 cases of pregnancy, varying between the fifth and the thirteenth week. The diagnosis of pregnancy must depend on no single sign, but on the conjoined evidence of a number of signs. The signs of inspection of the vagina offer very reliable evidence before the third month, but they are not of great use before the eighth week. At that time, blush and congestion of the vagina and cervix are present in about half the cases. The diagnosis of early pregnancy must, after all, depend on the changes wrought in the uterus by the growing ovum. Among these changes the most suggestive is irregular enlargement, symmetrical or otherwise. This condition of growth of the uterus is essential to a diagnosis of early pregnancy. Intermittent contractions, while they may exist in other conditions, are the most valuable of the corroborative signs. These contractions may constantly be felt if the conditions of examination are proper and the examination is conducted skilfully. The signs of compressibility and flexibility of the isthmus are of great value in the diagnosis of the condition, and, taken with intermittent contraction and uterine enlargement and softening, allow of a positive diagnosis being made in the early weeks of pregnancy.

42. **Blood Observations.**—Duncan presents some of the conclusions drawn from 300 blood observations: Normal blood findings vary with diet, exercise, hot and cold baths, starvation, etc. Cyanosis, due to general or local causes, purging, hemorrhage, injections of large quantities of normal saline, etc., are some of the causes of error. Negative findings can not always be considered, but positive findings are always of value. In relation to operating, the hemoglobin percentage should be taken not alone, but in relation to the general condition of the patient. Cases of chronic inflammation are more apt to be accompanied by a low hemoglobin percentage than those of acute inflammation. In determining the white blood count the differential count is important. A leucocytosis so low as 9,000 sometimes shows marked increase in polymorphonuclears. This indicates pus with low body resistance. A decided leucocytosis of 20,000 to 30,000 with slight increase in polymorphonuclears clearly indicates a mild infection with active resistance. A high leucocytosis with decided increase in polymorphonuclears means severe pyogenic infection with good resistance. Improvement will be shown by decrease in polymorphonuclears and white blood count. Decrease of white blood count with increase of polymorphonuclears indicates that the pyogenic infection is overpowering the resistance. Leucocytosis and increase in polymorphonuclears are found in many medical conditions, and in this series leucocytosis accompanied sarcoma of the ovaries and carcinoma of ovaries and uterus. The author discusses the clotting power of the blood and describes the technic with Wright's coagulometer, which in his hands gave the normal clotting time as two minutes and from thirty to forty-five seconds. As to the relation between the physician, the surgeon and the laboratory man, Duncan says: "Surely it can not be a sign of ignorance that the physician, or surgeon, who formerly gave his opinion after asking a few questions regarding symptoms, and noting the pulse, temperature and general appearance, should reserve his diagnosis until he has received the report of the microscopist on the blood or body secretions and excretions." But, on the other hand: "No wise surgeon will base his diagnosis or course of action on the blood examination alone. In conjunction with clinical features and the history, blood findings are of great value, both for diagnosis and prognosis. This is especially true in inflammatory conditions."

43. **Ventral Fixation.**—Humpstone reports six cases of dystocia from ventral fixation, and concludes that any operation fixing the uterus, either the newer vaginal fixation or the older abdominal method, is absolutely to be condemned before the menopause unless sterility is assured. Let the uterus be brought into position by some operation on the ligaments, for so far as he is able to find, no dystocia follows such procedure.

44. **The Hymen.**—This article appeared in the *Lancet-Clinic*, March 7, 1908, and was abstracted in The Journal, March 28, 1908, page 1077. There was published in the *American Journal of Obstetrics*, August, 1904, an article by Dr. George Gellhorn on "The Anatomy, Pathology and Development of the Hymen." The *St. Louis Medical Review* for March reproduces in parallel columns thirteen paragraphs from each of the two articles, some of them of considerable length, the verbatim parallelism between them being indeed remarkable.

45. **Metrorrhagia.**—Clarke mentions among the general causes of metrorrhagia the hydremic form of obesity, plumbism, phosphorus poisoning, icterus, scorbutus, purpura, and certain other forms of chronic disease. The occurrence of any of these several affections tends to diminish the plasticity of the blood and thus to cause disturbances of the circulation, and to lead at times to excessive menstrual flow and to metrorrhagia. The treatment for the relief of hemorrhage from such causes should be directed mainly toward the removal of the original trouble.

Chicago Medical Recorder, Chicago.

March.

48 *Cardiac Symptomatology of Arteriosclerosis. R. H. Babcock, Chicago.
49 *Cardiac and Renal Consequences of Arteriosclerosis. A. R. Elliott, Chicago.

50 *Mistakes in Refractive Work. H. Gradle, Chicago.
51 Complications of the Accessory Cavities of the Nose and Nasopharynx Occurring in Influenza. T. Faith, Chicago.
52 Effect of Influenza on the Nervous System. D. R. Brower, Chicago.
53 *Epidemiology of Influenza. J. H. Salisbury, Chicago.
54 *Religious Psychology. Bishop Fallows, Chicago.
55 Acute Otitis Media. S. E. Wright, Marinette, Wis.

48 and 49. Abstracted in The Journal, March 8, 1908, pages 1069 and 1070.

50. **Mistakes in Refractive Work.**—Gradle protests against the uncritical use of mydriatics, the zeal to correct all errors and at all times, and the too elastic interpretation of the eyestrain. He discusses various instances of each of these three forms of error.

53. **Epidemiology of Influenza.**—As a result of a study of the history of epidemics of influenza, Salisbury believes that: 1. The epidemic arises from a locality where the disease is endemic. 2. It usually follows the lines of travel without regard to prevailing winds. 3. It may be limited by some insusceptibility in the population. 4. Epidemics vary in severity. 5. The occurrence of the disease is connected in some way with the winter season and with peculiar conditions of the atmosphere. 6. Microbes undoubtedly modify the epidemic picture and are active in determining the lesions in individual cases, but apparently they are not the sole cause. 7. Depressing measures are injurious. 8. Probably the great aggregations of population in large cities favor the endemic character of the disease in recent years and its great severity in individual cases.

54. **Religious Psychology.**—Bishop Fallows discusses the subject of the Emmanuel movement of religious therapeutics, which is not a new sect or cult; no one has to leave his own church to take advantage of it. It simply forms societies for health and happiness, to teach the principles of right living and right thinking. It differs from the modern cults in that 1, it clearly recognizes the reality of the mind and the body and the inseparable relation existing between them, while connected with the human organism; 2, it affirms the value of anatomy, physiology, bacteriology, histology, etc., as well as that of psychology; 3, it maintains the existence of a fundamental distinction between functional and organic disease; 4, it asserts the absolute necessity for the work of the physician; 5, as a proper department of practical church work it aids the poor and necessitous without commercialism. This movement comprehends the principles underlying all that is distinctly known as faith healing, divine healing, mental healing, or any other form of unrecognized psychotherapy. He describes the history and progress of the movement from its origin in Boston sixteen months ago, and emphasizes particularly its cooperation with the medical profession.

New York State Journal of Medicine.

March.

56 *Indications for Artificial Abortion in First Three Months of Pregnancy. C. Jewett, Brooklyn.
57 Regulation of a Rural Milk Supply. S. W. S. Toms, Nyack.
58 *Two Cases of Streptococcus Septicemia Treated by Bacterial Vaccines After Method of Wright. A. T. Bristow, Brooklyn.
59 *Sequence of the Pathologic Changes in Appendiceal Peritonitis. E. M. Stanton, Schenectady.
60 What New York State Is Doing for Its Crippled and Deformed Children at the West Haverstraw State Hospital. N. M. Shaffer, New York.
61 The Nature of Tumors. E. H. P. Ward, White Plains.
62 The Medical Society of the County of New York. J. R. Goffe, New York.
63 Lives of Officers of the Medical Society of the State of New York. J. J. Walsh, New York.

56. **Indications for Artificial Abortion.**—Jewett discusses, without attempting definite classification, the principal indications for the induction of abortion in the first three months of pregnancy. In the present status of Cesarean section, pelvic contraction no longer justifies its routine use. In pelvic tumors the indication depends more on the tumor than on the pregnancy. Operation on the tumor should be governed by the same rules as in the non-gravid woman. Malignant disease of the cervix at its inception calls for hysterectomy. Later, with advanced disease, the child should be allowed to go to viable period. In uterine displacements abortion is only rarely necessary, when liberation of adhesions and reposition of the organ can not be effected by abdominal section. In vesicular mole prompt intervention is indicated. Death of the embryo indicates operation immediately on diagnosis. In toxemia of pregnancy the indication is pernicious vomiting; eclampsia is rare in the first three months. In hyperemesis it is better to interfere too early than too late. In pulmonary tuberculosis Jewett discusses the opposing views of various authorities. His own view seems to be that in light and incipient tuberculosis the disease may be retarded by the termination of pregnancy, and that the indication is plain when the disease grows worse at the onset of pregnancy; in severer types interference usually does no good. In regard to heart disease there seems reason to assume that, except when compensation is good and is likely to remain so, the interests of the patient will best be served by early interruption of pregnancy. In chronic nephritis the chances for the child are small, the risk to the mother's health and life is great, so that he usually advises evacuation of the uterus. With increasing albuminuria, elimination below normal, much ventricular hypertrophy, marked nervous disturbance, or albuminuric retinitis, intervention is imperative. Pregnancy with true diabetes, he thinks, should, with rare exceptions, be terminated in the very first months. Other conditions in which abortion may be indicated are polyneuritis gravidarum, myelitis ascendens, the worst forms of chorea, in rare instances only in psychoses, leukemia and pernicious anemia, and threatened loss of vision from causes dependent on pregnancy. Epilepsy is not recognized as an indication for abortion nor is hysteria, but in hysteroepilepsy the uterus should be emptied. The uterus has been emptied in the early months with marked benefit to the patient in exophthalmic goiter.

58. Abstracted in The Journal, Feb. 22, 1908, page 639.

59. Abstracted in The Journal, Feb. 15, 1908, page 558.

California State Journal of Medicine, San Francisco.

March.

64 *The Awakening of Public Interest in Sanitation. W. F. Snow, Berkeley.
65 Eleven Cases of Gastroenterostomy. W. A. Clark, San Leandro.
66 *Spinal Anesthesia. A. Newman, San Francisco.
67 Plea for United States Army Contract Surgeons. H. du R. Phelan, San Francisco.
68 Crimes or Maladies? A. E. Osborne, Santa Clara.
69 Cystoscopic Appearance in Some Cases of Seminal Vesiculitis. R. E. Peck, San Francisco.
70 Zittmann's Decoction. D. W. Montgomery, San Francisco.
71 Perforation in Typhoid Fever Successfully Treated by Operation. E. Newell, San José.

64. **Sanitation.**—Snow considers the methods of bringing about a thorough awakening in reference to sanitation. He insists that what Great Britain has acquired, through the expensive but effectual teaching of terrible visitations of epidemic disease, such as cholera and typhus, is what America most needs—trained, full-time medical officers of health, and security of tenure in office. The requirements to attain these ends are: 1, The active support of a public, educated in personal hygiene and general sanitation; 2, the enactment of adequate legislation covering the duties and powers of our public health departments; 3, proper facilities in our universities or medical schools for training expert assistants in vital statistics, epidemiology, public health, laboratory technic, etc., whom we may appoint to carry out the details of direct investigations on which all our executive actions should be based, if we are to deal effectively and fairly with the varied problems arising from day to day. He concludes by urging the association to work for: 1, paid secretaries for the county health officers; 2, the establishment of a bureau of sanitary survey and epidemiology of the state board of health; 3, better coordination in public health education work.

66. **Spinal Anesthesia.**—Newman discusses in great detail the subject to spinal anesthesia with various anesthetics, and concludes in general that, compared with spinal anesthesia, chloroform and ether are practically harmless. Still the outlook is improving for optimism and indiscriminate puncturing are giving place to a saner attitude; the more poisonous drugs are being eliminated; technic has been perfected and operators have become more skilled; so that, though this method will never

rival ether or chloroform, it will have its uses, and in selected cases will be the method *par excellence.*

St. Louis Medical Review.

March.

72 *Compound Comminuted Fracture of the Bones of the Face. J. F. Meuestriua, St. Louis.
73 Case of Hodgkin's Disease, with Autopsy Findings. C. W. Tooker, St. Louis.
74 *Inversion of the Vagina Operated on by Colpocleisis. F. J. Taussig, St. Louis.
75 Gonnorrheal Arthritis. J. V. Shoemaker, Philadelphia.
76 Surgery of the Ureter. B. M. Ricketts, Cincinnati.

72. **Fractured Bones of Face.**—Menestrina reports the case of a miner injured in the head by premature blast of dynamite. The frontal, sphenoid, ethmoid, two nasal, two superior maxillary, right lachrymal, two malar, turbinated, vomer and inferior maxillary bones were more or less fractured and comminuted. Fragments of coal, bone and powder came away daily in the dressing. The patient hovered between life and death for four weeks, delirious nearly all the time, but gradually regained consciousness at the end of the fourth week. The mental condition of the patient three months later was strangely unimpaired considering the extent of the injury. There was no impediment of taste, hearing or smell, and the only sensory disturbance was a marked hyperesthesia in structures supplied by the superficial and portion of the deep cervical plexuses (ascending branches) and descending branches (supraclavicular). There is no condition present which would account for a central origin, and nothing is perceptible in the course of the nerve to indicate a peripheral origin.

74. **Inversion of Vagina by Colpocleisis.**—Taussig reports the case of a widow nearly 60 years of age, who suffered from prolapse of the vagina, the uterus having been removed in 1900 in consequence of complete prolapse. As it was hardly likely that a plastic operation would have given more than temporary relief, the remaining vaginal sac was dissected away, the levator ani fibers were approximated by buried catgut sutures, and the vestibulum vaginæ was closed by interrupted silkworm gut sutures. The recovery, subjective and objective, was complete.

New Orleans Medical and Surgical Journal.

March.

77 *Traumatic Epilepsy. E. D. Martin, New Orleans.
78 *Epileptics in Schools of All Grades, Universities Included. E. M. Dupaquier, New Orleans.
79 Case of Jacksonian Epilepsy. L. L. Cazenavette, New Orleans.
80 *Ocular Tuberculin Reaction in Diagnosis of Tuberculosis. C. C. Bass, New Orleans.
81 *Opsonins and Vaccine Therapy. Id.
82 Report of Antituberculosis League to State Medical Society. E. L. McGehee, Sr., New Orleans.
83 Physiologic Effects of the Waters of Hot Springs, Ark. E. H. Martiu, Hot Springs, Ark.
84 Case of Forward Dislocation of the Humeral Head Irreducible by Manipulation. Reduced by Open Operation. F. W. Parham, New Orleans.
85 Fracture with Fibrous Union, Treated by Induced Pin-Callus. W. M. Perkins, New Orleans.
86 Gallstone Disease. J. M. Batchelor, New Orleans.

77. Abstracted in THE JOURNAL, Jan. 18, 1908, page 233.

78. **Epileptics in Schools.**—Dupaquier discusses the so-called epileptic character which demands attention from the educational point of view. What is wanted, he says, is to bring to a focus the nature of this so-called epileptic character, in order that its manifestations may be interpreted in the proper light. He submits a description of this condition, translated from Dr. Paul Boncour's paper in the *Progrès Médical.* Dupaquier points out that the symptoms mentioned are general and neuropathic and that to accept them as pathognomonic of epilepsy without some sign of paroxysmal epilepsy is absurd. He urges those concerned in schools and universities to endeavor to ascertain whether those guilty of severe violence or cruelty in games, hazing, etc., beyond the limits of humane fun and joke are not possibly true epileptics. The family physician should be called in, and if the ordinary paroxysmal manifestations can be shown, the subject may be regarded as a true epileptic; otherwise he should often be regarded as a murderer.

80. **Ocular Tuberculin Reaction.**—Bass summarizes his conclusions from personal experience as follows: (a) The reaction is an immunity reaction, being an expression of acquired immunity, and may occur in healed cases and fail in moribund cases. (b) It occurs in a large percentage, if not all, cases of tuberculosis. (e) It occurs in few, if any, nontuberculous cases, except healed cases. (d) It certainly seems the best method yet suggested of using tuberculin for diagnosiing tuberculosis. (e) Calmette's original claims seem wholly justified. They are: 1. It is absolutely safe. 2. It is so easy of application that any one can carry it out. 3. It produces no constitutional disturbance,and locally only a slight ocular disturbance and lachrymation. 4. It is accurate and delicate at the hypodermic method.

81. **Vaccine Therapy.**—Bass describes the technic in general, and offers an original simplified technic of his own, by which he says that anybody conversant with the use of a microscope and blood counting can determine the tuberculo-opsonic index with fair accuracy, and without the facilities of a well-equipped laboratory, such as the Leishmann technic requires.

Long Island Medical Journal, Brooklyn.

March.

87 *Intestinal Putrefaction as a Factor in the Etiology of Nephritis. H. A. Houghton, Bayside, Long Island, N. Y.
88 *Diet in Chronic Nephritis. L. Louria, Brooklyn, N. Y.
89 *Place of the Medical Spirit in the Ideal Hospital. L. S. Pilcher, Brooklyn, N. Y.
90 Clinical Study of a Case of Sarcoma of the Mediastinum. J. Ronsheim, Brooklyn, N. Y.
91 Clinical Study of Two Cases of Cerebrospinal Meningitis. W. Liutz, Brooklyn, N. Y.

87. **Intestinal Putrefaction and Nephritis.**—Houghton says that the experimental evidence on the relation between enterogenic intoxication and nephritis is meager or negative, and whatever light is to be gathered must come from clinical observation. He details cases tending to indicate an etiologic relation, though not necessarily the sole one, between excessive proteid putrefaction in the bowel and nephritis. With reference to this, he has formulated the following general principles: 1. To some extent the character of the kidney lesion depends on the character of the toxin which produces it. 2. To a greater extent, however, the character of the lesion depends on the amount of toxin to which it is exposed and the length of time over which the process extends. In other words, an irritation so small as to do no more damage than prolonged physiologic overwork will, if continued long enough, produce interstitial change; on the other hand, acute irritation will, in general, be confined largely to the parenchyma. He gives a schematic representation of the common chemical changes in the proteid molecule under the influence of digestive enzymes and the action of bacteria.

88. **Diet in Nephritis.**—Louria discusses the physiologic chemistry of renal excretion in regard to diet. His experience, though limited, enables him to support the French dechloridization treatment. The salt-free diet certainly seems to cause a general improvement of the patient, the diminution of edema, and a loss of weight, all of which seem to be parallel phenomena. Indeed, increase of weight in a nephritic may be interpreted as the first symptom of the beginning of an edema not yet visible. He considers the idea that red meat is more harmful than white, as exploded. As regards the quantity of meat, the nephritic should receive a daily ration of 100 grams of albumin. Assuming that he takes 750 c.c. of milk containing 26 grams of albumin, two eggs with 13 grams of albumin, and that 20 grams of proteids are in other food, as bread, vegetables, etc., there still remains 50 grams of proteid that he can be allowed in the form of meat, which amounts to about half or three-quarters of a pound.

89. **The Medical Spirit in the Hospital.**—Pilcher says that during the last generation, during which time the hospitals of the world have assumed an importance in the world's work never before occupied by them, those institutions have attained the greatest degree of efficiency in the discharge of their functions as hospitals, in which medical men have been accorded special influence in their administration, not necessarily to the extent of having the entire executive control vested in them, but in a manner and degree that has secured to them the opportunity to infuse into the work and development of such institutions in a marked degree their own special medical spirit. The unquestionable superiority of the hospitals of

Germany during the last fifty years may be traced directly to the dominance in their affairs of the medical men who, as chiefs in their several departments, have been vested with influence and power to direct the affairs committed to them unequaled in any similar institution in the world. He cites as an instance the excellent work of St. Mary's Hospital, Rochester, N. Y., which without depreciating the personal qualities of its well-known surgeons, has in large part been rendered possible by continuity of work, continuity of influence, continuity of responsibility, with loftiest ideals and loftiest aims and the loyal and continued support of the sisterhood. He points for further exemplification to the influence of well-known surgeons in the past with English and Scottish hospitals, and of similar instances in this country.

Ohio State Medical Journal, Columbus.

March.

92 *Treatment of Gastric Hypoacidities. M. J. Lichty, Cleveland.
93 Glandular Fever. A. M. Crane, Marion.
94 Radical Cure of Inguinal Hernia. G. Goodhue, Dayton.
95 Hemorrhage from the Bladder with Subsequent Paralysis of the Organ for Three Months. J. G. Albers, Fulda.
96 *Effects of Dye Stuffs on the Skin. W. I. LeFevre, Cleveland.
97 Detection of Calculi of the Kidneys and Ureters by the Skiagraph. K. Dunham, Cincinnati.
98 Corneal Infections. T. F. Bliss, Springfield.
99 Treatment of Purulent Ophthalmia. H. B. Harris, Dayton.

92. **Hypoacidities.**—Lichty lays stress on the fact that many patients do not need treatment for the stomach alone. He has found the hydrochloric acid treatment so disappointing that he now seldom uses it, and only with caution and in small doses. The patient rather than the hypoacidity should be treated. He describes the uses of bitter tonics, and says that surprising as it may seem, in spite of acid deficiency such patients often get relief by the use of alkalies and pancreatin, but the greatest need is to restore,and if possible to exceed, the former nutrition.

96. **Dermatitis from Dyestuffs.**—LeFevre calls attention to the effects on the skin of various dyestuffs used for articles of clothing, etc., and insists on avoiding colored articles of clothing next to the skin. He suggests that with the anilin dyes it may be the mordant used to set the dye—antimony, tin, etc.—that does the harm. He refers also to skin conditions caused by the grease paints used in theatrical make-up.

Journal of the South Carolina Medical Association.

March.

100 *Uncinariasis. W. Weston, Columbia.
101 Liberal Diet in Typhoid Fever. J. La B. Ward, Baltimore.
102 *Sea Bathers' Ear. C. W. Kollock, Charleston.
103 Case of Laparotomy for Gunshot Wound. J. C. Harris, Anderson.
104 Abdominal Drainage. F. L. Potts, Spartanburg.
105 Ocular Injuries. E. W. Carpenter, Greenville.

100. This article is practically identical with one by the same author in the same journal for December, 1907.

102. **Sea Bather's Ear.**—The fact that continued sea bathing is a frequent cause of ear trouble is not a novelty, but Kollock's experience of its frequency leads him to call attention again to the subject. He enumerates certain pre-existing conditions that render the individuals more liable to the injurious effects of sea bathing—an accumulation of wax, a small external canal, or one choked at its entrance with hairs, eczema of the external canal, and all cases of trouble of the middle ear, in which it is particularly likely to set up mastoid disease. He suggests the usual measures for the relief of these conditions, on the principle of quick removal, thorough drying and drainage, and the prophylactic measure of those predisposed by plugging the ear with non-absorbent cotton. Those who have middle-ear disease or perforated drum should not bathe in salt water at all.

Colorado Medicine, Denver.

April.

106 *Recurrent Autohypnotic Sleep, Hysterical Mutism and Simulated Deafness; Symptomatic Recovery with Development of Hypomania. B. Oettinger, Denver.
107 Diagnosis and Treatment of Migraine. H. T. Pershing, Denver.
108 Pernicious Influence of Diseased Tonsils and Adenoids on the General Health. W. C. Bane, Denver.

106. This article appeared in the *Journal of Nervous and Mental Diseases*, March, 1908.

Virginia Medical Semi-Monthly, Richmond.

April 24.

109 Salient Points on the Proper Control and Examination of a Sick Child and the Value of Symptomatology. G. W. Cocke, Danville.
110 Treatment of Acute Lobar Pneumonia. O. C. Wright, Jarratts.
111 Case of Ectopic Gestation. J. W. Dillard, Lynchburg.
112 Treat the Patient; Eliminate Toxins. J. Burke, Manitowoc, Wis.
113 Principles of Surgery. S. McGuire, Richmond.

Southern California Practitioners, Los Angeles.

April.

114 Hot Air in Therapeutics. P. C. H. Pahl, Los Angeles.
115 Bier's Hyperemia or the Use of the Elastic Bandage in Disease. C. D. Lockwood, Pasadena.
116 Hyperemia as a Curative Agent. W. W. Richardson, Los Angeles.
117 Hyperemia in Diseases of the Eye and Ear. F. W. Miller, Los Angeles.
118 Limitations to the Use of Antiseptics and Vaccines in Modern Treatment of Pathogenic Bacterial Invasions. G. Martyn, Los Angeles.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London.

April 18.

1 Anatomy of the Long Bones Relative to Certain Fractures. R. Thompson.
2 The Pygmy and Negro Races of Africa. F. C. Shrubsall.
3 Blood Pressure, Chlorin Retention and Dechlorination, Hyperacidity and Variations in the Starch Ration. H. Higgins.
4 *Epidemiology of Diphtheria in the Light of a Possible Relationship Between the Diphtheritic Affections of Man and Those of the Lower Animals. L. W. Sambon.
5 Cavity of the Lung Successfully Treated with Ozone. G. Stoker.
6 Anterior Dislocation of the Sternal Ends of the Clavicles; Treatment by Fracture of the Clavicles with Good Results. T. H. Middlebro.

4. **Diphtheria.**—Sambon calls attention to the not infrequent simultaneous occurrence of epidemics of diphtheria among humans and various animals, especially pigeons, turkeys and other birds. Considering that human diphtheria is easily transmitted by inoculation to many kinds of animals it is only reasonable to suppose that it may be conveyed by them to man. He compares our position with relation to diphtheria, in regard to reciprocal transmission, with that concerning tuberculosis. While, however, bacteriology and experimentation must settle the relation between human and animal diphtheria, the study of the epidemiology of the disease must not be neglected. Hitherto it has been entirely misunderstood, many medical officers of health even yet believing it to be brought about by faulty sanitary circumstances. A careful examination of reports of numerous outbreaks shows clearly that insanitary conditions of dwellings, defective sewerage, polluted water supplies, poverty and uncleanliness have no special connection with the incidence of diphtheria, though by lowering resistance they may favor the spread of disease. Longstaff has shown the coincidence of a low diphtheria mortality with the greatest density of population and the highest general mortality, while in other (country) districts where opposite conditions prevail a high diphtheria mortality coexists. Diphtheria shows itself with equal frequency and intensity among the poor and the rich, in the filthiest tenement houses and in the healthiest surroundings. It is eminently a disease of rural districts, scattered over wide areas, most cases occurring in isolated farm houses, without any traceable communication. As soon as we recognize the unity of the disease in man and in the lower animals we immediately understand its geographical peculiarities, its seasonal prevalence, its cyclical recrudescences, its rural distribution, its preference for the neighborhood of water bodies, its progress along the direction of prevailing winds, the frequent occurrence of cases in isolated farmhouses and in out-of-the-way places along the sea coast, the greater prevalence among children, especially female children, the heavier toll it levies on mounted troops as compared with infantry, the connection with manure, the recent increase in towns, the unimportance of geologic, orographic, meteorologic and sanitary conditions. He refers to the agency of flies, which feed on horse manure, as transmitters, and the frequent occurrence of the disease in fowls, turkeys, peafowl, guinea fowl, pheasants and partridges, and especially quail, and cites the passage in Numbers, xi. 31-34, as being probably an instance of the transference of

diphtheria from quail to man. He has also found false membranes in the oviduct of a hen pheasant, from which he concludes that raw eggs may play a part in the transmission of the disease.

British Medical Journal, London.

April 18.

7 *Bronchitis and Emphysema. Sir J. Barr.
8 Physiologic and Pathologic Effects Following Exposure to Compressed Air. M. Greenwood.
9 Primary Pneumococcic Peritonitis. A. Cuff.
10 *Rectal Temperature After Muscular Exercise. M. Flack.
11 Calmette's Ocular Reaction. T. H. Butler.
12 So-Called Stimulating Effect of Alcohol on Protoplasm. W. H. Kesteven.

7. **Bronchitis and Emphysema.**—Barr says that heredity plays an important part in the etiology of bronchitis; but chill, though undoubtedly an etiologic factor, has been greatly overrated. Dry cold does little harm. It is the excess of moisture rather than the coldness of the atmosphere which works mischief, but yet, strange to say, some physicians still continue to use the bronchitis kettle. This Barr vigorously condemns. With nasal breathing there is not much danger of any degree of cold damaging the bronchial tubes, though sudden variations of temperature do injury. The injurious effect of cold, when it happens, is a reflex on the nervous system of the bronchial tubes. When cold has damaged the mucous membranes, causing shedding of the epithelium, the microorganisms in the air passages keep up the work. Gases and vapors also may damage the membrane and set the germs in action. The excretion of toxins or irritating substances absorbed from the digestive tract, amounting, if alcohol be included, to from 50 to 70 per cent., is also a fertile cause of bronchitis. This effect he regards as due not to irritation, but to vasomotor paralysis. Every person with a liability to bronchitis should forswear the use of alcohol in all forms. Carbohydrates and fats should be cut down, but a liberal amount of nitrogenous food may be allowed. Diet should not be too liquid, but hot water is permissible. With deficiency of lime salts, when expectoration is free and albuminous, a moderate amount of milk and some preparation of gelatin may be given. Scanty and tough secretion indicates excess of lime salts in the blood and contraindicates milk and gelatin. Sodium chlorid should be restricted. Calomel and sodium sulphate are the best purgatives. Expectorants, e. g., ammonium carbonate, are injurious in acute cases and should be reserved for chronic cases. He agrees with Eustace Smith as to the value of antimony (THE JOURNAL, March 28, 1908, p. 1081) and commends compound tincture of camphor with ipecac. With tough and scanty expectoration decalcifying agents, e. g., sodium and potassium citrates should be administered. Calcium lactate, milk and jellies are necessary when the expectoration is very liquid, profuse and albuminous. In bronchial spasm the nitrites and potassium or sodium iodid are important. Counterirritants are valuable on principles explained by the lung reflex of Abrams. *Effleurage* and *tapotement* which cause, respectively, expansion or contraction of the lung, are useful. Barr discusses somewhat at length the physics of emphysema and says that instead of keeping the lung walls taut, as many are taught to do, the lungs should be kept elastic and given plenty of exercise. The way to exhaust the elasticity of a lung, as of a piece of rubber, is to keep it constantly on the stretch. Patients should be taught to breathe not with their diaphragms, but with their thoraxes. The diet should be restricted in emphysema, cutting down fats and carbohydrates, but giving a liberal allowance of nitrogenous foods as long as the kidney excretion is maintained. Other directions are similar to those given above for bronchitis, especially as regards the indications dependent on the quantity of lime salts in the blood. For drugs he recommends iodids and iodin, and, if there is much cough, some preparation of opium. If the costal cartilages are rigid, he advises operation, as recommended by Freund.

10. **Temperature and Muscular Exercise.**—Flack points out that the mouth and the axilla are very unreliable for taking temperature and that the most reliable method is by rectum. He reports the results of some observations by Leonard Hill and himself at the interhospital sports, in which the temperature was taken by rectum immediately after the event and also after the lapse of from 10 to 28 minutes. From these observations it appears that the increase in body temperature after hard muscular work is often very great, and may reach 105 without any subsequent ill effect, and that the longer the effort the higher the temperature rose. The individuals themselves exhibited no marked signs of warmth or dyspnea.

Medical Press and Circular, London.

April 15.

13 *Clinical Varieties of Chronic Rheumatism. J. Teissier.
14 Points in Connection with Therapeutic Immunization. Sir A. E. Wright.
15 Points of Practice in Maladies of the Heart. Sir J. Sawyer.
16 Case of Exophthalmic Goiter Treated by Thyroidectomy. W. Taylor.

13. **Chronic Rheumatism.**—Teissier distinguishes three clearly defined groups of symptoms: primary deforming arthropathies, running a regular, progressive, symmetrical non-inflammatory course, with a trophic neurotic basis, in the etiology whereof nothing can be invoked beyond damp cold; chronic joint affections consequent on acute articular rheumatism or some infective disease (chronic infective rheumatism); and, lastly, chronic diathetic arthropathies dependent on intoxications and certain non-intoxications. He discusses these groups in detail and concludes that true chronic rheumatism is of infective origin, but the infection may provoke arthritis in two different ways: (1) indirectly by a trophoneurotic process, that is to say, by the primary action of the poison or the toxins on the central nervous system and the medullary roots; (2) directly by the action of bacterial poisons on the synovial membranes or the periarticular connective and fibrous tissues. Active infections tend to attack the joint forthwith; they have septicemic tendencies, which are often revealed by heart lesions; this is infective chronic rheumatism. Infections that exert a slow but prolonged action act preferably on the nervous system, and it is through its intermediary that they produce trophic disturbances; this is trophoneurotic deforming rheumatism.

Clinical Journal, London.

April 8, 1908.

17 Operative Treatment of Cancer of the Large Bowel. W. A. Lane.
18 Two Cases of Traumatic Spastic Paraplegia. R. P. Rowlands.
19 Chronic Intestinal Obstruction. H. L. Barnard.

April 15.

20 *Acroparesthesia. J. A. Ormerod.
21 Treatment of Gonorrhea in the Male. J. G. Pardoe and A. Baldwin.

20. **Acroparesthesia.**—Ormerod considers this condition rather a group of symptoms than a disease—numbness, tingling, pins and needles, etc., in hands and feet, with pain in the same parts, and a sense of uselessness in hands and arms, giving rise to a fear of paralysis. The hands turn pale or red or become swollen; occasionally there is impairment of sensory power of fingers. The symptoms are paroxysmal, and the incidence at night, though by persisting through the day the condition may become continuous. The predisposing causes are female sex, age between 20 and 50 years, occupation calling for overuse of hands, and certain constitutional conditions, anemia, dyspepsia, etc. It is rare in true hysteria. The pathogenesis is unknown. The symptoms suggest interference with nerve supply rather than with vascular supply, as is commonly thought. As to treatment, Ormerod finds rest from the causative work, with simple general remedies, iron, gentian and rhubarb, or potassium bromid according to symptomatic indications, sufficient. Galvanism to hands and arms is excellent. The prognosis is not so unfavorable as foreign authors seem to think, and the patient may be encouraged as regards the unlikelihood of paralysis. It is necessary, however, to make sure that the case is really one of acroparesthesia, for peripheral neuritis, progressive degenerations of the cord, and Bright's disease may lead astray.

Medical Chronicle, Manchester.

March.

22 *Case of Phosphorus Poisoning, with Observations on Amino-Acid Excretion. F. H. Edgeworth and I. W. Hall.
23 Cholesterol, Fluid Crystals and Myelin Forms. C. P. White.
24 Gas-Containing Cysts or Air-Bladder Tumors. W. Mair.
25 Case of Hemolymph Glands. J. L. Smith.
26 *Colorless Feces without Jaundice. J. D. Mann.
27 Case of Tuberculous (?) Intraocular Growth. A. H. Griffith.
28 Chronic Joint Disease of Still's Type. E. N. Cunliffe.

29 Blood Plates. E. M. Brockbank.
30 Pathogenic Properties of and Amount of Dirt Contained in the Milk Supplied to Manchester, 1897 to 1906, Inclusive. S. Delépine.

22. **Phosphorus Poisoning.**—Edgeworth and Hall report a case of phosphorus poisoning, the result of taking, with suicidal intent, the heads of a quantity of matches, the approximate amount of phosphorus being 0.0619 gram. The physiologic chemistry of the effects is closely gone into. The authors conclude that we can exclude decreased oxygen supply to the tissues as a cause for the effects seen in phosphorus poisoning; but there are distinct signs of a diminished oxidative capacity of the tissue cells, and it may be that phosphorus acts directly on the cell protoplasm. It has a selective affinity for certain cells, especially those of the liver, kidneys and heart.

26. **Colorless Feces.**—Mann discusses the chemistry of the color of feces. He decides that the assumption of a temporary stoppage of bile does not account for all the cases of colorless feces which do not darken on exposure. He has long felt convinced that the presence or absence of urobilin does not account for all the variations in fecal coloration, and is disposed to believe that other unrecognized pigments (apart from the coloring matter of food) contribute toward it. The pathologic conditions in which colorless feces without jaundice may occur comprise defective supply of bile to the duodenum, intestinal catarrh, tuberculous abdominal disease, malignant disease of the intestine, septic diseases (especially those which affect the abdomen), chlorosis, and leukemia.

British Journal of Children's Diseases, London.

March.

31 *Congenital Syphilitic "Osteitis Deformans." F. P. Weber.
32 Late Effects of Inherited Syphilis. J. P. Parkinson.
33 The Notching of Lower Permanent Incisors in Congenital Syphilis. C. E. Wallis.
34 Syphilitic Nephritis. L. Guthrie.
35 Congenital Syphilis in Children. G. Carpenter.

31. **Syphilitic Osteitis Deformans.**—Weber discusses the differences between the osteitis deformans of congenital syphilis and that of Paget's disease, and concludes that the former may be distinguished from the latter by (1) the youthful age of the patients in the syphilitic cases; (2) the relative absence of pain in the syphilitic cases, pain being often extreme in Paget's disease; (3) the favorable result of specific treatment in the syphilitic cases; (4) the tibia in the syphilitic form and the femur in Paget's form are most frequently affected; (5) in syphilitic cases there are frequently irregular losses; (6) there is no tendency for malignant tumors to supervene in syphilitic cases as there is in Paget's disease; (7) in the syphilitic form other evidences of syphilis are often present.

Annals of Tropical Medicine and Parasitology, Liverpool.

February.

36 So-Called Canary Fever. C. E. Walker.
37 A l'étude de Porocephalus moniliformis. A. Broden and J. Rodhain.
38 *The Habits, Life Cycle and Breeding Places of the Common House Fly. R. Newstead.
39 Morphology of Spirochæta Duttoni in the Organs of Rats. J. J. van Loghem.
40 *Malaria and History. W. H. S. Jones.
41 Two New Human Cestodes and a New Linguatulid. J. W. W. Stephens.

38. **The House Fly.**—Newstead reports the results of an investigation undertaken by the health committee of the city of Liverpool into the habits of the common house fly. Their breeding places were found to be horse manure, or a mixture of this with cow dung, fermenting hops, ash pits containing fermenting vegetable matter, all temporary collections of fermenting matter. Very dry or wet ashes or moist cow dung does not harbor them. They do not breed in ash pits emptied at short intervals; covered ash pits were as badly infested as those that were open. The flies breed in relatively small numbers in ash pits where no fermentation takes place. The use of disinfectants in ash pits does not prevent their breeding. Where fowls, not ducks or geese, were kept and allowed freedom in the yards, relatively few larvæ and pupæ were found. The avidity with which the latter were seized on by fowls when offered to them connects their presence with the result. The flies feed on moist decaying vegetable matter, manure, animal and particularly human, rotten flock beds, straw mattresses, old cotton garments and sacks and waste paper, bread, decayed fruits and vegetables, and excreta of animals generally. The life cycle of the fly, in all kinds of fermenting materials, is reduced to the minimum period of from ten to fourteen days, and in the absence of such artificial heat the cycle may occupy a period of from three to five weeks or more, according to the temperature of the outside air. House flies do not depend entirely on excessively warm weather for breeding purposes, though in hot seasons they breed much more rapidly in non-fermenting materials, and their numbers, under such conditions, are greatly increased. Nine other species of fly are described with short notes of their habits and prevalence. The article is illustrated.

40. The subject of this article was commented on editorially in The Journal, April 11, 1908, page 1197.

Archives des Maladies du Cœur, des Vaisseaux et du Sang, Paris.

January 1, No. 1, pp. 1-64.

42 *Pharmacodynamic and Therapeutic Action of the Nitrites. H. Vaquez.
43 Histologic Action of Roentgen Rays in Lymphoid Leukemia. P. Menetrier and A. Touraine. Concluded in No. 2.
44 *Alimentary Poisons and Atheroma. M. Loeper.

February, No. 2, pp. 65-128.

45 Irregularities of the Heart. (Irrégularités du Cœur.) K. F. Wenckebach.
46 Blood Reaction in Experimental Lead Poisoning. (Réactions sanguines dans le saturnisme expérimental.) C. Aubertin.

March, No. 3, 129-192.

47 Elimination of Sodium Chlorid in the Urine and Systematic Reduction of Salt in Diet in Treatment of Chronic Sclerous Myocarditis. (Chloruric et diététique hypochlorurée méthodique dans la cardiosclérose.) G. Etienne.
48 Action of Radium on Connective and Vascular Tissue. H. Dominici and Barcat.
49 Presence in Blood During Hypertension of Substances Modifying the Arterial Pressure. O. Josué and L. Bloch.

42. **Therapeutic Action of the Nitrites.**—Vaquez reviews his experimental and clinical experience with amyl and sodium nitrite, spirits of glyceryl trinitrate and other nitrous compounds; it teaches, he thinks, that in order to obtain the desired benefit from administration of the nitrites they must be given before the system regulating the blood pressure has had opportunity to adapt conditions to counteract the modifications induced by the drug. The action is more inconstant the later it is manifested and it is inevitably transient. These drugs can tide the patient past some critical period, but they have no permanent influence on habitual hypertension. They should not be used systematically for this purpose, one argument against it being that they would thus lose their power when needed at a critical moment. Spirit of nitrous ether is the only one of the group to which the above does not apply; this drug is more of a general sedative for the circulatory system than a reducer of tension, and it does not contraindicate the use of the other preparations at need. He advocates it in the doses of from 2 to 4 gm. (30 to 60 grains) a day, in divided doses, kept up for a long time. But when occasional prompt action is necessary the organic nitrites must be called on, and he enumerates the reasons which have made him reject all but nitroglycerin. This he regards as the one remedy for angina pectoris and paroxysmal edematous dyspnea in persons with arterial hypertension. He has it put up in vials containing a single dose, five drops, of the official alcoholic solution, to be diluted with water and taken at the onset of the attack. Its prolonged use will neither prevent the paroxysms nor remove the cause. He believes that the toxicity of the drug has been much exaggerated; some of his patients took up to forty drops a day without injury.

44. **Alimentary Poisons and Atheroma.**—Loeper gives illustrations of processes of calcification and atheroma found in the arteries of animals under the influence of certain alimentary poisons. If the diet could be strictly atoxic from beginning to end, then atheroma could be warded off, he says. Oxalic acid was particularly active in inducing atheroma in his rabbits, and he warns that rhubarb, spinach and tomatoes contain an unusually large proportion of oxalic acid, which is also present, he says, in large proportions in tea, coffee, kola and cocoa. The latter also contains, he states, from 0.65 to 2 per cent. of theobromin, and theobromin is another vascular poison, as he shows by the atheroma induced in rabbits by injection of

theobromin acetate. Administration of lime salts had also a marked favoring action on the experimental atheroma. The lesions induced in his experiments were always calcification of the middle layer of the vessel wall; no tendency to sclerosis was ever noted.

Presse Médicale, Paris.

April 4, XVI, No. 28, pp. 217-224.

50 *Present Status of Treatment of Measles. (Rougeole.) J. Hallé.
51 Oxygen Admixture Not an Improvement for Brief Ethyl-Chlorid Anesthesia. L. Camus.

April 8, No. 29, pp. 225-232.

52 *Re-education of "False Gastropaths." J. Dejerine and E. Gauckler.

April 11, No. 30, pp. 233-240.

53 *Suture of Blood Vessels. (Suture des vaisseaux.) A. Frouin.
54 Facial Hemispasm Plus Motor Disturbances on Other Side. (Hemispasme facial alterne.) Brissaud and J. A. Sicard.
55 *Syphilis and Cancers of the Mucosa of Mouth and Pharynx. M. Letulle.
56 Diagnosis of Syphilis by Ultramicroscope. P. Gastou.

50. **Treatment of Measles.**—Hallé lays stress on hygienic measures, remarking that in hospitals and asylums. however. sometimes the most scrupulous hygiene does not seem able to reduce the mortality below a very high percentage. He disinfects the eyes systematically with a hot boric acid solution three times a day at first and with silver nitrate in case the conjunctivitis appears severe, using one or two drops of a 1 per cent solution. The nose, mouth and vulva must be examined and kept disinfected, and convalescents must not be allowed to go out until the throat and skin are entirely normal, generally not under twenty-one days. Glandular lesions frequently develop in children allowed to be out too early. even in summer. The children are liable to lose several pounds and not regain them under two or three months. Of all the complications of measles, bronchopneumonia is most to be dreaded on account of its frequent recurrence, its prolonged convalescence and the debility. It should be suspected by the fourth day after the eruption if the temperature remains high.

52. **False Stomach Affections.**—Dejerine and Gauckler express astonishment that so few seem to comprehend the purely psychic origin of a number of gastric affections. They call such patients "false gastropaths" and say that treatment must aim to re-educate them to a more normal diet. These patients are generally affected with neurasthenia, which causes loss of appetite, and they believe that the stomach is out of order. Other disturbances follow, and these the patients strive to remedy by restricting the diet. Dietetic re-education is the main point in the treatment. and it must be gradual to be effectual. Sometimes a preconceived idea in regard to the digestibility of an article must be argued down. They cite a typical case in a man of 52 who had suffered from gastric disturbances for fifteen years and was extremely emaciated. The first week he was given 4 quarts of milk a day; the second week, 5 quarts; the third week. 4 quarts of milk. 4 eggs, and a small amount of raw chopped meat in broth; the fourth week, with 3 quarts of milk a day, the dinner and supper included roast meats, mashed vegetables, eggs and pudding, and by the fifth week ordinary diet was resumed. By this time the patient was restored to health and was able to return to business which he had abandoned four years before on account of this imagined stomach affection. Dejerine is convinced that in many cases of supposed stomach affections in which a cure followed the application of various measures the real reason for the cure was the unconscious re-education of the patient to a rational diet. Such cures are liable not to be permanent, as the underlying psychic derangement persists unmodified.

53. **Suture of Bood Vessels.**—Frouin states that his experience has confirmed the good results possible when an artery and vein are sutured together, end to end, or when a segment of a vein is implanted in the place of an excised segment of an artery. He gives several illustrations of the findings months after operations of this kind on animals.

55. **Syphilis and Cancer of the Mouth and Throat.**—Letulle comments on the hundred cases on record in which cancer developed on the basis of an old or recent syphilitic lesion in the mouth or throat. He also gives an illustrated description of a similar case, distinguished by the fact that the parasyphilitic epithelioma in the old syphilitic cicatrix in the throat, accompanied a carcinoma in the stomach, and the former was an autopsy surprise. He calls attention anew to the unfavorable influence of mercurial medication on these cancers in the mouth and throat in syphilitics and emphasizes the etiologic importance of syphilis as the precursor of cancer in this region.

Bulletin de l'Académie de Médecine, Paris.

April 7, LXXII, No. 14, pp. 393-412.

57 *Are Intestinal Worms an Inciting Cause in Typhoid Fever? Chantemesse.

57. **Helminths and Typhoid Fever.**—Guiart has recently stated that no one whose intestines are free from helminths need fear typhoid fever. and consequently Chantemesse has been examining 134 typhoid patients and 62 with other affections in respect to the prevalence of intestinal parasites. He found that the proportions were no higher in the typhoid group than in the non-typhoid, and that there seemed to be no connection between the number of parasites and the development or course of the typhoid fever. His investigations, however, revealed that the trichocephalus was present in 67 and 72 per cent. of the 134 and 62 inmates of the hospitals examined, other helminths being found in only 11 cases. He ascribes the great increase in the prevalence of the trichocephalus to ingestion of salads and fruit grown on the sewage farms around Paris.

Berliner klinische Wochenschrift.

April 13, XLV, No. 15, pp. 725-772.

58 *Treatment of Tendon Sheath Phlegmons. (Die Behandlung der Sehnenscheidenphlegmone.) B. Klapp.
59 Special Nervous Symptoms in Addison's Disease. L. Wagner.
60 Serum Diagnosis of Syphilis. (Wassermann'sche Syphilisreaktion.) R. Beneke. Id.; Rôle of the Lipoids. O. Porges and G. Meier.
61 Pathogenesis of Salivation. H. Roeder.
62 Symptomatology of Chorioepithelioma, Especially of Metastasis in the Lungs. E. Scheidemandel.
63 Roentgen Determination of Gastrectasia and Pyloroptosis. F M. Groedel.
64 Myosis with Reflex Immovability of the Pupils. G. Levinsohn.
65 Puerperal Sigmoiditis and Perisigmoiditis. F. Lehmann.
66 *Sign of Stricture of Esophagus. P. M. Rewidzoff.
67 Leukemic and Pseudoleukemic Cutaneous Affections. A. Alexander.

58. **Treatment of Tendon Sheath Phlegmons.**—Klapp says that fine functional results have been obtained in 19 cases by what he calls the "physiologic method" of treatment. He makes an incision on each side of the phalanx on the palmar aspect, skipping the joints. cutting down to expose the tendon and passing a sound through the two incisions. This allows free escape to the pus and secretions. The tendon sheath is thoroughly rinsed with salt solution. the wounds are dressed with salve. but not drained or tamponed. The hand and arm are wrapped in an alcohol dressing. and the patient reclines with the arm horizontal. The dressings are changed every day. The first two or three days a half-hour bath in warm salt solution is given, and active and passive movements are practiced daily. When suppuration ceases and the inflammation subsides he supplements these measures with superheated air, which promotes function. In ten cases the patients recovered complete function. with partial necrosis in one case; in two cases of large felon both patients were cured with partial necrosis in one case; in six patients with extensive bone lesions there was more or less necrosis in four. but in two healing was complete; one patient with sepsis succumbed.

66. See abstract 53 on page 1085 of THE JOURNAL, March 28.

Deutsche medizinische Wochenschrift, Berlin.

April 9, XXXIV, No. 15, pp. 625-680.

68 *Medicine and Overcivilization. (Medizin and Ueberkultur.) W. His.
69 *True Systolic Retraction of Apex Beat and Abnormally High Position of Aorta. (Systolische Spitzenstosseinziehung und abnorme Hochstand des Aortenbogens.) N. Ortner.
70 *Uric Acid Arthritis with Enlarged Spleen and Reduction of Leucocytes. (Arthritis urica, Megalosplenie und Leukopenie.) R. v. Jaksch.
71 Occasional Partial Hyposystole of the Ventricles of Mammalian Heart. (Zeitweilige partielle Hyposystolie der Kammern des Säugetierherzens.) H. E. Hering.

72 Bronchoscopy for Shawl Pin in Left Bronchus. H. v. Schrötter.
73 A Carcino-sarcoma of the Throat. (Ein Carcino-Sarkom des Recessus piriformis bei Ekchondrose des Ringknorpels.) O. Kahler.
74 Ocular Reaction in Typhoid. (Ophthalmoreaktion bei Typhus abdominalis.) O. Orszag.
75 *Bradycardia in Appendicitis in Children. J. v. Bokay.
76 *Ileus as Complication of Gonorrheal Epididymitis. D. Balas.
77 *Diagnosis of Embolism of Pulmonary Artery. H. Eichhorst.

68. **The Family Physician and Overcivilization.**—His reviews various historical epochs which bear more or less of a resemblance to this overcivilized age and says that too much civilization, increasing artificiality, plus the general security, the lack of incentive to physical effort, are what are responsible for the prevailing subjective tendency, and this subjective tendency is in turn responsible for the development of nerve weaklings. The medical profession must lead and train the will power to normal vigor, and he outlines the rules by which this can be accomplished. Hygienic, dietetic therapeutic measures are as old as history itself, but when they are carried to extremes or are applied in too one-sided fashion they fall into disrepute. This is a warning for those who preach too strenuously the "return to Nature." The second point he emphasizes is that methods which aim to "toughen" are addressed to the senses, striving to render them less susceptible, but "nervousness" is not an affection of the sensory nerves, but of the will. It does no good to send the unfortunates from one sanatorium to another, from spa to spa; this merely confirms them more and more in their weakness of will power. They realize that their will is weak and it distresses them not to be able to will as they wish. The third point is that the "nervous" are extremely susceptible to the influence of suggestion, both of person and word. A course of treatment which has some special name inspires more confidence than one without a name; whether the name of the treatment is scientifically justified or not is immaterial. Resting and exercise, judiciously applied, lead to the same end—anything that can take the patient out of himself, give him an interest in something outside of himself. If he can once be set to some task which makes him feel that he is a useful or indispensable member of society, then his troubles will cease to occupy his mind, and they will thus lose their psychic toxicity. The most effectual factor in this line, His continues, is religious faith, the patient's belief that his personal fate is in the hands of a supreme, benevolent being. He says that he has often witnessed the complete cure of long persisting nervous disturbances when a transformation to such a belief occurred in the religious life of the patient. To advise in all these things is a grateful field of action for a sympathetic and wise physician. The profession can also do much in prophylaxis, never forgetting that the indispensable condition for the "nervousness" is security and prosperity. The profession should promote everything in the line of outdoor sports, etc., guiding them in safe paths, to counteract the dangers of one-sided intellectual training, precocious sexual gratifications, abuse of alcohol and all the ills of life in a great city. Physically vigorous race will be sound also in mind and will power. The body is not a mosaic of organs, but a single well-ordered organism, and there is no need for people to run from specialist to specialist and develop one neurosis after another; what is needed is a trusted adviser for the physical and moral ego, for the organism as a whole, the body and mind, the faithful family physician. The prevailing psychic epidemic, he declares, is the result of certain conditions which we can recognize and the effects of which we can ward off, although it is not in our power to alter the conditions. He regards the compulsory term of military service as a valuable means of promoting health and reducing the tendency to "nervousness." (In his presidential address at the recent Congress for Internal Medicine at Vienna, Miller stated that it is easier now to find a good specialist than a good family physician.)

69. **Significance of Retraction of Apex Beat and High Position of Arch of Aorta.**—Ortner describes a case of valvular disease distinguished by the noticeable retraction of the chest wall with the apex beat and the extraordinarily high location of the arch of the aorta. Autopsy revealed total pericardial adhesion and adhesion of the sheets of the pleura and of the pleura to the chest wall. The apex was immovably fastened to the chest wall; the aortic stenosis caused dilatation of the heart, but it was so fastened at the apex that it could enlarge only upward, pushing the aorta up above the sternum. He observed these same signs of adhesion in another case, the autopsy findings confirming the diagnosis. Pericardial adhesion can, therefore, be surmised when the apex beat remains immovable at the same point even after evacuation of ascites or other change in the conditions which otherwise would alter the position of the apex. The diagnosis is still more probable when the base of the heart is seen to be unusually high and the arch of the aorta is lifted up above the sternum. These signs not only denote pericardial adhesion, but localize it.

70. **Gout, Enlargement of the Spleen and Reduction of Polynuclear Leucocytes.**—The patient, a man of 45, previously healthy, developed gout, and the uric acid diathesis was evidently responsible for the enlargement of the spleen and anemia. No other cause could be discovered during life or at autopsy; there was nothing to suggest leukemia. The most exhaustive Roentgen examination failed to show anything abnormal in the gouty joints, even those the seat of severe arthritis. von Jaksch suggests the necessity for examining patients with leucopenia and enlarged spleen to detect coincident uric arthritis.

75. **Bradycardia in Appendicitis in Children.**—Ten cases are reported by von Bokay in which children with appendicitis presented bradycardia during the period of absorption of periappendicular inflammatory products. The pulse dropped to 52 in some or below 80, but no parallelism could be detected between the curve of the pulse and that of the temperature. The bradycardia is not an unfavorable sign; it may be accepted as an indication that absorption has commenced. It is probably due to irritation of the vagus. He states that he has been unable to find any reference to this symptom in appendicitis except Kahn's article in The Journal, Dec. 15, 1906, and Kahn mentions bradycardia only in respect to adults. In some of von Bokay's cases the bradycardia came on after operative evacuation of an appendicular abscess, or followed interval appendicectomy, and persisted for several days.

76. **Ileus as Complication of Gonorrheal Epididymitis.**—Balas reports that autopsy explained the ileus as the result of extension of the process to the vas deferens with perforation, circumscribed peritonitis, adhesion of the intestine to the abdominal wall, kinking and occlusion.

77. **Embolism of Pulmonary Artery.**—A woman of 43 with mitral stenosis, and four months pregnant, suddenly developed extreme dyspnea and other signs of embolism of the left pulmonary artery. The lung was almost entirely cut off from the circulation, the apex alone giving normal findings. The physical findings indicated that the blood must have rapidly passed into the alveoli and bronchus and coagulated. The patient recovered under morphin, absolute repose and a milk diet.

Therapeutische Monatshefte, Berlin.

April, XXII, No. 4, pp. 165-218.

78 *Cardiac Arrhythmia. (Herzarythmie.) D. Pletnew.
79 *Ocular Tuberculin Reaction from Ophthalmologist's Standpoint. (Ophthalmoreaktion.) A. Siegrist. Id. P. Schultz-Zehden.
80 *Eclampsia and Its Causal Treatment. W. Liepmann.
81 Treatment of Tapeworm. (Bandwurmkur.) F. Schilling.
82 *Transmission of Disease by Insects. (Uebertragung von Krankheiten durch Insekten.) L. Sofer.
83 Diagnosis of Syphilis. Naegeli-Akerblom and Vernier.
84 Does Arsenic Pass into the Hair During Atoxyl Treatment? (Geht bei Atoxylbehandlung Arsen in die Haare über?) Rabow and Strzyzowski.

78. **Cardiac Arrhythmia.**—Pletnew emphasizes the importance for practice of the results of recent research on the functioning of the heart, especially the behavior of the venous pulse and electrocardiograms. True, permanent hemisystole (von Leyden's), in which the defect reaches actual asystole of one ventricle is probably never observed except with a heart that is gradually dying. On the other hand, the type of hemisystole described by Kraus, while indicating a severe functional injury of the heart, has by no means a bad progno-

sis. Alternating and permanently irregular pulse and atrioventricular dissociation are more serious, while extrasystole and respiratory arrhythmia are much more favorable in regard to the outlook. It is also important to bear in mind that arrhythmia may be observed with an entirely sound heart, some pathologic condition elsewhere being responsible for the aberrations. The irregularity of the pulse can not be properly estimated by the arterial pulse alone, but must be studied in connection with the various organs of the body.

79. **Ocular Tuberculin Reaction.**—Schultz-Zehden reports the results of instillation of tuberculin into the eye for diagnostic purposes in 150 cases. This experience has convinced him that when mishaps have occurred they have been due to instillation of too large amounts of tuberculin. He uses a 1 per cent. solution of "old tuberculin," and although half his patients had various eye affections none seemed to be injured by the instillations. Transient conjunctival reaction was observed in only 2 out of the total 150 cases, but he refrained from applying the test when there was recent injury or corneal ulcer or burst phlyctena, fearing that tuberculous proliferation might follow in an open wound of the kind. The instillation never caused any aggravation of the lesion, even in recent processes. He found further that a healed tuberculous affection of the eyes gave a negative response in several cases. The main point is to obtain a thoroughly reliable and uniform preparation of tuberculin for the test.

80. **Eclampsia and Its Causal Treatment.**—Liepmann thinks that the placenta is the focus furnishing the toxins which cause eclampsia. He relates some experimental research in this line which brings further confirmation to this view. Treatment should, therefore, aim to remove the focus, and he states that statistics from the gynecologic clinics at Würzburg, Basle, Halle and Berlin show an average mortality between 25 and 30 per cent. under expectant treatment, while with immediate delivery the mortality has dropped to 2.8 and even 1.8 per cent. If delivery promises to be easy the obstetrician should induce it in the patient's home, but otherwise should send her at once to a hospital.

82. **Transmission of Disease by Insects.**—Sofer describes a number of experiments on himself and others and reviews the literature on the subject, his conclusions being that the transmission of disease by mosquitoes and ticks has been established beyond question, but that the case has not been proved to date in so far as bedbugs, fleas and lice are concerned. The fact that these insects contain pathogenic germs does not necessarily entail that they can transmit them to man in a condition to produce the disease in question.

Therapie der Gegenwart, Berlin.

April, XLIX, No. 4, pp. 145-192.

85 *Treatment of Chronic Endometritis. C. Menge.
86 Pathogenesis of Gout. (Gicht.) P. Linser.
87 *Care of Inebriates. (Auskunfts- und Fürsorgestellen für Alkoholkranke.) B. Laquer.

85. **Formalin Treatment of Chronic Endometritis.**—Menge believes in general tonic measures and efficient local treatment. He here gives an illustrated description of the technic with which he has been successful in fifteen years of office practice, stating that nothing answers the purpose like the intrauterine application of a fluid caustic. For this he prefers a 50 per cent. solution of formalin. This caustic is powerful, but not too profound in its action while it is an efficient disinfectant. He applies it on a hard rubber sound wound with a narrow strip of cotton. Several of these sounds are held in readiness in a jar half full of the formalin solution. He makes it a principle never to make an internal examination of the genitals just before this local treatment, and never cauterizes at the first consultation. Forty-eight hours after the last internal examination allows time for the vaginal secretions to wash out any infectious germs. Gonorrheal and postgonorrheal endometritis always takes the longest time to cure. He adds that in two instances the technic may have been responsible for the propagation of a gonorrheal endometritic process to the tubes, but these were the only exceptions to the rule of favorable results in hundreds of cases.

87. **Care of Inebriates.**—Laquer compares the plague of tuberculosis to the plague of alcoholism, and ranks the latter as of far greater import for the state and society. Tuberculosis does not leave such a trail of idiots, epileptics, degenerates and criminals as alcohol, and, fortunately, no one profits by the spread of tuberculosis, while the millions of capital invested in the production and sale of alcoholic drinks are directly interested in perpetuating and spreading the plague of liquor drinking. He estimates at $25,000,000 the annual expense to the German army, prisons, insane asylums and hospitals caused by liquor drinking, and states that while statistics in Germany show that the percentage of deaths from tuberculosis has dropped from 3.1 in 1885 to 1.9 per cent. in 1902, the number of patients admitted to hospitals and asylums on account of alcoholism has quadrupled in this period. He advocates the organization of antialcohol dispensaries and registers similar to those now being established for the tuberculous, in charge of physicians, with the cooperation of the police, insurance societies, charitable organizations, etc.

Münchener medizinische Wochenschrift.

April 7, LV, No. 14, pp. 713-776.

88 *Functional Reduction in Size of the Heart. (Funktionelle Verkleinerung des Herzens.) F. Moritz.
89 Heart "Alternans" and Its Relations to Continuous Heart "bigeminus." (Herzalternans und seine Beziehungen zur kontinuierlichen Herzbigeminie.) D. v. Tabora.
90 *Sudden Death in Heart Disease. (Mors subita der Herzkranken.) E. H. Kisch.
91 Tobacco Smoke. (Tabakrauchen.) K. B. Lehmann.
92 *Müller's Test for the Functioning of the Pancreas. H. Schlecht.
93 *Test for Pus with Millon's Reagent. (Zur Prüfung des Eiters.) L. Dreyer.
94 The Antiferments in Human Blood Serum. G. Jochmann and A. Kantorowicz.
95 *Cutaneous Reaction to Inoculation of Killed Cultures. (Hautreaktion bei Impfugen mit abgetöteten Typhus-Paratyphus B- und Kolikulturen.) R. Link.
96 Roentgen Differentiation of Ossification of Costal Cartilages. (Nachweis der Rippenknorpelverknöcherung.) F. M. Groedel.
97 Culture Medium: Perhydrase-Milk-Agar. E. Fraenkel and H. Much.
98 Culture Medium for Gonococci. Piorkowski.
99 Mutual Relations Between Lymphosarcomatosis and Tuberculosis. C. E. Brandts.
100 Experimental Cirrhosis of Liver. Id.
101 *Permanent Anesthesia in Tuberculous Larynx. (Daueranästhesie im tuberkulösen Kehlkopf.) R. Hoffmann.
102 *Diagram of the Trunk. (Schema des Rumpfes.) W. Hildebrandt.
103 *Persisting Thymus. Apoplectic "Thymus Death," and Relations Between the Persisting Thymus and Exophthalmic Goiter. (Beziehungen der Thymuspersistenz zur Basedowschen Krankheit.) C. Hart. Commenced in No. 13.

88. **Functional Reduction in Size of Heart.**—Moritz found that the heart grew smaller in persons lying on a flat table, the trunk fastened, but the arms free to raise weights and the legs free to be raised repeatedly from the level of the table until exhausted. Under the influence of this exercise the heart grew considerably smaller even when it was pathologically dilated, as he shows by reproductions of the orthodiagraphic outlines before and after. He thinks that this fact should encourage the cautious application of gymnastic exercises in treatment of heart affections, as the heart thus displays a tendency to become reduced in size when it beats more rapidly under the influence of functional stimulation.

90. **Sudden Death in Heart Disease.**—Kisch has had opportunity to make postmortem examination in 156 cases of sudden death of persons with heart disease, and he here reviews this material. It shows that under the age of 30 persons with heart disease are not more liable to sudden death than others, but that between 30 and 50 the proportion of sudden deaths is much larger, and after 50 those with affections of the heart and vessels must face the prospect of sudden death. Obesity and general arteriosclerosis afford a peculiar predisposition to sudden death, especially after 50, and in persons addicted to alcohol. In 15 per cent. of the material reviewed, a combination of mitral and aortic insufficiency was noted. He regards a very irregular pulse picture, actual cardiac delirium, as almost invariably a sign that death may occur suddenly at any time. The same applies also to extreme bradycardia, when the pulse waves show the anacrotism of pulsus tardus. When he encounters these conditions he warns the family at once of the possibility of sudden dissolution, and although the

shock at first is great, as in many instances the patient does not realize his condition, yet the precautions that are at once taken prolong life. The combination of emphysema of the lung with a cardiac affection also predisposes to sudden death, as also recurring attacks of angina pectoris after 60 and cardial asthma with paroxysmal dyspnea, although death seldom occurs during the attack. The immediate causes of sudden death in the course of heart disease in his material were hearty meal, banquet, drinking champagne, celebrating the eightieth birthday, the effort of climbing into a railroad car or climbing a hill, dancing, attack of coughing, straining at stool, coitus or gallstone, kidney and intestinal colic. The heart failure sometimes occurred during convalescence from pneumonia or typhoid or in pregnant women. When a piece of meat is found lodged in the throat the sudden death may also be due to reflex paralysis of the heart instead of the assumed suffocation. He notes further the familial tendency to sudden death prominent in some of his cases: in one instance three brothers and the father all died suddenly at about 50. The weather and season also seem to have a certain influence on sudden death in heart patients, especially abrupt changes in the weather. The sudden death is almost invariably fulminating; only very rarely does the individual linger for a few minutes or die from pulmonary edema after a few hours.

92. **Müller's Test of Pancreas Functioning.**—This communication reports favorable experiences with Müller's test of pancreas functioning at von Strümpell's clinic at Breslau. The simplicity and convenience of the test commend it, Schlecht says, while it is thoroughly reliable and requires only a few drops of fecal matter. Another advantage is that the material is sterilized by the high temperature. The test is based on the proteolytic action of the pancreatic ferment, trypsin. The patient is given a test meal and two hours later a calomel purge. A few drops of the thin stool then obtained are sown on a plate of Loeffler serum, which is kept for twenty-four hours at a temperature of 131 to 141 F. If there is any of the pancreatic ferment in the stool, the surface of the Loeffler serum shows pronounced depressions where the proteolytic ferment has been at work. In the absence of the pancreatic ferment the surface of the serum remains smooth, with no tendency to dimpling (Dellenbildung).

93. **Differentiation of Tuberculous Pus with Millon's Reagent.**—A drop of pus added to Millon's reagent causes the formation of a firm pellicle if the pus is of tuberculous origin, which is not observed with ordinary pus. The fluid also remains colorless with tuberculous pus while with pus of other origin it turns bright red. Dreyer has been applying this differential test in 41 cases of tuberculosis and 32 of ordinary pus processes, and found the tough pellicle a constant occurrence in the tuberculous cases, while in the non-tuberculous there was merely a patch of film in the center which fell to pieces at any attempt to lift it. The red discoloration was less constant. In mixed infection the response to the test is the same as with ordinary pus. The Millon reagent is a mixture of one part mercury and one part nitric acid with a specific gravity of 1.4 diluted with two parts water and decanted.

95. **Cutaneous Reaction to Killed Typhoid, Paratyphoid and Colon Bacilli Cultures.**—Link reports the findings in 14 individuals, some healthy and others with a history of typhoid, paratyphoid or colon bacillus infection. A cutaneous reaction was generally obtained and in many cases it paralleled the agglutinating property for the bacilli in question. In others the features of the reaction suggested that it is more an expression of the immunity of the individual.

101. **Induction of Permanent Anesthesia in Tuberculous Laryngitis.**—Hoffmann gives an illustrated description of a simple apparatus with which the patient is able to insufflate, himself, the anesthetic powder and thus anesthetize the region before eating. It is an open cup on the end of a bent tube. The powder is placed in the cup, the other end of the tube introduced into the throat, and the powder inhaled through the tube. In two cases he has induced permanent anesthesia in the region by injecting alcohol at the emerging point of the superior laryngeal nerve through the thyroid ligament. This arrests conduction of sensory impulses while it does not interfere with motor functioning. The patients can swallow food without further pain, but the swallowing of fluids is still more or less painful—less so when warm. He injects from 0.5 to 1.5 c.c. of alcohol, pushing the needle in for about 1.5 cm. The injection is harmless and can be repeated at need, while the patient's general condition is so improved by the nourishment which he is then able to take without pain that operative intervention later may be contemplated. Hoffmann is now engaged in research to determine the exact distribution of the sensory vagus in the region to perfect the technic of bilateral injection of alcohol in these cases.

102. **Diagram for Registering Physical Findings.**—Hildebrandt proposes a diagram of the trunk showing ribs, spine and pelvis spread out as in a map drawn on Mercator's projection. He shows by numerous examples how easy and simple it would be to keep records of cases by a few figures and signs marked on such a diagram.

103. **Relations Between Persistence of the Thymus and Exophthalmic Goiter.**—Hart mentions among other arguments in favor of a connection between persistence of the thymus and exophthalmic goiter that the affection was always unusually grave in the cases on record in which this coincidence was noted, particularly when removal of the goiter was followed by sudden death. Exophthalmic goiter is generally accepted as due to perverted functioning of the thyroid gland, but he suggests that the perversion of function may be the result of persistence of the thymus. The thymus may persist long enough to start the exophthalmic goiter and then atrophy, possibly under the influence of some intercurrent infection. He presents evidence to show that the thymus alone is able to induce heart and vascular disturbances. In his cases of persisting thymus in exophthalmic goiter, the thymus had all the characteristics of the juvenile organ and was not a secondary hyperplasia.

Wiener klinische Wochenschrift.

April 2, XXI, No. 14, pp. 453-516.

104 *Immunization by Mouth. (Immunisierung per os.) F. Chvostek.
105 *Elimination of Chlorids in Urine in Kidney Affections. (Uraemia achlorica. Stadium achloricum sine albumine bei akuter Nierenentzündung.) L. A. Gluzinski.
106 *Leukemia and Roentgen Treatment. R. v. K. Jaksch. Id. R. Kretz.
107 Peculiar Form of Progressive Fibrous Myositis. H. Lorenz.
108 *Pericardial Adhesion. (Concretio et Accretio cordis.) N. Ortner.
109 *Leucosarcomatosis. C. Sternberg.
110 *Diagnosis of Pancreatic Affections. (Pankreaserkrankungen.) H. Salomon.
111 *Pathogenesis of Catarrhal Icterus. H. Eppinger.
112 Process of Filling the Stomach. Nature of Atony. (Vorgang der Magenfüllung.) A. Müller and P. Saxl.
113 Vicarious Activity of Intestine in Nephritis. (Vikariierenden Tätigkeit des Darmes bei der Nephritis.) C. Rudinger.
114 Experiments on Organs Undergoing Autolysis. L. Hess and P. Saxl.
115 Lipoproteids and Significance of Degenerative Fatty Changes in the Cells. S. Bondi.
116 Method for Determining Acidity of Gastric Juice. (Bestimmung der Azidität des Magensaftes.) A. Müller.
117 *Chronic Polyserositis. (Morbus Bamberger.) E. v. Neusser.
118 *Orthostatic Albuminuria. R. v. Stejskal.
119 Occurrence of Inhibiting Processes in Reaction-Complex: Blood, Immune Serum and Complement Serum. R. v. Stejskal and R. Fleckseder.
120 Opsonins and Pregnancy. (Opsonine und Schwangerschaft.) K. K. Koessler and W. Neumann.
121 *Functional Diagnosis of Medical Kidney Affections. (Funktionelle Diagnostik medizinischer Nierenkrankheiten.) V. Blum.
122 *Colon Bacillus Infection of Respiratory Organs. (Kolibazillose der Respirationsorgane.) H. v. Schrötter and M. Weinberger.
123 Non-agglutinating Strains of Typhoid Bacilli. (Inagglutinable Typhusstämme.) M. Eugling and R. Grassberger.
124 Special Affinity of Kidney Vessels for Adrenalin. D. Jonescu.

104. **Immunization by Way of the Mouth.**—Chvostek's researches confirm those of Calmette, Loeffler and others in regard to the possibility of inducing active immunity in animals by feeding them with virulent killed cultures of micro-organisms and toxins. The results, however, are uncertain and far behind those obtained by the subcutaneous and intravenous routes.

105. **Elimination of Sodium Chlorid in Kidney Affections.**—Gluzinski describes several cases of kidney affections which

were distinguished by the retention of sodium chlorid, the urine being entirely free from it, while a peculiar uremia syndrome was observed. General symptoms came on gradually—much depression, with vomiting and progressively increasing proportions of hydrochloric acid in the vomit, excessive thirst, no muscular pains or headache, and the mind clear. This "achloric uremia" may gradually subside in the course of a few days and the patient recover, or it may progress with increasing weakness, agitation and loss of consciousness, and terminate fatally without convulsions, as occurred in one of his cases in three weeks, the patient, a man of 60 with arteriosclerosis of the renal vessels and chronic interstitial nephritis. Before acute nephritis manifests itself by the usual signs it may be possible to detect its development by the general weakness, vomiting, traces of edema, retention of sodium chlorid, reduction in amount and cloudiness of the urine, with tube casts and red corpuscles in the urine, but no albumin for the time being. Systematic examination of the urine during convalescence from scarlet fever would reveal this incipient phase of nephritis. It is probably the manifestation of acute parenchymatous degeneration, and retention of sodium chlorid is the first sign.

106. **Improved Roentgen Technic and Leukemia.**—The Journal, Jan. 25, 1908, page 324, referred to the good results obtained by von Jaksch in Roentgen treatment with elimination of the dangerous rays by interposition of a thin sheet of silver.

108. **Syndrome of Pericardial Adhesion.**—Ortner ascribes the congestion in the liver and the resulting ascites to the fact that the diaphragm is usually immovably fastened with pericardial adhesion as it is almost invariably accompanied by an affection of the pleura aiding in immobilization of the diaphragm. This assumption explains the clinical picture, he thinks, and he describes a case personally observed in which all the symptoms indicated pericardial adhesion, but no adhesion was found at autopsy, merely polyserositis with the sheets of the pleuræ adherent. The diaphragm had been thus immobilized, and the syndrome regarded as typical of pericardial adhesion was presented.

109. **Leucosarcomatosis.**—Sternberg reports some cases and calls attention to one in particular in which a child of 11 developed depression and dyspnea, the legs swelled, the abdomen and spleen became enlarged and the blood showed the signs of large-celled pseudoleukemia with elements characteristic of leucosarcomatosis. The dura mater was found sown with foci. The condition had developed independently of any preceding lymphatic leukemia, and it ran a course of about a year.

110. **Diagnosis of Affections of Pancreas.**—Salomon states that on an oatmeal gruel diet the stools show the presence of undigested fat typical of pancreatic disturbances when such exist. Several diabetic patients on a course of oatmeal according to von Noorden's technic had these typical "butter stools" the second day of the oatmeal diet. He has also found it frequently in surgical affections of the pancreas when the patients were kept on oatmeal gruel. He states further that an unusually large proportion of lecithin is found in the stools when the pancreas is not functioning normally. He found from 0.4 to 1.2 gm. a day on an egg diet while the amount never was above 0.1 gm. in normal or pathologic conditions with the pancreas working properly.

111. **Pathogenesis of Catarrhal Jaundice.**—Eppinger's patient was a young woman with a typical case of catarrhal jaundice, who fell from a third-story window and was picked up dead. The anatomic conditions were those of mechanical occlusion of the common bile duct at its mouth by inflamed processes which he is convinced were actual adenoid growths such as are observed in the throat.

117. **Chronic Polyserositis.**—The patient in the case described by von Neusser was a woman of 24 with chronic inflammation, thickening and linear adhesions in almost all the serous membranes, but especially around the spleen. The process developed very slowly, with little or no symptoms of inflammatory or local irritation; there was serous transudation at certain points. The patient succumbed by the end of the fifth year. The case had been diagnosed as Banti's disease or tuberculous cirrhosis of the liver with serositis, but autopsy failed to confirm either diagnosis. In this and in another case reported, as well as in others he has observed, a bacterial origin seems probable. Further bacteriologic research in such cases may throw light on the etiology of acute articular rheumatism, as there seems to be a certain analogy between it and chronic polyserositis. The clinical picture varies with the special involvement of the different serous membranes, the multiplicity and intensity of the anatomic localization. The most frequent form, he says, is Pick's pericardial pseudocirrhosis of the liver; this is followed in turn by "icing" liver; then come pseudocancer of the stomach and pseudophthisis of the lungs. He reviews the symptoms that aid in differentiating polyserositis or perivisceritis from cirrhosis. Any peculiar features of an assumed cirrhosis should suggest the possibility of the former.

118. **Orthostatic Albuminuria.**—Considerable experience with orthostatic albuminuria has shown that the condition is sometimes associated with actual nephritis and may be the only sign of an insidious kidney affection, but this is doubtful if the orthostatic albuminuria drags along for years. When orthostatic albuminuria develops at puberty it is usually accompanied by "cor juvenum," and both kidneys seem to participate in the albuminuria and it generally vanishes in two or two and a half years at most. When the secretion and the functioning of the two kidneys differ with prolonged orthostatic albuminuria there is probably some actual kidney lesion. Catheterization of the ureters and functional tests of the behavior of the two kidneys separately will readily differentiate the harmless cases of orthostatic albuminuria from those with a graver prognosis. The trouble seems to be due to inability of the vasomotors to adapt themselves to varying conditions, with the result that the blood stream in the renal vessels is rendered more sluggish when the individual stands while the blood flows more rapidly when he sits or reclines.

121. **Functional Tests of Kidney Affections.**—Blum presents evidence to confirm the assumption that the parenchymatous lesion may at first be localized in one kidney alone as chronic nephritis develops. The other kidney compensates the lesion by vicarious action for a time, so that general symptoms of the nephritis do not develop at first, the only symptom to attract attention to the trouble being hematuria or albuminuria with or without tube casts. In four cases the kidney was exposed on the diagnosis of "idiopathic kidney hemorrhage" and an unsuspected parenchymatous lesion was found, the vicarious action of the sound mate having prevented other manifestations beyond the hematuria. Orthostatic albuminuria may occur in one kidney alone when conditions interfere with the local circulation as in a case of intermittent hydronephrosis in his charge and in others of wandering kidney with intermittent compression of the artery.

122. **Colon Bacillus Bronchopneumonia.**—The patient was a young butcher who came to the clinic on account of general depression, obstinate coughing and expectoration and deafness, but no abdominal symptoms. The objective findings were those of pneumonia of both lower lobes. The sputum was that of suppurative bronchitis. The disease lasted about four months, from the first symptoms to complete recovery. The throat was swollen and inflamed at first, and there was marked pallor, even to a livid aspect. There was herpes on the lower lip and the hair fell out for about twelve days, but the blood picture was constantly normal. The colon bacillus was cultivated from the throat and sputum and the agglutination test with this bacillus was positive.

Zentralblatt für Chirurgie, Leipsic.

April 4, XXXV, No. 14, pp. 425-456.

125 Origin of Branchial Fistula. (Entstehung der seitlichen Halsfisteln—sog. Kiemenfisteln.) R. Weglowski.

April 11, No. 15, pp. 457-488.

126 *Treatment of Old Pronation-Luxation of the Foot. H. Hoffmann.

126. **Treatment of Pronation-Luxation of Foot.**—For two months the foot in the case described had retained the posi-

tion of the luxation, the inner margin facing downward and being twisted on its longitudinal axis fully 60 degrees. Osteotomy of tibia and fibula above the malleoli restored normal functional conditions. A plaster cast was worn for a time after the operation and a flat foot insole later. The osteotomy first rendered it possible to restore the foot to approximately normal position, reduction having been defective, even with a cast, before.

Zentralblatt für Gynäkologie, Leipsic.

April 11, XXXII, No. 15, pp. 473-504.

127 *Manual Treatment of Postpartum Hemorrhage from Atony. (Neuer Handgriff zur Behandlung der atonischen Nachblutungen.) L. Goth.
128 *Prophylaxis of Embolism After Gynecologic Operations. A. Sippel.
129 Instrument for Local Medicinal Treatment of Mucosa of Uterine Cervix. (Behandlung der Schleimhaut der Cervix uteri.) O. Hasenfeld.

127. **Manual Treatment of Postpartum Hemorrhage from Atony.**—Goth seizes the uterus from below and pushes it upward. The abrupt change in the position of the uterus and the drawing up of the vaginal mucosa induce reflex processes which have been useful in his experience in arresting postpartum hemorrhage from atony of the uterus. He describes eight cases in detail to show the method of application of the measure. In two other cases the measure proved ineffectual, and when this occurs he advises investigation at once to see if there is retention of fetal membranes or application at once of the Dührssen tamponing technic. He passes the thumb and forefinger down behind the pubic symphysis and grasps the uterus at the region of the internal os and pushes it upward, while with the other hand the body is pressed forward and friction applied to the fundus as with the ordinary technic. The rubbing and pressure on the posterior aspect, in conjunction with the pressure from below, compresses the uterine cavity. As the uterus is thus lifted the rubbing can be done more effectually, and the uterus usually responds with energetic contractions.

128. **Prophylaxis of Embolism After Gynecologic Operations.**—Sippel advocates keeping the pelvis raised for a couple of days after a gynecologic operation in which large veins in the pelvis have had to be divided. Continuing to keep the patient in the Trendelenburg position, even after the operation, while she is being carried back to bed and afterward, there is no danger of thrombosis as the mechanical conditions forbid it in this position. The blood flows constantly toward the center from the higher pelvic veins. After two days the position can be gradually changed to the horizontal. He explains the reasons why the danger of embolism is greater with the iliac and ovarian than the other veins. The proper position after the operation is obtained by allowing only a thin pillow for the head and placing the foot of the bed on a couple of stout chairs. After two days the chairs are replaced by stools for a few hours, before letting the bed down to the floor. Since he has adopted this principle he has had no mishaps from pulmonary embolism in more than a hundred myoma operations. It is so important, he thinks, to refrain from allowing the blood to accumulate in the pelvic veins that this counterbalances all the advantages of allowing the patients to be up early.

Policlinico, Rome.

April, XV, Medical Section, No. 4, pp. 145-192.

130 Action of Radium on Vaccine. (Azione del radium sul pus vaccinico.) S. Sereni.
131 *Transient Glycosuria from Nervous Shock. (Glicosurie transitorie da trauma psichico.) R. Ricci.
132 Hereditary Ataxia in Fourteen Months Infant. (Malattia di Friedreich in una bambina.) C. A. Crispolti.
133 *Agglutinating Test in the Tuberculous. (Semeiologia della reazione agglutinante nella tubercolosi.) L. Massini.

Practical Section, No. 15, pp. 453-484.

134 Inhibiting Action of Cerebrospinal Fluid on Rabies Poison. (Potere lissicida ed immunizzante del liquido cefalo-rachidiano di animali sani, rabidi ed immunizzati.) C. Fermi.
135 Epidemic Among Infants of Multiple Cutaneous Abscesses. (Ascessi multiple della pelle.) P. Pellicciotti.

131. **Transient Glycosuria from Nervous Shock.**—Ricci reports a number of examples of transient glycosuria in persons after an accident, operation or intense mental effort. He found transient spontaneous glycosuria in 26 per cent. of 30 persons brought to the emergency hospital suffering from the nervous shock and other effects of an accident; also in 23 per cent. of 17 physicians taking an examination for an important competitive position. He also found it possible to induce alimentary glycosuria in 40 per cent. of 15 patients facing or having just passed through some major operation. None of the patients had glycosuria before the nervous shock in question. In conclusion he discusses the mechanism of this transient glycosuria.

133. **Agglutinating Reaction in Tuberculosis.**—Massini ascribes considerable importance to the agglutinating test to supplement others, but warns that the findings can not be depended on during the course of acute infections, or in mercury or lead poisoning.

Norsk Magazin for Lægevidenskaben. Christiania.

April, LXIX, No. 4, pp. 301-412.

136 *Immunity to Tuberculosis. K. F. Andvord.
137 Casuistics and Genesis of Ovarian Dermoids. A. Ingier.

136. **Immunity to Tuberculosis.**—Andvord thinks that tuberculous glandular processes in children leave the system immunized to other forms of tuberculosis after healing. He attributes chronic pulmonary tuberculosis in adults to some primary glandular process. "Galloping consumption" is probably primary, he thinks, the infection occurring by inhalation in persons free from a primary glandular process and thus not immunized, or an acquired immunity having died out. He ascribes to the gastrointestinal route the origin of the other forms of the disease. Treatment should aim to assist the organism in establishing immunity, and it should be commenced at the first sign of glandular infection, as representing the initial phase of tuberculosis, when it can most easily be stamped out.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interest of our readers.

Diseases of Children. Edited by M. Pfaunder, Director of Children's Clinic at the University of Munich, and A. Schlossmann, Director of Children's Clinic at the Medical Academy in Dusseldorf, with an Introduction by L. Emmett Holt, M.D., New York, Professor of Pediatrics, Columbia University. In Four Volumes, Illustrated. Cloth. Price, $20.00 per set. Philadelphia and London: J. B. Lippincott Co.

Typhoid Fever. By George C. Whipple, Consulting Engineer, with an Introductory Essay by William T. Sedgwick, Professor of Biology, Massachusetts Institute of Technology. First Edition. Cloth. Pp. 407, with Illustrations. Price, $3.00. New York: John Wiley & Sons, 1908.

Fever Nursing. By Reynold Webb Wilcox, M.A., M.D., LL.D., Ex-president of the American Therapeutic Society. Second Edition. Revised and Illustrated. Cloth. Pp. 229. Price, $1.00. Philadelphia: P. Blakiston's Son & Co., 1908.

Medical Missions. By J. Rutter Williamson, M.B., Edinburgh University, Traveling Secretary Student Volunteer Movement. Cloth. Pp. 95. Price, 10 cents. New York: Student Volunteer Movement for Foreign Missions, 1899.

Annual Report of the Bureau of Health of the Philippine Islands for the Fiscal Year Ended June 30, 1907. Paper. Pp. 176, with illustrations. Manila: Bureau of Printing, 1907.

The Medical Mission. By W. J. Wanless, M.D., Medical Missionary under the Presbyterian Board in Western India. Paper. Pp. 96. Philadelphia: Westminster Press, 1906.

Practical Life Insurance Examinations. By Murray Elliott Ramsey, M.D. Cloth. Pp. 230. Price, $1.25. Philadelphia and London: J. B. Lippincott Co., 1908.

The Spectroscope. By T. Thorne Baker, F.C.S., F.R.P.S. Cloth. Pp. 130, with illustrations. Price, $1.75. New York: William Wood & Co., 1907.

Sixteenth Annual Report of the Board of Health, City of Spokane, Washington, for the Fiscal Year Ending Dec. 31, 1907. Paper.

Health and Happiness. By Robert Maxwell Harbin, A. B., M.D. Cloth. Pp. 184. Price, $1.20. Philadelphia: Griffith & Rowland Press, 1908.

Annual Report, 1907-8, Vassar Brothers' Hospital. Poughkeepsie, N. Y. Paper. Pp. 28. Poughkeepsie, N. Y.: A. V. Haight Co., 1908.

Parson Gay's Three Sermons. By Robert T. Edes, M.D. Cloth. Pp. 151. Price, $1.50. New York: Cochrane Publishing Co., 1908.

The Provost's Report, University of Pennsylvania, for the Year Ending August 31, 1907. Paper. Pp. 293.

Thirteenth Annual Report of The John Crerar Library for the Year 1907. Paper. Pp. 70.

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Original Articles

THE PREVALENCE OF CANCER IN THE PHILIPPINE ISLANDS.*

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MANILA, P. I.

From a perusal of the literature on cancer, one is led to believe that carcinoma is either very rare, or does not exist at all in tropical and subtropical countries. To show that this is not the case, in the Philippine Islands at least, is the purpose of this paper.

As a reason for the non-existence of the disease in tropical countries, is given the fact that the people subsist practically on a vegetable diet. They live almost entirely on rice and starchy tubers, varied, when possible, with, perhaps, a little fish, shellfish, or other sea food. The Filipino is not a vegetarian by choice, but is forced to be so of necessity. His consumption of meat is only limited by his ability to buy it. The vast majority practically never taste meat. The middle class eat a limited amount of native pork, while the wealthy class, principally confined to the larger cities, consume as much meat as most other people.

A great improvement in the general well-being of the poor native when changed from his accustomed diet to the more substantial one issued by the United States Army, with a reasonable meat component, was noted by not a few in the government service during the early days of military occupation.

Rayburn says "Cancer is not known in Borneo," yet it exists in the southern portion of the Philippine Islands, cases having been reported as far south as Palawan. In 1902, there were eleven cases reported from Bohol. The southernmost island of the Philippine Archipelago is Sibutu, the northern end of which lies some twenty miles from British North Borneo, and the latter can be distinctly seen from the island of Sibutu on a clear day.

While it is true that the present meager data on the subject would indicate that the percentage of the prevalence of the disease gradually diminishes as one proceeds south from Manila, yet this can be accounted for by the lack of authentic information from these parts and that the country is not so densely populated.

The following statistics are taken by kind permission from Dr. McDill's clinic, St. Paul's Hospital and Free Dispensary, Manila:

Since the establishment of this hospital, April 8, 1905, to Feb. 8, 1908, covering a period of two years and eight months, there have been admitted to the wards 4,284 patients. Of this number 48 were suffering from carcinoma, as follows: Tongue, 1; face, 1; breast, 7; cheek, 8; cervix uteri, 9; eye, 4; inferior maxillary, 2; buccal cavity, 5; larynx, 1; pancreas, 1; penis, 1; rectum, 2; stomach, 4; leg, 1; and lip, 1.

There were 17 admissions for sarcoma during the same period, as follows: Pancreas, 1; ear, 1; mastoid, 1; parotid gland, 2; metatarsal bone, foot, 1; neck, 4; femur, 1; tibia, 1; cranium, 1; orbit, 1; and testicle, 3.

There were refused admission, as being too far advanced for any treatment, 35 cases; 7 of these suffered from carcinoma of the cervix uteri, 8 from carcinoma of the breast, 12 from carcinoma of the tongue, 7 from sarcoma of the neck, and 1 from sarcoma of the femur. Of the 4,284 patients seen 25 suffered from sarcoma and 75 from carcinoma, or, in all, 100 cases of malignant disease, being respectively 0.0058 and 0.0175 per cent., or 0.0233 per cent. of malignant disease.

There were treated in the Free Dispensary during the same period 5,668 cases, and but 11 cases of carcinoma and no sarcoma were recorded. These 11 cases are not included in the foregoing, as the records are not sufficiently reliable to be considered.

It is believed that only from the percentage of those examined for admission can one get an idea of the frequency of the disease, as these figures are absolutely accurate.

Of the cases which found their way into the hospital, 26 were operated on, but in only 12 was there any hope of permanent relief, the rest being palliative in character. All of the cases of cancer of the uterine cervix were hopeless when first seen. The ages of these cancerous patients, under 40 years, so far as ascertained, were, according to the location of the disease, as follows:

Cervix uteri: One, 25 years; three, 30 years; one, 36 years, and one, 38 years. Rectum: One, 37 years. Stomach: Two, 24 and 30 years. Breast: One, 28 years; and eye, one, 25 years.

The statistics of the Board of Health for the Philippine Islands show the following deaths from cancer in the city of Manila for the year ending Dec. 31, 1907:

Buccal cavity, 14; stomach and liver, 9; peritoneum, intestines and rectum, 5; female genital organs, 13; breast, 5; skin, 3; not specified, 15—a total of 64 deaths. The population of Manila being 223,542, this would give 0.000286 per cent. of the total population. The total number of deaths from all causes for the year was 7,613, or 0.00852 per cent. of all deaths from cancer.

The reports from health districts outside of Manila were not used, as they were not considered to be accurate enough to be of much value.

In the census of the Philippine Islands, 1903, a comparative table for the year 1902, giving the percentage of deaths in the Philippine Islands and in the United States, states that deaths from cancer (and under this heading for the Philippine Islands, are included deaths from "other malignant tumors") are 0.1 per cent., while 2.8 is given as the rate in the United States.

As an instance of the medical value of this report, it may be mentioned that the death rate under the heading "Nephritis and Bright's Disease" respectively, for the Philippine Islands and the United States is given in the same table as 0.1 and 3.5 per cent. yet the hospital records will show that nephritis is very much more common here than in the United States!

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* Read at the Fifth Annual Meeting of the Philippine Islands Medical Association, Manila, P. I., Feb. 29, 1908.

The report shows 301 deaths from cancer and "other malignant tumors" for the year 1902, for the entire Philippine Islands, and shows that the disease was reported from every province in the Islands but three, during that year. There were 329,671 deaths for the year among the civilized people from all causes.

From several years service in the Insular Board of Health, and the United States Army, I am fully aware of the inaccuracy of reports from the outlying districts. From experience in many of the provinces, from Samar to Ilocos Norte, I feel safe in saying that the 301 deaths from cancer and other malignant tumors in the Islands for the year 1902, could be multiplied by one hundred without exaggeration, bringing the death rate up to about 5 per cent.

Professor Gilman[1] states that two cases of carcinoma were encountered in the first one hundred autopsies done at the Philippine Medical School morgue.

The frequency of cancer as shown by St. Paul's Hospital statistics is due, to some extent, to a rather careful clinical diagnosis, the employment of exploratory operation for diagnostic purposes, the microscopic examination of tissues removed, and the bringing to autopsy of all cases dying in the hospital.

Cancer of the cervix leads in frequency, and seems to occur about as frequently, as compared with cancer of other parts of the body, as elsewhere in the world, while cancer of the stomach seems considerably less frequent. The latter might be explained owing to the bland unirritating nature of the Filipino's diet, and to the fact that the drink habit practically does not exist.

Cancer of the buccal cavity and tongue is frequent, and it is thought to be due in large measure to the irritating effects of chewing "buyo," a composition which is generally used. It is composed of a piece of nut called "bonga," and lime made from oyster shells, and both are wrapped in a leaf taken from a tree called the "betel" (*Piper betle*). The general belief is, that no greater damage results to the chewer than the coloring of the teeth, which are permanently stained a reddish-brown.

But one case of cancer of the lips was admitted to the hospital. No other cases have been heard of, though considerable inquiry has been made. The Filipino does not use the pipe, confining his smoking almost entirely to cigarettes. All the cases here reported occurred in natives of the islands.

Rayburn has stated that the offspring of syphilitics and tuberculous patients and drunkards suffer from cancer more frequently than others, and assuming this to be correct, then it is not unreasonable to believe that the widespread distribution of tuberculosis throughout the islands may, to some extent, at least, account for the prevalence of cancer.

It is thought that the bad hygienic conditions under which the poor class of Filipinos, as a rule, live, ill-nourished by poor and often-times insufficient food, would lessen their resisting powers and make them easy prey to cancer, and that the absence of a better and more nourishing diet, with some meat, contributes to, rather than lessens the frequency with which they suffer from carcinoma.

It is said that people who live much in the open air suffer but little from cancer, yet the Filipino is much given to living in the open air, he being unable to exclude much of it even from his shack of nipa and bamboo construction.

Dr. Dalgetty, who says that he has never seen a case of malignant disease of the mamma in a native of Hindostan, wonders whether the constant presence of malaria in that country has anything to do with it. There is hardly a native in the Philippine Islands who escapes malaria.

The same writer speaks also of the possibility of the light clothing worn, which causes no pressure on the breasts, and the fact that the women are in the habit of suckling their children until the breasts are quite dry, as possibly contributing to the absence of cancer. It is thought such a gland would be less likely to undergo perverted action than one arrested while its function is still in full force. This all seems very plausible, but both of these statements apply equally well to Filipino women, and yet cancer of the breast is as common in the Philippine Islands, if not more frequently met with, than it is in the United States.

Not only all the cases of carcinoma of the cervix, but a vast majority of the cases of malignant diseases of other parts of the body, as well, come to the surgeon too late for hope of a successful operation. In no other country in the world is popular instruction regarding the nature of cancer, not only of the uterine cervix, but of all parts of the body as well, and the necessity of early operation, more needed than in the Philippine Islands.

The medical and surgical staff of St. Paul's Hospital has carried on its little propaganda since the hospital's foundation, and surgical patients are coming to it in ever increasing numbers, now including some of the better class, but most of the cases of cancer, as yet, come too late.

The meager statistics and the inaccuracy of most of those we have at hand make it impossible to show the true prevalence of cancer. The apparent rarity of the diseases, as shown in most reports, may be accounted for as follows:

The people are naturally averse to entering a hospital for treatment, looking on it as a family disgrace to have a member treated in a hospital, even as a pay patient, and I am sorry to say that the Filipino physicians, with few exceptions, foster this belief. The people generally do not submit readily to surgical operations, usually putting off such treatment until too late, and many prefer to die rather than submit to operation. They can not be blamed for this, however, as there were no modern hospitals in Manila before American occupation, and in the only then existing hospital open to civilians, only the few physicians on its staff were permitted to treat patients therein.

Owing to a lack of medical men in the islands, the government has found it necessary to continue to license the "cirujano ministrante." He is an ignorant man, whose only training consists in having served at practical work in the wards of a hospital very much antiquated in its methods. He is productive of more harm than good. There are many others who practice without a license, being collectively styled "mediquellos" and individually under various titles, such as "practicantes," "herbolarios," and "curanderos," all of whom cause the patient consulting them (and the great majority seeking relief go to them) to delay in consulting a competent surgeon so long as there is any money in sight.

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[1] A Report on the First One Hundred Autopsies at the Philippine Medical School, by Dr. Philip K. Gilman, Biological Laboratory, Bureau of Science and Assistant Professor of Pathology and Bacteriology, Philippine Medical School, read at the Fifth Annual Meeting of the Philippine Islands Medical Association, Manila, P. I., Feb. 27, 1908.

The very condition of things makes it impossible to secure accurate medical statistics, inasmuch as the great majority of the officials in charge of the municipal boards of health, the source of our statistics, are not possessed of the necessary training, to say nothing of the dearth of medical men in the provinces and their generally poor training.

I had charge of health conditions in Pampanga province, one of the wealthiest and most agricultural, close to Manila, during the years 1903-5. The population of Pampanga is 226,180, and there were but six licensed physicians practicing there during 1903. During the year 1905, there were 7,131 deaths, and but 421 of these received medical attendance. There were during the year 1907, 7,613 deaths in the city of Manila, and of these, 3,324, or 43 per cent., died without medical attendance.

As an illustration of the caliber of some of the men who gather medical statistics, is the following:

Very recently, an American school teacher in a town not far from the railroad was stricken with smallpox. The president of the municipal board of health was sent for, there being no other medical assistance available. He declared the teacher's affliction to be "an act of God" and refused to interfere by prescribing.

In justice to the Government, it may be said that every possible means have been taken to increase the number and efficiency of medical practitioners in the Philippine Islands. "An Act Regulating the Practice of Medicine and Surgery in the Philippine Islands" was passed in 1901. In 1903 the government began sending annually to the United States, selected students to be educated in branches to be selected by themselves, at the government's expense, and some of these choose medicine. In December, 1905, Act 1415 was passed, providing for the establishment of the Philippine Medical School in Manila, where medical education of a high standard can be had free by all who comply with the requirements governing admission.

In April, 1907, free scholarships were provided for, with the object of defraying the student's personal expenses, one from each province, the students to be selected by competitive examination. Each scholarship student who graduates must either accept government appointment, or return to his province and practice medicine and surgery therein, for a period at least equal to the time of his scholarship tuition.

The first academic year of the Philippine Medical School opened June 10, 1907.

CONCLUSIONS.

In conclusion it may be said:

1. Cancer is not confined to temperate climates.
2. It is believed that cancer exists in the Philippine Islands to a greater extent than in the United States.
3. The measures now being taken in other more enlightened countries to warn the people of the necessity of early diagnosis, and early radical surgical treatment in this disease, should be adopted here.
4. The disease is of sufficient importance in the Philippine Islands to warrant an effort being made to obtain better statistics in the future.

There is no doubt that the Philippine Medical School morgue will help us out greatly in this matter in the future.

THE CAUSE OF MILKSICKNESS OR TREMBLES.[*]

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AND
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OCCURRENCE OF THE DISEASE IN THE PAST.

A peculiar disease, now all but forgotten both by physicians and the general public, prevailed extensively in certain sections of the United States during the years of pioneer settlement. This disorder was known under a great variety of names, but was most commonly referred to as milksickness, from its apparent connection with the use of milk and milk products. A singular feature of the disease was its geographic limitation. the states of Ohio, Indiana, Illinois, Kentucky and Tennessee covering the area chiefly affected. Milksickness has never been known east of the Alleghanies and there is no record of its occurence outside of the United States. The medical journals of the Western States, in the period of from 1840 to 1860, contain numerous articles on the disease, but coincident with the clearing and cultivation of the land milksickness has tended to disappear and, except for its sporadic appearance in certain localities, has become practically extinct in those states in which it was once a barrier to settlement. Cases, however, have occurred in Illinois as recently as 1904,[1] and six deaths were reported from this cause in Macon County, Tennessee, in April and May, 1907.[2] A bibliography of the earlier articles on milksickness has been given by Schuchardt.[3]

Only the chief symptoms of the disease need be mentioned here. There were usually persistent nausea and vomiting, which led to the use of the name "sick stomach" in some localities. Obstinate constipation was an almost invariable accompaniment of the malady. A peculiar odor of the breath, usually described as "sweetish," was commonly noted and was regarded as highly characteristic by those having most experience with the disease. Muscular weakness, abdominal pain and other symptoms were more or less frequently reported. In the more severe cases great prostration occurs. As a rule, little or no fever is present and the temperature is said sometimes to be subnormal, although there are few instances where the temperature has been accurately recorded by a clinical thermometer. Little is known about incubation period, and autopsy records are few, fragmentary and largely unreliable.

CONNECTION WITH DISEASE IN CATTLE.

One of the most striking features of milk sickness is its association with certain localities. Settlers along the valleys of certain rivers or small streams are known to have been liable to outbreaks of milksickness, while those living in adjoining regions and under apparently similar climatic and geologic conditions remained entirely free from the scourge. Equally significant is the fact that in those localities where the disease existed there was invariably present a disease of cattle termed the "trembles" or "slows" and characterized by a symptomatology that was, to say the least, suggestive of the human milksickness. There are scores of instances in the literature of the subject showing in an unmistakable way a connection between the use of milk or meat from cattle sick with the trembles and an attack of milksickness in man.

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[*] Our investigation has been aided by a grant from the Memorial Institute for Infectious Diseases and by private subscription from public-spirited citizens of the Pecos Valley. We would especially acknowledge the help and courtesies extended to us by Dr. F. F. Doepp and Dr. Maurice Friedman and by Messrs. F. G. Tracy, A. M. Hove and W. M. Reed.

1. Palmer: Chicago Clinic, pp. 267-269, 1904.
2. Report of the Surgeon General Public Health and Marine-Hospital Service for 1907, p. 33.
3. Janus, 1897-1898, 2, pp. 437, 525.

NEW FOCUS OF MILKSICKNESS.

In November, 1907, we discovered a new focus of milksickness in the valley of the Pecos River, New Mexico, nearly 1,000 miles distant from the region where the disease had previously been known to prevail. At the time of our visit to the Pecos Valley the death of stock from this cause was generally attributed to "alkali poisoning." Some local observers, however, held the view that the trouble was due to the cattle eating some poisonous plant, the rayless goldenrod (*Bigelovia rusbyi*) being the plant most commonly suspected. In a letter received from Dr. W. G. Langley, State Veterinarian of Texas, we are informed that the same affection probably exists also in Texas from the state line along the valley of the Pecos to a point about fifty miles below the town of Pecos. It is possible that the disease occurs in the valley of the Rio Grande, but we have not been able to secure definite or positive information on this point.

Through the kindness of Drs. Maurice Friedman and F. F. Doepp we have obtained a record of 38 cases of this disease in man occurring in and about one town of about 2,000 inhabitants, between December, 1898, and January, 1908. Two of these cases in the convalescent stage we have seen. We also had the opportunity of studying an outbreak of considerable proportions in a herd of cattle and of observing and photographing the animals in many phases of the disease. Autopsies were made by us on animals dying from the effects of the disease and also on several shot or killed by a blow on the head while in various stages of sickness.

Many conjectures, some of which now appear grotesquely absurd, have been made as to the nature of milksickness. Those most generally advanced have assigned the cause to the eating by cattle of some poisonous herb, the same poison that causes the illness of the cow being communicated to man through milk, butter or flesh derived from the affected animal. In different localities and by different observers various plants have been incriminated. The poison ivy (*Rhus toxicodendron*) and the white snakeroot (*Eupatorium ageratoides*) have been frequently accused of giving rise to trembles and through it to milksickness; in some cases observation apparently has been supported by experimental evidence. The poison ivy, however, grows in abundance in the Atlantic seaboard states and in other localities where milksickness has never been known, and there are also observations indicating that the plant can be eaten by stock with impunity. The white snakeroot, while fairly abundant throughout most of the milksickness region of the central western states, does not occur in New Mexico, where we have found a center of the typical disease. Mosely,[4] to be sure, has recently published a report of some experiments thought by him to show that this plant is the cause of milksickness, but his experiments have been repeated by Crawford[5] with a completely negative result. The rayless goldenrod, which has been looked on as the cause of the "poisoning" in the Pecos Valley, is not found in Illinois, Indiana and Ohio, states in which many cases of trembles and milksickness have occurred.

In the two cases of the disease in man that were seen by us, one through the kindness of Dr. Doepp (Case 1), the other only incidentally (Case 2), the patients were convalescent when we arrived and, although blood examinations were made in Case 1, yielded nothing especially noteworthy. The history of the cases presented some of the classic symptoms of milksickness. In Case 1, a sweetish odor of the breath, said to be characteristic of similar cases of "alkali poisoning," was plainly perceived and was judged by us to be the odor of acetone. In Case 2, concerning the nature of which there had at first been some doubt, the same odor had been noticed by the wife of the patient, but was not apparent when the patient came under our observation.

The temperature records of Case 1 showed an average of about 97° F. *per os* through the attack. Mental confusion, nausea and obstinate constipation, preceded by extreme lassitude, were features of the onset of this case. Dr. Doepp assured us that the patient had had an enlarged liver, the enlargement extending about three inches below the costal margin. The organ could not be detected below the margin of the ribs at the time of our examination. The other patient (Case 2) had been ill with constipation, nausea and vomiting about two weeks before our arrival, the attack being diagnosed provisionally as "ptomain poisoning." When we saw the patient he bore every evidence of having passed recently through a severe illness. A slight exertion caused excessive fatigue, and this condition persisted throughout the period of our observation.

The old reports of milksickness state that lasting debility is a common consequence of the disease. Other features of these cases, in which we need not enter at this time, showed a close and convincing correspondence with the descriptions of milksickness in the early literature. The origin of the cases could not be definitely traced, but they were possibly connected with the eating of meat obtained at a Chinese restaurant.

SYMPTOMS OF THE DISEASE IN CATTLE.

We were able fortunately to observe the progress of the disease in a herd of about eighty cattle and to obtain all pertinent data.

One of the first noticeable symptoms of the disease in cattle is that the animal spends more time than usual in lying down and shows a reluctance to rise when urged; there is sometimes but not always a definite loss of appetite; the animal drinks as much as usual or even somewhat more than usual. If made to get up and urged to run, it quickly shows muscular distress, manifested in a definite weakness of the muscles of the fore and hind quarters, producing a shuffling gait as if its feet were sore; often it halts and trembles violently in all quarters, making at times ineffectual attempts to lie down and finally falling suddenly, trembling the while. Its breathing after such exercise is greatly accelerated; this rapidity of breathing passes off on resting. Sometimes after being thus disturbed the animal may have a passage of the bowels, usually of a rather thin consistency, in which may be noted much mucus mixed perhaps with blood; at other times this dropping of dung is not observed and the animal may be badly constipated. From this on, if the symptoms do not improve, the animal becomes steadily weaker, rising less often, eating and drinking less and less, until it becomes so weak that it can not rise, but lies on its side, moaning more or less frequently, its neck often becoming twisted to one side and the neck muscles standing out on the opposite side, hard and stiff. The sclerotics are often deeply injected and accompanied by a yellowish red discharge which becomes gummed on the canthi. The breath often acquires a more or less pronounced odor of acetone, but this odor may be absent. In the later stages of exhaustion there may be twitchings of the limbs, more particularly the fore legs, less often the hind legs, so that the ground becomes grooved by the movements. During the mid-stages of the disease the temperature is irregular, often ranging a degree or two below normal. We saw no cases of paroxysmal rage manifested by any of the animals we had opportunity to study. The animal dies quietly, its breathing becoming less pronounced and fitful, developing a Cheyne-Stokes rhythm; apparently all consciousness is lost shortly before death. Feces are often passed up to within a day before death, although as a rule the animal is more or less constipated throughout the course of the disease. Ranchmen state that in their experience an animal often recovers if it is "scoured out," either by feeding it Kaffir corn or giving it doses of linseed oil, leading to a thorough cleaning out of the bowels. The method of keeping the bowels open in the human patient by doses of castor oil has likewise been found beneficial.

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[4] Ohio Naturalist, 1906, 6, pp. 463, 467.

[5] Bull. 121, Part 1, Bureau of Plant Industry, U. S. Dept. of Agriculture, Washington, 1908.

THE PATHOLOGIC ANATOMY.

Externally the body presents nothing on inspection that is to be considered worthy of note. On reflecting the skin of the animal one can often detect an odor of acetone, particularly if the animal has just died. There are no subcutaneous lesions of any sort to be found.

On opening the cavities of the thorax or abdomen the odor of acetone is usually very marked.

The Thoracic Cavity.—Occasionally there may be a small quantity of clear yellow fluid present in the pleural cavities, which looks like serum and clots quickly on exposure to the air. There is no pleuritis. The *lungs* do not collapse greatly on opening the thorax. Several small areas of atelectasis may be found scattered over the dorsal aspect of the organs or at the apices of the upper lobes; at times one notices an occasional small area beneath the surface of the pleura which gives the impression that the part is filled with blood. The color of these organs varies at different times from a normal salmon color to a generalized purplish red, the latter condition being always found after a relatively long period of illness. The lungs feel boggy and on section exude a great deal of frothy fluid, *i. e.,* they are in an edematous state, and this circumstance accounts for the incomplete collapse of the organs on opening the thorax. Sections of the most edematous portions, however, float in water. We did not on any occasion find any traces of bronchopneumonia or lobar pneumonia. The mucosa of the trachea and bronchi showed no signs of inflammation. No ecchymoses were found on the pleural surfaces.

The Heart.—As a rule the pericardial sac contained varying quantities of clear straw-yellow fluid (50 to 175 c.c.) which clotted on exposure to the air. Pericarditis was not met with, at least such as could be laid to the disease; in one instance the visceral pericardium was thicker than normal, giving a uniform grayish tone of color to the whole of the organ—this was evidently due to some old attack of pericarditis. The right heart was generally found distended with blood, whereas the left side of the organ was usually found empty. Among the most noticeable things seen on opening up the pericardial sac were numerous areas of ecchymoses beneath the visceral pericardium, distributed chiefly along the course of the cardiac veins from base to apex and at times numerous at the base of the heart around the roots of the great vessels. These areas varied in size from that of a mere pin-point to irregular areas measuring approximately 2 by 2.5 mm. and the accumulation of blood sometimes bulged the serous covering up above the surface about 1 mm. in places. In some of the animals ecchymoses were of slight extent and in one case absent. No ecchymoses were ever seen on the parietal surface of the pericardium. As a rule the heart muscle was always definitely paler than normal, sometimes giving the impression of the existence of cloudy swelling, and at other times showing small areas of fatty metamorphosis. On opening the heart there were never present any evidences of the existence of endocarditis. In two cases ecchymoses were found beneath the endocardium over the tricuspid valves close to their bases, the accumulation of blood bulging up the endocardium about a millimeter high. On section the musculature showed the same appearances as seen on the outside, namely, either fatty areas or streaks, or more or less general cloudy swelling; this was brought out particularly on making sections of the muscle in the left ventricle, the apparent fatty areas being well marked.

The Abdominal Cavity.—On opening the peritoneal cavity there was in general little or no fluid present above what might be considered normal. No evidences of peritonitis were ever seen. In some cases small scattered areas of ecchymoses were found beneath the parietal peritoneum; these never measured over three square millimeters; more rarely were such found beneath the visceral peritoneal coat. The stomachs were usually well filled with food material in contradistinction to the intestines, both small and large, which were usually empty. The appearance of the small intestines, particularly in the duodenal and jejunal portions and less so as the large gut was approached, was that of a general and deep injection of the vessels beneath the peritoneal wall and within the walls of the gut itself. The large gut, as a rule, was in an apparently normal state and occasionally contained some fecal material.

Liver.—The most conspicuous condition pathologically among the organs was the state of the liver. Uniformly this organ was much enlarged, of a purple red color, being full of blood, with at times areas or streaks showing yellowish against the red color of the rest of the viscus. The gall bladder was most often full of bile of a dark green color. On removing the liver from the body and applying pressure to it, the dark red color disappeared and was replaced by that of a reddish yellow. The consistency of the liver substance was much diminished and it required little pressure of the fingers to produce rupture. At times an occasional ecchymotic spot could be seen under the capsule. On section the organ dripped considerable blood and exposed a reddish yellow surface, the presence of the blood vessels everywhere being plainly marked out, giving the typical appearance of the "nutmeg" liver. The parenchyma was markedly fatty. The gall bladder in some of the animals on being opened showed a small degree of injection of its mucous coat; at other times it looked quite normal. The bile was always clear and of a dark greenish color.

Spleen.—The spleen, so far as determined, was little, if any, enlarged in any of the cases, the capsule often being wrinkled up and thick and of a pearly gray color. In two of the animals the spleen showed several small ecchymotic patches, but as a rule these were absent. On section the organ was of a deep maroon red color, and the Malpighian bodies were not seen at all distinctly, sometimes not at all. The fibrous tissue frame work was in all cases very evident. The consistency of the spleen was thought to be normal in all cases, at least it was not particularly soft.

Kidneys.—The kidneys, so far as we were able to judge, were always enlarged and engorged with blood, having in consequence a deep brown red color. In certain of the animals the kidneys showed a definite cloudy swelling of the parenchyma, and in one instance slight fatty change. On section the organs contained a very considerable quantity of blood. The Malpighian tufts always stood out plainly on the cut surface. On the elimination of the blood from the organs in certain of the cases the appearance of cloudy swelling or of fatty metamorphosis seen in the organ before removal from the body vanished so that it could not be determined with certainty whether there existed any degenerative changes or not; on the whole, such organs looked healthy.

Bladder.—The bladder often appeared on the outside deeply injected, but this condition was not constant. On opening the viscus the mucous surface was at times found to be injected, at times not. There were no ecchymoses seen under the mucosa. In certain of the cases the urine contained within was cloudy and apparently contained traces of blood. The adrenals seemed to be normal.

Intestines.—On opening the small intestines they were seen to be much injected in the mucous membrane and also showed here and there in some of the animals small ecchymoses in the mucosa. As a rule the gut in the duodenal portion held a considerable quantity of greenish yellow mucus mixed in small amount with material from the stomach. Passing downward through the jejunum and upper parts of the ileum, the mucus in the gut was of a very tenacious character and of a definite yellow color, with little or no food material in it; it clung to the walls of the gut strongly and was mixed with small bubbles of gas. The large gut on being opened appeared normal in all the animals.

Muscles.—The general musculature of the animals was normal in appearance, being not pale or of deeper tint than usual; no ecchymotic spots were ever found beneath the muscle sheaths or in the muscle substance.

Brain.—In only one animal was the brain exposed, and this only with difficulty on account of lack of proper tools. In this case there was some congestion of the meningeal vessels, but no redness of the parenchyma of the brain. On section the ventricles of the brain appeared also congested and there was an excess of fluid, which was not, however, cloudy or blood stained.

THE DISEASE IN HORSES.

There was opportunity to note the clinical condition in but one horse. This animal had been out on pasture land on which two other horses had contracted the disease and died a day or two before this animal was seen. The horse stood in its stall, legs somewhat wide apart, and motionless except for its somewhat rapid breathing, sweating profusely about the head, neck, shoulders, back and flanks. Its head hung low and the animal appeared to be fully conscious. Its breath possessed a faint odor of acetone. Its rate of breathing was 28 a minute and its pulse 72. On percussion, the lung note was fairly clear and no signs of any pneumonia or bronchopneumonia could be discerned. Auscultation was rendered difficult and untrustworthy by the squeaking of the hair on the hide during the breathing, but no blowing note or coarse râles could be made out. No muscular tremors were noticed while the animal stood in the stall. The feces which had been passed were well formed and did not look abnormal. The animal died at midnight the next day after having been ill about 72 hours. It is to be regretted that no autopsy was obtained on this animal, but circumstances rendered this unavoidable.

Autopsy on Other Horses.—Opportunity occurred, however, to make an autopsy on another horse an hour after death, and on still another some 15 hours after death. In the latter case marked general invasion with *Bacillus welchii* prevented satisfactory examination, since the blood had become laked and had stained the tissues everywhere very deeply. In the former case the conditions found in the organs were in general similar to those observed in cattle. There were, however, some noteworthy differences. Instead of the liver being markedly fatty looking its condition appeared more one of marked cloudy swelling, although fatty changes were not wanting; the substance was friable.

Kidneys: The kidneys appeared to show cloudy swelling, but as they contained much blood this was not readily and certainly established.

Intestines: In the small intestines there were found at irregular intervals nodules lying in some instances close below the peritoneal surface and in others somewhat more deeply embedded in the wall of the gut. Viewed from the outside they measured in diameter about 4 or 5 mm. and were elevated above the surface in some cases full two millimeters, in others they projected about one millimeter. Those in certain instances were of a gray-yellow color surrounded by a zone of injected vessels and one or two of the nodules showed some traces of localized peritonitis capping, as it were, the apex of the nodule. In all there were eight of these nodules. On opening the gut it was found that these nodules had their origin in an inflammation of some solitary lymph nodes situated deep in the mucosa. In one part of the small intestine close to a nodule was seen imbedded fairly firmly a piece of hard foreign matter, which was supposed to be a thorn that had been swallowed and had penetrated the intestinal wall; this was later on found by microscopic examination to be the necrotic core of one of the nodules that evidently had ruptured through into the lumen of the gut. The peritoneal surface of the abdominal cavity presented a few ecchymotic spots. There was a very definite odor of acetone on opening up the cavities.

PATHOLOGIC HISTOLOGY.

So far as studied the chief lesions appear in the liver, heart musculature, kidneys and small intestine. The changes are those of a parenchymatous nature such as are frequently produced by toxin action in general, namely, cloudy swelling and fatty metamorphosis. The severest action is seen in the liver tissue, where the acute parenchymatous degeneration is exceedingly well marked. The liver cells are greatly enlarged, full of granules of various sizes, and at times the nuclei are barely seen or absent; in some places both cloudy swelling and fatty metamorphosis are coexistent in the same tissue. In no instance has there been determined any necrosis of the liver. The heart muscle in the various animals studied show variation in the intensity of the changes met with. In all, if careful search is made, there is found more or less well-marked evidences of cloudy swelling and in some cases of fatty metamorphosis, not widespread as a rule, but appearing in muscle bundles here and there in the tissue. No necrotic foci have been found. The kidneys are not so profoundly affected as might be expected; in some instances there are evidences of glomerulitis, accompanied by areas of acute parenchymatous inflammation, but in no case is the latter widespread in any of the specimens so far examined. The interstitial tissue nowhere is affected. Hyaline casts were noticed in the tubules in two specimens, as well as what was believed to be altered hemoglobin in the interstitial tissue and in some of the cells of the tubules.

In the small intestine of cattle there is seen to be great engorgement of the blood vessels of the gut from mucosa to peritoneum, accompanied by more or less of a well-marked small-celled infiltration. In one case the lymphoid aggregations were greatly enlarged and the lymphatic vessels in many places filled with large mononuclear endothelial cells like those seen in typhoid fever in the human subject, and traversing the lymphatics through the gut to the peritoneum, which was also in an edematous condition. The smooth muscle of the inner circular coat in places showed fatty metamorphosis of the muscle fibers. No necrosis of the lymphatic nodes could be seen in any of the specimens examined. In the case of one horse, as in the cattle, there exist in the small intestine evidences of the presence of localized inflammatory edema, largely confined to the neighborhood of the lymphoid aggregations. In this animal it has already been mentioned that in the gross examination of the gut a foreign body resembling a thorn appeared to be embedded in the mucosa. It has now been demonstrated by section that the supposed thorn is the remains of a pyramidal necrotic plug of mucosa still adhering to the deeper structure of the gut by its apical portion. The necrosis with its resulting slough evidently begins in the center of the lymph node and extends outward toward the lumen of the gut cutting out a wedge-shaped piece of submucosa and mucosa right to the surface, the base of the wedge impinging on the lumen of the gut. In its immediate neighborhood there are a large number of polymorphonuclear leucocytes and small round cells.

The general architecture of the necrosed tissue can barely be made out. There are ample evidences of reparative processes going on at the edges of the ulcerated surface of the mucosa, as new formed epithelial cells can be noticed growing over the edges of the ulcer and along the sloping floor in some of the sections. In another part of the same field can be noticed another swollen lymph node with its center just beginning to necrose, although there are no evidences of the extension of the ulcerative process towards the lumen of the intestine.

Examination of the other organs has not yet revealed anything of great interest. The lung tissue gives a picture of generalized edema; in places there may be atelectasis, and in other places small areas where the engorged capillaries have ruptured and filled the alveoli with blood; occasionally there can be found traces of localized emphysema, only a few alveoli here and there showing distention and intercommunication. The spleen in all the specimens gives evidence of the general engorgement seen in all the other sections of tissue; in some cases there is a deposit of altered hemoglobin in the meshes; there are apparently no other changes to be noted.

Sections of the central nervous system give no evidences of pathological alteration, beyond a general engorgement of the vessels everywhere in the sections of tissue.

BACTERIOLOGY.

Cultures were made from each animal on which an autopsy was performed, with one exception, and coverslip preparations were made from the various tissues and fluids removed from the bodies. In general, media were inoculated from the heart's blood and organs of the abdominal cavity, from the intestinal contents in two cases, and from collections of fluid in the serous cavities. Culture media were not inoculated in the field, as a rule, but from tissues and fluids removed from the body and brought to the laboratory, *i. e.*, within not more than two hours after the autopsy.

Early in the work a rather long slender bacillus was seen in the coverslip preparations made from the organs of a dead cow; a bacillus was also isolated from the tissues and body fluids of this and several other animals, in a number of instances in pure culture; the injection of 2 c.c. of heart's blood from a dead cow into a rabbit was followed by a fatal result, and a bacillus, apparently the same as that seen in coverslip films and cultivated from the organs of the cattle, was obtained in pure culture from the heart's blood and peritoneal exudate of the rabbit. These findings focussed our attention on this bacillus and, since the inferences from these observations have been supported by experiments with pure cultures, we have designated the bacillus as *B. lactimorbi*.

The morphologic and tinctorial features of this specific organism may be briefly given as follows: In coverslip smears from the organs the bacilli are larger and more slender than the colon bacilli, and stain unevenly with methylene blue. In preparations made from cultures grown on agar at 37° C. the organism is found to be a rod a little smaller than the anthrax bacillus, occurring singly and in pairs and in occasional filaments. As a rule the rods at the end of 24 hours incubation do not stain deeply with methylene blue, even if heated for a moment or two over the flame, but at one or both poles or at the center of each rod are found metachromatic granules which take on a reddish or purple tint, standing out sharply from the rest of the stained rod. Spore formation was observed in our first culture, the spore being perfectly round and situated at one pole of the rod in the mature forms; in the less mature rods, 24 hours old, the spore may be slightly oval and lie not quite at the end of the rod; the general effect produced by the shape and location of the spore reminds one strongly of the tetanus bacillus.

The spores stain readily by any of the ordinary methods. The organism is motile and it is found on staining by van Ermengem's method to be possessed of 10 or 15 flagella disposed peritrichally, the flagella measuring in length about five times the length of the bacillus itself.

This bacillus grew on our plates as small streptococcus-like colonies. It was soon found that some of the bacilli isolated and possessed of similar cultured characteristics did not answer in all respects to the description just given. Some differed markedly in morphology, forming more filaments than rods, both being almost devoid of metachromatic granules and in some cases even of spores, although corresponding culturally. This morphologic deviation occasioned some perplexity until it was found that if grown on gelatin at 25° or 30° C. the refractory bacilli would become metachromatic and sporogenous. We were able at the outset to establish the presence of *B. lactimorbi* in the cultures from four animals from the following sources: In the intestinal contents of two cows, in the bile, spleen, and liver, and in the liver of a four months' fetus of another (intestinal contents not examined), and in the pericardial fluid and intestinal nodule of a horse. A few cultures from other sources still remain doubtful.

Studied in greater detail after we had become assured from the results of animal inoculation that we were in possession of a pathogenic micro-organism, the following appearances and cultural reactions were observed:

Agar Slant.—At 37° C. at the end of 24 hours, the surface is more or less irregularly covered with a delicate veil-like growth, which is more profuse at the end of from 48 to 72 hours and eventually may take on a semiviscid character in some cultures; color, grayish, moist, smooth and glossy; no pigmentation of the growth itself or of the medium; no gas; condensation water growth heavy, gray-white in color. No odor.

Dextrose-Agar-Stab.—Surface growth occurs around the puncture and extends irregularly around from it in a delicate manner. At first the bacterium grew sparingly down the middle track for about 1.5 cm. but now it grows down 3 or 4 cm. or even farther; the needle growth is smooth and delicate, whitish in color and smooth; no pigmentation of the medium; no gas; no odor. The growth is more luxuriant after a few days.

Broth.—At the end of 24 hours there may not be any growth noticeable except sometimes a slight clouding of the broth at the surface. At the end of 48 hours there is seen on the surface, a well-formed pellicle, which will sink if the tube is agitated; the rest of the medium is feebly clouded and there may be a fine semiflocculent sedimented growth at the bottom of the tube or along the dependent side, if the tube has been inclined.

Litmus milk.—If not heavily seeded there may be no visible signs of growth. As a rule there is no change at the end of 48 hours; by 72 hours the cream ring will show a delicate green-blue color in the drier parts, and even in some instances the upper portion of the milk will show a slight alkaline reaction; this reaction daily increases until at the end of ten days the whole tube takes on an alkaline reaction which becomes more and more marked, until as in cultures of the hog cholera bacillus the medium may lose a part of its color, turning a dirty white, and even begin to turn opalescent, indicating a solution of the casein due to the great increase in free alkali. Coagulation has not been observed.

Potato.—No growth was observed; no multiplication was apparent on examining the surface by scraping and staining the scrapings and examining them under the microscope.

Heinemann's Synthetic Potato Medium.—No visible growth could be made out even at the end of two weeks; microscopic examination of the scrapings of the medium at the end of two or three days shows evidence of abundant multiplication.

Blood serum (Löffler's).—At the end of 48 hours there occurs along the needle track and confined to it an elevated, fairly vigorous, smooth, moist, yellowish, glossy growth, which later tends to spread but little. There is no discoloration of the medium, nor any liquefaction, nor odor.

Gelatin-Stab.—Grown at 20° C. growth begins to appear at the end of 48 hours, but is not sufficiently advanced for description until 72 hours old; then there is seen little or no surface growth around the puncture; down the stab to the extent of about 2 cm. a delicate gray, smooth growth appears. At the end of a week the surface growth has become extended on all sides from the puncture as a fairly well developed film of a whitish color, smooth, moist and glossy; at times the first evidences of liquefaction may now be detected, but this is not well established until the tenth day, when the medium just beneath the surface growth is slightly fluid. As time passes the liquefaction slowly progresses, extending down the stab to a slight degree, the gelatin at the end of 18 days or three weeks being liquefied completely across the tube and slightly downward. If kept at 23° or 24° C. the appearance and progress of the liquefaction makes more rapid headway, and at the end of a month at this temperature the whole of the gelatin may be reduced to a fluid state. There is always noticeable a more or less well defined putrescent odor.

Gelatin.—If the organism is grown in a petri dish of gelatin at 30° C., it is found at the end of 24 hours that the whole of the medium is quite cloudy, with not infrequently several small islets of pellicular material scattered over the surface. The surface growth increases during the next four days but never forms a complete film over the surface. The putrescent odor is more manifest in cultures grown at this temperature (30° C.).

In all cases in which a surface film forms at room temperatures on any of the media, fluid or solid, and particularly in gelatin left at 30° C. spore formation is abundant.

When grown at 37° C., particularly at the first isolation, the organism presents certain noteworthy differences both in growth appearance and in morphology. On slant agar the growth may continue thin and veil-like or may be as vigorous as the growth of the typhoid bacillus on the same medium. In broth there may or may not be a pellicle; as a rule at the end of 48 hours, there is a slight cloudiness only and a tolerable amount of sediment in the tube, which increases only slightly thereafter. The alkalinization of the milk cultures is not hastened by growing at this temperature. The morphologic alterations are striking; the size of the bacillus is less, approaching that of the typhoid bacillus, and there are irregularities in staining both in the individual cells and in different cells in the field; filament formation is more pronounced, and there may even be swollen, twisted forms of a shape entitling them to be classed as involution forms; metachromatic granules may be entirely absent or a few cells containing them may be found after prolonged search; spores are sometimes formed but as a rule not so abundantly as at 30° C. and by some races not at all. If a culture with these characteristics is grown on gelatin at 20° C. or at 30° C. and allowed to pass to the stage of liquefaction and again grown on the same medium and at the same temperature the type with metachromatic granules and abundant spore formation is produced. Our recognition of the true nature of certain cultures was considerably retarded by the uncertainty introduced through this polymorphic tendency.

Agar plate colonies of *B. lactimorbi* at the end of 24 hours at 30°, or 37° C., resemble those of *Streptococcus pyogenes,* but with this difference that they show a tendency to spread out in a film, particularly if the agar is freshly made, when the whole surface of the plate may be covered; film formation is also to be noted on the lower surface of the medium against the glass bottom. One of the strains at the end of three days on agar at room temperature developed a very distinct yellow color both in the depths of the agar and on the surface. In gelatin plates grown at 20° C. at the end of from 43 to 72 hours the colonies make their appearance and resemble at first those of streptococci but at the end of the fourth day they appear more vigorous, the surface colonies partaking more of the characteristics of *Staphylococcus albus,* although the color is of a yellowish white and they are not so elevated nor large, measuring about 2 mm. in diameter. Liquefaction becomes apparent at the end of ten days or two weeks, the colonies settling down in the medium which after five or six weeks becomes almost wholly liquefied.

The thermal death point of the bacillus as determined by the use of Sternberg's bulbs varies according to the type of culture employed, as shown thus:

48-hour agar culture grown at 30° C., fully sporing...15′ at 100° C.
48-hour agar culture grown at 37° C., non-sporing... 5′ at 55° C..

All tests were made with a time limit of 90 hours in the thermostat at 37° C., using agar as the medium for growth.

AGGLUTINATION.

We have been unable to obtain any signs of agglutination with three of the races of organism (two from cattle, and one from horse), using serum from the human patient and from two cows and one horse in dilutions of 1:50.

ANIMAL EXPERIMENTS.

Rabbits, guinea-pigs, dogs and calves have been used by us in experimental work.

Rabbits.—A young rabbit (R. 1) weighing about 400 grams, was inoculated intraperitoneally with 2 c.c. of heart's blood from a heifer that had died of "alkali poisoning" five hours previously. The rabbit to all appearances remained entirely well for four days, at which time a certain listlessness was noted. On exercising the animal it quickly became exhausted and after running a short distance would fall over and then slowly struggle to its feet, panting vigorously. The muscular weakness increased during a period of about five hours after this condition was noticed, and the animal then died quietly. The autopsy disclosed a general exudative peritonitis, the exudation being whitish-yellow and fibrinous everywhere, all organs being more or less covered by it. The liver was very much enlarged, dark red, soft and friable. On section the lobules could not be readily distinguished (cloudy swelling). The spleen was enlarged, deep red and soft. the Malpighian bodies being barely discernible. The kidneys were enlarged, moderately red and showed cloudy swelling. In portions of the small intestine the vessels were prominently injected, but there were no ecchymoses. The heart was apparently normal.

Bacteria Found: Coverslip films made from the peritoneal exudate, heart's blood, liver and intestinal mucus showed in all cases long slender bacilli with the morphologic character of *B. lactimorbi;* in the intestinal mucus other forms were also present. Plates made from peritoneal exudate and heart's blood gave pure cultures of *B. lactimorbi.*

A second rabbit (R. 2) was inoculated intraperitoneally with about 1.5 c. c. of the clot in the heart of R. 1 rubbed up in sterile water. Unfortunately this rabbit died during our return journey to Chicago (about 3 days after inoculation), and before we were able to make an autopsy decomposition changes had gone so far that the material was virtually worthless. Other rabbits (adults) have been fed with pure culture of *B. lactimorbi* and also inoculated subcutaneously and intraperitoneally, but up to the present with negative results.

Guinea-pigs.—A number of guinea-pigs have been fed and injected with pure cultures of *B. lactimorbi,* for the most part with negative results. In a few instances, however, when animals were used that had previously been weakened by other treatment, for example, by injection with diphtheria toxin-antitoxin mixtures death occurred. No characteristic changes could be certainly observed in the organs, but in one case (G.-P. 8.) *B. lactimorbi* was isolated in pure culture from the liver, plates made from the heart's blood and bile of the same animal showing no growth.

Dog 1.—From January 28 to March 5 this animal received agar and gelatin plate cultures of *B. lactimorbi* in nine doses. On March 8 it received three gelatin plate cultures. This animal was a rather old dog, fat, lazy and docile. Ten days after the first feeding it was noticed that its appetite was not so good as usual. Two days later it passed some masses of hard feces with a small quantity of bloody mucus. On examining this mucus bacilli were found in good numbers along with cellular debris. When the bacilli were stained with methylene blue they showed metachromatic granules, but there were no spores present. Plated in agar the material yielded the typical *B. lactimorbi,* and abundant spore formation was observed. Eight days later the animal again passed a considerable quantity of bloody mucus when out for exercise on the street in care of an attendant; no cultures were obtained, and it was not observed to pass any further mucus. Four days after the mucus was first observed, the animal was noticeably thinner and showed well-marked irritability which as time passed developed into an almost maniacal raging when the cage was approached, although when out for exercise it was quiet enough, except to actual strangers at whom it snapped when they attempted to pet it. February 27 it was in a decidedly weak and emaciated state. It also had a marked limp in the left fore foot, but on examination of the paw no foreign body could be found. On extending the leg evidence of pain at the shoulder joint was given, although there were no external manifestations at that point. By February 29 the dog for the first time failed to leave its box voluntarily. On March 1 there was very definite weakness and stiffness in the hind legs. Its bark became harsh and husky and the conjunctivæ were quite deeply injected. This condition marked the height of the clinical manifestations, and since the animal became no worse it was killed by chloroform on March 10 and an autopsy made immediately.

AUTOPSY NOTES.

Abdominal Cavity.—On opening the peritoneal cavity there are no signs of inflammation anywhere. The liver is definitely enlarged; general color a deep chocolate, in places somewhat mottled by ligher colored areas; there is much blood in the organ, but on pressing this out the liver takes on a yellowish cast due to a moderate grade of probable fatty change in the parenchyma; consistency soft, capsule and liver substance rupturing easily on handling. On section the liver lobules are not clearly marked out and there is some cloudy swelling present as well as some fatty change; no focal necroses are seen; the tissue contains much blood; color red brown. The gallbladder and bile seem to be normal. Spleen is probably normal in size; color dark red. Malpighian bodies near surface are readily seen; consistency is about normal.) On section contains considerable blood, but one can detect the Malpighian bodies without difficulty. Kidneys appear to be normal, both outwardly and in section. Adrenal glands look normal and on section are pale. Small intestine is injected in some places, but not markedly so; Peyer's follicles look prominent as seen from the outside; the mesenteric glands are not enlarged or altered; large intestine is apparently normal and in places contains fecal matter. On opening the whole gut there is some injection of the mucosa of the small intestine, but in only a slight degree; no ulceration and although Peyer's patches appear a trifle prominent there is no sign of inflammation in them. There is present a large number of a species of tapeworm. The large intestine shows no demonstrable lesions. No ecchymoses can be found in the serous membrane of the cavity. Bladder is not injected and is apparently normal.

Thoracic Cavity.—No fluid or ecchymoses are present in the pleural cavities, and no signs of inflammation. Lungs are light in color and apparently normal. Heart is a trifle large for a dog of its size (20 lb. dog), walls of both ventricles are pale and soft; valves are free of inflammatory changes; endocardium is clear; pericardium is clear and shows no ecchymoses.

Brain.—Cortical vessels are somewhat injected and full; no signs of meningitis. On section, no injection of the vessels was found, ventricles appear normal, with a slight trace of clear fluid in them. Cerebellum and pons and medulla are seemingly in a normal state.

Bacteriology.—Coverslips and cultures in agar were made from the liver and kidney. The coverslips showed nothing characteristic; from the agar plates from both liver and kidney, *B. lactimorbi* was isolated in pure culture after 48 hours' growth.

Dog 2.—A young dog of some fifteen pounds weight, in good condition was received on February 16, and during the interval between this date and March 19 it received four doses of gelatin plate cultures of several different strains of *B. lactimorbi*. On February 29 it was noticed that the animal had become noticeably thin, although lively and active. On March 10 it was much thinner and perceptibly weak, remaining contrary to habit in its box, after entrance of any one into room. Next day it had developed a bronchitis, causing it to cough and interfering with its barking. On March 12 it was evidently very ill, lying in its box and showing great disinclination to rise; March 17 found it still in an enfeebled state, unable to bark, and the cough still continuing. On March 19, however, it appeared much better and was out of its box; the cough was less severe. On March 20, it barked vigorously; the cough had almost disappeared, and the animal was lively. It was killed by chloroform and an autopsy was performed at once.

AUTOPSY NOTES.

Nothing of note is revealed by inspection. Reflection of the skin shows that the dog is exceedingly emaciated, there being no subcutaneous fat present. The muscles everywhere are very pale red. The inguinal and axillary glands are of normal appearance.

Abdominal Cavity.—On opening the abdominal cavity the peritoneum shows no signs of inflammation nor ecchymoses. The liver does not appear to be enlarged; color light chocolate brown; firm to the feel of the hand; it does not appear to show any cloudy swelling nor fatty change, and does not contain any excess of blood. No focal necroses are seen through the capsule. The gallbladder is empty. On section the liver looks in a tolerably healthy state, as does the gall bladder. The spleen is normal in appearance, both in the cut and uncut condition. In similar way the kidneys are likewise in an apparently good state. Adrenals are normal. The small intestines are found to be empty, and in places a bare trace of injection of the outer coats can be found. The large gut is seemingly in a healthy state and contains some fecal material. On opening up the intestinal tract, it is found that the small gut contains a fair amount of bile-stained mucus, and there is seen an occasional slight swelling of a Peyer's patch, but no sign of inflammation; there is an entire absence of any past or present sign of necrosis anywhere in the gut. The large gut contains soft feces and is in a normal state. Stomach apparently normal.

Thoracic Cavity.—The heart looks of proper size and is not soft to the touch, but the muscle of the ventricles is somewhat pale. Valves and endocardium are normal. The lungs show a few small points of atelectasis in the dorsal portions of the lobes of each; no trace of any bronchopneumonia. Trachea shows in its walls and in the wall of some of the larger bronchi some few flakes of muco-pus, although there is lacking any of the signs of active inflammation. Brain and spinal cord are in a normal condition.

Bacteriology.—Coverslip preparations were made from the liver, intestinal mucus and mucopus of the trachea. That from the liver showed no bacteria; that from the intestine a number of colon-like bacilli and a few cocci; in the tracheal pus there were quite a number of lanceolate diplococci and a very few bacilli. Cultures in agar were made from the liver, intestinal mucus, kidney and heart's blood. Liver and heart's blood sterile, the intestinal mucus gave *B. coli* and streptococci; *B. lactimorbi* was not obtained.

Dog 3.—This animal received gelatin plate cultures of one strain of *B. lactimorbi* on March 19, 23, 29 and April 8. On April 7 it appeared to be less active in its movements, a trifle thinner and showed no disposition to bark or whine. Next day, although it barked a little, observers received the impression that it was somewhat enfeebled. On April 9 it was weak and refused to leave its box, and when persuaded to rise up in the box it trembled perceptibly in the forequarters and neck muscles. On April 11, it was lively and again got out of the box and danced about in its cage and wanted to be petted. On April 14 no signs of illness could be further detected.

PATHOLOGIC HISTOLOGY OF THE DOGS.

In the tissues of Dogs 1 and 2 the action of a toxic substance is chiefly manifest in the liver and kidney. Particularly in the liver of Dog 1 the marks of a parenchymatous degeneration of the type of cloudy swelling is most pronounced, the cells being so swollen that it is hard to make out the existence of the capillary network; fatty changes are wanting in Dog 1, but are in slight evidence in Dog 2. In the kidney tissue of Dog 1 there is present some degree of glomerulitis, together with cloudy swelling of the epithelium of the convoluted tubules, the rest of the tissues being in a sound state. In Dog 2, although the glomeruli are well filled with blood due to general congestion of the vessels, there is no trace of inflammation of the glomeruli. Here and there are to be found traces of slight cloudy swelling of the convoluted tubules; otherwise the tissue looks healthy. In neither specimen are there any casts present in the tubules. The splenic tissue of Dog 1 shows that it contains a considerable amount of blood, otherwise there is nothing of a pathologic nature found. The heart muscle of Dog 1 shows slight traces of cloudy swelling in some of the muscle bundles. No fatty changes noted. That of Dog 2 appears normal. Other tissues seem to be in a normal state.

Calf 1.—A calf (C. 1) weighing about 350 pounds, was fed with agar plate cultures of *B. lactimorbi* at intervals of a few days during a period of about six weeks. To all appearances the animal remained entirely well and showed no characteristic symptoms, or, indeed, symptoms of any kind. The animal was killed at 9 p. m., and the autopsy was held the next morning at half past nine. The following pathological conditions were found:

Heart.—A small ecchymotic spot was found beneath the epicardium of the right ventricle near the apex; the organ was otherwise in an apparently normal condition.

Liver.—On the surface in three or four places were found small areas of irregular shape of an uniform reddish-gray color in which the architecture of the liver substance could not be seen. These were considered to be necrotic in nature. On section, these areas seen on the surface were found to dip down into the parenchyma to varying depths, preserving the same features as seen on the surface. On further examination of the organ there was found in the posterior portion of the large lobe some 3 cm. below the surface an irregularly shaped necrotic mass of about 6 cm. in diameter, whose appearance corresponded entirely to that of the smaller areas just described; it was very friable, breaking down on the slightest pressure. In other respects the organ appeared normal.

Mesenteric Glands.—These were generally much enlarged and less firm than normal. Other organs and tissues appeared to be in a normal state.

CALF 2.—Another animal (C. 2) was fed with spore-bearing culture in a similar manner. Three days after the first feeding the feces were soft, unformed, and contained much mucus. When exercised by running the animal was readily fatigued and showed great unwillingness to move, although on the preceding day it had been very active. On the fourth day the disinclination to muscular exertion was still more marked. There was much mucus in the feces, and microscopic examination showed the mucus to be filled with slender, granular-staining bacilli morphologically agreeing with *B. lactimorbi.* With the use of cultural methods *B. lactimorbi* was isolated and definitely identified. Nine days after the first feeding an abundance of blood-streaked mucus appeared in the stools. During the next two weeks little change was noted in the condition of the animal, beyond a slow but steady drop in the temperature, which, after the first 10 days, ranged below 100° F. a large part of the time. Four weeks after the dosing was begun the animal was alive, but emaciated and rather stupid. At the end of another week while being led about the yard, the animal's forelegs seemed to give way suddenly and it went down on its knees with head on the ground, but did not lose its balance completely. After a while it struggled to its feet and moved on, only to repeat the performance a little later. This behavior strikingly reminded us of the cattle affected with "slows" or "tires," as we have seen them in the Pecos Valley, but there were no "trembles" in this case.

NOTE: It is evident that the observations and experiments in part recorded in this article, in part reserved for more detailed statement,[6] are necessarily but the prelude to a more comprehensive study. For the purposes of such study more abundant material is indispensable and we shall be very grateful to all physicians who will notify us immediately on the appearance in any locality of milksickness or of the cattle disease, "trembles," "slows" or "alkali-poisoning."

Address letters or telegrams (at our expense) to E. O. Jordan, University of Chicago.

SURGERY OF THE PROSTATE.

A PLEA FOR EARLY PROSTATECTOMY IN HYPERTROPHY OF THE PROSTATE.

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A study of 485 recorded cases of prostatectomy for hypertrophy of the prostate, occurring in the practice of thirteen different operators, wherein the cause of death is given, shows in all 33 deaths. Of these deaths, ten were due to causes such as cancer of the liver, pulmonary tuberculosis, etc., in no way connected either with the operation or the pathologic condition because of which the operation was undertaken. Eight of the deaths were due to exhaustion, pneumonia, pulmonary embolism and sepsis, conditions caused by the operation itself or the anesthesia. It would be nearer the exact truth, perhaps, to say of the deaths due to sepsis that most of them were due to conditions existing before the operation was done; but for the present at least we will consider them as deaths due to the operation *per se.* The remaining 15 deaths were due to pyelitis, pyelonephritis, and other conditions secondary to and caused by the hypertrophy of the prostate, and existing at the time of the operation.

The total death rate in this series of cases, then, is less than 7 per cent. The death rate of the operation (charging the operation with some deaths, perhaps, which should not be charged to it, as above mentioned) is less than 2 per cent., while the death rate from conditions secondary to and caused by the enlarged prostate is 3½ per cent. In other words, half of all the deaths following prostatectomy are due to conditions set up by the enlarged prostate. The deaths from these conditions outnumber the deaths from the operation *per se* two to one. This means that the death rate in hypertrophy of the prostate treated without operation is about 4 per cent., while timely prostatectomy will yield a death rate of 2 per cent. or less. If there is any error in these statistics, it consists in attributing to the operation itself too many deaths and in charging to the pathologic conditions secondary to the enlarged prostate too few.

Fuller,[1] speaking of his personal experience with prostatectomy in over 300 cases, says: "I feel that if cases complicated with very marked uremia are excluded I can operate with an average risk to the patient of not more and probably under 5 per cent. Death from the operation itself is practically *nil.*" Goodfellow[2] has done 105 prostatectomies with but two deaths. Watson[3] gives the death rate in enlarged prostate treated by catheterization as 7.7 per cent. The expectancy of life in patients treated by catheterization, according to Harrison and Lydston, quoted by Deaver,[4] is four or five years.

Time will not permit me to go further into the details here, so I will content myself with the assertion that the study of the statistics will prove that the above deductions are in accord with the facts. It is, perhaps, unnecessary to say that I am speaking of that degree of prostatic hypertrophy only which demands treatment. Thus far we have concerned ourselves with the question of mortality. Let us now turn to the question of morbidity.

The man with a clinically enlarged prostate is seriously handicapped as to his usefulness, comfort and pleasure. Will prostatectomy remove these disabilities? Will the operation cause any disability? Impotency, sterility, fistula, stricture, epididymitis, orchitis, and incontinence are the disabilities charged to the operation. Fuller, in 400 cases, has had but one case in which there was permanent dribbling of urine, and in that case the dribbling occurred only on exertion. He has had no permanent fistulæ, and it is his opinion that the operation should improve rather than injure the sexual function. Watson, in his analysis of 530 cases, gives the percentage of incontinence following the operation as 3½. Ruggles[5] says that in 39 cases operated on in Rochester, N. Y., incontinence followed in five (7.6 per cent.).

It should be remarked, in passing, that this percentage of incontinence as a result of prostatectomy is unnecessarily high. According to Pilcher,[6] complete control over the bladder is the rule. Barling, Hartman, McGill, Lilienthal, and Freyer[7] are of the opinion that control of the bladder is not interfered with by prostatectomy, but, on the contrary, is restored in cases wherein it was lost prior to the operation. The two latter are of the opinion, based on a large personal experience, that prostatectomy improves rather than in-

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[6] The full report of our investigations will appear in a future number of the Journal of Infectious Diseases.

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[1] THE JOURNAL A. M. A., xliii, p. 1452. (Fuller's cases are not included in the 485 cases studied.)

[2] THE JOURNAL A. M. A., xlii, p. 184. (Goodfellow's cases are included in the 485.)

[3] Ann. Surg., xxxix, p. 853.

[4] Am. Jour. Med. Science, cxxviii, p. 16.

[5] Ann. Surg., xli, p. 558.

[6] Ann. Surg., xli, p. 569, et seq.

[7] Cumston, Surg. Gyn. and Obstet. iii, p. 361.

terferes with the sexual powers. Young,[8] basing his statements on 75 cases of "conservative perineal prostatectomy," says that in a "large proportion the sexual power has been maintained after the operation." He has seen but one permanent perineal fistula due to the operation; four cases of rectourethral fistula were cured by subsequent operation; no cases of continual incontinence have occurred; only one stricture occurred and that was easily dilatable, and in all voluntary urination was restored.

Goodfellow, in 73 cases of perineal prostatectomy, has had no permanent fistulæ, no permanent incontinence, sexual powers have been regained by many patients, and in but three patients has there been comparatively trivial trouble from traumatic stricture. He has had a few cases of epididymitis. Albarran, quoted by Young, reports the sexual powers lost in most of his cases.

Murphy's[9] conclusions, based on 51 operations, are that the sexual power is usually destroyed; the vesical control is almost uniformly good; the frequency of urination is reduced to about normal. I found no cases of stricture in Murphy's reports. One urethro-rectal and one urethral fistula were closed by subsequent operation.[10] It should be remembered that Murphy removes the posterior wall of the prostatic urethra in the perineal operation.

For obvious reasons it is difficult or impossible to arrive at accurate conclusions concerning the influence of prostatectomy on the sexual functions. Besides, one writer will overrate and another will underrate the importance of these and other functions. Hence, I concluded that perhaps the most reliable method of arriving at a just estimate of the effects of prostatectomy generally was to get the expression of a number of operators of experience as to their impressions gained from their patients' statements as to the results of the operation. Many patients, for instance, whose sexual power is lost or greatly impaired express their unqualified satisfaction with the results of the operation. With a view of arriving at the patients' attitude toward the operation, I wrote to a number of the more prominent operators of the country asking them what their experience along this line was and, incidentally, the number of operations on which their opinion was based. Some of the replies received cover other points besides the particular one now under discussion, and some of these are of such great interest that they are included in the abstracts which follow:

Drs. Munro and Bottomley have had 18 cases, with excellent results in 11, good results in 5, and in the remaining 2 there is no report other than that one patient died after two and a half years from an unknown cause, and that the other is dying of cancer of the prostate and metastasis.

W. L. Rodman says: "The effects after prostatectomy have usually, not invariably, been entirely satisfactory." Dr. Rodman was sick in bed when he wrote, and was, therefore, not able to give the number of his cases.

Dudley P. Allen says:

> My judgment of the cases, based on those which I have seen and those from which I have received reports, is good, so far as the attitude of the patients themselves is concerned. Some of them report a complete restoration of the bladder function with normal micturition and normal power of the bladder in expelling urine.

John B. Murphy writes:

> I might say in a general way that here and there there has been an unsatisfactory result as far as the patient's effort and mental condition were concerned, but I have never received as large a percentage of strong, complimentary letters on the result, as I have on the prostate. So that, on the whole, my opinion would be that the patients, in a very great percentage of the cases, were very well satisfied.

A. VanderVeer answers:

> Yes; the operation has yielded results satisfactory to the patients. As nearly as I can tell I think I have done in the neighborhood of fifty prostatectomies and a most remarkable condition has presented in the laboratory reports, i. e., a fraction over 30 per cent. of these cases have been of the nature of adeno-carcinoma. Of course these patients have not done so well, but I have some living nearly two years after the operation and the wounds have remained in good condition.

C. H. Mayo, including his brother's cases with his, says:

> In two hundred and ninety-one cases, including twenty-six for carcinoma, we have twenty-eight deaths. We think the after-results of operations for enlarged prostate compare favorably with any other serious surgical work so far as the patients themselves are concerned. There is now but little trouble following the operative technic. While a few of these old individuals have other diseases, kidney, bladder and diseases of the blood vessels, which would be sufficient of themselves to prevent good health, it is no fault of the operation.

Dr. Lilienthal says:

> My cases number about seventy-five, nearly all suprapubic. The patients are extremely grateful and do all in their power to send others to me who are afflicted as they were.

Hugh H. Young says:

> The results after prostatectomy by the method which I employ are entirely satisfactory. There is generally no disturbance of sexual powers except in old men as you will see in the accompanying report. There is not a case that has not been benefited and with about half a dozen exceptions all have been completely relieved of the obstruction to urination. In some cases contracture of the bladder and cystitis have prevented their having a perfect result, but these can always be relieved by appropriate treatment by hydraulic dilatations. I have now had one hundred and ten consecutive cases without a death, two of these have been over 80 years of age, and about forty over 70 years of age.

Eugene Fuller referred me to some marked passages in his reprints, from which I abstracted the following:

> My results are so nearly uniformly satisfactory and perfect that it is my custom to assure a patient that after recovering from the operation he will be able to urinate naturally, and at normal intervals will be able to empty his bladder completely, and that his urine will become free from pus and bacteria. As for a patient's sexual status after the operation, I do not consider it safe to be so positive, for a fair percentage of these elderly individuals have already lost that function through senility or through old inflammatory lesions in connection with the seminal vesicles. Prostatectomy will not restore potency in such cases. In a considerable number of those individuals who have lost their sexual force, the cause lies in the fact that the prostatic hypertrophy by its direct pressure on the seminal vesicles has caused atonic distention of those organs, the result being impotency. In such cases the removal of the hypertrophy will restore the sexual function. In a number of my operative cases representative of such a condition, satisfactory marriages have resulted the year after operation. If the patient still has sexual force before operation, in my experience prostatectomy ought not to injure the function, while in many instances it ought to improve it.

Dr. Fuller closes his letter by saying: "I have to date performed prostatectomy about 450 times."

These last two letters, so nearly alike as to results reported, from men of large experience, the one doing the perineal and the other the suprapubic operation, seem to show that the result obtained depends rather on the man operating than on the method chosen.

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[8] Ann. Surg., xli, p. 549, et seq.

[9] Four urethral fistulæ remained 4, 2, and 2 and 3 months, respectively, after the operation

[10] The Journal, xlii, p. 1558.

Willy Meyer writes as follows:

> 1. I have done outside of some eighty-five Bottini operations for prostatic enlargements, forty-one suprapubic and eight perineal prostatectomies. 2. Perineal prostatectomies: The greater number of patients were satisfied with the results; one developed recto-urethral fistula on the tenth day after operation; one had a very obstinate perineal fistula (suspicion of prostatic cancer); two patients lost power of intercourse. 3. Suprapubic prostatectomies: Results uniformly satisfactory to the patients. No fistula; no hernia; no dribbling. Virility preserved. In patients showing complications the two-stage operation, under spinal anesthesia, is highly advised. Personally, I prefer the suprapubic to the perineal operation.

Finney writes that, owing to the great experience of and good results achieved by Dr. Young, he has for the past four or five years turned cases demanding prostatectomy over to him or his (Finney's) assistants. He says:

> My experience is based on a dozen cases operated on five or six years ago. These were about equally divided between the suprapubic and perineal methods and my results in each case were very satisfactory.

Crile says:

> In my experience in about twenty-five operations for prostatectomy the patients themselves were pleased with the result and there is not a single instance in which there has been a clinical failure. That is to say, in not a single instance has the patient regretted that the operation had been performed. In most cases the patients have been very grateful for the relief afforded them.

Macdonald, of Albany, writes as follows:

> I have done about eighty such operations for very different conditions. The most satisfactory results have been attained in pure hypertrophies of large size having material functional disturbances. As a rule, my patients have been greatly pleased with the results of the operation.

My own experience is limited to 25 cases. There were three deaths, all due to septic conditions (pyelonephritis and cystitis) which existed at the time of the operation, and because of which conditions the patients finally asked for operative relief. There were no postoperative sequelæ. I know of no operation which gives more general or more complete satisfaction to the patients than does prostatectomy for enlarged prostate. That malignant disease is present in a much larger percentage of cases of so-called enlarged prostate than was heretofore believed to be the case is proved by the experience of Young, the Mayos, VanderVeer, Munro, Bottomley, and others. Moreover, that a benign hypertrophy of the prostate may become malignant seems from the evidence at hand a well-nigh proved fact.

Summary.—The fatalities following prostatectomy are largely due to conditions resulting from the hypertrophy and existing at the time of the operation. Prostatectomy, in the absence of serious complications, entails a risk to life of less than 2 per cent. The death rate in enlarged prostate treated by catheterization is over 5 per cent. Prostatectomy in enlargement of the prostate adds to the average expectancy of life in these patients and adds to their enjoyment and usefulness. Malignancy is present quite often in enlargements of the prostate thought to be benign in character, and it is more than probable that benign enlargement may take on malignancy.

CONCLUSIONS.

1. The catheter treatment of enlarged prostate is, like the opium and poultice treatment of appendicitis, unsurgical and unsafe.
2. Prostatectomy, done before secondary changes have arisen, is the best treatment for enlarged prostate.

HYPERTROPHY OF THE SYNOVIAL FRINGES OF THE KNEE JOINT.

FURTHER OBSERVATIONS.

EDVILLE GERHARDT ABBOTT, A.B., M.D.
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In an article[1] on "Hypertrophy of the Synovial Fringes of the Knee Joint," published in 1903, I took credit for having done some original work in this particular field. Some time later it was brought to my notice that a comprehensive article on operative work on the knee joint, by Dr. Joel E. Goldthwait, which included this condition, had appeared[2] about one year prior to this. In 1903[3] there was published an article by Drs. Charles F. Painter and William G. Erving, entitled "Lipoma Arborescens," which also treated of these hypertrophies. In 1904, Dr. Albert Hoffa, late of Berlin, Germany, presented a paper on this subject at the annual session of the American Medical Association, at Atlantic City, in which by failing to call attention to the work of others he also appeared as a pioneer.

The credit for original investigation in any work should be given to whom it belongs, and in this case, while there might be some question as to the exact nature of the work done by the different men, credit certainly seems to belong to Dr. Goldthwait through his lucid contribution mentioned above.

In order that there may be no misunderstanding as to the character of the cases described in my article[1] referred to, also as to the character of those on which the following observations were made, let it be said that no inclusion is intended of those patients in whom the condition found was that of fatty tumor, chronic arthritis, or floating cartilage. The work relates wholly to that disturbance of the knee joint in which the normal synovial fringes, situated just posterior to the patella and on the same plane as the transverse line of the joint, have become so enlarged that they interfere with joint motion.

The other pathologic changes often described with this condition—lipoma arborescens, chronic villous arthritis, and floating cartilage—while in some instances they may be an extension of the process, seem to me to be entirely separate, and should not be considered with it.

The difference of opinion as to the results which may be expected from conservative treatment may arise from the fact that these conditions are of a different nature, and a surgeon would most certainly be justified in stating that tumors of fat, or floating cartilages, could not be satisfactorily treated by the use of the ordinary conservative treatment for joint disturbance.

Continued observations on this subject have shown that this hypertrophy of the synovial fringes is often met by the orthopedic surgeon and, furthermore, that its treatment demands surgical interference much more frequently than was formerly supposed. Operative treatment, however, has not proved wholly successful in all cases, since the prolonged restriction of normal joint motion following the operation has been so marked that the results have caused one to hesitate before undertaking radical measures for its relief. In conversation, Dr. Hoffa, a short time after he had presented his views on the subject, stated that he had given up the work almost wholly for this reason. At one time my views on the subject were also in accord with the above, but subsequent work has caused them to be again altered; at present, a change in the method of operating which has produced better results has led to the conviction that operative procedures are justified in all cases which do not readily yield to conservative treatment.

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[1] The Journal A. M. A., April 25, 1903.
[2] Trans. Amer. Ortho. Assn.
[3] Boston Med. and Surg. Jour., Mar. 19, 1903.

The cause of so much difficulty following the operation has seemed to arise from the fact that too much scar tissue, which restricted motion, followed such an extensive operation as was considered necessary at one time. The long continued after-treatment with its accompanying pain, required to establish normal motion, has chilled the ardor of both the surgeon and the patient, especially if the latter had a friend who had already submitted to the operation. Therefore, a method of accomplishing the same ultimate result was sought with the hope of limiting the disagreeable after-symptoms.

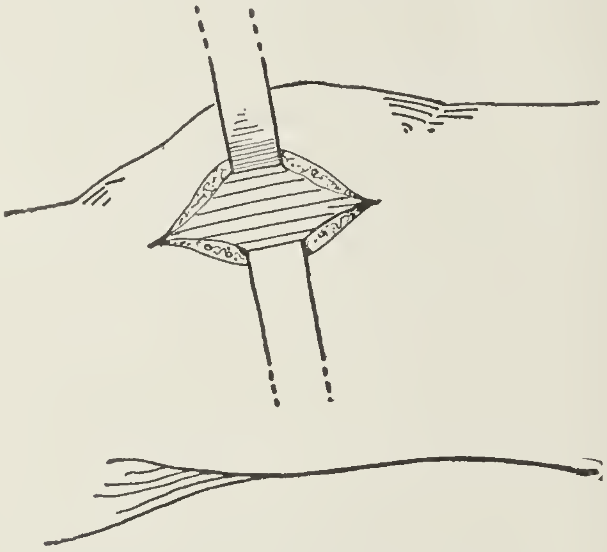

Fig. 1.—Showing capsule exposed.

It was with the above objection in view that I put the following procedure into effect, and the results have seemed to justify placing it before the profession:

As already stated, the usual method of operating, which is through an incision either U-shaped or lateral, division of the capsule, and thorough removal of the offending hypertrophied fringes, has often caused serious trouble through the interference with motion by the mass of scar tissue and adhesions after the wound is healed.

The interference with the performance of the normal functions of the joint is due to the swollen fringes catching between the joint surfaces as the leg is extended on the thigh; and although the subjective symptoms are often severe, and the individual is rendered practically incapacitated for work, a large number of the patients, when seen for the first time, do not show marked objective symptoms, as the fringes are small, and, while the attacks are frequent with some swelling, the temporary recovery is rapid. An examination of the joint at the time of operating often shows so little enlargement of the fringes that there may be some doubt in the operator's mind as to whether or not these structures are at fault. Repeated examinations, however, together with the disappearance of the symptoms following extirpation of the enlarged fringes has removed all uncertainty.

Owing to the fact that, in this class of cases, the parts which interfere with the joint motion are so small, there does not seem to be any need of their complete removal, since they cause the disturbance wholly by projecting into the joint cavity a very little farther than they do in a normal condition. If through a more simple operation the fringes can be retracted so that the obstruction is removed, it would seem that such a procedure is advisable.

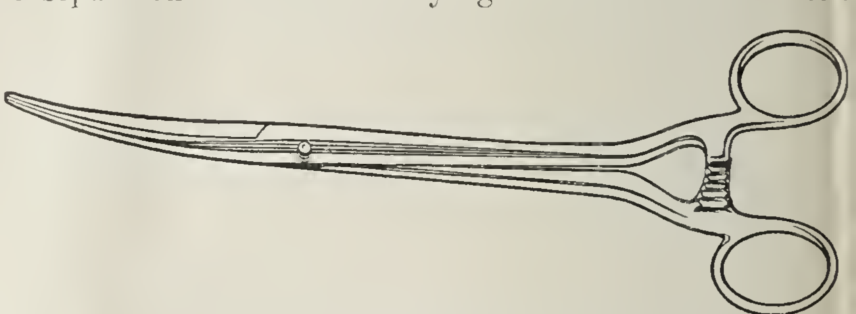

Fig. 2.—Special forceps.

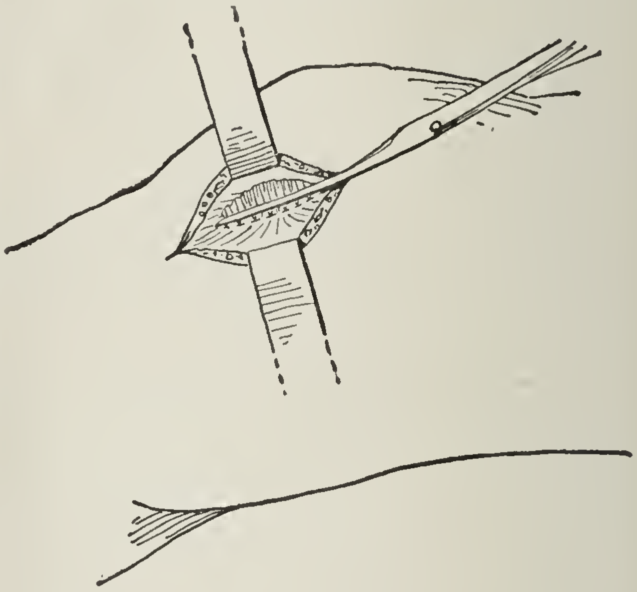

Fig. 3.—Showing forceps placed and sutures inserted.

The operation which has seemed to give the best results in my hands is as follows: A small longitudinal incision about two inches in length is made on either side of the patellar tendon, through the skin and subcutaneous tissues, and the capsule of the joint is exposed. Instead of opening the joint the capsule is separated from the overlying tissues for some little distance laterally (Fig. 1) so that a fold may be picked up and a small plait made in it—a specially devised instrument for holding the capsule while the work is being done will be found of great service (Fig. 2). The capsule is grasped near the center of the exposed surface by a pair of volsellum forceps and the clamp is placed in position (Fig. 3). As much of the loose capsule is gathered up in this manner as is possible, for by so doing the fringes are pulled out from the joint, and the parts heal leaving them in this position. The next step in the operation is the placing of the sutures. The clamp is raised as much as possible, and sutures are passed through the capsule and synovial membrane on a line just below and parallel with the clamp. After this has been securely sewed, the capsule is cut with a pair of scissors or a knife between the clamp and the line of sutures. This leaves a cut margin nearly two inches in length, which consists of capsular tissue on the outside with synovial membrane lining it. The edges of this cut surface should be sewed together by a fine suture which buries the synovial border. The skin is then closed and a splint which keeps the leg fully extended is applied.

It has been found best to keep the part in this position about one week. The whole after-treatment consists simply of placing the joint at rest until healing has taken place. Motion is not restricted by such an operation, and a few days after the removal of the splint the joint is practically normal.

The advantage of this operation over the free incision into the joint with removal of the fringes is readily seen by anyone familiar with the work, and may be summed up as follows: A large part of the danger from a more extensive operation is removed; complete recovery is better assured; and the long after-treatment with its attendant discomforts is avoided.

HIP-JOINT TUBERCULOSIS: ITS EARLIER SYMPTOMS AND TREATMENT.

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In cases of tuberculous hip, beginning insidiously, a limp is the first thing to attract the attention of the parents. It may be that this limp will disappear in two or three weeks, only to return after a varying interval up to three months. As a rule it is slowly progressive until a marked degree of disability exists.

Stiffness in the joint on the side affected may now be noticed, and any irritation of the joint causes an involuntary contraction of the muscles which resist any effort that is made to move the limb. The joint is held firm by these muscles, thus causing the pelvis to move with the limb. This muscular spasm is present in many forms of inflammation of the joint, but its catchy character and persistence are the strongest points in the diagnosis of hip disease. Hyperextension and rotation are the two motions most likely to be first restricted.

Atrophy of the affected limb is an early symptom and is due to disuse and trophoneurotic disturbances. This atrophy is more noticeable in the thigh than in the calf.

Shortening begins after the earlier months and gradually increases, migration of the acetabulum and bone atrophy accounting for the major part of the shortening. In the latter part of the course of the disease the foot on the affected side shows that it is smaller and shorter than the other foot, proving that it shares in the atrophic process. The patient often cries out during the night, especially the earlier part, because on friction of the diseased parts during sleep the muscles contract sharply and quickly force together the diseased bones, causing pain. The more severe the disease the greater will be the night cries. In milder cases the child often cries out but does not awaken. Night cries indicate pain in the joint, but under conditions of non-protection, and are always referred to the joint.

Pain in the knee joint, at the inner side, is a typical pain of early hip disease, this pain being reflex in character, as the hip joint and knee joint are supplied by the same nerve. Unless great care is exercised in your examination, a common mistake will probably occur, and you will apply treatment to the knee instead of to the hip, where the diseased area is located. An incomplete examination is often fruitful of serious and preventable disability and deformity. Local pain rarely begins until the disease has extended from the bone to the joint structures. If pain continues after you have protected a joint you may feel sure that there is some joint effusion or a burrowing abscess to be found.

Temperature is no positive index to the disease, but a high fever of 103 to 104 F. indicates a rapidly destructive type of the infection. Even abscess formation does not affect the temperature to any appreciable degree.

The usual position in a painless case of hip disease is abduction, flexion and outward rotation, but if the infection be acute and painful the limb assumes the position of greatest self-protection, viz.: abduction, flexion and inward rotation. Badly treated cases usually result in flexion and adduction, which may be explained by the fact that the upper rim of the acetabulum becomes worn away by the intrajoint pressure, and the socket is above and behind its former site, forming a dorsal dislocation with an exaggerated adduction due to a total or partial loss of the head of the bone. Abscess may be present early in the acute form, but in milder cases only after some months, if at all.

Just behind the trochanter a fulness may be felt, even before the capsule has ruptured. When the abscess points in the adductor region, or above the crest of the ilium, it strongly indicates a perforated acetabulum. The limp, which may be intermittent, restriction of motion due to the reflex muscular spasm, pain at the inner side of knee, night cries, postural deformity of the limb, and early atrophy of the muscles of the limb, are about the earliest symptoms of hip-joint tuberculosis. Naturally in our treatment of hip-joint disease we desire, first to prevent motion of the hip; second, to relieve pain and muscular spasm, and, third, to prevent deformity and care for abscesses as they arise.

There are in use for the treatment of an early case of hip disease a great many temporary makeshifts which I will not mention, for what we want is plenty of fresh air and sunshine along with the most effective treatment possible. One of our best means of fixation and protection of a diseased hip joint is the plaster-of-Paris spica bandage, when it is carefully and properly applied. If the disease is very active it may become necessary to keep the patient in bed for a few weeks, but if it is not very painful to the patient he may be allowed to walk about. As the activity of the disease lessens the foot need not be included in the plaster, and finally as a recovery splint the cast may extend only from the pelvis to just about the knee.

Many braces are being used, among them the Thomas hip splint, the Taylor brace and Sampson hip brace. These last two braces are employed to make traction during locomotion. The Cabot wire frame is especially adapted for use with baby patients.

Try to prevent abscesses by keeping the patient as quiet as possible, if the disease seems active; but if an abscess does occur, put the patient to bed until the painful symptoms disappear. When walking, crutches may be allowed. With the system of quiet and protection nearly one-fourth of the abscesses will disappear. If an abscess seems certain to open, if left alone, it may be incised at the point most suitable for drainage. A mixed infection is shown by a fever of 102 to 103 F., redness and heat over the abscess and an increase of the white cells of the blood, which you do not get in a tuberculous infection alone. When sinuses form, dress them as infrequently as possible.

Mechanical treatment gives the best results. Excision of the hip should be regarded as an operation of necessity only, and amputation is employed as a life-saving measure. From nourishing food, plenty of fresh air and sunshine, good hygienic environments, along with conservative treatment, we may hope to get the best possible results.

SERUM TREATMENT OF GONORRHEA WITH REPORT OF CASES.

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In January, 1906, Torrey[1] of Cornell University made a report on the use of serum in the treatment of gonorrhea. At this time he stated that he had been able to effect a cure in acute gonorrheal infections of the prostate, epididymis, joints, etc., but had not been able to cure gonorrheal urethritis. I can not understand why a serum should be effective against infections with the same organism in some tissues and not in others, and in the following report I think that I have been able to demonstrate beyond any doubt that this serum is extremely useful in the treatment of toxemic conditions following a gonorrheal infection, but not in the acute infections with this organism.

Antigonococcic serum, used in these observations, is produced as follows, according to the method described by Rogers and Torrey. Cultures are grown for from eighteen to twenty-four hours on large slants of ascitic agar. Culture tubes average one inch in diameter. It is essential to obtain a luxuriant growth. This is best accomplished by planting from an eighteen to twenty-four hour stock culture to medium of the following composition:

Meat peptone 2 per cent. agar is prepared in the usual way and titrated 1.5 per cent. acid to phenolphthalein. One part of rich sterile ascetic fluid is then added to two parts of the agar. The full grown uncastrated male sheep (the ram) only is used. In immunizing these animals it has been found advantageous to pursue the following plan:

The first inoculation may consist of the twenty-four hour surface growth, from eighteen square inches of solid culture medium, emulsified in about 30 c.c. of normal saline solution and heated for about one-half hour at 65° C. In immunizing rabbits and goats, a potent serum was obtained, but it was found that the serum itself is decidedly toxic for some individuals and produced rather alarming reactions; hence, only rams are used. The immunization of the ram requires ten weeks, one injection being given weekly. The animal is bled to death from the carotid and the serum collected, filtered and tested for sterility. The serum is polyvalent.

The method of administration is by subcutaneous injection, the skin being prepared as for other subcutaneous injections. The abdominal wall was used in all cases, because the reaction which follows almost every injection is better tolerated in this part of the body.

The amount given at each injection varied from 2 to 6 c.c. The injections were given from forty-eight hours to seven days apart, depending on the severity of the reaction. A reaction follows almost every injection, appearing sometimes in the form of a slight urticaria at the site of the injection, at other times in a more severe form accompanied by a dermatitis, enlargement of the inguinal glands, rising of temperature from one to two degrees, and an increase in the pulse rate. Most of these symptoms disappear in from twenty-four to forty-eight hours. In one case, however, the urticaria and dermatitis extended over the entire body with a high temperature and rapid pulse, and continued for nearly five days. The absorption of the serum is rapid; the tumor which follows the injection disappears in about fifteen minutes.

Fifty-two cases including almost every form of gonococcus infection were injected with this serum. Of this number 45 were treated in the clinic at Rush College; 7 were private cases. I will not give a history of each individual case, but will divide them into six groups, as follows:

1. Acute gonococcus infection of the anterior or anterior and posterior urethra, with or without infection of the prostate and seminal vesicles.
2. Subacute gonorrhea of the anterior urethra or anterior and posterior urethra.
3. Chronic gonorrhea of the anterior urethra or anterior and posterior urethra.
4. Acute gonococcus infection of the epididymis.
5. Acute gonococcus infection of joints.
6. Chronic gonorrheal joints.

Of the first group, namely, the acute gonococcus infection of the anterior and posterior urethra, I injected seventeen individuals. These patients were given the maximum dose, 6 c.c., as frequently as the reaction would allow, without any change in the discharge from the urethra or other symptoms.

In Group 2, subacute gonorrhea of the anterior urethra or anterior and posterior urethra, nine patients were injected. Eight of these did not show any improvement after repeated injections, one cleared up after the third injection.

In Group 3, chronic gonorrhea of the anterior and posterior urethra, eleven patients were injected. Seven did not show any improvement; one cleared up after eight injections given during a period of four weeks; one after six injections given during a period of three weeks, and two passed clear urine after four injections given during two weeks.

In Group 4, acute gonococcus infection of the epididymis, four were injected. Three did not improve so quickly as usually seen with local treatment. In one case the swelling subsided in two weeks without the return of the discharge from the urethra; this patient received six injections of 4 c.c. each.

In Group 5, acute gonococcus infection of joints, four were injected. Two of them were aspirated and the gonococcus demonstrated. One patient is under treatment at the present time; three did not show much change.

Group 6, chronic gonorrhea of joints, included seven patients. All improved promptly after the first few injections.

I will give a brief history of three of the most severe cases in this group.

Case 1.—Male, aged 45, contracted gonorrhea twenty-two years ago.

History.—About four months later both feet became very painful, so that he was hardly able to walk. Four years later he again contracted gonorrhea, which was again followed by pain in both hip joints. From this time on, he was never free from some pain, although it was not of a very severe character. In June, 1907, he was again infected. A few weeks after, his right ankle joint became very painful and was followed shortly by pain in the left ankle joint. He entered the clinic at Rush College on November 25.

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[1] The Journal A. M. A., Jan. 27, 1906, p. 261.

Treatment.—On this day he was given an injection of 2 c.c. f serum. This was followed by slight reaction, but no perceptible improvement. Second injection of 4 c.c. was given)ecember 2, and was followed by a severe reaction and slight mprovement. A third injection of 6 c.c. was given three days ıter. This was followed by a very severe reaction, but the oints greatly improved. After this he was given three injecions, 4 c.c. each, at seven-day intervals.

Result.—Since the third injection he has been almost free rom pain. At times he complains of a slight tenderness in oth heels, which I think is due to adhesions of the articulaions of the os calcis.

Case 2.—A male, aged 24, contracted gonorrhea six months go.

History.—Two months after infection the right knee and ip and left ankle joint became extremely painful.

Treatment.—He received his first injection November 29; c.c. were given without any change in his condition. Deember 3 a second injection, 4 c.c., was given, followed by arked improvement in all involved joints. December 8 he as given a third injection, and the following day he reorted that he was absolutely free from pain.

Subsequent History.—Thinking he was cured, he did not eturn to the clinic until January 3, when he again apeared, hardly able to walk. He was given four injections f 6 c.c. each, at forty-eight-hour intervals. He showed deided improvement after each injection and at present is free rom pain. I consider this case instructive, because when he eft the clinic after three injections he had been given a total f 12 c.c., which gave him relief, but evidently was not suffiient for a permanent cure. On his return, he was given four njections, a total of 24 c.c., with the result stated above.

Case 3.—Male, aged 25, contracted gonorrhea in 1900.

History.—After months of treatment for the local condiion, his right knee joint became slightly swollen and very ainful. This was followed in a short time by involvement of oth ankle joints. After a course of baths at Hot Springs, is condition improved for a short time, only to be followed y an extension of the disease into almost every joint in the ody. He consulted me in the latter part of August, 1907.

Examination.—I found a slight gleety discharge from the rethra, which contained gonococci in small numbers. The oint condition was so aggravated at this time that he was nly able to walk by the aid of two canes. This had been his ondition almost constantly for seven years.

Treatment.—After ten weeks of local treatment, the urethral lischarge disappeared, but with only a slight improvement n the joints. November 21 he received the first injection f serum. Two c.c. were given, followed by a second injecion of 4 c.c. at the end of forty-eight hours. The following lay he developed a slight urticaria at the site of the injection nd was somewhat improved. A third injection of 6 c.c. was iven November 27, followed by marked improvement. Two nore injections of 6 c.c. each were given November 29 and)ecember 2. On December 3 and 4 he suffered from rather severe reaction, after which the pain in his joints almost ntirely disappeared. Three weeks after he received the first njection, he entered the service of one of the express comanies and was able to do this work during the holiday rush, vhich, I think, describes the change in his condition better han words.

CONCLUSIONS.

The conclusions to be drawn from this report I think re very clear: First, the serum has absolutely no effect n acute gonorrheal infections, whether they exist in the ower urinary tract or in any other part of the body. Second, its value in subacute and chronic cases is very loubtful, although there were a few isolated cases in vhich the results were somewhat better than we see with ocal treatment. Third, the value of this serum in the reatment of chronic gonorrheal joints is without quesion. In the past, these painful joints accompanying nd following gonorrhea have been most resistant to treatment, both local and general, and I feel that we now have a remedy which will give rapid and permanent relief to the sufferers from this common complaint.

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SPINAL SPRAIN.

ITS COMPLICATIONS AND CONSEQUENCES, WITH REPORT OF CASES.*

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The object of this paper is to review from a practical and clinical standpoint the general subject of sprain of the spinal column, and to call attention to the value and frequent necessity of fixation of the spine. I will divide the cases into three clinical groups: (1) Sprain; (2) sprain followed by neurotic symptoms, and (3) sprain accompanied by spinal cord symptoms. Excluded entirely from the list are sacroiliac conditions, so often due to injury, Kummell's spondylitis, the ordinary neurasthenic spine which may originate in a slight trauma, spondylolisthesis, and cases of mild traumatic lumbago which promptly recover when treated by rest, heat and poultices.

CAUSE.

The injury that originates a true sprain of the spine is more often indirect than direct. In 17 of my 26 cases the cause was a fall on the buttocks, a fall on the feet, prolonged lifting, or a violent wrench of the body, causing sudden flexion of the spine. In 9 of the cases the cause was direct violence to the back itself. The site of trouble is more often at the lumbo-dorsal region than at that other movable section, the lower part of the neck. In 19 of the cases the lumbar portion of the spine was affected, and in 7 the lower cervical. Brush, in a collection of 43 cases, found the condition located in the lumbar region in 38 of them.

PATHOLOGY.

As the pathologic changes are those of sprain, and as it may exist in any part of the column, spinal sprain is a more appropriate term than the popular one of traumatic lumbago. As a result of the wrench received the ligaments about the spinal column are torn, with a laceration of muscle and fibrous tissue. A number of the smaller joints are involved. In the dorsal region the junction of the ribs with the transverse processes may be strained. There is an exudation of blood and serum into the surrounding tissues. As the muscles are deepseated, swelling and ecchymosis are rarely to be seen, unless there has been direct contusion to the back. The muscle is occasionally ruptured close to the surface of the body, so that the finger finds a depression, tender to the touch. After tearing of the ligaments within the spinal canal, a blood clot is apt to press on the cord, a condition called hematorrhachis.

The spinal cord may be affected in various ways. Sometimes temporary loss of function for a few days ensues, then rapid recovery, due, according to some neurologists, to supposed concussion of the cord. Hemorrhage within the cord, called hematomyelia, may be diagnosed by lumbar puncture, as the blood remains liquid from admixture with cerebrospinal fluid. Hematomyelia is most apt to occur in the cord in the lower cervical region. A meningitis or pachymeningitis may be aroused. The commonest cord condition is a zonal paralysis, or mild transverse myelitis, from which recovery is partial or complete. No classic clinical picture can be drawn, as most of the cases differ according to the lesion in the cord.

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* Read before the Buffalo Academy of Medicine, March 3, 1908.

There may be other injuries associated with the spinal injury, and the commonest of these is fracture of the ribs.

SYMTOMATOLOGY.

1. *Simple Sprain.*—These patients, as a rule, do not regard themselves as seriously hurt at first. Many will continue at work for a few days. Then increasing symptoms compel them to rest. Backache, localized about the spine, or radiating forward or down the hips, becomes more pronounced. The pain lessens or subsides when the spine is at rest, but on motion of the head or extremities is reproduced, and is most pronounced on getting up from a chair or on bending forward. When the strain has been severe, nature attempts to control spinal motion by muscle spasm. Then the large movements of the back are limited, and on attempted motion the lumbar lordosis remains fixed and the muscle groups stand out rigidly under the skin. Unless fixation by support is provided, the spasm may finally involve most of the muscles of the body and with this the knee jerk becomes exaggerated and ankle clonus may be induced, exclusive of cord lesion. Such a patient moves about with the greatest difficulty. He arises from a chair by pushing with the hands on the arms of the chair or on his thighs. He walks with head and shoulders bowed forward, or with a straight "poker" attitude, or with a lateral tilt to one side, in that way finding the posture that is least painful. Constipation and partial retention of urine may be induced because the movements of the diaphragm and abdominal muscles cause pain.

In case muscle spasm has not developed, the spinal motions are often voluntarily limited because the patient knows they will produce pain. Deep tenderness over the erector spinæ on both sides of the column is to be found. General hyperesthesia over the entire back and over the spinous processes may accompany marked spasm.

Tenderness is a subjective symptom, and a well-known test is to count the pulse before, during, and after pressure on a tender point. Increase in the rate during pressure makes this symptom objective. As there is no change in the pulse rate in some of the cases where there is real tenderness, the test is not of great value in detecting simulation. This sign may also be found in cases of hysteria. The continued pain, lack of appetite and sleepless nights interfere with nutrition, and the weight may be lessened as much as thirty to forty pounds. The face becomes drawn and anxious and the circulation poor. In fact, the patient may appear to be a complete physical wreck.

2. *Sprain Followed by Neurotic Symptoms.*—In these cases the injury is of milder grade and as the effects subside, neurasthenic or hysteric symptoms appear and continue. Subjectively there are backache, tenderness over the back, ribs and certain spinous processes, pain on motion, with a variety of other complaints. Objectively, there may be muscular weakness and tremor, a lively knee-jerk, a positive Romberg test, rapid pulse, emaciation, and vasomotor signs, such as flushing, sweating and cold extremities. In hysterical cases, anesthesia of skin and mucous membranes, and contraction of the visual fields may be found.

3. *Sprain Accompanied by Spinal Cord Symptoms.*—After a variable period, there is a slow or rapid onset of cord signs, in different groupings, according to the lesion. These symptoms are radiating pain, girdle sensation, partial or complete anesthesia, partial or complete paralysis, ataxia, change in the reflexes, and sphincter troubles.

DIAGNOSIS.

In examining a case, after consideration of the history and the subjective symptoms, the patient is watched to see if there be change in posture, a stiff gait and a drawn facial appearance. His method of getting in and out of a chair, of standing with the eyes shut and of raising the knees alternately is observed. The contour of the spine is noted and local tenderness sought. The spinal motions are investigated, and, if limited, whether the limitation is due to pain or spasm. It must not be forgotten that wryneck and spasm of the cervical muscles may simulate a Pott's disease, the diagnosis being confirmed by the result of treatment. Note is made of the condition of the reflexes and sensation.

In the neurotic cases, a diagnosis must be made largely from the grouping of symptoms and not so certainly by objective signs. It is easy for malingerers to counterfeit the "railroad" spine, and the objective signs given under symptomatology may alone point to the diagnosis.

PROGNOSIS.

The outlook is much better if the diagnosis is prompt, and treatment is instituted early. When fixation by jacket is indicated by great pain or spasm, it is most unwise to defer it. Brush[1] states that in 14 cases in which the diagnosis was made at once and proper treatment begun, there were 8 full recoveries. Whereas in 29 cases with delayed diagnosis and treatment, there were but 2 recoveries. In general, it is much better to settle an impending suit rather than to wait for trial, but settlement should be deferred until one can feel sure about the future condition of the patient. In Case 9, cited below, a prompt settlement for $500.00 was made for contusions and shock. Three weeks later, a myelitis developed, followed by paralysis of arms and legs. After prolonged legal work, the case was finally reopened and a large settlement effected.

TREATMENT.

In practice it is found that the physicians in charge of these cases are slow in coming to the conclusion that rest in bed with counterirritation to the spine is ineffectual in the severe types of sprain. A plaster jacket for several weeks is the most comfortable and rigid splint, to be followed by a removable leather or celluloid jacket. It is most strongly indicated where there is spasm, but also is often indicated where there is only pain on motion or in cases where there is no pain but where cord symptoms are developing. In neurotic cases a light temporary support acts favorably. There is not the same danger of prolonged stiffness following, such as may result from fixation of a sprained ankle. Massage, exercises, and avoidance of lifting, bending, and riding in cars are in order later on. The support is left off at night and a small pillow is placed under the small of the back to fix the lumbar curve. For spasm of the neck muscles, head traction in bed, followed by a jacket with a head support brings prompt results.

It is often agony to the patient to attempt to put on the first plaster jacket by means of suspension in the Sayre apparatus. The patient should be lying on the back, the head and legs on pillows, and the shoulders, sacrum and lumbar region held up from the bed or table by one of the many simple portable appliances now in use, and described in orthopedic works under the treatment of Pott's disease. I prefer the apparatus described by E. W. Ryerson,[2] of Chicago. This is made of four short bars of soft iron, bent to form two capital T's, the ends sitting into a small gas-pipe, which is fastened to two plumber's wall-sockets, which in turn are screwed to a small board. One can devise a support by procuring two pieces of soft steel, about twenty inches long and one-half inch broad, bending them to fit the patient's back, and resting the ends on two small piles of books covered by paper. The pieces of steel are laid parallel so that they will touch the muscles on each side of the spine. The patient is lifted on to this arrangement, over which a strip of cotton or felt is laid. The bandages include both trunk and steel. After the jacket hardens the pieces of steel are pulled out from under the plaster.

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[1] N. Y. State Jour. Med., May, 1904.

Romer[3] cites 6 cases in which continued pain, tenderness, and stiffness over a small area indicated adhesions. Forcible trunk movements during anesthesia, followed by massage, cured these patients. Moullin,[4] for the same condition, advises quick motions without an anesthetic while pressure is applied over the painful area.

For neurotic cases, the usual treatment of neurasthenia or hysteria is followed. In addition, rest, spinal douches, ergot, electricity, and sometimes a spinal support are indicated for the back. Settlement of the suit acts most favorably.

In cord cases, contractures and bedsores are to be prevented; the sphincter conditions need treatment, and massage and electricity are given for palsied muscles. Murphy[5] states that early lumbar puncture may relieve paralysis due to hematomyelia.

I have seen 26 cases of spinal sprain of which the following 10 cases are typical examples.

CASES OF SIMPLE SPRAIN.

Case 1.—*History.*—Schoolgirl, aged 13. Two weeks before while sliding on the pavement, this girl slipped and sat down with considerable force. In spite of the wrench she continued to go to school. Every day the backache and pain on motion increased until she had to leave school and lie on the sofa all day. Pain kept her awake and crying the greater part of each night.

Examination showed a strong, well-built child, with all spinal motions prevented by marked muscle spasm. Any attempt at motion caused great pain.

Treatment.—A close-fitting plaster jacket was applied and in three days all pain ceased and she could attend school and play out of doors in perfect comfort. When the jacket was removed six weeks later, normal conditions were found.

Case 2.—*History.*—Man, aged 38. General health excellent. Two years previously this man had been in a runaway accident. He was thrown from a buggy and struck a telegraph pole which caused sudden violent flexion of the head, wrenching the upper back muscles. Since the accident he had always had a dull heavy pain in the back of the neck and between the shoulders. This pain was worse some days than others, and was aggravated by bending forward, by riding in a car, or by writing at a desk. He could work only a portion of each day, being compelled to go home and rest in the afternoon. He had been treated by static electricity, vibration, osteopathy, rest, prolongeu vacations, and the use of eyeglasses, without relief.

Examination.—There was no muscle spasm, but all motions distressed him. Well-marked tenderness existed from the occiput downward over both trapezii as far as the mid-dorsal region. Lifting under the chin and occiput relieved his dragging pain.

Treatment.—Faradism and the cautery were given a trial first. Then traction in the afternoon and night by weight and pulley. Then hot air bakings. Finally a leather support was made, embracing chin, occiput and chest. This was worn every evening and Sundays for many weeks, but not during the day to his office. The fixation and rest afforded by the jacket cured him entirely of his aching and tenderness. This case was interesting on account of the long period of pain, the location of the trouble, and the failure of local treatment.

Case 3.—*History.*—Man, aged 26, a railroad engineer. While sitting on the window-ledge of his cab the boiler of the engine exploded and he was blown out of the window to the ground. Pain in the back followed and he was confined to his bed for three months, unable to stand. While quiet the pain would cease, to return on any attempted motion. He had lost flesh and strength and his sleep was disturbed by attacks of pain. Bowels costive and urine held as long as possible.

Examination.—When first seen he was lying back in a large chair supported by pillows. He needed assistance to sit up and helped himself by bracing his hands on the arms of the chair. Violent spasm appeared all over the body, even the face being contorted. There was tenderness to pressure over the back. The knee jerks were increased, but ankle clonus was absent. Sensation good.

Treatment.—Fixation was imperative and improvement began as soon as a jacket was put on. In three weeks he could get about without assistance and the spasmodic pain had disappeared. In six months he could do light work. When last seen his only complaint was some pain across the lower back on stooping forward. This case was unusual on account of the excessive spasm which nearly resembled a tonic convulsion.

Case 4.—*History.*—Man, aged 34, driver of a fire engine. While driving to a fire this man was thrown from his seat to the asphalt. The back and left hip were violently wrenched. Constant pain followed across the lower back and into the left thigh.

Examination.—When seen, three months later, he was able to limp about slowly. There were diffuse tenderness, marked rigidity and spasm, ataxia, and increased superficial and deep reflexes. Sensation and bladder control perfect.

Treatment.—For three months he wore a plaster spica from the axillæ to the left knee, and then a leather jacket. In one year he could do light work. He has continued to suffer during the past two years from the same symptoms in a modified form, but to a lessening degree. He can do full work but only with the aid of a jacket.

Case 5.—*History.*—Man, aged 35. While running to a fire in the evening, this man came to a drop of about eight inches on the level of the ground. The loss of support for his foot caused a violent jerk of the head. He continued his occupation for a time, in spite of pain localized about the upper dorsal vertebræ. He lost twenty-four pounds in weight, shifted his trunk to the left to relieve strain and became unfit for work. The pain continued day and night for two years.

On *examination* there were evident a curvature to the left, tenderness alongside the upper dorsal vertebræ, but no spasm or cord symptoms.

Local *treatments* having proved useless, a spinal brace with head support was ordered and worn for nearly a year. By that time the aching was rarely in evidence and the curvature had disappeared. Some months later he returned to work.

CASES OF SPRAIN FOLLOWED BY NEUROTIC SYMPTOMS.

Case 6.—*History.*—Girl, aged 17. One year before examination she slipped and sat down forcibly on a stone step. She remained in bed for three weeks, suffering from pain over the sacrum. Later, pain in the back began, often sharp in character. She had eight falls, due to general weakness. She slept bady and had nightmares. She lost twenty pounds in weight.

Examination.—The spine showed normal motion, but tenderness from the sixth to the twelfth dorsal spines. Anesthesia of the skin and of the mucous membranes of the eye, nose and pharynx was found.

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[2] Amer. Jour. Orthop. Surg., April, 1907.

[3] Lancet, Lond., Feb. 18, 1905.

[4] Sprains, Consequences and Treatment, N. Y.

[5] The Journal A. M. A., March 2, 1907.

Treatment.—In six months, under tonic treatment and fixation by jacket, she was practically well, except for disturbed sleep and nervousness.

Case 7.—*History.*—Man, aged 45, of large and strong build. One year before examination this man was struck across the back of the neck by a heavy plank of wood. A few days later a complete paralysis and loss of sensation of the left side of the body set in. He suddenly recovered at the end of three days and returned to work. Some months later, while bending over and straining his neck, he found himself unable to stand or get up, but after being helped up, regained his strength. This recurred several times. Strong cauterization of the neck and back with suggestion ameliorated the condition.

CASES OF SPRAIN ACCOMPANIED BY SPINAL CORD SYMPTOMS.

Case 8.—*History.*—This man, aged 38, was thrown violently forward, then backward, in a trolley collision. He thought he was not hurt, and aided others who were injured. Backache and headache set in the next day and he was in bed for six weeks. Walking became difficult and any exertion caused great pain. For the next six months he was in a very weak condition, temperature averaging 95 to 98 degrees, and his pulse about 32. Headache and backache were his chief complaints.

Examination.—When seen there were exaggerated reflexes, weakness, and spasticity in the legs, but no sensory symptoms. Tenderness from the third to the eighth dorsal spines and pain on motion were the local symptoms.

Treatment.—With fixation he began to improve, and two years later had recovered and could do a full day's farm work.

Case 9.—*History.*—Woman, aged 52, weight 92 pounds. By the sudden jerk of a train, she was thrown from the step to the platform, striking her left side. After several days in bed she went to a sanitarium to recover from the nervous shock. Pain in the upper spine, mild at first, reached a climax in six weeks, when general weakness set in, with radiating pains.

Examination.—When examined a few weeks later, there were found partial palsy of both arms and legs, dulled sensation in the same, exaggerated reflexes and muscle spasticity. The sphincters were not affected. There was tenderness over the back of the neck, and the fourth and fifth cervical spines were rather prominent and tender. The mental condition had changed, there being loss of control over the emotions, poor memory, and reasoning power.

Treatment.—Extension to the head by weight and pulley, with fixation by small pillows under the neck formed the main treatment. Improvement soon set in, and in four weeks sensation returned; the reflexes were lessening and power increasing. A leather jacket, with head piece, was given her, and she began to sit up and get about. During the next six months all cord signs disappeared, but poor mental control persisted. She could go about alone, wearing her support. During the past two years she has remained feeble, nervous and depressed.

Case 10.—*History.*—Man, aged 61. This man was nearly crushed in a collision between two trolley cars, three ribs being broken close to the spine, and his body covered with bruises. Very soon paraplegia and retrocolic spasm appeared. His general health suffered. Incontinence of urine and constant diarrhea aggravated his condition.

Examination.—When seen about a year later, as he sat in an armchair, supporting his head against the back of the chair, his face showed constant suffering. On leaning forward, clonic contractions of the neck muscles caused retrocolic spasm. The speech was jerky and interrupted. The reflexes exaggerated and anesthesia evident to the middle of the abdomen. The spine was tender to the neck and held immobile by spasm. His complaints were backache, headache, girdle sensation, vomiting, diarrhea, and urinary incontinence. Six months later the health had improved a little. He could get about the house with crutches; the wryneck had lessened; the reflexes had subsided. Two years later there was further gain. The left knee jerk was exaggerated and the right normal. Sensation had partly returned. The wryneck, the incontinence and the ataxia were barely noticeable. Backache, girdle sensation and some spasm troubled him. Fixation by jacket would have been beneficial, but was not urged by the attending physician and was objected to by the patient on the ground of expense.

ARE THERE VALID OBJECTIONS TO THE QUININ PROPHYLAXIS OF MALARIA?*

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As with many other important questions the matter of quinin prophylaxis of malaria is largely one of compromise. Do the good results obtained under certain conditions hold generally, or are there exceptions—are there valid objections to its use other than the generally recognized one of preventing exact diagnosis?

In the first place, the ease of its application as compared with the better methods of mosquito destruction and screening, appeals to the sanitarian, especially in the tropics. It is just as easy to give quinin to a man in the tropics as it is in temperate climates, but when you consider the propositions of draining tropical swamps and shutting off circulation of air on a torrid night with fine wire gauze in the windows and closely woven mosquito nets around the bed, the question is decidedly different. In consequence, the tendency would be for the average man to despair of accomplishing anything in the way of mosquito destruction and screening and to seize eagerly on the inferior alternative, that of quinin prophylaxis.

Ronald Ross presents this matter concisely and to the point when he states that it is not a good policy to substitute a measure which does not exclude infection, but is merely extirpative in some cases, for positive prevention. From this it will be seen that unless it is clearly recognized that quinin prophylaxis may in some cases extirpate, but does not prevent, there might be a tendency to adopt this measure and neglect the two proper ones.

As regards the relative merits of quinin prophylaxis and protection from mosquitoes Celli gives the following figures:

Treatment.	Infected.
Mosquito protection plus quinin prophylaxis.	1.75 per cent.
Mosquito protection alone..................	2.5 per cent.
Quinin prophylaxis alone....................	20. per cent.
No protection at all.........................	33. per cent.

In 1895, I served as medical officer of the Ludlow Nicaraguan Canal Commission. It was my intention to recommend that members of the party take quinin as a prophylactic. On arriving at Greytown, I consulted with a physician who had been on the medical staff of the Nicaraguan Canal Company, and acting on his advice, I decided against quinin prophylaxis. He stated that their experience had been that quinin in doses that could be well borne had little effect in preventing the development of the disease; also, that it appeared to them that persons who had been taking quinin prophylactically were less amenable to its curative effects and that relapses had appeared to be more common in those following such practice than in those who only received the drug at the time of a malarial attack.

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* These statements are in substance the remarks made in the discussion of the paper of Prof. Thayer on Quinin Prophylaxis at the meeting of the American Society of Tropical Medicine, March 28, 1908.

While in camp along the canal route we had a few cases of malaria. These were immediately treated with large doses of quinin, and without exception they responded promptly and satisfactorily to such treatment. The only member of the party who insisted on taking quinin prophylactically was Colonel Ludlow, the head of the commission, and strange to say, he was the only one who had malaria on the trip home.

To those who have thought of quinin prophylaxis as a true preventive the following instance is instructive: On May 20, 1906, a battalion of marines, numbering 398, was organized at Philadelphia. Seventy-five per cent. of the force was made up of recent recruits from the Middle West. Leaving Philadelphia May 21, Colon was reached May 28. On June 4 the battalion was disembarked at Colon and stationed for a time at Camp Elliott, which is situated about 25 miles from Colon and which was comparatively free from mosquitoes. Later on, three companies were stationed at Camp Reed, five miles from Panama, at which place mosquitoes were numerous and troublesome.

On July 6, after a service of practically one month on the Isthmus, the marines returned to the ship (U. S. S. *Columbia*). During the month's encampment, 9 grains of quinin had been served out daily as a prophylactic. In addition, such measures as head-nets for those on night sentinel duty and inspection of mosquito nets about men sleeping in tents had been in force. There was very little malaria reported from these men while on the Isthmus.

The ship sailed from Colon on the night of July 7. On the first day out 20 cases of malaria were admitted to the sick list, the next day 53, and the third day 45. In consequence of what appeared to the medical officer to be universal infection among the men, ten grains daily of quinin were administered to every one as a prophylactic. Notwithstanding this almost curative dosage of quinin the condition of the men was such when the ship arrived at San Juan, July 13, that it was deemed necessary to get the men out of the tropics as several cases of a pernicious type and two of blackwater fever had appeared. Accordingly the ship sailed for Boston July 16.

Notwithstanding the prophylactic use of quinin, under military observation, for those who were not cinchonized, there were 215 acute malarial paroxysms among 298 men during the five days' trip from San Juan to Boston. About 100 men of the original 398 had been transferred to other ships and stations prior to the sailing of the *Columbia* for Boston. The character of the paroxysms was atypical—there was no frank chill. The men would feel fairly well until shortly before an attack—they would then complain of chilliness and weakness and either lie down or fall down in a heap on deck. Passed Assistant Surgeon Butler, U. S. N., states in a report that when the men arrived at Boston so many were anemic and weak that they were unfit to return to the tropics. Dr. Butler also noted the fact that these cases did not seem to respond at all satisfactorily to quinin even when given hypodermatically. Before the cases became so numerous blood examinations were made and the form of malaria was considered to be chiefly tertian. The clinical features, however, would indicate that there was estivo-autumnal infection in many of the cases.

In considering the experience of these marines who were given prophylactic, I might even say curative, doses of quinin during a period just exceeding a month, and when this was discontinued during the days of July 7, 8, 9 and 10, showed an extensive malarial morbidity, the question naturally presents itself as to the explanation of this. Furthermore, we must note the fact that resumption of quinin prophylaxis at this time in those not cinchonized appearently had little effect in checking the outbreak, and that when quinin was administered in curative doses, at times hypodermatically, it did not seem to control the infection as is usual. It is common experience that malaria responds readily and promptly to quinin properly administered. I can not but believe that malarial parasites may develop a resistance to quinin.

Browning, reporting recent work in Ehrlich's laboratory, states that when mice infected with trypanosomes were not given sufficient doses to destroy the flagellates, these protozoa developed a resistance to the therapeutic agent during the time their development was held in abeyance. A most startling discovery was, too, that these trypanosomes retained their chemo-resistance through numberless generations. After passage during a period of fourteen months through 144 mice these last generations of trypanosomes still retained their immunity to the exciting drug. Browning experimented with atoxyl, parafuchsin and trypan blue. Experiments with paramecium have also shown that these ciliates may develop marked resistance to agents primarily toxic to them.

I have seen actively motile amebæ in the stools of people undergoing quinin irrigation of the colon. I had generally considered that the explanation was that mucus had protected them from the toxic action of the quinin. May it not have been that these amebæ had developed resistance to quinin during the extended use of the remedy? Does it not seem that the malarial parasite may develop a resistance to a toxic influence which holds them in abeyance but does not destroy?

Another important consideration is that not only is the chief means of correct diagnosis, the finding of the parasite in the blood, made uncertain or useless, because it is common experience that even a single dose of quinin will drive the parasites from the peripheral circulation, but the frank manifestations of the malarial paroxysms are masked so that clinical diagnosis also is made difficult. When one considers the insidious and rather uncharacteristic paroxysms of estivo-autumnal fever this difficulty is more apparent. In this connection, the physician above referred to considered that as a result of failure to recognize malaria clinically institution of curative measures was delayed, and that as a result, the disease was more difficult to treat and relapses were more frequent.

Now at that time (1895) we did not know about parthenogenesis on the part of the macrogametes. Thanks to Schaudinn it would now seem that we have a scientific explanation. The sexual forms in estivo-autumnal fever do not develop for about ten days after the first paroxysm. In case we are giving quinin prophylactically we do not recognize the first attack and as time goes by the gametes develop. These being resistant to quinin, as shown by the experiments of Gualdi and Martirano, are not extirpated. Later on, the microgametocytes die out, leaving only the macrogametes. These by a parthenogenetic reproduction give rise to another non-sexual cycle and we have a relapse.

PSYCHIC TREATMENT OF SPIRIT AND DRUG NEUROSES.*

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Two marked changes are noted in all spirit and drug takers. One of them is physical, and is seen in the changes in the face, eyes, tone of voice, manner of walking and general expression and control. The heart is irritable and deranged in its action. There is muscular feebleness, nutrient disturbances, with insomnia and unusual emotional excitement or depression. The general health, conduct and work, as well as capacity of the person is changed.

A second change or symptom noted is the psychic one. The person is bold, assertive, egotistical or the opposite. His former manner of hopefulness or depression is altered. Where he was frank before, he is now secretive, untruthful, unreasoning, has little respect for his words and statements, incurs obligations, asserts or denies emphatically matters of no consequence. His general appearance and pride of character is lowered. These symptoms may be unnoticed in the early stages, but later they are prominent. Both the physical and psychic are intimately associated with each other, yet from the very beginning they may be marked differences in the prominence and intensity of either one or the other, indicating the direction of the most active degeneration.

THE PROBLEM TO BE MET.

It is the study of these conditions that suggests lines of treatment that are practical. To the patient and his friends there appears little evidence of mental change. The patient will claim to be strong both in mind and body, and exaggerate some minor symptoms of functional derangements as responsible for his conduct and thought. These views are confirmed by the opinions of his friends and often by the physician. The theory is that it is a mere question of vice and careless yielding to the surroundings. Any symptoms of disease are considered insignificant, requiring little or no treatment. It is the prevalence of these theories that has made the existence of over a hundred quack "homes" possible, with probably a thousand patients under treatment, all based on the assertions that they have discovered specific remedies for the disease.

The fact of using spirits and drugs for their effects any length of time should never be considered insignificant or unimportant. This fact should always create an interest to discover the changes and degenerations both physical and psychic that always follow the use of these drugs. There should be no doubt of the variations, defects and departures from the normal, which can be traced and studied with as much certainty as that of any other defects. Such a study along the following lines will bring out the facts beyond question. First, how far has this condition been due to hereditary defects? What diseases have been common in the family, and what neurotic tendencies have been transmitted directly or indirectly?

Inquiry into the nutrition and surroundings, the growth, culture, traumatisms and diseases of early or later life, will bring out new facts. Nutrition and traumatism are very important factors in a great variety of organic derangements, associated with low vitality, and feeble resisting power, which frequently merge into spirit and drug taking. If this study is carried into the psychic realm, and notes made of the integrity of the senses, emotional control, the influence of surroundings, home life, occupation, training and purpose in life, a new class of facts will be gathered from which to judge the case. It is from this study that the psychic and physical degenerations appear, also the question, which is the most prominent. The physical is always regarded as transient and the psychic, or the question of vice and morals and general weakness, the more prominent.

THE PSYCHIC ELEMENT.

For the cure of the latter, prayers and pledges are offered, and appeals to the moral nature are supposed to stimulate and rouse up some weak will, from which escape by faith and conversion will follow. The element of fear and suffering is kept prominent in the legal methods by fine and imprisonment, and the supposed humiliation and loss of pride which follows is thought to give a certain strength toward possible restoration. In these theories there is no recognition of the exact conditions and, of course, the treatment is destructive and irrational. All patients should be examined with the utmost care to determine every deviation from the normal.

In the treatment the toxic and inflammatory conditions should receive first attention and never be lost sight of in all after remedial efforts. The prominence of either the psychic or physical disturbances will determine which is the more seriously affected. In the psychic study many patients exhibit an egotism that borders on the paretic, with its peculiar delusions and deliriums. The patient claims to have perfect control of himself and ability to abstain from all spirits and drugs at will. He is confident that his weakness depends on the unreasonable efforts of friends to help him, and that his own judgment of his condition and its needs is more accurate, and if carried out would enable him to recover.

With this is another delusion that a moderate use of spirits is an ideal state, which is always possible. Another psychic symptom is that of confusional excitement and intense efforts to explain why spirits and drugs are used. This is often seen in periodic drinkers, who, after the subsidence of the drink paroxysms are greatly excited and intense in their apologies and explanations. Usually this is explained as due to persecution and faults of others, as well as the surroundings. In this there is depression and often contrition with convictions that it will never occur again. The most positive assertions will be made that he will never use spirits or drugs any more, and these statements are often accepted by friends as facts.

A third class of psychic disturbances is a general negative one. The patient is depressed and gives no reason for his conduct, calls it fate and despairs of any change. A common explanation is that he was worried, angry, and did not care what he did, or that he used spirits to spite some one. Oftentimes occupations and surroundings are explained as active causes. In jails and insane asylums they are all recognized as moral defects, which may possibly grow less with an increasing physical vigor. In private hospitals, where their gravity is recognized, they suggest lines of treatment of equal value o that of the physical. To treat one and not the other s to fail. To treat them both, giving special reference o that which is most prominent, is the highest practical science of to-day.

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THE POWER OF MENTAL IMPRESSIONS.

One of the questions in the psychic treatment is whether the patient should have profound psychic impressions by a sudden or gradual process. If the person s egotistical, with distinct delusions of his strength and capacity, it is wise to use the most impressive means to shock and break up his present range of thought. If with his egotism there is pride of family ties, social connections and ambition to take rank in the world, a sudden mental revolution is desirable.

One of the ways to accomplish this is to make a very impressive examination, particularly with instruments of precision, measuring every possible function and state of the body, and securing pronounced evidence of his perilous condition. This may be assisted by the use of drugs and electric appliances and powerful suggestions in a way that will produce a form of psychic shock on the patient's mind; also a literal hypnotic control which should be followed by the most pronounced means and measures. This control must be increased, and the mind, led by gradual stages into new efforts and new purposes, thus literally trained out of its old reasonings. This is sometimes done by evidence that impresses the senses as much as the mind. If the patient is a business man the questions of values and losses can be made prominent. If an educated professional man, facts and their meanings and the laws which control them will increase such impressions. The second method is to approach the psychic by gradual changes and seek to turn the mind into other channels and into other ranges of thought.

APPLICATIONS.

Practical illustrations are as follows: A lawyer who had a highly developed sense of color was led to take up the study of plants and flowers, with the possibilities of changing the combination of colors. In this way his mind was led into a new range of mentality, resulting in a perfect recovery and the development of a new mental control power which followed him through life. In another instance a mechanic developed a most intense passion for the study of French. This was a new road out of the past and this psychic impulse dominated all his after life. In another instance a lawyer was encouraged to take up the study of heredity, and this became a hypnotic force controlling his future. It is often possible to discover latent ambitions and tendencies of the psychic life which have been suppressed; it is the gradual development of these that becomes a powerful medicinal measure.

Religious faith is another psychic influence which, when founded on reason, is very helpful. Often it is so complicated with emotional states and excitement that it is transient. The mind and senses of spirit and drug takers are not often receptive to psychic facts concerning the future life. Such facts may secure a momentary impression, but unless sustained by continuous appeals and increasing organic vigor are usually transient. The higher consciousness of right and wrong and power of appreciating ethical truth is depressed and enfeebled. While the patient is credulous, it is along lower levels and toward physical ideals. One central fact should be the controlling power, namely, to train and develop the mind and body out of the present condition and toward an ideal of new vigor and strength. This combination is most perfectly secured in small hospitals and homes where the patient can be seen and studied and every condition of surrounding regulated.

The power of contagion in which one person dominates another, forcing his conclusions on him, often to his injury, can be controlled in small hospitals. The paretic egotist who defends the use of spirits and urges other extreme theories, which are accepted as truths by weaker minds, is a psychic degenerate that is positively dangerous to others. Such persons in the community are infectious and need psychical treatment. In hospitals they should be isolated and made subjects of profound impressions.

OCCUPATIONS—MENTAL AND PHYSICAL.

The depressive confusional conditions of many spirit neurotics are often treated successfully by physical and mental occupation, applied up to the point of fatigue. In one instance a number of persons under treatment were sent daily a long distance to take the temperature of the water of a lake and compare it with that of the water in a cave. In another a patient was sent to a library to find some historic records. Both of these persons made good recoveries, largely depending on the psychic treatment of the mind. In a small institution this personal treatment can be concentrated in stimulating and dominating the psychic impulses. Physical culture can be developed here to a high degree, and the various morbid impulses can be suppressed and overcome by the development of other combating forces. The theory of the subliminal, or the inner consciousness, to obtain mastery over the degenerative functional impulses, is most suggestive, and the application of it seems to be unlimited.

It is clear that physical training and the removal of the toxic causes and the improvement of nutrition opens a larger scope for the test of this theory, which is practically the influence of mind over matter. We are all aware of the potent power of this psychic force, seen in every great cult that is growing in this country. Why can not this power be concentrated in our private work in small hospitals and made to accomplish results in overcoming disease? Already we are face to face with the fact that what is termed suggestion, skilfully applied and persistently pressed along rational lines, is a medicinal power of tremendous possibilities. We are already aware that the great armies of spirit and drug neurotics in every section of the country should be halted, restored and saved from the jail and almshouse. With a wise application of psychic and physical remedies this can be done.

The evidence is accumulating, and almost every physician can refer to instances of restoration ascribed to means that are utterly inadequate. When examined scientifically it is the psychic realm and its mysterious laws which has produced this result, and we stand about unconscious and ignorant of its mighty presence. The toxic neurotic with his damaged pain centers and faulty resisting powers, low vitality, requires something more than physical treatment. He needs psychic remedies to turn his feeble mentality into new lines of thought. New forces must be brought into activity and new measures must be used. The small hospital and the family physician are the pioneers to develop and make practical this realm of practice now unoccupied at our door.

PATHOLOGIC RESULTS OF OPERATIONS ON THE TURBINATES.*

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When one considers the extreme vulnerability of the nasal mucosa, the extent to which its surface is exposed to infection both by the agency of the inspired air and by its situation, it may well occasion surprise that the cases of unfortunate sequelæ following operative procedures on the turbinates is so small. This is especially so when one considers, too, the enormous number of operative procedures of various sorts which are performed within the nasal cavity. Lermoyez[1] classifies the accidents which may follow intranasal operations as follows: 1, of infectious origin; 2, of nervous origin; 3, of mechanical origin, and this is probably as satisfactory a classification as can be made.

The most serious accidents which follow operations on the turbinates would, of course, come under the head of the infections. Septic conditions following turbinal operations are by no means as common as one would expect. When we consider the large blood and lymphatic channels which lie immediately beneath the nasal mucosa and the proximity of the tissues to the brain and its meninges, we would hardly think that cases of meningitis, cerebral abscess or thrombosis of the sinuses are as rare as they would seem to be after a diligent search of the literature on the subject. Of course, an obvious fact to be borne in mind when looking for records of cases of this character is that such cases are seldom reported, the surgeons in whose practices they occur preferring, very naturally, not to publish their mistakes to a censorious world.

One of those to report cases of septic infection following intranasal operations was Voltolini,[2] who, in an article on nasal polypus, reported two cases. One of the patients was a man who died of meningitis following the removal of nasal polypi. This patient took a long journey on the day following the operation. The second died of pyemia following the removal of nasal polypi.

J. Broeckaert[3] reports the case of a child 5 years of age from whose nose he removed polypi with a hot electric wire snare. The patient developed suppurative lepto-meningitis and death ensued.

L. Rethi[4] reports the case of a man, 62 years of age, who died following the removal of multiple polypi. The postmortem diagnosis was general meningitis with sinus thrombosis and pyosepticemia.

Jürgens[5] reports a case in which he removed the middle turbinate from a man, 55 years of age, who died shortly afterward from an abscess in the orbit.

An interesting case was reported by Galliard,[6] in which the application of perchlorid of iron for epistaxis was followed by the death of the patient, who was a young man. The autopsy showed gangrenous inflammation of the nasal mucous membrane with a meningitis chiefly in the region of the olfactory nerve.

H. Knapp[7] reports a case of operation by external incision with the removal of nasal polypi and an orbita tumor. The woman, aged 47 years, died four days after the operation from purulent leptomeningitis.

F. J. Quinlan[8] reports the case of a girl of 18 in whom he cauterized the middle turbinate with a galvanocautery. Seventy hours after the operation she died of meningitis. This patient had had several intranasal operations with saw and bone forceps performed some months before.

C. H. Knight and James F. McKernon[9] reported the case of a woman, 25 years old, in whom the removal of a cystic expansion of the anterior extremity of the right middle turbinate by the cold wire snare and nasal cutting forceps, was followed by acute otitis media and mastoiditis of the same side. The aural condition required first paracentesis, followed by mastoidectomy and subsequently the ligation and incision of the internal jugular vein. In spite of the great degree of sepsis the patient ultimately made a good recovery.

C. R. Holmes[10] reports the case of a young man who, after a turbinectomy, made a business trip in inclement weather. The nasal wound and ethmoid cells became infected and he had repeated attacks of epistaxis. Two months later his vision became blurred, and Dr. Hotz, who saw him, stated that there had been an extensive optic neuritis, complicated thrombosis of the lower veins and hemorrhage in the macular region. Dr. Holmes also saw a case which occurred in the practice of the late Dr. Max Thorner. The patient was a young man, 17 years of age, from whom Dr. Thorner removed a nasal polypus and subsequently cauterized the base of the polypus. Forty-eight hours later the patient had an extensive hemorrhage in the macular region with thrombosis of the ophthalmic vein, which ultimately resulted in optic atrophy and amblyopia.

Of the nervous affections which may follow operations on the middle turbinate there are some which are most curious. My attention was first forcibly directed to nasal reflex phenomena by an occurrence in my private practice which caused me considerable worry, although it was not serious in its ultimate outcome. I have already reported the case.[11]

Patient.—A man, aged 37, of muscular build, and without neuropathic taint, came under my care for a hypertrophic rhinitis of severe grade.

History.—He had been treated by several specialists in diseases of the nose and throat and had undergone many minor nasal operations during the immediately preceding few years. The hypertrophic tissue had been treated with the galvanocautery, chemical caustics and by removal with the cold wire snare. During February, 1897, I used the cold wire snare to remove a small piece of hypertrophied tissue from the anterior extremity of the middle turbinate bone of the left side. Two days later the patient returned and informed me that on the day following the operation he had, while writing, suddenly become blind in his left eye. He had gone at once to the office of a well-known oculist, and while waiting in his ante-rooom to see him found that his vision was beginning to return. Before the doctor had finished his examination sight was almost completely restored to the eye. The period of complete left-sided blindness was stated by the patient to have lasted between twenty and thirty minutes. The oculist has since informed me that careful examination had failed to reveal any cause for this condition. When I saw the patient after the occurrence, the site of the operation presented a perfectly normal appearance. I subsequently used the cold wire snare in the further treatment of the case and also employed chromic acid, with no results out of the ordinary. Of course the transient blindness can only be considered as a reflex amaurosis, the result of the intranasal operation.

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*Presented in the Section on Laryngology and Otology of the American Medical Association at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

[1] Ann. de Mal. d. l'Oreille et du Larynx, etc., 1891, xvii, 85.
[2] Die Krankheiten der Nase, 1888.
[3] Ann. de Mal. d. l'Oreille et du Larynx, etc., December, 1894.
[4] Sajous Annual, 1896, iv.
[5] Wien. med. Wochschr., 1899, xlix, 66-68.
[6] Bull. Soc. g. Anat. de Paris, 1880, lv, 438.
[7] Arch. of Otology, 1884, xxxiii 51.
[8] N. Y. Med. Record, 1890, xxxiii, 292.
[9] Tr. American Laryng. Assn., 1905.
[10] Ohio State Med. Jour., February, 1906.
[11] Med. News, Oct. 9, 1887.

In connection with the report of this case, I reviewed in my article the literature of the subject, and in doing so called attention to the many curious phenomena that have manifested themselves after operations within the nasal cavities.

In 1885 Ziem[12] wrote a lengthy article on evil results of reflex origin following intranasal operations, in which he reported a number of cases of visual disturbances under such circumstances and also several of delirium.

Dr. Thorner[13] reported a case almost identical with that reported by me of reflex amaurosis. Although it resembled in some respects the case which Dr. Holmes saw with Dr. Thorner, which I have already referred to, it differs so essentially in its nature that I think it must have been a distinct case. The patient, following the cauterization of a small polypus in the middle meatus of the nose, suffered from a temporary amaurosis of the same side. He could distinguish between light and dark, could see objects held closely before the eye, but could not count the fingers at five feet. His vision was gradually restored in four or five weeks. In the same article Chappell is quoted as reporting two other cases, one a boy aged 16 years in whom the removal of a piece of the middle turbinate the size of a pea was followed four hours later by total loss of memory. The boy's family physician reported in Thorner's case that the boy's temperature was elevated, his conjunctivæ hyperemic and his pupils dilated. He complained of headache and was absolutely unconscious of everything that had happened since he left home to go to Dr. Thorner's office. There was absolute loss of memory for six weeks, after which the memory gradually returned until it was completely restored, three months after the operation. The other case was that of a woman, aged 24, who had a severe subacute cough accompanied by neuralgia of the left side of the face following the removal of the anterior portion of the left middle turbinate.

W. F. Chappell[14] reports the case of a woman, aged 58, in whom he injected one drop of monochloracetic acid into the mucous membrane of the right middle turbinate. The same evening the patient was attacked with severe pain in the right side of her face, extending over the top of the head to the occiput; she also had pain down the right side of her neck and along the course of the nerves to the tips of her fingers. The pain was neuralgic in character and began to subside after one week, but six weeks had elapsed before she was restored to her normal condition.

Another patient of Chappell's, after the removal of a portion of the left middle turbinate, had a good deal of hemorrhage, but only slight pain. Two hours after operation she began to suffer with pain and tenderness over the left frontal region, extending to the occiput and down the back of the neck to the left shoulder. She felt dizzy and at times feared that she would fall. Three months after the operation, although much better, she still had some numbness of the left side of the face and neck. Dr. Chappell also refers to another case in which a portion of the left middle turbinate was removed with forceps and the galvanocautery was used on the left inferior turbinate. Following the operation the patient vomited and complained of pain in the back of the neck. A month later the galvano-cautery and chromic acid were used to cauterize the right inferior and middle turbinates. Shortly after this last procedure the patient complained of pain in the head and aching of the neck and shoulders. Another cauterization was followed by similar symptoms, in addition to which she had pain in all the large joints of her body. The following day she had great pain over the bridge of the nose, vertex and back of the neck and suffered from aphasia. A few days later she fell into a cataleptic state, pupils contracted, respirations shallow, and heart action normal. This condition continued for about an hour and recurred daily for ten days. The patient, at the time Dr. Chappell reported the case, was still far from well.

One can not help thinking that in this case there must have been a large hysterical element, as her complaints of pain did not always seem to have been backed up by the physical lesions which would have caused it.

Sir Felix Semon[15] reports a case in which the removal with a galvanocautery loop of multiple recurrent mucous polypi of the nose was followed by sudden exophthalmos of the right eye, accompanied by Graefe's sign (lagging behind of upper lid when patient looks down) and Stellwag's symptom (retraction of the upper eyelid). There was no enlargement of the thyroid gland.

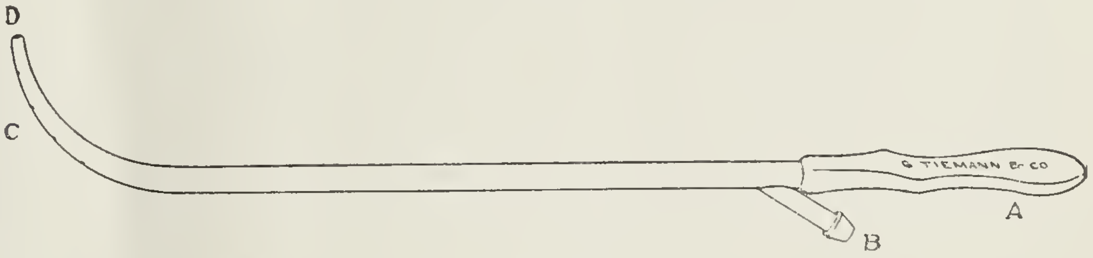
Clinical Notes

COMBINATION CATHETER AND SOUND.

J. W. MEEK, M.D.

CAMDEN, ARK.

I have had made a combination catheter and sound. So far as I know there is no other instrument of exactly this type. The advantages claimed are as follows:



Combination catheter and sound: A, head of sound, solid, (steel); B, outlet for escape of urine, or point of attachment of fountain syringe to wash out the bladder; C, small perforations communicating with central canal; D, perforation at point.

1. When a metallic instrument is to be used, this is more readily introduced than a silver catheter, as the weight of a solid, or almost solid, sound, after reaching the deep urethra, readily carries the instrument into the bladder—at least when raised perpendicular—unless there be serious mechanical obstruction to the introduction of any instrument.

2. This instrument not only dilates the urinary canal, but its entrance into the bladder will be made known by the slow discharge of the urine. I say slow, because the canal or channel in this instrument is purposely made small in order to preserve the weight of the sound.

3. If this instrument meets with serious obstruction, a little warm sterile oil or glycerin may be injected

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[12] Monatschr. f. Augenheilk., Berlin, 1895, xix, 257.
[13] The Journal A. M. A., Sept. 26, 1896.
[14] N. Y. Med. Record, May 10, 1890.
[15] British Med. Jour., April 20, 1889.

through this canal with a small hand syringe, thus facilitating its introduction.

I was led to feel the need of such an instrument by having to attend a man over 70 years old, who, after months of catheter life from enlarged prostate, was operated on by Dr. J. B. Murphy. After some months the patient again had trouble in fully evacuating the bladder. Dr. Murphy advised me to introduce a sound once a week, or two weeks as required. This maintained the patency of the canal, but did not drain off the residual urine. This necessitated the use of a catheter afterward. The sound would frequently pass into the bladder when neither a soft nor metallic catheter would do so, unless the sound preceded it.

The bladder can also be readily washed out by attaching a fountain syringe to the hollow projecting point B in the engraving.

MARKED MALPOSITION OF THE SIGMOID SINUS.

RICHARD H. JOHNSTON, M.D.
BALTIMORE.

On March 16 of the present year I was called on to open the mastoid of Fulton M., aged 5, who had suffered from acute suppurative otitis media for two weeks. There was decided swelling of the skin over the bone. After making the usual incision through the skin, a small fistula was found in the mastoid fossa which passed down through the cortex. After removing the bone, granulation tissue was encountered, but the peculiar doughy sensation imparted to the probe warned against the use of the curette. The soft tissue was carefully uncovered from the mastoid fossa to the tip, and everywhere presented the same granular appearance. Its position was directly back of the posterior wall of the canal. There was no pulsation of the mass. In trying to make a positive diagnosis a portion of the canal wall was removed and even then it was impossible to tell whether I was dealing with granulation tissue alone or with the sinus covered by it.

At one point the granulations were accidentally scraped off and a bluish shimmer convinced me that I was dealing with the sinus. To make assurance doubly sure a sterile, hypodermic needle was pushed through the blue spot and the withdrawal of dark blood made the diagnosis positive. The position of the sinus was directly back of the posterior wall of the canal, hugging it as closely as possible, and extending from the mastoid fossa just below the dura above to the uncovered tip below. Its direction was perfectly straight instead of the usual S shape. The position of the vessel changed an apparently simple operation into a complicated one. Since there was no evidence of thrombosis, the granulation tissue was not disturbed. The skin wound was sutured a short distance above and left open below.

The patient made an uneventful recovery. I had never seen such a marked displacement of the sinus.

919 North Charles Street.

TETANUS TREATED WITH MAGNESIUM SULPHATE BY HYPODERMOCLYSIS.

MORTON LYON, M.D.
DE WITT, IOWA.

I wish to report a case of tetanus treated with magnesium sulphate by hypodermoclysis, with recovery:

The patient, J. K., male, 7 years old, stepped on a nail, which punctured the sole of his shoe and entered the left foot, barely through the skin, making a wound scarcely noticeable.

Eight days later he complained of stiffness in his foot and leg. On the ninth day a spasm of the leg caused him to fall, and rigidity of muscles was increased. On the tenth day trismus was noticed and there were occasional convulsions. On the eleventh day I was called to see him and found his jaws set and almost all his muscles rigid. He could move his arms and hands to a limited extent. The wound was laid open and thoroughly treated with hydrogen dioxid and tincture of iodin.

The convulsions were partially controlled by morphin, chloral and bromids. On the twelfth day, at 3 p. m., I gave two drams magnesium sulphate in four ounces of distilled water under the skin of abdomen. At the end of two hours the boy could separate teeth 2 cm., and his other muscles were relaxed to a marked degree. On the thirteenth, fourteenth, seventeenth and nineteenth days the magnesium sulphate injection was repeated, and, although the muscles were not relaxed to the same extent as after the first injection, the convulsions were infrequent and not so severe. Only twice was there any bronchorrhea, and then of slight consequence. About the fourteenth day a vesicular eruption appeared all over his body. The vesicles were of pin-head size and filled with a clear fluid. These dried up and disappeared with an exfoliation of epidermis in about one week.

From the last injection of magnesium sulphate on the nineteenth day the stiffness in muscles slowly disappeared, the last to disappear being in the foot which was injured. It was necessary to give digitalis to improve heart action after the first week of illness, and tonics for anemia during convalescence. About the thirtieth day he was able to sit up, and in ten days more to walk again as usual.

CASE OF MULTIPLE SACCULATED THORACIC ANEURISM SUCCESSFULLY TREATED BY WIRING.

JAMES M. ANDERS, M.D., LL.D.
AND
JAMES P. MANN, M.S., M.D.
PHILADELPHIA.

Patient.—M. W., a colored man, aged 36 years, was admitted to the Medico-Chirurgical Hospital, Jan. 18, 1907, complaining of a painful, throbbing lump in the sternal region, a troublesome cough, marked dyspnea, and general weakness.

History.—The family history was negative. The patient as a child had measles and mumps. When about ten years of age he fell and sustained an injury to the chest, to which accident he attributed his present condition, though the first local symptoms appeared twenty years later. He had always been more or less subject to colds and had suffered from several slight attacks of acute rheumatism. For the past twelve years he had been a barber and had previously been employed for a number of years on a farm. He had used tea and coffee in moderation, but tobacco, beer and whisky freely until entering the hospital. He had been married eight years. The patient admitted a specific infection, the primary lesion appearing, however, only four months previous to the time of his admission.

The present illness began about four years ago, when he noticed a dull boring pain under the sternum. Soon, a small, painful, throbbing protuberance appeared to the right of the mid-sternal region, but this swelling largely disappeared under absolute rest and medicinal measures. During the four years intervening between that date and his admission to the hospital, he had an occasional pain in the same region, and a cough at intervals, which, however, was not characteristic of thoracic aneurism.

Since Christmas, 1906, he had a severe cough, which caused considerable pain in the area of the original swelling. On January 14, four days prior to date of admission, he indulged in a "spree," during which he suddenly felt a sharp pain accompanied by a sense of "something giving way" in the chest. This was attended with a smothering sensation, and at the same time he noticed a return of the swelling. The tumor now rapidly enlarged and four days later it was about the size of a small orange. Neither dysphagia nod aphonia was present.

Examination.—On admission to the hospital, the most striking feature of the physical examination was a conical tumor-mass, projecting from the thorax at the right edge of the middle of the sternum. This was about 2½ inches in height and 3 inches in diameter at the base. The apex showed a subcutaneous hemorrhage which rapidly increased in extent until it was the size of a silver half-dollar. The extreme summit of this area was of a deep reddish color and presented a glazed appearance. An expansile pulsation was both visible and palpable, extending for a considerable distance beyond the base of the mass. There was an absence of thrill, tracheal tugging and episternal pulsation. A systolic murmur or bruit was heard at the second aortic interspace during inspiration only. This was transmitted into the vessels of the neck, but was not audible over the elevation. The heart was apparently neither enlarged nor displaced. The heart sounds at the apex were somewhat rapid and rather weak; the second aortic sound, however, was moderately accentuated. The lungs were normal, except for a slight congestion of the lower portion of the left lung.

The pupils were equal and reacted to light, accommodation and convergence.

Estimation of the blood pressure in both radials showed the right to be: Systolic, 130 mm. Hg; left, 125 mm. Hg. Later the difference was more marked, viz.: Right, 120 mm.; left, 100 mm.

An *x*-ray examination, made by Dr. Pfahler immediately after the patient entered the hospital showed an aneurism extending 3½ inches to the right of the median line on a level with the third rib and also approximately 2½ inches upward and downward from this level. The upper portion of the aneurismal shadow just overlapped the origin of the aorta.

The blood showed a slight grade of secondary anemia; the coagulation-time was 3½ minutes; later (June 7) this was reduced to 2 minutes.

Treatment.—A modification of Tufnell's diet was used. Breakfast, a soft boiled egg and two ounces of bread; dinner, three ounces of meat and two ounces of toasted bread; supper, milk toast. Between meals he was allowed four ounces of milk every three hours, but no other fluid. Later a small quantity of stewed fruit was added to the diet.

The medicinal treatment consisted chiefly in the use of tincture of aconite m. iii, every three hours, gradually reduced to m. ii three times a day, and a saturated solution of potassium iodid m. v twice daily, increased m. i daily, until the dose became m. l, three times a day, when the patient developed symptoms of iodism; it was now reduced to m. xxx, which amount was maintained during his entire stay in the hospital.

Codein sulphate gr. ⅛ was administered by mouth when necessary to control the troublesome cough. He was also given magnesium sulphate in doses sufficient to keep the bowel movements in a fluid state.

The patient's condition did not improve and the aneurism was in imminent danger of rupture. On January 29, therefore, it was decided after consultation to resort to more radical measures. Accordingly, one of us (Dr. Mann) inserted into the aneurismal sac about ten yards of fine silver and copper wire. Almost immediately the expansile pulsation was markedly diminished and the tumor-mass was less prominent. The wire could be distinctly felt, giving the impression of subcutaneous emphysema. About two weeks later, an additional slight elevation above the second rib, and to the right of the sternum, was visible. This also gave an expansile pulsation.

The second eminence slowly increased in size and on February 13 Dr. Mann inserted several yards of fine silver wire. At this time the pulsation in the original mass was not apparent. In a few days the pulsations in the second elevation were less marked and a considerable diminution in its size was noticed. On February 28 the entire upper surface of the primary tumor-mass sloughed off, exposing the wire coiled up within the aneurismal sac. Beneath the wire, which admirably fulfilled the purpose for which it was intended, a firm granulating surface was visible.

As the result of the formation of this granulation tissue and the progressive retraction of the sac, the wire was steadily protruded from the wound and small portions were removed each day until little remained. The coils of wire which had been passed through the sternal opening, however, were not removed. For a long time after the mass had disappeared, there was a slight oozing of blood from the wound. A small hemorrhage occurred June 16, about two ounces of blood being lost.

On July 1 the patient first sat up. The wound now slowly healed by granulation. A slight pulsation over the second elevation was still present. The patient's strength gradually returned and on July 17, the wound meanwhile having healed, he was discharged from the hospital.

SUPPLEMENTAL REPORT BY DR. MANN.

The aneurism was first wired Jan. 29, 1907, at which time and continuously thereafter, careful precautions to insure asepsis were maintained. With a hollow needle of sufficient caliber to admit freely the passage of No. 26 silver wire, the tumor was punctured near the base of the portion external to the sternum.

About thirty feet of wire was passed through the needle, which was directed toward different areas of the sac in order to distribute the coils better and also to block the opening in the sternum. The sternal aperture, as discovered by a radiograph, had a diameter of about three-fourths of an inch and was located in the lower half of the gladiolus. Pulsation almost entirely subsided soon after the wire had been introduced.

About two weeks subsequent to the first wiring, that is on Feb. 13, 1907, a small area of pulsation appeared in front of the sternum just above the original tumor. This second sac was filled with seven feet of wire, after which and up to Jan. 15, 1908, there has been only feeble pulsation and no extension of the parts wired.

Results.—The patient has been seen at intervals of one to two months since he left the institution, and has continued symptom-free with the exception of slight dyspnea on active physical exertion. Certain physical signs of the aneurism are, however, still present, namely, very slight bulging over site of upper elevation, feeble pulsation (slightly expansile) over same area, and a small abnormal field of dulness above and to the right of the normal cardiac dulness and slight accentuation of the second aortic sound. No bruit can be detected, however, a small, shallow dark red protuberance covering an area about the size of an ordinary coat button appeared about Feb. 6, 1908. This small projecting mass exhibited an expansile pulsation. An *x*-ray examination made this day showed no perceptible increase in the size of the saccular aneurisms situated to the right of the sternum when compared with the results obtained by the same method six months previously. The aneurismal dilatation of the transverse portion of the arch, however, had extended itself to a slight extent, although it had given rise neither to symptoms nor to physical signs.

By March 10, 1908, the small protuberance, which appeared on February 6, 1908, had entirely disappeared as the result of rest.

A PRECAUTION TO BE OBSERVED IN MAKING THE USUAL GMELIN TEST FOR BILE IN THE URINE.*

WALTER H. BUHLIG, B.S., M.D.
CHICAGO.

In the performance of the usual Gmelin test for bile in the urine the nitrous acid necessary for the oxidation of the biliverdin is obtained in various ways. It has been our custom—and this method has been used elsewhere—to instruct the student to heat concentrated nitric acid with a few pieces of the wood of matches, and to heat until the fumes of the nitrogen oxids arise faintly, in this way furnishing the mixture of nitric and nitrous acids. The acid is then poured into another clean, dry test tube and, after superimposing the urine on the slightly yellow nitric acid, the usual play of colors is looked for.

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* From the Clinical Laboratory of the Northwestern University Medical School.

An error in interpretation, not of the presence of bile, but of the presence of albumin, in the urine is remotely possible after this manipulation. In practically every test made in this way a distinct white ring can be seen between the urine and the acid in nonalbuminous urines after the lapse of less than a minute, often at once. This ring, which is practically always just below or associated with the normal brown ring, is sometimes so dense and sharp that under some conditions, remembering the usual Heller's test for albumin, a faulty conclusion respecting the albumin content of a urine may be made. Heating the acid alone to boiling will never give the same result, and the white ring in question is probably precipitated resin dissolved from the wood by the nitric acid. This resin can not be removed by ordinary means. Benzin will not remove it completely, or will give a cloud at the juncture of the urine and the acid after its removal from the benzin. Alcohol is impracticable, for it mixes with the acid. Consequently, the ring will be present after making nitrous acid in this way and it becomes necessary to heed the warning.

The same care in diagnosis in this test, relative to the presence of albumin, must be taken as in the interpretation of the presence of albumin in urines containing resins, from copaiba, etc., when making the Heller's test for albumin. In the latter instance the white ring is usually high, that is, above the junction line of the nitric acid and the urine, for it comes from the urine. The position of the ring in the test for bile by yellow nitric acid made as described above is low, the resin being precipitated from the acid, and this location of the ring is of importance in putting one on one's guard.

When one remembers how hastily some clinical tests of urine are made, this precaution, I believe, is of practical importance. One always hesitates to announce such a simple error as this, but in none of the usual text-books on clinical diagnosis has any mention of it been found. Other methods of producing the nitrous and nitric acid mixture may be used, as, for instance, by heating nitric acid with starch, by adding a nitrite to the acid, or by exposing the acid for a long time to the air, but none of these is so easy of application or so rapid of execution as the one by the use of the wood of matches.

CASE OF ACUTE MASTOIDITIS WITH SOME UNUSUAL FEATURES.*

ALFRED WIENER, M.D.
NEW YORK.

The interesting and uncommon features present in this case I believe warrant its recital.

Patient.—Mrs. S., 65 years of age; a widow; domestic by occupation; was admitted to the hospital Nov. 30, 1907.

History.—Patient's family history is negative. Three years ago she suffered from an attack of pneumonia, followed by an acute purulent otitis media in the right ear, from which she eventually completely recovered. Nov. 3, 1907, she was confined to bed with an attack of influenza, and almost immediately an acute otitis media made itself apparent in the left ear. The tympanic membrane ruptured of its own accord, and soon a purulent discharge was noticed. At first there was little pain, but gradually the pain became more severe in character and extended over the region of the mastoid process. This condition was allowed to go on for two weeks, when the pain, temperature and deafness made the patient so miserable that she finally sought relief, and was at once admitted to the hospital.

Examination.—Patient appeared well nourished and rather corpulent. She seemed to be a very sick woman. The lungs showed a mild degree of emphysema. The heart was hypertrophic and the second sound was very much accentuated. The urine showed granular casts and the presence of albumin. The specific gravity was 1.018. Abdomen, extremities and reflexes were normal. The cranial nerves were perfect. The eyes responded to light and accommodation. There was no nystagmus. The fundus of both eyes showed nothing abnormal.

Ears: The tympanic membrane of the right ear was slightly retracted. The hearing function was normal for ordinary purposes. In the left ear only loud conversation was heard close to the ear. Whisper could not be heard at all. Weber was lateralized toward the left ear. Rinné was negative. Bone conduction was good. High-note tuning forks were appreciated somewhat better than the lower notes. There was a mild degree of edema over the mastoid process. The whole region was extremely sensitive to pressure, especially at the tip and posterior border. The canal was very much narrowed by the sagging of the upper wall. There was some secretion in the canal. The perforation in the tympanic membrane could not be seen. The drum was reddened and bulging and its anatomic landmarks were no longer recognizable. The patient complained bitterly of pain both in the ear and back of the ear, and of some headache. The temperature on admission was 101 F. There was no history of a chill, sweating, nausea, vomiting or vertigo.

Examination of the secretion showed pneumococci. Examination of the blood showed 18,000 leucocytes and 80 per cent. of these were polynuclears. Operation was advised at once and accepted.

Operation.—Division of the soft parts showed nothing unusual. On chiseling the mastoid, immediate entrance was made into a cavity filled with pus, broken down cells and granulation tissue. Although the opening was made close to the suprameatal region, I came down directly on the lateral sinus, which in this patient unfortunately was lying far forward, within three-eighths of an inch from the posterior wall of the external meatus. By working slowly and carefully I was able to preserve the posterior wall and enter the antrum. The whole mastoid process was cleaned out and the tip resected. As the sinus appeared healthy and distinct pulsation was noticed, it was not interfered with. The wound was packed, a dressing and bandage applied, and the patient was put to bed. For the next forty-eight hours the result of the operation appeared to be entirely satisfactory.

On the evening of the third day after the operation the patient passed a restless night and complained of headache and pain over the left side of the head. The temperature rose to 102.2 F. and the pulse rate was 70. Physical examination proved negative. An examination of the fundus in both eyes showed a slight blurring of the discs. The patient was given calomel. For the next forty-eight hours she appeared to be improving, her temperature not going above 100 degrees. Suddenly, on the morning of the sixth day, the patient began to complain of severe headache, the temperature gradually rose to 105 F. and the pulse dropped to 60. There was neither chill nor vomiting. A blood count showed 15,000 leucocytes, with 76 per cent. of polynuclears. Physical examination proved negative. The fundus in both eyes showed a marked choked disc. The mentality of the patient was good, and there was not the slightest sign of delirium. She complained bitterly of her headache. A serous meningitis was at once suspected, the reasons for this suspicion being the inten headache without other cranial symptoms, the choked dis the rather slow pulse, with a temperature of 105 F. It wa decided to make a lumbar puncture, and also to remove the dressings and seek for the cause of the meningitis.

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* Reported at the Otological Section, New York Academy of Medicine, February, 1908.

The lumbar puncture at once substantiated the diagnosis of serous meningitis. The fluid was drawn under high pressure, was perfectly clear, and proved negative on microscopic examination. No lymphocytes; coagulability was good, and there was an absence of all formed elements or bacteria.

The question now arose as to what was producing the serous meningitis. Examination of the wound revealed the sinus covered with a layer of lymph, but soft and pulsating. In the region of the antrum there was a large pocket of pus, in regard to the origin of which there was some doubt. This pocket was cleaned and a fistula sought for in the roof of the antrum, but none could be detected. With the exception of an otitis pyemia pure and simple, due to an absorption of toxic matter, as the cause for a high temperature, an extradural abscess or a probable lateral sinus thrombosis of the parietal type, had to be borne in mind. As there was no positive evidence of the latter two suspicions, the wound was packed lightly to afford good drainage from the region of the antrum. It was decided to wait twenty-four hours and watch the effect of the lumbar puncture and the thorough cleansing of the wound. On the following day the temperature dropped to 99 F. and the patient appeared to be very comfortable. For the following three days the temperature remained below 101 F. and the pulse between 68 and 78. The slight pressure symptoms, such as the headache, which appeared to recur toward evening, were relieved by lumbar puncture. Thirty c.c. were withdrawn each time and proved negative to microscopic examination.

On the evening of the third day the patient began to feel very uncomfortable. Her headache again became excruciating. It was located over the occipital region on the left side, and the entire frontal region on both sides. The temperature rose to 105 F. and the pulse dropped to 60. The fundus examination showed discs measuring nearly 1½ mm. in depth. There was neither chill nor vomiting. A blood count showed 22,000 leucocytes and 84 per cent. of polynuclears. Blood culture proved negative. The extreme pain over the occiput, the high temperature with the slow pulse, the absence of all cranial symptoms, with the exception of the headache and choked discs, together with the previous history and observations, led me to conclude that serious complications were present. The pain and pyemic temperature might be explained as being due to a sinus thrombosis, while the marked pressure symptoms pointed to a brain abscess.

The patient was again anesthetized, and the roof of the antrum and tympanic cavity were made more accessible. As I removed the roof of the antrum I at once came on an extradural abscess. The greater part of the roof was removed until I was able to evacuate this abscess thoroughly. The dura was explored, but no fistula was apparent. The sinus was the next point for observation. The walls were found to be discolored and of a greenish hue, and easily remained indented after pressure made by the finger. There was, therefore, no doubt about the presence of a thrombus within the sinus. I first exposed the sinus toward the torcular for about 1¾ inches until the wall appeared normal. It was then slit open, and a broken-down thrombus removed, and free bleeding obtained. Before attacking the central end I proceeded to tie the jugular. At first the jugular could not be found, but finally it was found entirely collapsed, and about the size of a very small quill. It was tied off and resected for about an inch, and the upper portion brought out at the upper edge of the wound. This was done for the purpose of further observation.

I now went back to the mastoid wound, and found it necessary to lay bare the entire sinus and the bulb. The whole anterior wall was resected, and the thrombus was cleaned out, inclusive of that within the bulb. No free bleeding was obtained. Although the thrombus in the bulb looked healthy, I was unwilling to leave such a mass in a location where infection is not rare and also treacherous. If the remainder of the thrombus should break down, it could easily be dealt with, as explained above. The patient had now been under the anesthetic for one and three-quarter hours, and was beginning to show signs of exhaustion, and it was not deemed wise to proceed any further. No attempt was made to explore the brain, as no involvement was suspected. Sufficient had been found to account for all the symptoms. The patient was put to bed, treated for the slight shock which had resulted from the operation, and awoke on the following morning with a temperature of 102 F. and a pulse of 88. Her subjective symptoms had been very much improved, and her physical condition was excellent. There was a slight rise to 102.3 F. in the evening, and on the following day the temperature dropped to 100 F., with a pulse varying from 80 to 100. The patient now appeared to be cheerful and feeling the good effects of our operative efforts. During the following ten days she was constantly improving, when suddenly she developed a temperature of 103 F. with slight headache. She also began to cough and to complain of pain in the left side of her chest and in the region of the left kidney. Respiration 24, pulse rate 115. The sputum was of a rusty tinge.

Examination of the mastoid wound and of the wound in the neck showed both progressing favorably. A blood count showed 18,000 leucocytes, with 81 per cent. of polynuclears. Widal was negative. Examination of the chest showed consolidation over the lower lobes on the left side. The twenty-four-hour quantity of urine was diminished to 600 c.c. Microscopic examination showed pus cells, red blood cells, granular, hyaline and epithelial casts. An examination of the fundus of both eyes was extremely interesting. Both discs were markedly swollen. In addition, there was an exudation near the macula region of both eyes, and on the outer side of the right papilla there was an exudation with a small flame-like hemorrhage—a picture very familiar to us in albuminuric retinitis. This attack proved to be a migratory pneumonia with an acute exacerbation of an old chronic nephritis. As the temperature still ranged between 103 and 100 F. after ten days, and there was still some consolidation present in the lower lobe on the left side, with increasing cough and dyspnea, it was thought best to pass a needle into this area for the purpose of determining whether there might not be present an empyema or abscess of the lung. There was a possibility that this pneumonic process might be a metastatic condition resulting from the original infection. The exploration proved negative.

After three days the temperature began to drop of its own accord, and from this time on the patient showed improvement from day to day. The wound closed after three months from the date of her admission into the hospital, and at the present time she is perfectly well and able to resume her duties as a domestic.

Especial attention is called to the fact of the presence of a serous meningitis with its characteristic symptoms of high temperature with a slow pulse, choked disc and severe headache. The high temperature was probably due to the sinus thrombosis, but its association with a slow pulse and choked disc led me to suspect a serous meningitis, which was verified by the lumbar puncture. The sinus thrombosis was probably present at the very first rise of temperature, and although suspected could not be verified. Either it was located at the bulb or, what is more probable, it was of the parietal type and, therefore, could not be diagnosed from general appearances or puncture of the sinus. The reason for not attacking the sinus and bulb at this stage of the condition was, that there was a probability that the pocket of pus in the antrum or an extradural abscess in this location might have been the cause for the serous meningitis.

Another interesting feature in this case is the occurrence of a distinct neuro-retinitis of the albuminuric type, making itself evident in the latter part of the illness. This was at once recognized by its exudative character at the fundus. It was especially prominent in the neighborhood of the macula.

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SATURDAY, MAY 23, 1908.

THE CAUSE OF MILKSICKNESS OR TREMBLES.

On account of its gradual disappearance, now apparently almost complete, the remarkable disease known as trembles when affecting cattle and other animals, and as milksickness when communicated to human beings, seemed to be on the very point of passing into history as an unsolved problem of western medicine.

Fortunately the discovery of a new focus in the valley of the Pecos River in New Mexico gave to Jordan and Harris the opportunity necessary in order that the disease might be studied by means of modern microbiologic methods. As may be seen from their report in this issue of THE JOURNAL,[1] there is every reason to believe that they have succeeded in discovering the actual cause of the disease. The description by Jordan and Harris of the symptoms of the sick animals seen by them and furnishing the materials for their study tallies so exactly with the symptoms of trembles as recorded in the literature that there can be no question as to the identity of the disease in the Pecos Valley with the trembles of pioneer days in Ohio, Indiana, Illinois, Kentucky and Tennessee, described in some of its manifestations so graphically by Daniel Drake: "The animal begins to mope and droop, and to walk slower than its fellows, to falter in its gait. If under these circumstances it should be driven, and attempt to run, the debility and stiffness of its muscles are immediately apparent. It fails rapidly, trembles, pants, and sometimes seems blind, as it runs against obstacles, but this may arise from vertigo; at length it falls down, lies on its side quivering, and is not, perhaps, able to rise for several hours, sometimes never."

The conclusion that the disease in the Pecos Valley is trembles is strengthened greatly by the occurrence in the same locality of cases of disease in man presenting some of the classical symptoms of milksickness, including the well-known sweetish odor of the breath.

The observations of Jordan and Harris on the anatomic changes in animals that have died of trembles are highly interesting. The degenerations in the myocardium, fatty and otherwise, explain the weakness of the animals and the collapse on more violent exercise. The nature of the lesions in the myocardium, the liver and the kidneys furthermore indicates that powerful toxic substances are at work.

From the blood and organs of animals dead with trembles Jordan and Harris isolated in pure cultures a spore-forming bacillus, seen in smears from the organs, which they name *Bacillus lactimorbi,* and with which they have reproduced in animals clinical symptoms and anatomic changes peculiar to the original disease, recovering *B. lactimorbi* in pure cultures from the animals subjected to experimental infection. Consequently it may be said that the requirements established by Koch for the conclusive demonstration that a certain microbe is the cause of a given disease have been fulfilled.

As pointed out by Jordan and Harris, more comprehensive studies based on more abundant material are highly desirable in order to make wholly clear the many obscure and mystifying points in the etiology of milksickness and trembles. For the purpose of securing such material the request is made that E. O. Jordan, University of Chicago, be notified immediately on the appearance of milksickness or trembles in any locality. At the same time, as physicians are urged to bear this request in mind, it also seems well to emphasize the possibility that this disease may be occurring even at the present time to a greater extent than is ordinarily believed. This may be true not only of localities in which the disease was prevalent formerly, but also of places in which it has not been thought to occur. We note that the focus in the Pecos Valley is newly discovered and that the disease may occur in Texas; furthermore, that cases of milksickness have occurred in Illinois and Indiana within the last three or four years and in Tennessee only last year.[2]

PRISONS AND SANITATION.

To most of us, prison life is so strange that we think of those who lead it as belonging almost to a separate world. The felon is separated from his fellow men and affects them little either in a sanitary or in a moral sense. But the jail presents much more intimate relations with the outside world and has often revenged itself for sanitary neglect by spreading disease among all classes of society. Since innocent persons must frequently be confined in jail, at least temporarily, it is incumbent on society to see that they take no harm either morally or physically from such forced detention. These considerations should arouse the interest of medical men in these institutions and make of the highest importance the results of recent investigations covering 290 jails in 37 states and territories, which have been carried on by the American Prison Association with the cooperation of *Charities and the Commons.*

With respect to the physical conditions affecting the health of the inmates, the committee making the investigation has a large mass of information. So far as food is concerned, the facts indicate that the diet, while affording sufficient nutriment, is not well selected, either as regards health or cost. The excess of meat is especially unwise in both relations. The report makes the following pertinent suggestion: "The whole matter should be placed in the hands of a medical commission in each state, with power to fix a standard diet, adapted to the climate, the season, the activity, the age and the sex of the prisoners." The report further says: "The customary mode of serving food is revolting and demoralizing and often dangerous to health."

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[1] Page 1665.

[2] McCoy: Bulletin No. 41, Public Health and Marine-Hospital Service, Washington, 1908.

Clothing, being usually furnished by the prisoner, is not entirely under the control of the authorities, but is largely instrumental in conveying disease and disseminating vermin. While the sanitary superiority of the shower as a method of bathing is admitted, it is rarely installed in jails, but instead, tubs are provided which are easily made dirty and dangerous. The use of the bath tub for laundry purposes, and the opportunity for the spread of vermin afforded by the open structure of the jail are condemned by the report which further says: "The best the visitor dares to write is, 'the bedding is fairly clean, considering the situation; the situation is vile.'"

While the buildings were generally found tolerably clean, no bacteriologic examination was made to learn what sanitary filth might remain after the official sense of sight and smell had been satisfied. The committee suggests that a state central board of supervision should take up this study by employing an agent with fortified eyes. The same may be said regarding ventilation. Scientific scrutiny is needed. The lighting is unsatisfactory from the fact that the tiers are generally so placed that adequate sunlight can not reach them.

Another sanitary need of jails is provision for exercise and occupation. At present the facilities provided are insufficient from the standpoint of bodily health, but this is the least important aspect of the question. The mental health of the prisoners is of the utmost importance, especially in the jails, as a large portion of the inmates of these institutions are only temporarily detained in them, and if the conditions are such as to return these persons to society with impaired mental powers and more inclined to crime than before their incarceration, the community is injured rather than benefited.

It is now recognized that proper occupation is a means of cure in insanity. The effect of forced incarceration, with its necessary interruption of customary employment, the depressing tendency of an accusation of crime, and the pernicious influences of other criminals create a strong tendency to mental disease which should be counteracted in every way possible.

In all respects, therefore, both from the viewpoint of the sanitary interests of society in general, and from that of ordinary humanity, a better sanitary supervision and control of jails is demanded. Some of the needed improvements can be brought about only by a radical change in the spirit and methods of the criminal law, but some of the recommendations of the committee are immediately practicable and should receive the attention of county officers and physicians.

SPORT AND NUTRITION.

Recent investigations into the relation of diet to muscular activity have an important bearing on the nutrition of those called on to make special muscular exertion. Athletes, especially, are of interest in this regard to the physician, for it is often a grave question with him how the most successful results may be attained by them without ultimate injury to health. In these days sport has acquired a firm hold on a large portion of the populace, and there have been evolved traditions regarding the proper diet, derived largely from the experience of English trainers, who have generally advocated a diet containing a large amount of proteids. The recent work of Chittenden and others has brought to our notice, however, facts which seem to render the wisdom of this practice questionable. The success of vegetarians also in certain trials suggests that the importance of proteid nutrition for training purposes has been overrated. German army experiments, moreover, as well as physiologic tests, appear to show that carbohydrates are an important source of muscular energy. The additional force requisite for violent muscular exertion is provided for by an increase in all the elements of the food; in Germany, according to A. Albu, preference is given to the carbohydrates, in America to the fats, and in England to the proteids.

Albu[1] asserts that the question in regulating the diet of athletes is the determination, not so much of the minimum of food and of proteid on which certain muscular tests can be carried out, as of the optimum, i. e., the amount which will give the best results with the minimum of danger to health. It must be remembered that success in athletics demands, as a rule, the achievement of results in a relatively short time; and although in the long run the system may be able to get along better with a minimum of proteids, it is possible that without harm it may advantageously use for a time a relative excess. On the other hand, the experiments of Chittenden and the vegetarians may have been influenced by certain factors that must modify the conclusion drawn by them, that the result was altogether due to the small amount of proteids in the diet. Among these factors Albu reckons the psychic influence of interest in the scientific question involved and devotion to the cause of vegetarianism. He calls attention to the fact that the success of the vegetarians has been greatest in the tests of endurance, and especially in walking, a form of exercise to which they are peculiarly devoted. But in most of these tests the vegetarians have formed the majority of the contestants, so that it is only natural that they should have borne off most of the prizes. When this majority has not existed the users of meat have also had their share of winners.

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[1] Berl. klin. Wchschr., March 23, 1898.

Albu concludes that a mixed diet is preferable for those about to engage in athletic exercises. We should hesitate, he thinks, to recommend either a reduction of the proteids to the physiologic minimum, or the adoption of a vegetarian diet. The proportion of nitrogenous to non-nitrogenous food should be as 1 to 5, or better, as 1 to 6. A preference for proteids, however, especially in the form of meat, is not justified; the quantity should rather be reduced. On the whole, it would seem as though there must be both a right and a wrong for each of the contending theories, the determining factor perhaps being the particular manifestation of energy required. No one, we imagine, would prescribe alcohol in the form of brandy as a tonic, or in the form of malt liquor as a stimulant in cardiac collapse.

THE HOSPITAL LABORATORY.

Even within the present generation, hospitals have undergone a marked transformation. At one time, any insanitary building was considered good enough for the work which physicians had to do in them; little or nothing of value to science was there accomplished. Formerly, the poor entertained a prejudice against hospitals as being places in which cruel things were supposed to be done; now, the primary object for which they are built—the humane and skilful treatment of the sick—is almost ideally conserved, and this fact is recognized by rich and poor alike. Nurses are trained in them for the effective work which they afterward do. Internes receive in them the practical education which subsequently stands them in such good stead. Means for the scientific investigation of sickness are at hand, as are also the appliances for wise and effective treatment.

Dr. Francis C. Wood[1] calls attention, however, to one point at which improvement might still be made. In his opinion the part played by the pathologist is not accorded due recognition and weight. Certain it is that in the evolution of the modern hospital there is no function greater than his; nevertheless, till recently —and even now the situation obtains in perhaps most hospitals—the rank of the pathologist has been a subordinate one; he has not been appreciated, and the remuneration for his services has been shamefully inadequate.

In hospital treatment the "case" begins, not with the time of the patient's appearance, but with the ascertainment of his family and life history before his admittance—all of which is carefully recorded in the familiar way. Next come the examination and diagnosis; and here the pathologic laboratory must be in evidence constantly. How often does the pathologist aid in the establishment of a correct diagnosis, without which rational treatment is impossible? How often does he save an otherwise hopeless situation? Where else than in the laboratory is certain and immediate knowledge to be obtained of the nature of a lesion which must otherwise remain obscure, of the benignancy or malignancy of a tumor, of the kind of infection which must be dealt with? This department of medical science indeed marks more than any other the change from the old-time hospital to the present day institution, wherein so many brilliant results are achieved.

Indeed, it is often by the wise cooperation of the pathologist that the case reaches its ideal conclusion—the patient's departure from the institution in the enjoyment of recovered health. On the other hand, the sum total of medical knowledge is increased by study of "cases" that reach the autopsy table, where the attending physicians, internes and pathologists may review the whole history—the possibility that the examination or the diagnosis was at fault; the reasons why the treatment had proved inefficacious. Then the data collected during life can be compared with those revealed after death, all correct antemortem findings be verified and all erroneous opinions be disproved. By such rational study medical science directly, and the race indirectly, are benefited. Only in this way can we comprehend the achievements of an eminent physician, of whom it was said that at the outset of his career he buried himself for ten years in the morgue.

Dr. Wood's thesis is that the laboratory equipment and facilities should be at least on a par with those at the service of the attending physicians and surgeons, and that the hospital pathologist should eventually join its attending or visiting staff. In this country there is little prospect of any such advancement; and that is why promising young physicians are not attracted to such work, which should be the most congenial in medicine. Under present conditions, attending physicians, especially in hospitals which are not connected with medical colleges, are not always, nor necessarily, men trained in scientific methods. The internes whom they are to teach must all have passed rigorous examinations; but their instructors need not have done so. Often the attending physician is appointed at the instance of a patron who has dealt generously with the institution; or because he is well in touch with the board of trustees; or because of his friendship among the medical staff. This is not always conducive to the greatest good.

The plan outlined by Dr. Wood is not a chimera. It now obtains generally in European institutions where scientific work of the first importance is the rule. Such qualifications have long existed in Germany as necessary preliminaries to ward service. "All the great consultants and teachers there have passed through the laboratory," and it would be well if the importance of the hospital pathologist were appreciated here as it is abroad.

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[1] Hospital Laboratories; Their Organization and Function. Columbia University Quarterly, April, 1908.

DAMAGES FOR A PHOTOGRAPH AND A TESTIMONIAL.

In the United States Circuit Court, New York City, May 12, Judge Lacombe announced the award by the jury of $6,000 damages to a saleswoman in a department store who had sued the Lydia E. Pinkham Medicine Co. for having used her photograph in their advertisements without her consent. The saleswoman had pleaded that the publication of the advertisement caused her life to become unbearable. Her fellow workers made fun of her. In spite of her protest, the same advertisement and picture appeared in other New York papers and produced so much contempt for her that she was finally obliged to give up her employment. The story of how the photograph and testimonial were obtained follows certain exposures of the same kind. The plaintiff had been asked to permit a photographer to take her portrait on condition that he should be allowed to retain one of them for his show window. This was secured by the Lydia E. Pinkham Medicine Co. and with it a testimonial written by an acquaintance of the plaintiff, but without her knowledge. These were then used as set forth. The plaintiff testified that she neither wrote nor signed the testimonial and indeed never saw it before its publication; furthermore, that she had never tasted the Lydia Pinkham compound and never lived at the address given. This is one of the important decisions in this line, because the use of a photograph even without consent is not always considered by the courts a good reason for damages, and the amount awarded in this case, considering the circumstances of the plaintiff, shows that evidently an exemplary sentence was intended. Physicians generally should take note of this case since few newspapers are likely to publish an account of it because of their advertising arrangements with the Lydia E. Pinkham Medicine Company. The New York *Times,* Wednesday, May 13, gives a rather full account of the case.

A DUTY OF THE PROFESSION.

Elsewhere[1] we publish an earnest appeal, both to the members of the medical profession and to our colleagues of the medical journalistic guild. The appeal comes first not to "the profession," for so long as anything continues everybody's business it remains nobody's business, but to the conscience of each individual member of the profession—yes *your* conscience, reader. Next it comes to those editors—and there are some assuredly—in whose hearts there arises an abhorrence of all kinds of fraud, who realize their enmeshment in one particular kind, the paresis caused by which renders futile all their struggles against the others. And with the appeal a way of escape is pointed out. If, as Dr. Sollmann says, these editors deem the Council's rules vicious, let them put their fingers on the viciousness and show the Council how to eliminate the bad without destroying the good. If they agree with the rules but differ as to the extent of their application, then let them either undertake their own investigation and apply them accordingly, or let them at least accept the Council's results where they are proved beyond a peradventure. By undertaking to exclude the advertisements of all those articles that have been definitely convicted of fraud until such time as the conviction can be quashed in the court of common sense, or until the offense has been purged—by going even this far with the Council, not only will they give ease to their own consciences and arouse sympathetic forbearance with them in their efforts to free themselves, but they will also exercise a most powerful leverage to persuade hesitating preparations into passing over to the right side of the border line.

THE SENSE OF DIRECTION.

It is one of the puzzling questions of comparative psychology how to account for the homing instinct of certain of the lower animals. Remarkable stories occasionally go the rounds of the lay press, some of them doubtless apocryphal, of cats and dogs finding their way home over hundreds of miles of territory which must have been absolutely unknown to them by any former experience. Less striking instances have probably, at some time or another, come under almost everybody's observation. Mr. Benjamin Kidd, the well-known English writer, has recently discussed[1] this faculty, which he considers the most remarkable phenomenon in animal instinct. He points out that it apparently bears no necessary relation to the general intelligence of the animal. Moreover, as many have observed, it is not an endowment of every individual of those species which display it most; there are many dogs and some cats that appear to have it to a very slight degree. The phenomenon possesses some human interest, as there is reason to believe that, in common with other instinct endowments, it is sometimes shared by man. Asylum physicians have observed cases where almost utterly demented patients, unable to answer intelligently the simplest questions, have escaped and made their way to distant homes over routes they could hardly have learned through a rapid trip in a railway car, it may be at night. Of course such cases are exceptional, but admitting, as we must, the reality of such performances in the lower animals, there is no great strain on the credulity to admit also their possible occurrence in our own species. The subject is one that does not seem to have received the attention that its interest merits. It may not be easy to say how it can be profitably investigated, so far as its application to man is concerned, but it does seem worthy of at least a tentative study by psychologists.

VAPOROUS URINE AND NEBULOUS RATIOCINATION.

A writer in *Items of Interest,* a dental journal, propounds the theory that "spongy gums, loose teeth, absorption of the maxillaries," an odor of urine in the breath, "the calcarious (sic) condition of the teeth caused by uric acid deposits," rheumatism—concerning which "the physician is right when he says" that it "is caused by a surplus of uric acid in the blood," though "the medical text-books have not told how it enters the system"—and in short the whole dire results known and unknown that constitute the so-called uric-acid disease are due to sleeping in a room with an uncovered chamber vessel. "The oxygen of the air which is taken up by the blood is charged with vaporous urine which gets into the human system, first, by inhalation into the lungs, and, second, by condensation in the nasal fossa whence it is swallowed into the stomach, thus having access to all the vital organs and producing an excess of urine in the system which makes the conditions abnormal and setting free the uric acid." Surely, even a dental journal should have a filter at its Pierian fount with meshes small enough to prevent such chunks of sediment as these from passing through.

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[1] Department of Pharmacology, page 1705.

[1] Century Magazine, April, 1908.

CANCER IN THE TROPICS.

Dr. Dudley's article in this issue[1] is of interest, not only as contradictory to any general statement that cancer is rare in the tropics, but also as bearing on certain other questions of the etiology of the disease. The Filipinos are practically vegetarians and their liability to malignant diseases disposes of the claim, made not infrequently by advocates of an exclusively vegetable diet, that cancer is a result of meat eating, though the somewhat less frequent occurrence of gastric cancer among them suggests, as Dudley intimates, that an unirritating vegetable diet with comparatively temperate habits as regards alcoholics may have an influence in sparing the stomach from the disease. The irritation of clothing, he shows, can not be well invoked as a cause of the frequency of mammary cancer. Cancer appears to be on the increase in civilized communities—has the more or less partial acquirement of civilization by the Filipino had any influence and in what classes of the population is it most prevalent? It would seem that climatic, physiographic, ethnologic and sociologic studies of cancer in a tropical country where it appears to be exceptionally frequent might throw some useful sidelight on the etiology of a disease that is just now one of the puzzling problems of medical science.

BROMO-SELTZER AND COMMERCIAL RESPONSIBILITY.

One can not but be impressed with the growing regard for the sacredness of human life. The demands in various quarters for legislation in the line of employers' liability is but a reflection of this sentiment. The latest example of—if not admitted, at least inferred—responsibility has been brought to our notice by a correspondent in connection with the makers of Bromo-Seltzer. The manufacturers of this acetanilid-containing "nerve lullaby" and "mental invigorator" are issuing a little memorandum book and calendar for advertising purposes. In itself this would hardly call for comment, but examination of the booklet shows an awakening of the commercial conscience which is as welcome as it is unlooked for. Realizing the heavy responsibility assumed in the indiscriminate sale of dangerous heart-depressing poisons and evidently anxious to offset as far as possible the enormous damage to health of which the exigencies of commercial competition have made them guilty, the makers of this "morning bracer" have risen to their opportunities. Just inside the cover of the freely distributed memorandum book we find an identification card to be filled out by the user of Bromo-Seltzer. Thus, should history repeat itself, the little booklet will be the means of allowing the ambulance surgeon to notify the nearest relative and permit the remains to be carefully disposed of. Nor is this all. Appreciating the vast recuperative powers possessed by the human body when given a chance, we find on a subsequent page a brief account of what to do in case of poisoning—how to act until the doctor arrives. We commend to other dispensers of "patent medicines" the forethought and consideration here displayed by the manufacturers of Bromo-Seltzer. Nothing is to be lost by these human touches mixed with the hard matter-of-fact pursuit of commercial success. The principle, too, lends itself to expansion. For example, a small paid-up insurance policy might be issued with every large size can of Antikamnia, while a free course of treatment at a whisky cure guaranteed to every purchaser of Peruna would unquestionably increase the testimonial file at Hartman's "laboratory."

Medical News

CALIFORNIA.

Society Organized—.At a meeting of the physicians of Imperial Valley, held in Imperial, April 16, the Imperial Valley Medical Society was organized with the following officers: President, Dr. George M. Bumgarner, Imperial, and secretary-treasurer, Dr. Cooke, Brawley. Monthly meetings are to be held alternately at the towns of Imperial, El Centro and Brawley.

Alleged Medical Fakers Arrested.—Under the direction of the United States District Attorney, eleven alleged quack practitioners of Los Angeles were arrested April 21. Among these were Julien A. Macrae, "mental healer," and "Licentiate" of esoteric philosophy; Charles C. Summer, William A. Clark, Mrs. Inez Decker, Mrs. A. Laiyon, Mrs. M. Woods, Mrs. C. E. Smith, E. E. Eads, Haigh, Taylor, and Alice von Rickert. Under the statutes they are to be proceeded against for using the mails in correspondence regarding the use of dangerous drugs to prevent childbirth.

Vital Statistics.—During March there were reported 2,135 births, equivalent to an annual birth-rate of 12.5 per 1,000. The deaths for the month, excepting sillbirths, were 2.860, equivalent to an annual mortality of 16.8 per 1.000. Of these 463 or 16.2 per cent. were from various forms of tuberculosis; 442 or 15.4 per cent. were from diseases of the circulatory system, and 366 or 12.8 per cent. from pneumonia or other diseases of the respiratory system. Deaths from epidemic diseases were as follows: Diphtheria, 39; typhoid fever, 35; influenza, 27; measles, 17; whooping cough, 13, and malaria and scarlet fever, each 15.

Hospital Notes.—The physicians of Monterey are building a new sanatorium on the cottage plan. All the rooms for patients open by French windows on a sun porch having a southeast exposure and overlook the bay of Monterey. The new sanatorium will be known as Monterey Heights and will succeed the Lillie Sanatorium.——Dr. J. Emmett Clark is building a three-story building at Alameda to be known as the White Cross Hospital.——The Sisters of Charity Hospital at Sterling City is practically completed and will soon be open for patients.——The Rideout Memorial Hospital, Marysville, opened to receive patients May 1.

ILLINOIS.

Society Meeting.—At the thirty-second annual meeting of the Brainerd District (Ill.) Medical Society, held in Lincoln, April 30, the following officers were elected: President, Dr. John M. Wilcox, Clinton; vice-presidents, Drs. Don W. Deal, Springfield; John W. Bozarth, Mount Pulaski, and Chauncey W. Cargill, Mason City; Secretary, Dr. Harry S. Oyler, Lincoln;

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[1] Page 1663.

treasurer. Dr. Charles C. Reed, Lincoln, and censors, Drs. Irving Newcomer, Petersburg, Berton W. Hole, Springfield and Charles M. Noble, Bloomington.

Personal.—Dr. James M. Postle De Kalb, has moved to Elgin and will take charge of the practice of the late Dr. Carlton E. Starrett.——Dr. D. C. L. Mease, Freeport, has been elected president of the Stephenson County Telephone Company.——Dr. Elisha C. Dunn, Rockford, for fifteen years a member of the council, is said to have been found guilty of having received bribes, and to have been fined $2,000.——Prof. George A. Kemp of the University of Illinois, Urbana, has resigned, to take effect September 1.——Dr. Leslie Rutherford, Peoria,. left for Europe May 12.

Chicago.

Personal.—Dr. Frank Billings and daughter have returned from a trip to the Mediterranean.

Bequest to Hospital.—By the will of the late Mrs. Harriet S. Jones, St. Luke's Hospital and the Children's Memorial Hospital are each to receive $5,000 before May 1, 1911.

Cocain Seller Fined.—Louis Ellisburg, a druggist, charged with the illegal selling of cocain and morphin, is said to have pleaded guilty, May 13, and to have been fined $200 and costs.

New Trial Denied.—A motion for a new trial in the case of P. S. Scoda, charged with practicing medicine without a license, and fined $200 April 30, was denied by Judge Scovill, May 9, and judgment entered.

Banquet to Dr. Williams.—In honor of the twenty-fifth anniversary of his entrance into active practice in Chicago, Dr. Daniel H. Williams was the guest of honor at a banquet given by prominent colored people of the state. Colored physicians of New York presented Dr. Williams with a loving-cup and the colored physicians of Boston sent a silver-mounted inkstand.

Contagious Disease Situation.—The Department of Health received notification of 553 cases of communicable diseases during the week, distributed as follows: Measles, 303; scarlet fever, 78; diphtheria, 61; tuberculosis, 36; whooping cough, 29; chickenpox, 24; typhoid fever, 14; and smallpox, 1. As compared with the preceding week, there were 15 more cases of diphtheria, 32 more cases of scarlet fever, 34 fewer cases of measles, 21 fewer of typhoid fever, and 3 fewer of smallpox.

Mortality of the Week.—During the week ended May 16, 635 deaths were reported, 104 more than for the week preceding, but 72 less than for the corresponding week of 1907. The greatest increases for the week were among relatively chronic diseases, and were probably hastened by the damp days and the sudden and marked changes of temperature.——The mortality from nephritis increased 19; from cancer, 16; from cerebral hemorrhage, 13; and from heart disease, 9.——Chief among death causes were the following: Pneumonia, 74; tuberculosis, 63; heart diseases, 57; violence (including suicide), 54; cancer and nephritis, each, 42; acute intestinal diseases, 35; typhoid fever, 11; scarlet fever, 10; whooping cough, 8; influenza and measles, each, 5; and diphtheria, 3.

INDIANA.

Charged with Failure to Report Disease.—W. E. Nichols, Andrews, charged with illegal practice of medicine, at the instance of the Huntington County Medical Association, from which Dr. Nichols is said to have been expelled some time ago, is now charged by the secretary of the Andrews board of health with having failed to report a case of smallpox.

Unlicensed Practitioner Acquitted.—In the case of E. L. Burns, Bloomington, charged with practicing medicine without license, on complaint of the Monroe County Medical Society, the jury found the defendant not guilty. His defense was that he does not pose as a physician, but treats cancer without giving medicine or prescribing as a regular licensed practitioner.

Society Meetings.—The Franklin County Medical Society was recently reorganized in Brookville by the district councilor, Dr. David W. Stevenson, Richmond, with a membership of 13. The following officers were elected: Dr. Evan L. Patterson, Brookville, president; Dr. Calvin Carter, Brookville, vice-president; Dr. Clifford H. Mayfield, Brookville, secretary; Dr. James F. West, Brookville, treasurer; and Drs. Philip L. Mull, Oldenburg, and Henry Gregory, Laurel, censors.——At the annual meeting of the Gibson County Medical Society, held in Princeton, the following officers were elected: President, Dr. George C. Kendle, Princeton; vice-president, Dr. Harry B. Gudgel, Hazleton; secretary, Alois L. Ziliak, Princeton; and censors, Drs. William T. Williamson, Fort Branch; Martin A. Montgomery, Owensville, and Dudley H. Swan, Francisco.

IOWA.

Distribution of Medicine Samples Prohibited.—The Board of Health of Davenport has adopted resolutions to prevent the distribution of samples of medicine within the city limits.

Chiropractor Guilty.—F. M. Miller, Marshalltown, a "chiropractor," charged with practicing medicine without first having secured a certificate from the State Board of Medical Examiners, is said to have been found guilty March 26.

Many Medicine Peddlers.—According to a compilation recently completed by the secretary of the State Pharmacy Commission, there are 301 licensed itinerant vendors of patent medicines in the state, from each of whom an annual license of $100 is exacted.

State Pathologist's Report.—In his quarterly report, Dr. Henry Albert, state bacteriologist, states that 2,458 examinations were made in the State Board of Health bacteriologic laboratory during the first three months of the year. Of these 1,242 were for diphtheria, 873 for tuberculosis and 158 for typhoid fever.

Physician Loses Damage Suit.—In the suit of Russell Johnston, Salina, versus Dr. Charles E. Ruth, formerly of Keokuk, in which $10,000 damages were claimed on account of the alleged leaving of a piece of gauze in the abdomen after an operation for appendicitis, the jury is said to have returned a verdict for $2,000 against Dr. Ruth, April 18.

KANSAS.

Health Board Reappointed.—The governor has reappointed the following members of the State Board of Health: Drs. Alexander B. Scott, Jetmore; Jonathan B. Carlile, Leon, and Clay E. Coburn, Kansas City.

Smallpox.—Smallpox is reported to be prevalent in outlying portions of Kansas City, where there are 42 cases.——Three new cases of smallpox developed in Muscotah, April 25. The public schools and churches have been closed.——Several new cases of smallpox are reported northwest of Atchison.

Commencement.—At the eighteenth annual commencement exercises of Kansas Medical College, Medical Department, Washburn University, Topeka, April 23, a class of 13 was graduated. Dr. William S. Lindsay, dean of the faculty, presided. The degrees were conferred by President Norman Plass of Washburn University, and the doctorate address was delivered by Dr. Henry Coe Culbertson, president of the College of Emporia.

Personal.—Dr. Derastus E. Smith, assistant police surgeon of Kansas City, has been elected surgeon for the Fireman's Relief Association, vice Dr. John W. Faust.——Dr. F. M. Thomas, Leonardville, had a serious attack of heart disease May 1, but is reported to be better.——Drs. William A. Enhren and Mark L. Bishoff, who have been employed as assistant surgeon and dispensary physician respectively at the Santa Fé Hospital, Topeka, have started for Vienna.

KENTUCKY.

Resolutions Regarding Dr. Cartledge.—The Jefferson County Medical Society, at a special meeting passed resolutions expressing their esteem for their late member, Dr. A. Morgan Cartledge, and extending their sympathy to the bereaved family.

Declared Not Guilty.—The court of appeals in the case of the commonwealth of Kentucky against Dr. Sarah A. Murphy, Louisville, has decided that the testimony does not show that Dr. Murphy was guilty of the criminal offense charged against her and that the direction of the jury to render a verdict of not guilty was correct.

MASSACHUSETTS.

Society Meetings.—At the annual meeting of the Hampden District Medical Society, held in Springfield, April 24, the following officers were elected: Dr. George L. Woods, Springfield, president; Dr. Charles W. Jackson, Monson, vice-president; Dr. Richard S. Benner, Springfield, secretary-treasurer; Dr. James E. Marsh, Springfield, censor; and Dr. Locero J. Gibbs, Chicopee Falls, commissioner of trials.——Berkshire District Medical Society at its annual meeting at Pittsfield, April 30, elected Dr. John J. Hassett, Lee, president; Dr. Harry B. Holmes, Adams; vice-president; Dr. Isaac S. F. Dord, Pittsfield, secretary; and Dr. William L. Paddock, Pittsfield, treasurer.——At the annual meeting of the Middlesex North District Medical Society, held in Lowell, April 29, Dr. William B. Jackson was elected president; Dr. Clarence A. Viles, vice-president; Dr. Archibald R. Gardner, secretary; and Dr. Thomas B. Smith, treasurer, all of Lowell.——At the first annual meeting of the

Bristol North District Medical Society, held in Taunton, April 16, the following officers were elected: President, Dr. Elliott Washburn; vice-president, Dr. Arthur V. Goss; secretary, Dr. Ralph D. Dean; treasurer, Dr. William Y. Fox; and librarian, Dr. Thomas F. Clark, all of Taunton.——At the annual meeting of Plymouth District Medical Society, held in Brockton, April 15, the following officers were elected: President, Dr. Frederick J. Ripley; vice-president, Charles S. Millet; and secretary-treasurer and reporter, Dr. Alfred C. Smith (re-elected).——The Worcester North District Medical Society, at its fiftieth annual meeting, held in Fitchburg, April 28, elected the following officers: Dr. John G. Henry, Winchendon, president; Dr. Eustace L. Fiske, Fitchburg, vice-president; Dr. Walter F. Sawyer, Fitchburg, secretary; and Dr. Luther G. Chandler, Townsend, commissioner of trials.——At the second annual meeting of Springfield Academy of Medicine, held April 14, the following officers were elected: President (re-elected), Dr. Walter A. Smith, Springfield; vice-presidents, Drs. John A. Houston, Northampton, and Ralph H. Seelye, Springfield; director, Dr. Oscar W. Roberts, Springfield; censor, Dr. Theodore S. Bacon, Springfield; secretary, Dr. Joel I. Butler, Springfield; and treasurer, Dr. Harvey W. Van Allen, Springfield.

MISSOURI.

Personal.—Dr. John J. Farrell, Hannibal, leaves for Europe early next month.——Dr. Walter S. Wheeler has been appointed quarantine physician of Kansas City, vice Dr. Eugene Carbaugh.

Will Not Prescribe Whisky.—The members of the Boone County Medical Association, at the April meeting, are said to have pledged themselves not to prescribe whisky for any cause whatsoever.

Commencement.—The twenty-seventh annual graduating exercises of the University Medical College of Kansas City were held May 8. Rev. J. M. P. Johnson, St. Louis, delivered the annual address, and a class of sixty-three was graduated.

Fined for Prescribing Liquor.—Dr. C. W. Jones, who was arrested at Columbia, charged with the illegal sale of liquor, is said to have been found guilty and to have been given the maximum fine of $200, May 2. The plea of the defendant was that the prescriptions on which it was claimed he had sold liquor, were forged. The case has been appealed to the Circuit Court.

St. Louis.

Object to Maternity Hospital.—The residents of the neighborhood have entered a protest against the location of the Maternity Hospital at 3416 Lucas Avenue, claiming that the institution, purporting to be a charity is in reality a money-making scheme.

Personal.—Dr. J. Wilbur Shankland, assistant superintendent of the City Hospital, has gone East for special study.——Dr. Edward J. Hogan on May 7 applied for a mandamus to compel the State Board of Health to allow an appeal in the case which resulted in the revocation of his license to practice medicine in July, 1906, and to certify the proceedings in that case to the Circuit Court.

Law Cases.—The suit of Dr. Louis E. Barricelli against the members of the Italian American Cooperative Society for $5,450 damages, on account of his removal as physician for the society, was dismissed, April 13, the plaintiff's attorney stating that his client had been reinstated.——In the case of Dr. Adolphus Dietz against the estate of Dr. Louis L. McCabe for $10,774, for professional services said to have been rendered the deceased physician, a jury in Judge Rules' court decided against the plaintiff, April 20.

MONTANA.

Sattler in Butte.—Dr. Herbert Sattler, Leipsic, Germany, visited Butte recently, on his return home by way of the west from India and China.

Personal.—Dr. Frances J. Adams, Great Falls, has qualified as a member of the local board of health, and has been elected secretary of the body.——Dr. Louis H. Fligman, Helena, has left Berlin for Paris, where he will remain for four months before returning to the United States.——Dr. G. A. Chevigny, Butte, has been appointed a member of the State Board of Medical Examiners.——Dr. Charles K. Vidal, Belt, has been appointed secretary of the Cascade County Board of Health, to succeed the late Dr. Charles A. Brady, Great Falls, and Dr. John H. Fairfield, Great Falls, has been appointed coroner of the county to fill out the unexpired term of Dr. Brady.——Dr. Russell G. Gwinn, Missoula, has returned from an extended visit to the East, and will devote himself exclusively to treatment of diseases of the eye and ear.

NEBRASKA.

Physician Acquitted.—The case of the state against Samuel S. Weidner, Fairbury, charged with performing a criminal operation, was decided in favor of the defendant, March 28.

Omaha Medical Library.—Omaha has a medical library of about one thousand volumes, with about seventy-five magazines on file. The library is in the public library building and is handled, catalogued, and classified by the city library corps. Miss Margaret O'Brian is the librarian in charge of the department. The Medical Society of Douglas County appoints a committee and appropriates money for the maintenance of the library.

Society Meetings.—At the annual meeting of the Clay County Medical Society, held in Clay Center, April 11, Dr. Bruno J. F. Getzlaff, Sutton, was elected president; Dr. J. Oscar Latta, Clay Center, vice-president, and Dr. Adam R. Ray, Fairfield, secretary-treasurer.——At the annual meeting of the Cuming County Medical Society, held in West Point, April 25, the following officers were elected: President, Dr. Harry W. Francis, Bancroft; vice-president, Dr. Charles S. Grabin, Beemer, secretary-treasurer, Dr. Harry L. Wells, West Point, and delegate to the state association, Dr. Henry S. Summers, West Point.

NEW HAMPSHIRE.

Graduation Exercises.—The annual graduation exercises of Dartmouth Medical School, Hanover, took place March 27. Dr. William J. Beattie, Littleton, delivered the doctorate address, and degrees were conferred on a class of nine by Dr. William T. Smith, dean of the school.

State Society Meeting.—At the one hundred and seventeenth annual meeting of the New Hampshire Medical Society, held in Concord, May 14 and 15, the following officers were elected: President, Dr. John M. Gile, Hanover; vice-president, Dr. Frank Blaisdell, Goffstown; councilors, Drs. Alpha H. Harriman, Laconia, Belknap County, and Milton S. Woodman, West Lebanon, Grafton County; trustee, Dr. William T. Smith, Hanover; member of Board of Medical Examiners, Dr. J. Franklin Robinson, Manchester; alternate, Dr. George C. Wilkins, Manchester; delegate to Dartmouth Medical College, Arthur C. Heffenger, Portsmouth; anniversary chairman, Dr. Howard N. Kingsford, Hanover, and necrologist, Dr. Eli E. Graves, Penacook. A committee, consisting of Drs. William T. Smith, Hanover, John W. Parsons, Portsmouth, Edgar O. Crossman, Lisbon, Charles A. Morse, Newmarket, and Louis W. Flanders, Dover, was appointed to express to the governor of the state the conviction of the members that there is continued and great need of a state sanatorium for consumptives.

NEW JERSEY.

Food and Drug Inspection.—During the month ended April 30, 711 food and drug samples were examined in the State Laboratory of Hygiene, 605 of which were found to be above, and 106 below standard.

Society Meetings.—At the annual meeting of Cape May County Medical Society, held in Cape May April 14, Dr. Virgil M. D. Mercy was elected president, and Dr. Anna M. Hand, vice-president, both of Cape May.——Hunterdon County Medical Society, at its meeting, April 30, elected the following officers: President, Dr. Theodore B. Fulper, Junction; vice-presidents, Drs. Enoch Blackwell, Clinton, and G. Henry, Flemington; secretary, Dr. Obadiah H. Sproul, Flemington; treasurer, Dr. Isaac S. Cramer, Flemington; reporter, Dr. Morris H. Leaver, Quakertown; and censors, Drs. George L. Romine, Lambertville; George N. Best, Rosemond, and Willard E. Berkow, Annandale.——The sixty-fourth annual meeting of Camden County Medical Society was held in Camden, April 28, when the following officers were elected: President, Dr. Paul M. Mecray, Camden; vice-president, Dr. William B. Jennings, Haddonfield; secretary, Dr. Daniel Strock, Camden; treasurer, Dr. A. Haines Lippincott, Camden; historian, Dr. Alfred Cramer, Camden; reporter, Dr. Harry H. Sherk, Camden; censor, Dr. William H. Iszard, Camden, and trustee, Dr. H. Genet Taylor, Camden.

NEW YORK.

Tuberculosis Clinic Open.—The Rome Tuberculosis Clinic was opened to the public April 30. It will be open on Tuesdays, Thursdays and Saturdays from 12 m. to 1 p. m., and from 8 to 9 p. m. Those in charge are Drs. Thomas P. Sculley, Arthur A. Gillette, Thomas G. Nock, J. Orley Stranahan, Henry D. White and Howard F. Hubbard.

Communicable Diseases of the State.—During March there were reported to the New York State Department of Health 12,019 cases of measles, 5,831 cases of scarlet fever, 2,777 cases of tuberculosis, 2,308 cases of diphtheria, 357 cases of typhoid fever, 108 cases of smallpox, 76 cases of cerebrospinal meningitis, and 4 cases of ophthalmia neonatorum.——Niagara Falls is said to have about 400 cases of typhoid annually, with from 30 to 40 deaths.——At the House of Providence, Syracuse, 35 cases af measles are reported.——There are said to be 5 smallpox patients at the Niagara Falls quarantine station.——On account of the prevalence of diphtheria in Manchester, the infected houses have been placed in strict quarantine.

Bills Signed.—Governor Hughes has signed the following bills: Mr. Hemmenway's, authorizing boards of supervisors to establish county laboratories, each in charge of a trained county bacteriologist and such assistants as may be required, compensation of such officers to be fixed by the board; Mr. B. R. Robinson's, providing for the election annually after the year 1908 of seven trustees of the New York Dispensary and regulating the powers of the board; and Senator Davis's, authorizing superintendents of state hospitals for the care of the insane, except the Matteawan and Dannemora State hospitals, to receive voluntary patients.

Personal.—Dr. Grosvenor R. Trowbridge, Buffalo, is reported seriously ill.——Dr. Lester W. Bellows has been recommended as health officer of Waterloo to succeed Dr. William W. Carleton.——Dr. Jason Parker has been elected a member of the board of health and Dr. John W. Nelson physician to the poor of Jamestown.——At the meeting of the Fiftieth Separate Company, Rochester, Dr. Archibald S. Knight, assistant surgeon, was presented with a sabre.——Dr. and Mrs. Edward S. Van Duyn, Syracuse, have returned from Egypt.——Dr. George D. Barrett has been made health officer of Clyde.——Dr. Charles S. Roberts is said to have been expelled from the Syracuse Academy of Medicine, April 20, for violation of the principles of ethics by advertising and exploiting a remedy for consumption.——Dr. Major A. Veeder has been made health officer of Lyons.——Dr. Henry F. Hutchinson, Hulberton, has been recommended as health officer of Holly, vice Dr. Frank B. Storer, term expired.——Dr. Douglas C. Moriarta has been appointed health officer of Saratoga.

Court to Name Experts.—A committee of five, consisting of Drs. John A. Wyeth and Edward D. Fisher, New York City; Dwight H. Murray, Syracuse, A. Walter Suiter, Herkimer, and Algernon T. Bristow, Brooklyn, have been appointed to cooperate with a similar committee from the State Bar Association regarding the naming of medical experts. The recommendations apply only to civil proceedings and provide that any court in which any medical or surgical question is likely to be material, may on its own motion or at the request of either party to the suit, appoint from a list made up by a committee of the Academy of Medicine and the State Medical Society, one or more persons learned in the science of medicine and surgery, who shall investigate the facts of the case and give their opinion in writing to the court, the New York Academy of Medicine making up the eligible list for Greater New York, and the State Medical Society for the remainder of the state. The men whose names are submitted must be of good standing, of not less than seven years' actual experience, and shall be recognized as "competent and expert in medicine and surgery." Such official experts shall be paid by the court out of the treasury of the county, a minimum fee of $50 for the examination of, and report on, a case, $50 additional for the first day's attendance in court and $100 a day thereafter.

New York City.

Funds for Consumptive Children.—Forty-one chocolatières took part in an entertainment in the ballroom of the Plaza, April 22, and raised more than $3,000 to go toward the support of free beds for consumptive children at the Loomis Sanatorium.

Woman's Medical Society Formed.—The Woman's Medical Society of New York State on May 2, filed a certificate of incorporation. The directors include Drs. Mary I. Denton, Buffalo; Mary H. Cotton, New York; Sarah R. A. Dolley, Rochester, and Florence A. Sherman, Watertown.

First Cocain Conviction.—A druggist in Mott Street was convicted before Judge Malone in General Sessions of having sold cocain to an agent of the Department of Health. This is the first conviction under the new cocain law. The maximum penalty is one year in prison and a fine of $1,000.

New Building for Infirmary.—On May 14 ground was broken by Dr. Charles B. Meding, secretary and surgeon to the Harlem Eye, Ear and Throat Infirmary, for the new building at Lexington Avenue and One Hundred and Twenty-seventh Street. The infirmary treats about 6,000 patients a year.

Gibb Memorial Prize.—The committee on the Edward N. Gibb Memorial prize declines to award the prize this year. At the suggestion of the Committee, the board of trustees, with the consent of the donor, made a gift of $500 for the essay "E. Pluribus Unum" by Dr. Normal E. Ditman, New York City.

Verdict Against Eddyite.—In the Supreme Court, April 22, a jury rendered a verdict of $20,000 damages against Julius Benjamin, an Eddyite healer, who was sued for $25,000 damages by Solomon Register on account of alleged improper treatment of a sore toe, necessitating eventually amputation of the leg of the complainant.

More Money Needed for Charity.—The State Charities Aid Association has asked for $1,735,000 for the Department of Public Charities, to be used to provide additional accommodations for tuberculous patients, to provide or make available, additional hospital beds in Brooklyn, and for additional accommodations for almshouse inmates.

Quarantine and the Plague.—Health Officer Dr. Alvah H. Doty has announced that owing to the spread of bubonic plague in Venezuela, and the unwillingness of that government to give a frank statement regarding conditions, all vessels from Venezuelan ports will be held at quarantine until further notice for inspection and fumigation.

Personal.—Dr. William T. Bull was operated on for abscess in a small gland of the neck, April 25.——The complaint against Dr. Charles M. Bellows, Brooklyn, for exceeding the speed limit in his motor car was dismissed in the Yorkville court, April 18.——The house staff of Bushwick Hospital, Brooklyn, gave a supper in honor of L. M. Pinco, house surgeon, who has resigned to continue study in Europe.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended May 9, 1,668 cases of measles, with 47 deaths; 908 cases of scarlet fever, with 43 deaths; 518 cases of tuberculosis, with 185 deaths; 394 cases of diphtheria, with 37 deaths; 32 cases of typhoid fever, with 8 deaths; 32 cases of whooping cough, with 5 deaths; 8 cases of cerebrospinal meningitis, with 7 deaths; and 136 cases of varicella, a total of 3,696 cases and 332 deaths.

Pure Food Law Effective.—In a talk before the Society of Medical Jurisprudence, Dr. Darlington, president of the Board of Health, stated that the pure food law had been effective in this city. Out of 800 samples of food recently collected, only 35 were found to be adulterated, and of these only five cases were worth prosecuting. It is evident that an overwhelming majority of manufacturers, jobbers and dealers are determined to do their utmost to conform to the law. The city markets, retail stores, bakeries and other places where foods are prepared and sold are constantly under supervision. During the past year 3,533,858 pounds of such foodstuffs, including fish, were seized and destroyed, while 7,540,516 pounds of fruit met with the same fate. Substitution and misbranding have almost entirely disappeared.

NORTH CAROLINA.

Hospital News.—The contract for the construction of the new Watts Hospital, Durham, has been let at a cost exceeding $200,000 for the building alone, and work will begin May 1. The main building will be 80 by 256 feet, of fire-proof construction and three stories in height. The donor, Mr. George W. Watts, purposes to provide in addition to the site and building, which are his personal gift to the city of Durham, a sufficient endowment to maintain the institution in perpetuity.

Society Meetings.—The second annual meeting of the Sixth District Medical Association was held in Durham, April 23. The following officers were elected: President, Dr. Norman M. Johnson, Durham; vice-president, Dr. Thomas S. Faucette, Burlington; secretary, Dr. W. Arthur Bradsher, Roxboro.——The third semi-annual meeting of the Tenth District Medical Association was held in Asheville under the presidency of Dr. Lewis B. McBrayer. Dr. William R. Kirk, Hendersonville, was elected president; Dr. Charles S. Jordan, Asheville, vice-president; and Dr. Thomas E. W. Brown, Asheville, secretary.

OHIO.

Communicable Diseases.—During the last week of April 2 cases of cerebrospinal meningitis were reported in Alliance.——Several cases of scarlet fever have developed in Delphos.——Mansfield reports 3 cases of scarlet fever.——At Oxford College 8 cases of smallpox are reported.——A number of cases of smallpox are reported in New Bremen, where schools have been closed and public gatherings interdicted.——Smallpox is reported prevalent in Cottonwood, adjacent to Toledo.

State Medical Society Meeting.—At the sixty-second annual meeting of the Ohio State Medical Association held in Columbus, May 6, 7 and 8, the following officers were elected: President, Dr. David R. Silver, Sidney; vice-presidents, Drs. Florus F. Lawrence, Columbus; John Eakins, Gallipolis; Alonzo B. Walker, Canton, and Harry G. Noble, St. Mary; councilors, Drs. Clyde E. Ford, Cleveland, and Charles D. Mills, Marysville; and member of national policy committee, Dr. Benjamin R. McClellan, Xenia.

Welfare League.—The Welfare League of Ohio was organized in April, with headquarters in Columbus. Its object is to secure enactment of laws for the betterment of sociologic and sanitary conditions. Plans are already under way for the organization of county societies in Ross, Madison and Greene counties. Dr. John W. Clemmer and Maurice P. Hunt, Columbus, are vice-presidents of the organization. The duties of the league toward its members are outlined as follows: To bring reports of all violations of welfare laws to the attention of the respective federal, state, county and municipal officers; to assist in the prosecution of all cases where such assistance is desired or practicable; to disseminate literature from time to time relating to the declared purpose of the league, and to furnish speakers to address public meetings held under the auspices of the league.

Ill and Injured.—Dr. Thurston H. Rowles, Cambridge, was injured in a runaway accident May 4.——Dr. George W. Crile, Cleveland, was thrown from his automobile, April 26, but escaped serious injury.——Drs. John C. Tritch and Milton S. Williamson, Findlay, who were injured in a runaway accident April 17, are reported to be improving.——Dr. A. Melville Crane, Marion, sustained severe injuries in a fall from a tree, April 24.——Dr. Louis M. Early, Columbus, has entered a hospital in that city to undergo amputation of the right hand, for disease said to be due to persistent use of the *x*-ray.——Dr. Clarence E. Gourley, New Alexandria, was painfully injured, April 20, in a runaway accident.——Dr. A. E. Griffin, Columbus, who has been an invalid for eighteen months, has recovered and resumed practice.——Dr. John H. Rodgers, Springfield, who was operated on at the Lakeside Hospital, Cleveland, recently, is said to be convalescent.

Personal.—Dr. Daniel B. Aldrich, Ashtabula, was the victim of a highway robbery, May 6, while making a professional call.——Dr. William H. Benner has succeeded Dr. Harmon B. Gibbon as health officer of Tiffin.——Dr. Mary A. Platter, Chillicothe, has been appointed assistant physician at the Presbyterian Hospital, San Juan, Porto Rico.——Dr. Gannett, Columbus, has suceeded Dr. John M. Thomas as physician at the Ohio State Penitentiary, Columbus.——Dr. F. Marion Kent, Bellevue, has been appointed surgeon of the Toledo division of the Pennsylvania System, vice Dr. H. C. Aurand, resigned.——Dr. Henry F. Kattenhorn, Cincinnati, has returned from a trip to South America and Africa.——Dr. John O. Stewart, Cedarville, has been re-elected president of the local board of health.——Dr. John S. Zimmerman, Youngstown, has been appointed examining physician of the Glenwood Children's Home during the absence of Dr. Ida Clarke, who has gone to Europe.——Dr. Elmer S. Protzman has been elected secretary of the Kenton board of health.

PENNSYLVANIA.

Philadelphia.

Institute's Permanent Home.—After long and fruitless efforts to acquire property at Seventh and Lombard streets, the Henry Phipps Institute has abandoned negotiations and will establish the institute at 236 and 238 Pine Street.

Hospital Needs Help.—At the one hundred and seventy-fifth annual meeting of the contributors of the Pennsylvania Hospital there was a discussion as to the best means for increasing the income of the hospital, and a more general appeal to the public for working funds was advocated. The annual report showed a grand total of 45.883 patients treated in all the departments of the hospital during the year. The expenditures were $191,210.85, of which amount only $15,253.20 was received from patients. As the expenses exceeded the income from endowments and other sources by $40,000, this had to be provided for by a temporary loan.

Money to Charity.—The provisions of the will of the late Joseph Tagert Macauley, who left the greater part of $60,000 to the Sisters of St. Francis, in charge of St. Agnes' Hospital, were upheld in a decision handed down May 2 by Judge Anderson in Orphans' Court.——A provisional bequest of $134,108 to the Methodist Hospital is contained in the will of the late L. P. Simpson. The money is to be used in the establishment and maintenance of ten free beds and also to assist in supporting the dispensary department.——The will of the late Sarah Reeves bequeaths $5,000 to the Episcopal Hospital for the endowment of a free bed, and $500 to the Home for Consumptives.——The will of the late John A. Brill provides the following bequests: $5,000 to the German Hospital, $3,000 to the Home for Incurables, $5,000 to the White Haven Sanitarium for Poor Consumptives.——Seventeen charitable institutions will eventually benefit by the will of the late Joseph Channon. Immediately following the death of his sister and aunt, his estate, amounting to $75,000, to be divided equally among the following institutions: Bethesda Children's Home, Chestnut Hill; Children's Hospital; Episcopal Hospital; Foster Home; German Hospital; Germantown Hospital; Germantown Relief Society; Orphans' Home and Asylum for Aged of Lutheran Church, Germantown; Masonic Home of Pennsylvania; Methodist Episcopal Home for the Aged; Methodist Episcopal Hospital; Methodist Episcopal Orphanage; Odd Fellows' Home, Tioga; Samaritan Hospital; Southern Home for Destitute Children; Woman's Hospital of Philadelphia, and Children's Homeopathic Hospital.

TENNESSEE.

Resolutions Regarding Dr. Maddin.—The Nashville Academy of Medicine, at its meeting April 28, adopted resolutions expressive of their sorrow at the death of Dr. Thomas L. Maddin.

Antituberculosis League.—The Bristol Antituberculosis League was organized April 30, with the following medical men among the officers: McMinn M. Pearson, first vice-president; and Dr. Arthur J. Edwards, treasurer.

Free Dispensary Established.—St. Luke's Free Dispensary has been established in South Chattanooga. The dispensary will be open from 12 to 2 in the afternoon. Nurses will be detailed for duty from Erlanger Hospital, and Dr. Raymond Wallace will be in charge of the institution.

Personal.—At a meeting of the Bristol-Sullivan County Society held recently, Dr. M. M. Butler was presented by the society with a gold-headed cane.——Dr. E. E. Reisman has been elected house surgeon of the Nashville State Hospital Board, vice Dr. Robert W. Grizzard, Jr., term expired.

Smallpox.—Nine houses in Dickson are under quarantine on account of the prevalence of smallpox.——Dr. F. B. Stapp, chief vaccination surgeon, Chattanooga, announces that unless the people of East Chattanooga show a more kindly spirit toward the vaccinators, smallpox is likely to become epidemic and quarantine will be declared against the infected section of the city.

Commencements.—The thirty-third annual commencement exercises of the Medical Department of Vanderbilt University, Nashville, were held May 1, when degrees were conferred on a class of 40. The faculty charge was delivered by Dr. Lucius E. Burch, and the honors were awarded by Dr. William L. Dudley, dean of the faculty.——The fifty-seventh annual commencement exercises of the Medical Department of the University of Nashville were held April 30, when a class of 67 was graduated. The faculty address was delivered by Dr. Larkin Smith.——At the annual commencement of the University of Tennessee, Nashville, held April 30, a class of 39 was graduated. The doctorate address was delivered by Dr. Hilliard Wood, and Hon. J. W. Judd delivered the address to the graduating class.—Meharry Medical College, Nashville, held its annual commencement exercises, April 11.——The Medical Department of the University of Chattanooga held its annual commencement exercises, April 27, when a class of 25 was graduated. The faculty address was delivered by Dr. George R. West, and the degrees were conferred by Rev. John Race, D.D., president of the university.——At the annual commencement exercises of the Memphis Hospital Medical College, held April 30, a class of 82 was graduated. Dr. B. N. Ward, Como, Miss., delivered the address to the graduating class, and Hon. William H. Carroll, president of the board of directors, conferred the degrees.——The second annual commencement exercises of the College of Physicians and Surgeons, Memphis, were held May 1, when a class of 15 was graduated. The commencement address was delivered by Prof. Junius Jordan, Pine Bluff, Ark., the degrees were conferred by Dr. Heber Jones, dean of the college, and the faculty address was delivered by Dr. R. S. Toombs.

WASHINGTON.

Wants Isolation Hospital.—The health commissioner of Seattle has asked an appropriation of $25,000 for the erection of an isolation hospital.

Tuberculosis Infected Houses to be Fumigated.—Dr. J. E. Creighton, health officer of Seattle, has ordered all houses in which persons have lived who have had consumption, be fumigated before being occupied by other tenants.

Medical and Surgical Building.—Dr. E. M. Renninger, medical superintendent of the Alaska-Yukon-Pacific Exposition, has planned a medical and surgical building to cost $20,000 or more, in which exhibits shall be made showing the standing and advancement of the world in medical and surgical science.

Personal.—C. C. Mann, Spokane, and A. W. Burns, North Yakima, have been appointed members of the State Board of Dental Examiners.——Dr. Richard J. O'Shea has returned to Seattle after several months in Europe.——Dr. Thomas Tetreau, North Yakima, has succeeded Dr. Phillip Frank as health officer of Yakima County.

Vital Statistics.—During March the births reported in the state exceeded the deaths by 400. Chief among death causes were: Typhoid fever, 23; diphtheria, 26; scarlet fever, 4; measles and whooping cough, each 2; tuberculosis, 98; cancer, 40; cerebrospinali meningitis, 16; heart diseases, 59; pneumonia, 96; suicide, 18; homicide, 6; accidents, 75; nephritis, 50. ——During March there were 185 deaths in Seattle, an increase of 38 over the preceding month. The principal causes of death were: Diseases of the circulatory system, 29; tuberculosis, 26; pneumonia, 24; digestive diseases, 16; accidents, 14; nervous diseases, 15; diseases of early infancy, 13; and cancer, suicide and senility, each 5.

Work Against Plague.—Since the opening of the campaign against bubonic plague in Seattle last November, 35,894 rats have been killed and accounted for by the health authorities. Nearly as many have been killed by traps and poison by private individuals. During March 4,019 rats were delivered to the laboratory, of which 3,610 were examined postmortem. More than half of all the rats were brought in from the water front. From time to time rats brought in alive are searched for fleas. Thirty-five rats searched during the month yielded 127 fleas. During the month 18 ships were fumigated for the destruction of rats. One rat found March 25 was plague infected. This is the first infected rat found since January 7. Assistant Surgeon Chapin reports that on April 22 plague was positively determined in a rat found on the water front near the "old depot" and later, April 30, a second rat in which plague infection has been positively determined, was found in the same district.

WEST VIRGINIA.

Personal.—Dr. John E. Cannaday, former surgeon to the Reynolds Memorial Hospital, Glendale, has located in Charleston.——Dr. Cassius C. Hogg, Huntington, major and surgeon, West Virginia National Guard, has been made head of the medical department, vice Dr. H. Byron Baguley, deceased.——Dr. A. B. McEachen has resigned as interne at Cook Hospital, Fairmont, to become physician of the Fairmont Coal Company. Dr. M. J. Bartlett, formerly of Clarksburg, is his successor.

State Medical Society Meeting.—At the forty-first annual session of West Virginia State Medical Association, held in Clarksburg, May 13, 14 and 15, the following officers were elected: President, Dr. Fleming Howell, Clarksburg; president-elect, Dr. Vincent T. Churchman, Charleston; vice-presidents, Drs. Robert J. Reed, Wheeling, Rawley H. Powell, Grafton, and Henry D. Hatfield, Eckman; secretary, Dr. Thomas W. Moore, Huntington; treasurer, Dr. Timothy L. Barber, Charlestown; delegate to the American Medical Association, Dr. James G. Walden, Wheeling, and alternate, Dr. Orra F. Covert, Moundsville.

WISCONSIN.

Charged with Illegal Practice.—Niccola Janetta, Cumberland, was arrested and taken before Judge Kinsley at Barron, April 28, charged with practicing medicine without a license. He is said to have been convicted and fined $50 and costs, with the alternative of 60 days in jail. This individual is said to be a farmer who has suddenly turned healer, and in addition wards off witches and breaks spells of the "evil eye."——In the case of Dr. Henry A. Schmidt, Milwaukee, charged by the State Board of Medical Examiners with having obtained his certificate by misrepresentation, the judge is said to have directed a verdict in favor of the defendant, May 6.

Appropriation for Tuberculosis Exhibit.—The regents of the State University have appropriated $250 for an exhibit in connection with the state exhibit at the International Congress on Tuberculosis to be held in Washington. The exhibit will include models of buildings, dormitories and class rooms, showing methods of heating, lighting and ventilation as well as methods employed to prevent tuberculosis infection. Charts will be prepared showing the result of physical examination of students on entrance to the university with especial regard to diseases and weakness of the lungs. The exhibit will also include a demonstration of the work of the university extension division in the campaign against tuberculosis, and the methods employed by the department of bacteriology for disseminating information among the students concerning the cause and prevention of tuberculosis.

Society Meetings.—Jefferson County Medical Association, at its annual meeting, held in Jefferson, April 28, elected the following officers: President, Dr. George L. Smith, Jefferson; vice-president, Dr. Harlow O. Caswell, Fort Atkinson; secretary, Dr. Carl R. Feld, Watertown; and delegate to the state society, Dr. C. Howard Searle, Palmyra. The society has condemned the contract practice of some of its members and has given these members three months in which to sever their connection with lodges or associations for which they do an indefinite amount of work for a stipulated sum.——At the annual meeting of the Ninth Councilor District Medical Society, held in River Pines Sanatorium, below Fond du Lac, April 28, Dr. Frank A. Southwick, Stevens Point, was elected president, and Dr. J. Willis Rockwell, Grand Rapids, secretary.——At the annual meeting of Sauk County Medical Society, held recently in Reedsburg, the following officers were elected: President, Dr. Frank D. Hurlburt, Reedsburg; vice-president, Dr. D. I. Thompson, Reedsburg, and secretary-treasurer, Dr. Roger Cahoon, Baraboo.

GENERAL.

Hygienists Meet.—The American School Hygiene Association held its second Congress in Atlantic City, N. J., April 16-18. It was definitely decided that the policy of the association during the coming year should lead to the formation of several active committees to cover such work as the compilation of a bibliography on school hygiene; the formation of a conspectus of state and municipal laws relative to school hygiene; the accumulation of further statistics concerning medical inspection; and the publication of monthly bulletins on school hygiene. The following are the officers of the association: President, Dr. Henry P. Walcott, Cambridge; vice-president, Dr. Arthur T. Cabot, Boston; and secretary, Dr. Thomas A. Storey, Boston.

Society Meetings.—The fourth annual meeting of the National Association for the Study and Prevention of Tuberculosis will be held in the Auditorium Hotel, Chicago, June 5 and 6, under the presidency of Dr. Frank Billings, Chicago. The association is divided into sections clinical, climatological and surgical, with such topics for general discussion as "Sanitarium Secured, What Next?"; "Prevalence and Prevention of Tuberculosis in Charitable and Correction Institutions," and "Tuberculosis in Children."——The Northwestern Woman's Medical School Alumnæ Association will hold its annual meeting, June 2, at Lexington Hall, Chicago University, Lexington Avenue and Fifty-ninth Street, at 10:30 a. m. At 12:30 luncheon will be served at Lexington Hall, and in the afternoon Dr. Elizabeth Dunn will show the alumnæ through the university. Dr. Anna Ross Lapham, 260 Bowen Avenue, is secretary of the association.

CANADA.

Contagious Diseases.—During January, February, March and April there were 196 cases of diphtheria, 285 of scarlet fever, 114 of typhoid, 289 of measles, 35 of chickenpox, 260 of whooping cough, 358 of tuberculosis, 46 of erysipelas, 107 of mumps, 91 of scabies, and 10 of spinal meningitis.

Personal.—Dr. J. J. MacKenzie, Toronto, will spend the next three months abroad.——Two prominent practitioners of Sherbrooke, Que., are contesting that constituency in the Quebec elections—Dr. Joseph P. Pelletier, liberal, and Dr. J. Oliviet Camirand, conservative.——Dr. Charles Sheard, medical health officer of Toronto, is inspecting the water facilities of Philadelphia, New York, Boston and Albany.

The Tuberculous Immigrant in Canada.—Dr. P. H. Bryçe, chief medical officer of the inland revenue department, Ottawa, states that 59 tuberculous immigrants admitted into Canada in the past two years have been deported. He classifies these as follows: Evidently tuberculized on admission into Canada, 25; probably, 17; not, 15; no particulars, one; died in hospital, one. Speaking of all deportations, he states that 400 were made on account of disease during the eight months ended November, 1907, in a total of 181,784, as compared with 925 for the same reason in a total of 1,286,000 who entered the United States during the past fiscal year. Under the Canadian immigration act any immigrant who becomes a charge in any public institution in Canada within three years after landing may be deported. Sixteen were debarred on account of tuberculosis at the seaports and were not admitted into Canada.

Hospital News.—The recent appointments to the Muskoka Sanatoria medical staff are as follows. Dr. W. B. Kendall, physician-in-chief to the Muskoka Cottage Sanatorium and the Muskoka Free Hospital for Consumptives; Dr. Charles D. Parfitt, physician-in-chief to the Free Hospital since its opening in 1902, becomes resident consultant to the two sanatoria, each giving his entire time and effort to these institutions. The medical staff includes a trained resident pathologist and two assistant doctors, together with a staff of specially trained nurses.——To the Royal Alexandra Hospital for Contagious Diseases, Montreal, there were admitted during April, 7 cases of diphtheria, 36 of scarlet fever, and 6 of erysipelas. Five scarlet fever and two diphtheria patients died. The total admissions for this year up to May 1 were 179, with 24 deaths. ——Dr. C. K. Clarke, superintendent of the Toronto Provincial Hospital for the Insane, criticises severely the immigration system of the Canadian government, and says that of the 200 admissions to the institution he supervises during 1907, 120 were foreigners, and the greater part of these were recent arrivals. The cost for maintaining those who could not be deported would be for the Toronto institution alone, $300,000.

FOREIGN.

New Hospital for Glasgow, Scotland.—The Glasgow Maternity and Women's Hospital was formally opened during the first week in May.

Plague in Ecuador.—It is estimated that since February 9, the date on which the first case of plague was recognized, there have been more than 450 cases, with over 200 deaths. The special sanitary commission has taken over the lazaretto formerly used for yellow-fever patients and has purchased another building which is well adapted for plague cases. Two additional pavilions for plague cases and a separate pavilion for smallpox cases are being erected. In *Public Health Reports* for May 15, Dr. Lloyd of the United States Public Health and Marine-Hospital Service gives the details of the work being done in preventing the spread of the disease and in the treatment of cases. He states that the experience with Yersin's serum is satisfactory when the serum is used in the beginning of an attack; after three or four days the serum is almost useless.

Plague in Venezuela.—A number of cases of bubonic plague have occurred at La Guayra, Venezuela, and vessels from this port are not allowed free entry to German and a number of other ports. Cable despatches relate that Dr. G. Peraza, who first differentiated the numerous cases of sickness as bubonic plague, was arrested and taken to the Caracas jail for making such a statement. A sanitary officer was sent from Caracas to investigate, and he reported the epidemic disease not to be plague. People continued to die mysteriously, however, and plague was at last admitted. President Castro ordered the place quarantined and released Peraza, while isolation of the plague victims was commenced on a systematic scale and the city is receiving a general cleaning up. Peraza was met at the station by a crowd and borne to his home on the shoulders of the multitude. The U. S. Consul at La Guayra, T. P. Moffat, reported early in April the prevalence of a suspicious disease.

LONDON LETTER.

(*From Our Regular Correspondent.*)

London, May 2, 1908.

Prosecution of a Quack.

As stated in The Journal, March 14, p. 889, the authorities in Great Britain are beginning to abandon the supine attitude which has so long permitted quacks to defraud the public. In the case there reported, damages were for the first time recovered against a quack for fraudulent misrepresentation. Another case has now occurred in which a quack has been arrested and prosecuted at Exeter. This man announces himself as "The Great American Doctor, Professor Mortimer (Berkeley College, Boston, U. S. A.)." He defrauded a number of poor people of sums varying from $6 to $40. On account of the maladies from which they were suffering they were ready to listen to any one who promised relief. "He had devoted a lifetime to the study of every disease that afflicts humanity and equipped himself with every modern appliance for the diagnosing of every disease in existence." He laid out a table with all sorts of surgical instruments, and in a few days patients began to pour in. He adopted the same method in dealing with them all: first alarming them about their condition, then assuring them that he would cure them. He had the audacity to claim that a well-known Exeter doctor, Dr. J. Mortimer, was his son. He asked what were large sums for the poor who consulted him and then reduced the price, but in all cases insisted on a cash transaction. Many of the patients borrowed money in order to pay him, and were reduced to great straits in consequence. The case was adjourned to enable the prisoner to produce evidence for his defense, failing which the recorder announced that he would commit him for trial at the assizes.

Scottish Births the Lowest on Record.

The annual report of the registrar-general for Scotland for 1907, which has just been issued, shows a further marked decline in the birth rate. The birth rate per 1,000 of the population has declined as follows: 1897, 30; 1899, 29.8; 1901, 29.5; 1903, 29.2; 1905, 28.1; 1907, 26.9. The last is the lowest on record. While the population of Scotland had increased in 1907 from 4,300,000 in 1897, by nearly half a million, the number of births in the year had actually decreased.

The Research Defense Society.

The Research Defense Society, which was formed in January for the purpose of combating the antivivisection propaganda, has made great progress. It already numbers more than 800 members, and comprises not only eminent medical men and scientists, but also well-known persons in all departments of public life. Among the vice-presidents are the Duke of Abercorn, Lord Avebury, the Marquis of Bath, five bishops and four deans. Among names eminent in medicine are Sir T. Clifford Allbutt, Sir James Crichton-Browne, Professor Osler, Sir Thomas Smith, Sir Frederick Treves, Sir John Batty Tuke and Sir Samuel Wilks. Among eminent scientists are Prof. Francis Darwin, Sir George Darwin, Sir Joseph Hooker, Sir William Huggins, Sir E. Ray Lankester, Sir Norman Lockyer and Sir Henry Roscoe. The honorary secretary is Mr. Stephen Paget, who has written an excellent book in defense of vivisection. The president is Lord Cromer, who achieved fame as a great administrator while governor of Egypt. The society is the first organized attempt to deal with the question of vivisection from the standpoint of its bearing on public health and welfare; and to bring home to the popular understanding the real nature of experimental research, the benefits which it has conferred not only on man, but on the lower animals, and the still greater benefits which it will bring in the future. The society will make it clear that medical men who employ vivisection are not less humane than the rest of their countrymen. The society will give information to all inquirers, issue articles and leaflets, send out speakers and lecturers, and carefully examine the truth of the statements made from time to time in the speeches and writings of antivivisectionists.

A Middle-Class Hospital.

A new departure in the way of hospitals has been made by the foundation of the National Eye Hospital for the benefit of the middle class—for those people who can not afford to pay the high fees of a specialist and yet do not wish to avail themselves of hospital charity. Hitherto there has been no half-way house for people of limited means who wish to consult an oculist. There was either the free hospital for the very poor or a fee of $10 for the specialist. At this hospital patients will be treated for a uniform fee of $2.50. They may undergo an operation for cataract or any serious eye disease for $50 or $75, instead of the usual fee of $125 or $500. The hospital has been organized by a committee of city merchants interested in the scheme. It is not run for profit, though it is hoped that it will become self-supporting.

Cancer Research in the Colonies.

An interesting government paper has been issued on "Cancer Research in the Colonies." Lord Elgin, secretary for the colonies, drew the attention of British colonies and protectorates to the importance of the investigation of cancer being on a uniform basis. Great interest attached to investigating the occurrence of cancer in widely separated geographical areas and in different races, in accordance with a uniform plan and over a prolonged period. The valuable information already provided by British colonies has attracted the attention of authorities in foreign countries who have unanimously emphasized its importance. The committee again direct attention to the importance of microscopic examination of tumors. Investigations lately conducted in England, Scotland and Ireland have shown that even with the great facilities enjoyed at home, almost 40 per cent. of the less advanced cases of internal cancer and many external cases are not recognized in hospitals from clinical symptoms alone.

Therapeutics

[It is the purpose of this department to outline an up-to-date management of disease, to suggest scientific treatment for diseased conditions, and to present prescriptions that are simple, useful and palatable. Prescriptions are written in both the metric and apothecaries' systems, but the amounts of the ingredients are NOT exact translations of one system into the other, but quantities convenient for pharmacist and physician. It should be understood that solids are weighed in grams or fractions of grams, while liquids are measured in cubic centimeters; that a teaspoon holds five cubic centimeters, i. e., more than a fluid dram, hence a 100 cubic centimeter preparation will contain twenty doses.]

Chronic Alcoholism and Its Treatment.

Before discussing this condition and the success and non-success of its treatment, we should separate the alcohol habit from dipsomania, briefly consider the hereditary tendency to the desire for alcohol, both the physical and mental craving for the stimulant or narcotic (for alcohol is taken for both purposes), and then discover, if possible, what drugs or treatment it is that cures the patients, who are cured, of this habit.

Chronic alcoholism may be defined as the condition caused by the continued use of alcohol. The patient may take it frequently to excess and become actually intoxicated or stupefied by it, but except possibly during the periods when acute indigestion has been caused by it, alcohol in some form is more or less continuously and daily taken. Chronic alcoholism may also be defined as a more or less frequent consumption of considerable amounts of alcohol, with short periods of intermittency. This latter method of taking alcohol generally means excessive amounts.

On the other hand, dipsomania, while literally meaning a state of "frenzied thirst," is used to describe a condition of periodic craving for alcohol, satisfied only by enormous amounts which for some hours or even days may be tolerated without complete intoxication. These periods of craving may be so long separated as to occur but a few times during a year, or but once a year, and sometimes even longer. They last from a few days to two or three weeks. In the meanwhile the patient may take no alcohol at all nor have any particular desire for it. The instigator of an attack may vary. Sometimes it is a taste of alcohol, or the observation of others drinking, and again it may occur as a nervous explosion similar in its lack of control to an epileptic attack, and not infrequently there is a prodromal period of depression, restlessness or anxiety. At such periods nothing but restraint will prevent the patient from taking enormous quantities of alcohol, and this is usually accompanied by a more or less complete lapse of physical and moral cleanliness. He can not reason, and is really suffering from a species of temporary insanity.

It is obvious, therefore, that the two conditions, chronic alcoholism and dipsomania, can not be treated in the same way, and should not even be considered as allied. One is a confirmed drug habit with all the pharmacologic actions, degenerations and deteriorations that go with the continuous ingestion of large amounts of alcohol, while the other is an unexplained disease or condition of the nervous system due to some periodic irritation creating a desire that experience or hereditary intuitive knowledge has taught can be satisfied with alcohol.

That there is an hereditary predisposition to the almost uncontrollable desire for alcohol can not be doubted. It is not the purpose of this article to discuss the action of alcohol on the brain cells, as to the combinations or dissolutions that it may cause in the substance of the brain cells, or the deterioration that it may cause of the germ cells in alcoholic parents, but certain it is that children born of parents addicted to the overuse of alcohol have given them a heritage of impaired resistance against certain diseases, notably tuberculosis, and have handed down to them a craving, or at least a tendency to the desire, for stimulation. This desire for excitement may show itself in the neurotic disposition with all its imagery of higher life and aspirations, or its opposite, the horrors of the depths of despondency; in either case the patient getting an increased cerebral stimulation out of the exalted or depressed condition he allows himself to take on. Again these subjects while undergoing such pain as the ordinary individual ordinarily withstands, have such an exaggerated appreciation of their suffering that they demand and acquire some drug that will appease it. Little by little they acquire a habit for the drug which they have found most satisfactory, and it depends on the environment and the sex of the patient as to how often alcohol will be the drug selected. If these patients are frequently despondent, after having once found that alcohol soothes them or exalts them to a more contented state, then the alcohol habit easily follows. Many patients are unaware of this hereditary taint until a few social gatherings with the free use of alcohol have suddenly developed a liking and a craving for it that they could not have foretold. Some of these patients with aid—medical, lay, or through their own mental force—may stop the use of a drug but only to take up another, for some drug habit is sure to be continued. Sometimes the patient finds that one drug is not satisfactory or has lost its ability to stimulate, and then takes a stronger drug. It is much harder to cure of the alcohol habit a patient who has inherited the tendency than a patient who was born of parents not so tainted. Just what represents this easily awakened desire of the patient who has an alcoholic inheritance we do not know, but it seems most probable that the "centers" for the highest brain functions (will and self-control being the last to develop and consequently the first to be impaired in any process of retrogression) are more or less insufficiently developed in the man with an hereditary alcoholic tendency.

If this is true, then, when such an one having personally learned the exhilaration or indifference that alcohol produces and enjoying it, has the desire to repeat the sensation, he has no will or even inclination to withstand the desire and consequently reaches for and takes his alcohol.

Having taken it and gained the desired mental condition, he has by the alcohol taken damaged his higher centers a little more, and left them a little less equal to exercise their function of control. Repetition of desire and the results of acquiescence to it finally almost abolish the functions we call "will" and "self-control" and confirmed alcoholism is established.

This reasoning presupposes that the hereditary alcoholic enjoys the mental condition that alcohol gives him, and it requires but little consideration to see that this must be true. The lower down the scale of development we go, the more we see enjoyed the animal passions, the freedom from restraint, and the removal of this exercise of restraint. Alcohol inhibits this restraint and allows full sway of the animal passions.

If we analyze the desire or craving of the alcohol habitué we find that there are at least three elements: 1, The action which the alcohol has on the throat and stomach; 2, the action on the circulation, and, 3, the action on the brain. Most patients who crave alcohol take it stronger and stronger and less and less diluted. In other words, we may say they are normally whisky and brandy drinkers; abnormally drinkers of one of the other strong liquors or alcohols. This desire for a burning, warming sensation in the throat, gullet and stomach is real, for so far as the throat is concerned it is often simulated by the urgent desire of cigarette inhalers for another smoke, and part of the cigarette desire is certainly located in the throat. Also, it has been many times found that some irritant, biting substance like capsicum taken into the stomach has stopped this local craving for strong alcohol. It is quite possible, and perhaps probable, as seen in other organs of the body, that any periodic or intermittent stimulation that the organ receives soon causes it to have a periodic desire or habit for that stimulation, hence, one desire, probably the least one, for strong alcohol.

The next most urgent desire for alcohol comes from the circulation. Those who have the alcohol habit get less cardiac stimulation or reflex stimulation out of alcohol than one who is not accustomed to it. Consequently, this is not the stimulation that they desire, but it is in all probability the dilatation of the peripheral blood vessels. In other words, a patient used to a constantly repeated vasodilator as alcohol, if for any reason is deprived of it or has the period of intermittency prolonged, has more or less contraction of the surface vessels; consequently more congestion of the internal organs and with these the brain. With this condition there is more or less restlessness, nervousness, and voluntary and involuntary muscular twitching, perhaps largely due to disturbances of nerve centers, but all helped by a non-intoxicating and by a non-narcotic dose of alcohol, and even sometimes by a small dose of alcohol, showing that it is not entirely the effect on the nerve centers that is desired, but the effect of equalizing the circulation, relieving the congestion of the internal organs, and often relieving the heart by dilating the peripheral blood vessels. The moment that such patients feel the peripheral flushing and warming from alcohol, that moment their nervous excitation and restlessness cease. The enormous effect of chronic alcoholism on the peripheral vessels is well understood and is often evidenced by the condition of the nose and face where the blood vessels are near the surface and readily show dilatation. It has also been noted that where there is craving for alcohol from this circulatory reason nitroglycerin can at times be substituted and the craving postponed or diminished. Consequently, many times the amount of alcohol that the patient takes can be greatly reduced without uncontrollable craving if nitroglycerin is gradually substituted.

The third cause for the craving for alcohol proceeds from the central nervous system. Whether this is an actual craving of the brain cells for a stimulant or a narcotic (they having become used to such stimulation) much as the cry of the body cells for water creates both subjective and objective thirst, can not be determined. It is also perhaps difficult to decide whether this craving is a chemical need caused by an acquired habit of the brain cells, or whether it is an exaggerated psychologic desire first instigated by the physical craving above described and exaggerated by the individual who is suffering from the alcohol habit, the patient interpreting his psychologic craving as a real physical need. It is certainly difficult to decide how much of the craving for the drug is due to the need for that drug or to the enslaving psychologic need for the repetition of the confirmed habit; in other words, mental craving. It is also difficult to decide which the patient or the brain cells desire the most, stimulation or dulling of their sensibilities. Certain it is that patients craving alcohol or any other drug are in a condition of hyperexcitation, and the acquisition of the drug quiets them down to a normal condition. Consequently, in these instances of the confirmed drug habit we must consider that the action of the drug is to quiet; in other words, it is a narcotic to the central nervous system. On the other hand, many a patient while acquiring a drug habit gets such a nervous stimulation from it that he can mentally do much better work, and the drug thus acts in him as a stimulant. Again, this "stimulation" is really perhaps fallacious, as it is often hypersensibility or irritability, worries, frets or actual physical pain that prevents him from doing his best mental work. The narcotic effect, then, of the quieting drug puts him in a psychologic condition that enables him to do better mental work; hence, even in these instances the drug really acts as a narcotic.

Let us now for a moment consider the ability of alcohol to satisfy these many conditions described. In the first place, a little of it before meals, or with the meals, stimulates the appetite, and, if not in large amount, aids digestion. A debilitated or tired-out man feels better and improves. Also, when there is poor peripheral circulation, cold extremities, and increased cerebral tension from too much blood pressure in the brain, alcohol will dilate the peripheral circulation and relieve this tension. An anemic, weak, overworked man or woman with breathless turns and periods of exhaustion may relieve that feeling with alcohol, the circulation starting up, the heart being slightly stimulated, and the condition becoming improved. If the patient has chronic pain or recurring pain which is not too acute, alcohol will stop it or dull it, both by its actual narcotic effect and by relieving the localized congestion by dilating the general circulation, and in this instance the patient feels better. In worries, frets and actual brain fag the stimulation from alcohol of a healthy circulation through the brain with a reduction of the increased blood pressure, with the slight mental indifference which alcohol causes, makes the condition of the patient seem to himself more to be tolerated. Also, there is the actual narcotic action of alcohol on the brain cells, slight in amount probably with small doses, more and more intense with larger doses, that becomes, perhaps, with the constant repetition of the habit, a temporary necessity at least for the cells to receive this quietus to stop this intermittent exaggerated irritability when deprived of alcohol.

Any one or all of the above reasons may become the cause or causes of the acquisition of the alcohol habit. The patient (and he has now become a patient) can not eat unless he has a drink; his circulation is not good unless he has an alcohol dilator; his brain does not work unless he has an alcohol sedative; his muscles do not work coordinately unless alcohol controls the nerve cell irritability. Suddenly deprive him of his alcohol and cerebral irritation reaches the point of delirium, the heart becomes rapid and irregular and the circulation fails.

Excessive amounts of alcohol tolerated for a longer or shorter period will do one of two things: either cause such a profound chemical effect on the brain cells and nervous centers as to produce coma and perhaps paresis; or, by accumulating in the blood due to the inability of the excretory organs to get rid of it, cause meningeal irritation and, therefore, delirium. It can thus be seen that a man with delirium tremens from excessive use of alcohol, when he has excreted by medical aid this excess, may again have delirium from the need of the cerebral cells for their narcotic. The treatment at first must be aimed at excretion. The treatment of the subsequent condition is to give the cerebral cells what they need in gradually diminishing amounts, or to substitute some other narcotic which will satisfy their desire. Of course, in the beginning of the treatment of delirium tremens while the excretion is being aided, it may be necessary from the violence of delirium to administer strong narcotics. This primary delirium is probably meningeal irritation. The secondary delirium is probably the same as seen in the sudden deprivation of an alcoholic of his alcohol, and is due to the irritation of the cerebral cells. This is similar to the nervous irritations seen in withdrawing the drug in any other drug habit.

The deduction from all this preamble is that in chronic alcoholism there is an intense physical desire to combat, yet also a psychologic element of nerve habit which can only be overcome by nervous control. In other words, as the alcoholic's physical desires are increased to the point of frenzy by his mental interpretation of such desires, so can no "cure" be successful without his mental belief that he is improving and can be cured. Hence, no cure has been or can be successful that does not treat the mind of the patient—that is not suggestive. There is probably no lauded or asserted treatment to cure the condition of chronic alcoholism that has not had some successes. There is also no treatment that has not and will not have relapses. It is probable that just as many patients have been cured by the simple signing of the pledge as are cured by any other treatment. This certainly was true in the past. In the present very practical age, when a man must see something done, or have something done, or do something tangible before he will exert his mental powers to control his habit, the mere signing of pledges is less successful. The man must take some treatment that has a name to it, or go to some institution and have something done, or do something that makes more frequent impressions on his mind, i. e., to suggest repeatedly to him that he is being cured.

These assertions, then, presuppose what seems to be the absolute fact, that there is no known specific for the treatment of chronic alcoholism. In other words, there is no known drug or any combination of drugs that will cure alcoholism. From time immemorial it has always been known and always been recognized that the taking of a drug or preparation, the ingredients of which the patient did not know, caused more mental cooperation of the patient than the taking of a drug which he did know; consequently the ability of many lauded nostrums to cure the alcohol habit. And even the physician administering a nostrum owned by some firm or corporation carries with it the mental hopefulness of the physician to stimulate the mental hopefulness of the patient. Also, the individuality of the physician who administers or conducts the treatment, or the individuality of the minister who compels a man to sign the pledge is perhaps the most important factor in the cure. As just stated, however, this individuality or the administration of something to the patient the ingredients of which he does not know, or the application of some physical treatment to the patient must be repeated frequently to obtain the best suggestive results. Institution treatment of alcoholics is the only treatment that can succeed when the patient's mental ability has so deteriorated that the stimulation of such suggestion and the stimulus of such individuality can not control him. There is no drug and no treatment known that can give him that mental stimulus if he has not the ability to evolve it. It is many times perfectly true that the ordinary mental stimulation that a physician is able to give a patient by any method which he may inaugurate will not touch the psychologic keynote in the individual which can be touched and often later is touched by some pseudopsychopathic treatment. Therefore, Christian science or any other mental suggestive treatment may in individual cases so start healthy cellular vibrations in the brain of the chronic alcoholic that he controls his desires and becomes cured of his habit.

It is hardly necessary to enumerate the number of "cures" that have been lauded for chronic alcoholism. Those at present most in evidence are the Keeley "cure" and the Oppenheimer "cure." It is needless to say that neither of these methods has concealed in the medical treatment any wonderful discovery. The valuable gold cure contains no gold, and what is more, never did. And the promoters of this fraudulent term "gold cure" soon found that to be successful the patient must be frequently seen by the physician treating him, or better, be treated at an institution, and that he must be interested in some physical thing done or medicine taken, so many times in twenty-four hours; that is, repeated suggestive impressions to the mind while the physical needs of the man are being attended to.

The Oppenheimer cure, now thrown open they declare to any physician wishing to buy the medicine, analysis of which they pretend to mail to the physician and make public, shows a mixture of drugs the properties of which are perfectly well known, but the tonic and quieting efficacy of which are clouded to the physician using the treatment by one or two other supposedly newly discovered alkaloids or active principles of unimportant drugs. The physician administering the treatment thus believes it is this unknown quantity that is efficacious, and the patient must come frequently to the physician's office, two or three times a day, for his medical treatment and his mental suggestion of improvement, and the results are many times successful.

The advantage of doing something physical has been aided by the use of the hypodermic syringe, so that some institutions administer drugs frequently by the hypodermic method, or even may often give pure water hypodermatically with the suggestion that the patient will be improved by it. Various electrical, massage, exercise and eliminative treatments all, of course, have their use in improving the physical condition of the patient and, therefore, his mental ability to fight his habit, and are all more or less taken advantage of in the institutional treatment of the alcohol habit.

To come down to a concrete treatment. The physician must in the first place honestly decide if he has the mental forcefulness to take charge of patients suffering from the alcohol habit, and out of a given number of physicians but a small percentage will find that they possess that power. In other words, few have such a forcefulness as will carry mentally one or more patients suffering from the alcohol habit for a continued length of time. After this each patient should be individualized, and it is rare that any one patient can be treated like any other patient in this as in any other condition. If the patient's surroundings and his mental ability to control himself with the physician's help are far below par, nothing but institutional treatment will be successful. Whether or not the alcohol shall be withdrawn rapidly or slowly depends on the physicial condition and on the intensity of the nervous desire. Whether capsicum or some other irritant shall be given before meals for digestive stimulation (remembering that all tinctures contain alcohol), or whether nitroglycerin as a dilator will prevent, in the individual patient, the circulatory craving, or whether strychnin will steady or overstimulate irritable nerves and nerve cells, must all be decided by the physician who studies the individual patient. Whether bromids or chloral, or a temporary coal-tar cerebral sedative is advisable must also be decided by the individual physician for the individual patient. But whatever medicinal treatment is instituted, physical treatment should also be inaugurated, and most important of all, as just stated, is the frequent mental aid given by the physician to the patient, and perhaps in no better manner furthered than by his personal administration to the patient of the drugs needed, or the placebos instituted.

Pharmacology

THE BROADER AIMS OF THE COUNCIL ON PHARMACY AND CHEMISTRY.

TORALD SOLLMANN, M.D.
Member of the Council, Professor of Pharmacology and Materia Medica at the Medical Department of Western Reserve University.
CLEVELAND, OHIO.

(*Continued from page 1621.*)

IX. THE SEED THAT FELL ON STONY GROUND.

The tabulation of the proprietary advertisements in prominent medical journals, to which I referred recently,[1] contains a mine of highly suggestive information. As an instance of this, there is the interesting fact, that of the nearly 200 products thus advertised, only thirty, or just about *one-sixth*, had been admitted by the Council. It is very evident that the labors of the Council have been absolutely fruitless so far as these journals are concerned. If they practice any discrimination whatever, it must be against the decent products. Nor do these journals stand alone—by comparing the advertising pages with the list of admitted products, which is published

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1. The Journal, May 9, 1908, p. 1540.

monthly by the Council, it is very easy to ascertain the stand which any journal takes in this matter.

What is the real reason for this negative attitude? It sounds very grand, no doubt, when medical editors, with their hands on their hearts, proclaim that they "cherish their independence too much to follow blindly the lead of any set of men—self-styled chemists, druggists, laboratory moles, uncrowned czars, etc."—very grand, but is it not just a little beside the question? Does anyone ask them to "follow blindly"? The rules of the Council have been given the widest publicity, and are very easily accessible. If the editors remain blind, if they are not acquainted with these rules, whose is the fault? If they deem any of these rules vicious why do they not present evidence to show in what the viciousness lies? If they agree with the rules, do they believe themselves more competent than the Council to apply them? Will they take the trouble to investigate personally the status of every product which they advertise? I wish them joy in the undertaking. Perhaps they would have us believe that they have done so already, and are honestly convinced that they are advertising only honest products? Then let them ponder over the following list of articles which have been publicly exposed by the Council, and which occupy prominent space in the advertising pages of these and many other journals:

Pepto-Mangan (Gude) (1, 2, 3, 4, 5*): Guilty of misquoting reports (see The Journal, Sept. 23, 1906, p. 934; Oct. 7, 1906, p. 1099; April 6, 1907, p. 1197).

Tyree's Antiseptic Powder (1, 2, 3, 4, 5): Guilty of advertising a fake formula (see The Journal, Oct. 20, 1906, p. 1316; May 18, 1907, p. 1692).

Antikamnia (1, 2, 5): Guilty of—what not? (see The Journal, June 3, 1905, p. 1790; July 1, 1905, p. 55; Jan. 26, 1907, p. 340; Feb. 8, 1908, p. 467).

Campho-Phenique (1, 2, 3, 4, 5): False formula (see The Journal, April 20, 1907, p. 1365).

Kutnow's Powder (1): Advertised in the newspapers (see The Journal, Oct. 21, 1905).

Lactopeptine (1, 2, 4, 5): The psychic digestant (see The Journal, Feb. 2, 1907, p. 434; Feb. 9, 1907, p. 533; March 16, 1907, p. 959).

Pancrobilin or *Protonuclein* (1, 2, 4, 5): The physiologic mysteries (see The Journal, vol. 49, 1907, p. 1198).

Phenalgin and *Ammonol* (1, 2, 4, 5): The rival chemical hybrids (see The Journal, June 3, 1905, p. 1790; Jan. 27, 1906, p. 290).

Hagee's Cordial (1, 2, 3, 5): "Every beneficial constituent of cod liver oil"—except the oil (see The Journal, Oct. 13, 1906, p. 1207).

Cactina Pillets (1, 2, 4, 5): The psychic heart tonic (see The Journal, Sept. 21, 1907, p. 1021; March 21, 1908, p. 956).

Listerine (1, 2, 3, 5): The bargain-counter antiseptic.

Anasarcin and Anedemin (1, 3, 4, 5): The twin "inventions" (see The Journal, May 4 and 11, 1907, pp. 1535 and 1641).

Calcidin (2, 4): The drug that surpasses itself (see The Journal, Sept. 7, 1907, p. 866).

Thialion (3): Another "synthetic" mixture of wondrous graphic formula (see The Journal, Nov. 3, 1906, p. 1500).

Oxychlorine (5): Ditto, ditto (see The Journal, July 6, 1907, p. 54).

With this list as the sole article of evidence, I am willing to leave the question of the relative competency of the editors and the Council to judge the honesty of proprietary products, to any jury of unprejudiced men—even without any stipulation as to their intelligence. But you, as members of the medical profession are confronted with the necessity for something more than a mere verdict—you are jury, judge and executioner in one. Are you content with this state of affairs? Are you willing to perpetuate these frauds? Perhaps you answer that you do not take your journals for the advertisements, that you do not even look at these—perhaps not, but *somebody* does, and is influenced by them, or good money would not be spent on them. *You* are doing your best to make dishonest advertising possible; *you* are helping with all your might to disseminate it. A pleasant thought, is it not? Do not place all the blame on the editors, or even on the publishing houses—they depend on *you*, they must and will give you just what you want, and withhold what you do not want—*if* only you make your wishes known with sufficient emphasis. With you, the active practitioners throughout the land, lies the responsibility for the continuation of fraudulent proprietary medicines. You can not shift it, you can not escape it.

I am not suggesting a wholesale destructive campaign against advertising in medical journals—but I *would* like to see a general constructive campaign for high and clean standards in medical journalism. Such a campaign *should* be started voluntarily by the editors of the journals themselves. They should aim for true independence of thought and conscience—not the pretended independence which is tied about with purse-strings. If they can attain to this independence they will enter into this movement, not indeed as blind followers, but as loyal leaders. If they can not attain to this independence, their days of usefulness are past. A journal which is in any way dishonest with its subscribers is not worth having, and the editors should be made aware of the fact; not by society resolutions, but directly by their subscribers. I have heard it said that business men have a fine contempt for "resolutions;" it is what the individual subscribers feel and think, say and do, that counts.

(*To be continued.*)

[Contribution from the Chemical Laboratory of the American Medical Association.]

ZYME-OID.

W. A. Puckner and W. S. Hilpert.

Zyme-oid, manufactured by the Oxychlorine Chemical Company of Chicago, is advertised as "a powerful gastrointestinal antiferment" which will "arrest and prevent bacterial fermentation in any portion of the intestinal tract, whether the media be acid or alkaline." These extravagant statements, like many others made regarding the properties of zyme-oid, are very similar in character to those made in the circulars accompanying the preparation oxychlorine, manufactured by the same firm and exposed in The Journal, July 6, 1907, page 54.

As examples, several parallel statements help to show this similarity. The formula (?) of oxychlorine, as expounded on the label, is given in full, while in the case of zyme-oid only a hint is given as to its composition, but still sufficient to point to a similarity between the two:

OXYCHLORINE.	ZYME-OID.
"Oxychlorine is a tetraborate of sodium and potassium combined with oxychlorid of boron, thus: $(6NaKB_4O_7)BOCl_3$."	"Zyme-oid is a double borate salt."

In the matter of claims for chemical stability the two seem to be very closely allied:

Oxychlorine is "a stable salt under all conditions until brought in contact with sub-oxygenated organic matter."	Zyme-oid is "a product which is stable enough for keeping purposes, but which readily yields nascent oxygen in the presence of bacterial products."

The therapeutic properties attributed to these sister products are even more similar, for we find that:

"Oxychlorine is adapted to all morbid and abnormal fermentative alimentary states."	"Zyme-oid is a powerful gastrointestinal antiferment."

Many more statements and claims could be quoted to show a similarity between, amounting almost to an identity of, oxychlorine and zyme-oid

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*The numbers in parentheses refer to the journal in which the advertisements appeared: 1, Medical Record; 2, Chicago Medical Recorder; 3, Therapeutic Gazette; 4, Interstate Medical Journal; 5, New York Medical Journal.

With these facts in mind, the analysis[1] of zyme-oid was undertaken in order to compare it with the previously examined oxychlorine and to determine to what extent the claims made for zyme-oid are upheld by its composition. The analysis indicated, as was expected, that zyme-oid is essentially the same as oxychlorine as is shown in the following, quoted from the report of the analysis of each:

ANALYSIS OF OXYCHLORINE.		ANALYSIS OF ZYME-OID.	
Potassium (K)	12.26	Potassium (K)	13.50
Sodium (Na)	8.20	Sodium (Na)	9.84
Chlorate (ClO_3)	25.32	Chlorate (ClO_3)	27.53
Nitrate (NO_3)	21.70	Nitrate (NO_3)	24.22
Boric acid anhydrid (B_2O_3)	18.63	Boric acid anhydrid (B_2O_3)	13.42
Water, calculated	13.29	Water, calculated	10.42

Assuming that the chlorate in zyme-oid is present as potassium chlorate and the nitrate is present as sodium nitrate, the figures obtained by analysis correspond to a mixture approximately as follows:

Potassium chlorate ($KClO_3$)	40.43
Sodium Nitrate ($NaNO_3$)	33.22
Potassium tetraborate ($K_2B_4O_7$)	1.60
Sodium tetraborate ($Na_2B_4O_7$)	3.31
Boric acid	21.14

From the results of the analysis and from the physical properties of zyme-oid we conclude, just as was done in the case of oxychlorine, that the preparation is not a definite chemical compound, but is essentially a mixture of alkali chlorate and nitrate with boric acid, probably produced by fusing together the constituents.

COMMENT.

An examination of the claims made for the firm's two products, while, as already proved, disclosing many points of similarity, will also show one remarkable difference. We refer to the skilful indefiniteness that pervades the claims made for zyme-oid and which defies scientific refutation. This verbal obscurity is becoming daily more common in the "literature" of firms marketing nostrums. Since the Council has analyzed many of the much advertised articles and proved the unreliability of the pseudo-scientific claims made for them, the more cautions of the nostrum-mongers have modified the matter descriptive of their products. They have called to their aid the principle that words were given to man to conceal thought rather than to express it, and they have reduced equivocation to a fine art. Wherever it was possible to put forward claims by implication rather than by expression this has been done.

To substantiate further the claims made by the manufacturers of zyme-oid for their product, a laboratory report is brought in evidence. This report, which is written more in the style of a peruna testimonial than that of a conservative scientific statement, fails to verify the claim that zyme-oid is a "double borate salt," but confines itself to a statement of its harmlessness and its anti-fermentative properties. In passing, it seems regrettable that scientific laboratories should, for a pecuniary consideration, be willing to jeopardize their reputations by lending their names to the furtherance of nostrum exploitation. The results of the examination of zyme-oid demonstrate that the product is no more worthy of the physician's consideration than its close, and equally worthless, relative oxychlorine.

Cuticura Resolvent.

In the investigation of secret remedies the *British Medical Journal* (April 18, 1908), takes up the nostrums advertised to the British public for the treatment of skin diseases. Among these the Cuticura remedies which are prepared by the Potter Drug and Chemical Corporation, Boston, and are widely sold in America, are of special interest. The advertisements recommend these preparations for a variety of skin affections and imply their special value in syphilis. The remedies consist of the cuticura soap, ointment and an internal remedy known as Cuticura Resolvent. The last named preparation is said to be alterative, antiseptic, tonic, digestive, and aperient, and is recommended for purifying the system of humors of the skin, scalp, and blood, with loss of hair. It is to be given in a dose of two teaspoonfuls for adults three times a day. Analysis showed the composition of the mixture to be:

Potassium iodid	17 grains
Sugar and glucose	486 grains
Extractive	8 grains
Alcohol	10 fluidrams
Water sufficient to make	6½ fluidounces

In this preparation, which is sold for 60 cents for 6½ ounces, no alkaloidal substance was present; the extractive gave a slight indication of the presence of a preparation of rhubarb; all other drugs with well-marked characters were absent. It is a good illustration of the power of advertising and the faith of the credulous public that less than a grain of potassium iodid at a dose is believed to produce effects when given in a secret nostrum which can not be attained by the usual methods of treatment.

Correspondence

The Midwives of Chicago.

Chicago, May 18, 1908.

To the Editor:—In The Journal, May 16, we note a letter from Dr. Egan, secretary of the State Board of Health, criticising the report issued by the Committee on Midwives of the Chicago Medical Society. We feel that Dr. Egan does not meet the issue fairly. He admits the truth of the deplorable state of affairs as revealed in the report, but he disclaims all responsibility on the part of the board; in fact, he censures the committee for not notifying the board of the criminality of certain midwives as soon as the facts were discovered. We feel that the committee was not derelict in duty from this fact. Directly after the council of the Chicago Medical Society created the Committee on Midwives, its chairman visited Dr. George W. Webster, president of the State Board of Health, and outlined to the president the course to be pursued in the investigation. At this private conference with Dr. Webster, in his own office, Dr. Webster reiterated his expressions of commendation, and offered every assistance in his official capacity, which he had previously done from the chair when presiding over the deliberations of the council. Dr. Webster heartily approved of our desire to have our investigator appointed an inspector of the State Board of Health; he gave the chairman of the committee a letter to Mr. C. R. Chindblom, attorney for the board of health, who directly has supervision of the inspectors. The chairman assured Mr. Chindblom that any information which might be of service to the State Board of Health would be given promptly to the board by the committee. Dr. Webster stated that he would confer with Mr. Chindblom and Dr. Egan on this matter, as Mr. Chindblom asserted he would likewise seek advice with Dr. Webster and Dr. Egan. At a second conference Dr. Webster stated that the authorization would be given the inspector; on the second visit to Mr. Chindblom he agreed to mail the appointment. We waited some weeks, and at the next meeting of the council Dr. Webster again stated that the plan was to be given official recognition by the board. As no letter was received from the State Board of Health, the committee decided to make an independent investigation. If any accusations of dereliction of duty are due anyone, it would appear to us that the State Board of Health alone had omitted a public duty.

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[1] Analysis of Zyme-oid.—Zyme-oid as purchased in the open market is a white granular product devoid of odor, soluble in water, and having a salty taste. The aqueous solution responds to tests for hydrogen, sodium, potassium, chlorate, nitrate and borate ions, the proportions of which were determined quantitatively.

In order to determine sodium and potassium by the sulphate method, all other interfering ions were removed; chlorate and nitrate by the action of acids, and boric acid by repeated distillation with methyl alcohol in the presence of acid (Quantitative Analysis, Olsen, p. 112). In this way 0.3073 gm. of zyme-oid gave 0.1850 gm. combined sodium and potassium sulphates, and 0.3041 gm. zyme-oid yielded 0.1843 gm. combined sulphates. From these figures the sodium content was calculated after the potassium was determined; average, 9.84 per cent. sodium.

The combined sodium and potassium sulphates were dissolved in water and freed from sulphate, and the potassium determined in the usual way as the chlorplatinate, 0.3041 gm. zyme-oid yielding 0.2562 gm. potassium chlorplatinate, equivalent to 13.58 per cent. of potassium. In the second determination 0.3073 gm. of zyme-oid yielded 0.2557 gm. potassium chlorplatinate, an equivalent of 13.42 per cent. of potassium; average, 13.50 per cent. potassium.

The chlorate was determined by reduction of the chlorate to chlorid, having first demonstrated the absence of any chlorid and determining as silver chlorid (Daclin-Répert. de Pharm., 1907, p. 397) and calculating to chlorate. It was found that 0.0751 gm. zyme-oid gave 0.0355 gm. of silver chlorid, which corresponds to 0.0206 gm. chlorate (ClO_3), or 27.51 per cent., and that 0.0815 gm. zyme-oid yielded 0.0387 gm. silver chlorid, equivalent to 0.0224 gm. chlorate (ClO_3), or 27.55 per cent.; average, 27.53 per cent. chlorate (ClO_3).

The nitrate was determined by the zinc-iron method (U. S. Department of Agriculture Bulletin, No. 46, p. 21). By this method 0.7949 gm. zyme-oid was found to contain 0.0433 gm. nitrogen, equivalent to 24.15 per cent. of nitrate. A second determination indicated the presence of 25.29 per cent. of nitrate; average, 24.22 per cent. of nitrate (NO_3).

Boric acid was determined by titration in the presence of glycerin (R. T. Thomson, Jour. Soc. Chem. Industry, xii, 432). It was found that 1.2977 gm. zyme-oid required 5.01 c.c. normal alkali, equivalent to 23.94 per cent. of boric acid, and 1.5826 gm. zyme-oid required 6.12 c.c. normal alkali, equivalent to 23.69 per cent. of boric acid. From the average of these results, boric acid anhydrid was calculated.

Calculations.—All the chlorate was calculated to potassium chlorate and all the nitrate was calculated to sodium nitrate. The remaining potassium and sodium was then calculated to potassium and sodium tetraborates, as this appeared to be the most likely combination of the extra sodium and potassium. Then the quantity of boric acid equivalent to the sodium and potassium tetraborates was subtracted from the total boric acid, giving the quantity of uncombined boric acid.

Who then is responsible for the ignorance and criminality of the midwives of Chicago? Of course, in the last instance the responsibility for all abuses comes back to the community. But the community, as a whole, can not control any situation, and, therefore, delegates its powers to certain appointed bodies.

The State Board of Health has been given charge of the practice of midwifery, and it can not rid itself of responsibility in the matter by claiming that it has too little power unless it can prove that it has made genuine but fruitless efforts to have these powers increased. Dr. Egan contents himself with a mere statement as to the impossibility of securing further legislation on this subject. It would seem rather that the board has merely acquiesced in a situation which it admits to be fraught with grave peril to the public.

According to Dr. Egan's letter, it is impracticable for the board to insist on an examination which will really test the training of the prospective midwife. Such an examination should include, as all will agree, evidence of attendance under proper instruction on a certain number of obstetric cases, and, further, should include practical tests.

Dr. Egan makes animadversion to our ideal conditions outlined in our conclusions. The increased requirements brought about by legislative enactment for the practice of medicine in Illinois surely permit us to expect that similar progress in the requirements for midwifery practice is not too utopian for suggestion, and clearly could be formulated into practical law. The enforcement could be secured by efficient executive function. Even as the law now stands it would appear to the committee that the sentence in Paragraph 3, of the act regulating the practice of medicine, in force July 1, 1899, was sufficiently elastic and comprehensive—to wit: "The examination of those who desire to practice midwifery shall be of such character as to determine the qualification of the applicant to practice midwifery." This surely gives the State Board of Health ample discretionary power to make the examination a reasonable test of ability. If prospective physicians are compelled to show evidence of, for example, obstetric experience by ruling of the board, then certainly the board may likewise compel candidates for midwifery license to show like evidence. We can not see why it should be found "impracticable" in the case of midwives. If dentists and undertakers are given practical tests, why is it "impracticable" for the midwife? There is nothing in the law to prevent the board demanding actual clinical experience, and practical demonstrations on the manikin from midwives.

It must be admitted that the practice of midwifery has been pretty completely neglected by the State Board, as evidenced, among other things, by the deplorable condition of the registry which Miss Crowell speaks of. It is true that the general public, the various philanthropic bodies in Chicago, and the medical profession are all under obligation to urge a reform in this department. But the initiative in such reform should have been taken by the State Board of Health long ago, as alone familiar with the existing evils, and as especially appointed to control this class of women. The board has not done its full duty when it deplores the present state of things and expresses its readiness to welcome any reform which outsiders may effect. In conclusion, the evidence is so clear that he who runs may read that the midwives as a class constantly violate the medical practice act by prescribing medicine and by often attempting serious obstetric operations. It appears culpable blindness when this state of affairs is tolerated with little or no attempt to check it.

Rudolph W. Holmes, M.D.,
Chairman of the Committee on Midwives, Chicago Medical Society.

The Roentgen Ray Not an Unmixed Blessing to the Surgeon.

Philadelphia, May 12, 1908.

To the Editor:—The warning contained in the editorial in The Journal, May 9, 1908, "The Roentgen Ray Not an Unmixed Blessing to the Surgeon," is timely and valuable. There are one or two other points that may be of value to the surgeon in warding off malpractice suits.

The Roentgenogram must, as you say, be interpreted by an expert, especially in court cases. In the case cited it must have shown not only how great the resulting deformity was after union, but also how serious the injury was and how impossible of reduction without open operation.

In malpractice suits the Roentgenogram should always be made to show how serious the original injury had been and hence the difficulties with which the surgeon had to contend, and the disability that was to be expected.

The safety of the surgeon lies in employing the Roentgenogram in all his cases to show the result of reduction and fixation, if not for diagnosis. When the surgeon suggests the employment of the Roentgen examination and is refused its aid by the patient, he is freed from its adverse testimony and is not bound by its standards.

In cases in which the Roentgenogram shows that the fracture can not be reduced or probably held by fixation dressings, open operation should be demanded. Exact coaptation of fragments and symmetrical bony union can not be demanded unless the surgeon is afforded the opportunity by open operation of fixing the bones themselves.

If the choice of Roentgen examination and of open operation are refused by the patient the surgeon is freed from much responsibility. It is much better to have the Roentgen rays employed before rather than after union has taken place. It is the most accurate method of diagnosis and if employed after fixation dressings are applied it furnishes positive evidence that the reduction, setting and fixation were proper and that any subsequent deformity resulted from the negligence of the patient.

Properly employed and expertly interpreted, the Roentgenogram forms the greatest safeguard that the practitioner or surgeon can have in the treatment of fractures.

Charles Lester Leonard, M.D.

Association News

Entertainment for Alumni of College of Physicians and Surgeons, Chicago.

The faculty of the College of Physicians and Surgeons of Chicago is making preparations for the entertainment of the alumni during the meeting of the American Medical Association, June 2-5. Headquarters will be at the Auditorium Annex and members of the alumni can gather there and meet their friends and renew old associations. An informal reception will be given at the Great Northern Hotel June 2, from 8 to 11:30 p. m., at which all members of the alumni will be entertained as guests of the faculty.

Banquet to Alpha Omega Fraternity.

An assembly and banquet of the Alpha Omega Alpha Honorary Medical Fraternity will be held June 3, 6:30 to 8:30 p. m., at the Great Northern Hotel. Each of the fourteen chapters will be represented on the program by a delegate.

Book Notices

The Prolongation of Life. By Elie Metchnikoff, subdirector of the Pasteur Institute, Paris. English Translation Edited by P. Chalmers Mitchell, M.A., D.Sc., Oxon., Hon. LL.D., F.R.S., Secretary of the Zoological Society of London. Cloth. Pp. 343. Price, $2.50. New York: G. P. Putnam's Sons, 1908.

In this work, a sequel to his "Nature of Man," Metchnikoff discusses neither exhaustively nor conclusively, the three chief evils which hang over mankind—disease, old age and death. Of the first of these he believes that rational hygiene and prophylaxis should ultimately rid the race; and he declares that senility and death should be postponed until long after the periods at which we are accustomed to see them.

That in our generation more has been done than ever before to eradicate disease is unquestionable. Its ultimate extinction, however, can not be hoped for so long as we have to contend with vicious heredity, untoward environment and weak and perverse wills. There is good ground for the opinion that old age should be much longer postponed than is now generally the case. The eighteenth century physiologist, Haller, declared that one ought to live 200 years. Flourens estimated that as man takes twenty years to grow, he ought naturally to live five times that number of years, or to the century limit. Buffon estimated that the duration of life in any animal—man or another—is six or seven times that of its period of development. Considering human growth to be attained at adolescence, he concluded that our span of life should be rather five score than three score and ten. We imagine that centenarians are rare; but this does not seem to be the case, as Metchnikoff tells us that nearly 150 people die every year in France after having reached the century mark. In eastern Europe this phenomenon is still more common; in Greece centenarians are, relatively to the population, about nine times as numerous as they are in France.

Metchnikoff believes that old age is nearly always premature; and he holds that the colon is the chief enemy of long life—a useless organ, merely a culture tube for many dangerous bacteria. In most cases he thinks that senility is due to intestinal putrefaction; toxins, such as indol, skatol and the like, being evolved by germs inimical to health. By the free ingestion of microbes antagonistic to these putrefactive agencies the growth and toxic influence of the latter should be inhibited. Particularly should we take in skimmed milk, in which lactic acid fermentation has been induced. It may be mentioned in passing that Metchnikoff has taken means, in ways of no great interest to science, to place the germs bringing about this fermentation—and more especially the Bulgarian bacillus—within reach of everyone.

While Metchnikoff thus emphasizes the large intestine, he does not consider other possible modes of specific invasion, neither does he dwell on the truism that morbid processes are almost never the result of but one factor, nor that there is also at least diminished tissue resistance, which predisposes the organism to microbic attacks. In discussing Metchnikoff's thesis, Herter[1] points out that he designates no definite group of bacteria, but is general in his condemnation of them; nor does he differentiate regarding the often very wide degree of pathogenicity possessed by given forms. In gastric cancer there is much lactic acid, which nevertheless in such cases has no appreciable effect on intestinal putrefaction.

In accord with the charming optimism generally pervasive of Metchnikoff's book (its title in the original is "Essais Optimistes"), the ideal old age should be so prolonged that the coming of death, humanity's greatest terror, should be awaited with equanimity. In that happy era when diseases have been suppressed, death should visit us only in extreme old age. It should obtrude itself only in its natural place at the close of a long cycle of existence, when there should be no fear of it and when it should be gratefully welcomed. The instinct of life would then be replaced by an instinct of death, or, as the venerable aunt of Brillat-Savarin said to him, on her deathbed: "My dear, if you ever reach my age, you will find that one wants to die just as one wants to sleep."

Hypnotic Therapeutics in Theory and Practice. By John Duncan Quackenbos, A.M., M.D. Author of "Hypnotism in Mental and Moral Culture." Cloth. Pp. 330. Price, $2.00. New York: Harper & Brothers.

This book would hardly deserve notice were it not for the fact that it is clearly intended for the layman, who is not in a position to recognize its faults, and hence its dangers. A psychology based on an unscientific conglomeration of science, metaphysics, telepathy and spiritualism, can hardly be palatable to the medical man; still less will he relish the many contradictions, glaring exaggerations and misstatements. A complete list of these would require a small volume, so a few examples will have to suffice: "Anemia of the brain encourages the nutrition of that organ;" "all neurasthenics are hydrophobiacs with desiccated nerves;" fast driving of automobiles "is a recognized cause of ataxia and Bright's disease;" "experiments with condemned criminals show that a conviction of having slept in beds infected with the poison of contagious disease has resulted in the immediate assumption by the subjects of the symptoms of such disease with fatal terminations."

The list of ailments which the author claims to have cured by means of suggestion, however, is the most surprising thing in the book. In it we find mentioned among others: low intelligence, migraine, menstrual disorders and tendency to miscarriage, epilepsy, intellectual unbalance, dementia præcox and incipient insanity. That suggestion may soften a sclerosis and hasten the absorption of exudates and inflammatory products has probably never been claimed before, even by the most enthusiastic suggestionists. After having read such statements, the claim that dipsomania was cured in a single interview and that the speedy development of intellectual germs and the evocation of latent talent and inherent creative power is possible will not seem surprising. We read of rather indifferent actors, painters and authors whom a few treatments with hypnotism raised to the rank of the greatest of their kind and of the possibility of fitting a college student for a rigid examination by the same means. Even in locomotor ataxia, angina, cancer and tuberculosis this marvelous remedy proved to be most useful in the author's hands.

But the most miraculous of his cures he performed on a girl who had passed through a series of infections culminating in pneumonia. When her temperature had reached 107.5 F., her pulse 160 and the respirations 60, the attending physician had withdrawn in despair—as well he might—with the statement that the patient could not live for two hours. She had been unconscious for two weeks, but in spite of this unconsciousness she promptly replied to the author's suggestion that she must "return." It is needless to state that she speedily recovered. And this after the author himself has acknowledged that in organic diseases suggestion can do nothing.

That some of the most experienced hypnotists, among them some whom the writer himself mentions as authorities on the subject, have had very grave, even fatal accidents, does not deter him from claiming that hypnotization used by the skilled operator for legitimate purposes is "absolutely innocuous."

The following passages savor strongly of "patent medicine" literature: "I am treating cases without number, both of men and women, for intellectual decay due to this cause (masturbation) alone." "Unless the unfortunate subject can obtain outside psychic aid through suggestion in some form, he ultimately finds his way into the asylum, the prison or the suicide's grave." Thus we are prepared for the statement that "patients who invoke the suggestionist's services with the purpose of evading their pecuniary obligations seldom receive benefit."

That the author has succeeded in inducing a reputable house to publish his work seems to us satisfactory evidence that he is a past master in the art of suggestion.

Diseases of the Breast with Special Reference to Cancer. By William L. Rodman, M.D., LL.D., Professor of Surgery in the Medico-Chirurgical College of Philadelphia. Cloth. Pp. 385, with 111 illustrations. Price $4.00. Philadelphia: P. Blakiston's Son & Co., 1908.

The author is to be congratulated in making a departure from the ordinary form of text-books on surgery which attempt to cover every phase of this rapidly growing branch of medicine. This departure consists in writing a monograph on one of the most important subjects in surgery, viz., diseases of the breast. He has covered the ground in a most satisfactory manner, and the book is made a very readable one through its giving the author's personal opinions derived from his own experience in this particular field. A slight omission, however, of the personal pronoun would not detract from future editions of the book. The chapters on anatomy and syphilis, written by Dr. C. W. Bonney, are especially thorough, but it would seem as though some departure could be made from the ordinary stock illustrations which need to be borrowed from the standard text-books. An interesting point in the chapter on anatomy is the fact that prolongations of glandular substance may extend upward toward the clavicle, downward toward the external oblique muscle, inward to the sternum, and frequently outward to the axilla. Cusps of glandular tissue also sometimes perforate the retromammary fascia and invade the substance of the pectoralis major muscle. There are a number of excellent half-tone and colored illustrations, but with the extensive experience of the author, many more of his own specimens could have been called on than is the case. The colored illustrations, such as cancer en Cuirasse, are specially to be commended. There is no mention of the Bier-Klapp method of suction treatment in acute mastitis. The description of chronic mastitis and the difficulty of differentiating it from malignant neoplasms is well brought out. Every one will endorse the statement on page 73 that in a certain proportion of cases of advanced cystic disease with proliferation of epithelium, the morbid process may advance to malignancy. The classification and description of the various forms of tumors of the breast are thoroughly up to date, the pathology being especially well considered. Many of the photographs throughout the book could be retouched with profit to their value as medical illustrations. There are but few references to the literature, which seems rather regrettable in a special treatise on any subject. Altogether, the book is the most satisfactory which has appeared up to the present time on diseases of the breast.

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[1] The Journal A. M. A., Dec. 14 and 21, 1907.

Atlas and Text-Book of Human Anatomy. By Johannes Sobotta, M.D., Professor of Anatomy in the University of Würzburg. Edited with Additions by J. Playfair McMurrich, A.M., Ph.D., Professor of Anatomy in the University of Toronto. Vol. III. Pp. 342. With 297 illustrations. Cloth. Price, $6.00. Philadelphia: W. B. Saunders Co., 1907.

The third and final volume of this work deals with the vascular system, the lymphatic system, the nervous system, the organs of special sense, and the integument. Two appendices are added. One takes up the regions of the body, and the other is devoted to a few general remarks on its structure and early development.

In its general features this volume conforms with the first and second, which already have been reviewed. As in them, the plates are large, comprehensive and accurate, most of them being based on photographs. They are colored so as to approximate fairly the appearances actually seen in anatomic preparations. The various structures are clearly distinguished and the general artistic effect is good. They are arranged in the order in which the student encounters the structures in the regular course of work in dissecting laboratories.

Certain features in the third volume are particularly noteworthy. One is the representation of arteries, veins and nerves all in the same figures. They are depicted with equal care and their relations to one another are clearly manifested. This is convenient and valuable, because it shows relations at a glance, because it is like the actual dissections, and because it permits of an exhaustive presentation of the anatomy of these structures in a relatively small number of plates. Another noteworthy feature is the section dealing with the lymphatic system. Seven and a half pages of text, four large plates, and several smaller figures are devoted to this exceedingly important topic. The term "lymph gland" has been dropped entirely and replaced by the better one of "lymph node."

The gross anatomy of the central nervous system is shown in a series of seventy-four beautiful plates and figures made from excellent dissections. In Figures 624, 632 and 648, the cavity of the septum pellucidum is made to appear as though in communication with the cavity of the third ventricle, an error which should be corrected in later editions. The courses of the more important fiber tracts are shown in colors in seven wood cuts.

As a whole, this is a valuable work for anyone wishing to review gross human anatomy. While the total number of illustrations is a little smaller than in some other atlases, the greater size of the plates and the more topographic character of at least a part of the work offset this, and the number and scope of the figures are sufficient to meet the needs of the ordinary student. The section dealing with the viscera is particularly good. The plates are beautiful, numerous and comprehensive, each one showing many structures.

It is regrettable that the Basle terms, used in the original German, were not retained. They are simple, accurate, brief and significant. Changes of them are almost invariably changes for the worse, and it is to be hoped that they may soon come into general use here as they are now in Germany. The terms used in the book are not consistent in form or spelling. About a third are in Latin and the rest in English. This mixture is confusing, and does not tend to carefulness and precision, qualities for the development of which the study of anatomy might afford a valuable discipline.

Bradycardia and Tachycardia. Part II of Clinical Treatises on the Symptomatology and Diagnosis of Disorders of Respiration and Circulation. By Prof. Edmund von Neusser, M.D., Professor of the Second Medical Clinic, Vienna. Authorized English Translation by Andrew MacFarlane, M.D., Professor of Medical Jurisprudence and Physical Diagnosis, Albany Medical College. Cloth. Pp. 150. Price, $1.25. New York: E. B. Treat & Co., 1908.

This book, the second one in the series which von Neusser is writing, is even more interesting than the first. The various affections in which disturbances in the heart's rate occur are considered separately and the causes provoking such changes are considered fully. For example, the first sections of the book are devoted to the various toxins which can produce bradycardia. The slow heart in Adams-Stokes disease and other heart affections, in diseases of the brain, in hysteria and melancholia, is fully considered. The second part is devoted to a discussion of tachycardia and its occurrence in many of the common infections. While the toxin of the infecting organism plays a part, and the chief part, in causing a rapid pulse, it is by no means the only factor. von Neusser states that in pneumonia the rapid pulse "is dependent on the degree of injury to the heart, on the extent of the pneumonic process, on the individual affected, on possible complications (pericarditis, endocarditis, pleuritis) and not less also on the intensity of the intoxication with the poisonous products of the causative factor; even the nature of the latter may not be without influence on this phenomenon." The subject of tachycardia in drug intoxications; in heart affections; in disease or injury of the vagus nerves; in cachexias; in Basedow's disease, and in nervous disorders follows the discussion of its presence in infections. An appendix contains an abstract of W. H. Howells' articles on the "Cause of the Heart Beat." Adams' original article on what is now known as the Adams-Stokes symptom-complex, and an abstract of Stokes' and His' articles on the same subject. Abstracts are also given of American and British medical literature and a foreign bibliography of Adams-Stokes disease. Like its predecessor in the series, this book is an interesting one for the student of diagnosis and of pathologic physiology.

Prostatic Enlargement. By Cuthbert S. Wallace, M.B., B.S. (Lond.), F.R.C.S., (Eng.), Surgeon to East London Hospital for Children. Cloth. Pp. 215, with illustrations. Price $4.00. New York: Oxford University Press, 1907.

This book is an exceedingly valuable contribution to the subject of prostatic enlargements, and is another illustration of the much-to-be commended tendency to take up surgical subjects exhaustively in monograph form. The chapters on anatomy and pathology are the most thorough which have appeared of late years in the English language. They represent the results of a large amount of original investigation undertaken with the idea of settling the structure of the prostate and its relation to its fibrous sheath and to the bladder. The author calls attention to the fact that there are two forms of prostatic enlargement—the encapsulated form, which is chiefly adenomatous, and the fibrous or diffused variety. The latter is met with in about 15 per cent. of the cases, and can not be enucleated, but must be removed piecemeal. If the monograph had considered chiefly the anatomy and pathology of this organ, it would have been a more satisfactory one than is the case. The chapters on diagnosis and treatment are far less satisfactory and do not represent as extensive a personal experience as is the case in those on anatomy and pathology.

Atlas der Ætiologischen und Experimentellen Syphilis Forschung (Mit Unterstützung der Deutschen Dermatologischen Gesellschaft). By Prof. Dr. Erich Hoffmann of Berlin. Cloth. 53 Pp. and thirty-four illustrations. Price, 48 marks. Berlin: Julius Springer, 1908.

As a tribute to the memory of Fritz Schaudinn, one of the discoverers of the *Spirochæta pallida*, this atlas has been prepared by his colleague, Prof. Erich Hoffmann of Berlin. With the financial support and interest shown by the members of the German Dermatologic Society and especially by Professor Neisser, the publication of this splendid work has been made possible.

The atlas contains not only reproductions of preparations of Schaudinn and Hoffmann, but also those of many well-known investigators in various European countries. The book contains as frontispiece a fine portrait of Schaudinn, a preface, an introduction and 53 pages of text. There are in all 34 plates. The first 7 show the lesions of experimental syphilis in animals. Among these illustrations are found the original female chimpanzee inoculated by Metchnikoff and Roux in 1903, and illustrations of syphilitic keratitis in the sheep and rabbit. The remaining 23 plates, containing 78 different illustrations, show the *S. pallida* most beautifully and clearly in smear preparations and in sections of various organs of the body. Some of the plates are devoted to various spiral organisms, such as the *S. refringens*, which is to be differentiated from the *S. pallida*. The last 4 plates contain 42 excellent photomicrographs of the *S. pallida* and other spiral organisms. The illustrations of the apes have been made by the animal painter, M. Landsberg, and the histologic and other plates are the work of G. Helbig.

The atlas certainly reflects great credit on its renowned and talented author, and further, on the scientific position held by German dermatologists.

Medical Lectures and Aphorisms. By Samuel Gee, M.D., Fellow of the Royal College of Physicians. Flexible Cloth. Pp. 363. Price, $1.50. New York: Oxford University Press. 1908.

This is the third edition of Dr. Gee's little book, but inasmuch as it has not been mentioned in these columns before and because most American physicians probably are not aware of its charms and its value, we take this opportunity to give it a little more complete and more worthy introduction than it has received. In the first place it is well to emphasize that there is a remarkably large amount of real clinical wisdom born of large, well-rounded experience and of much study of old as well as modern literature presented in these lectures and aphorisms, and it would be impossible for any intelligent physician to read them without reaping direct benefit in his diagnosis and his treatment of disease as seen in the individual patient. If one reads, for instance, the first lecture—"The History of a Case of Cerebral Hemorrhage"—one can not but feel that the understanding of the antecedent conditions and the ability accurately to foretell are growing as Dr. Gee so masterfully traces his case from beginning to end. In the aphorisms much of great value to the practitioner is put in terse and striking form. In the next place, great pleasure may be derived in the reading of this book because of its style—graphic, forceful, simple, yet elegant. There is then real profit and real pleasure in store for the physician who reads this book in the proper spirit. The lecture on "Sects in Medicine" should be reserved for an especially favorable hour of intellectual enjoyment.

Traité Clinique des Maladies de l'Estomac. By Dr. Lucien Pron (d'Alger). Paper. Pp. 417. Paris: Jules Rousset, 1, rue Casimir-Delavigne, 1907.

The first chapters of this book, in which methods of examination are considered, while they present the subject fully, contain nothing new or especially noteworthy. The author's discussion of dyspepsia and the various functional derangements of the stomach and the often coincident or successive occurrence of them in one person is interesting and instructive. The relationship of stomach disorders to disease in other organs is emphasized throughout the book. The chapters devoted to treatment are commendable, and are evidently based on ripe experience. Although the discussion on dietetics contains nothing original, it is valuable, because it presents the subject in the light of facts as revealed by the more recent researches.

An Aid to Materia Medica. By Robert H. M. Dawbarn, M.D., Professor of Surgery and of Surgical Anatomy, New York Polyclinic Medical School. Fourth Edition. Revised and Enlarged by Eden V. Delphey, M.D. Pp. 338. Cloth. Price, $1.75. New York: Macmillan Co., 1908.

This little volume gives a succinct account of the remedies official in the U. S. Pharmacopeia, giving the properties, official preparations, dosage, and a very brief statement of the pharmacologic properties. To this is appended short articles on prescription writing, incompatibilities, etc., and a number of lists and tables. The final list describes non-official remedies, including only articles of definite chemical composition. The author emphasizes the duty of the physician to know the exact composition of every medicine he orders. The book is not in any sense a work on therapeutics or pharmacology, but unfortunately this limitation is carried out more rigidly with reference to official than to non-official drugs. The book is well adapted for its purpose, which is to serve as a work of ready reference for student and practitioner.

Diseases of Women. A Clinical Guide to their Diagnosis and Treatment. By George Ernest Herman, M.B., Lond., F.R.C.P., Consulting Obstetric Physician to the London Hospital. With 265 Illustrations. Pp. 900. Price, $5.00. New York: William Wood & Co., 1907.

This edition has been revised and brought up to date. The maladies are arranged according to symptoms instead of being grouped under the organ affected. The author states (page 8): "Patients do not come labelled 'disease of the uterus,' 'disease of the ovary,' etc.; they come complaining of symptoms; and the discovery which organ is in fault is often the greater part of the diagnostic problem." The author calls attention to the fact that the family physician, by sound advice, can prevent the patient magnifying trifles, can disabuse her of erroneous theories before they become fixed in her mind, can dispel her fears for the future, and can correct an unhealthy mode of life before it has had time to do harm.

Cancer of the Stomach. By A. W. Mayo Robson, D.Sc., F.R.C.S., Bradshaw Lecturer, 1905. Cloth. Pp. 218. Price, $1.75. New York: William Wood & Co., 1907.

This is a short but pithy synopsis of our present knowledge of this important subject. It was written as one of the Nisbet Modern Clinic Series for the "busy practitioner." Its object in this direction is fully accomplished. To those who do not find the opportunity to read the larger works on cancer of the stomach this little volume can be warmly recommended.

The Pyonex: Its Theory and Practice. By W. B. Rule, M.R.C.S., L.R.C.P. Cloth. Pp. 572. Price, $3.00. London: John Bale, Sons and Danielsson, Ltd., 1907.

This book is a special plea for a special mode of treatment which is based on an error of reasoning. It is full of misstatements and partial statements due to ignorance of pathology, symptomatology and therapeutics or to intentional omission. There is nothing in it to be recommended to either the medical man or layman.

Dictionnaire Technologique, dans les Langues Française, Allemande et Anglaise. Renfermant les termes techniques usités dans les arts et métiers et dans l'industrie en général. Rédigé par M. Alexandre Tolhausen, traducteur près la Chancellerie des Brevets d'Invention à Londres. Revu par M. Louis Tolhausen, ancien consul général de France, officier de la Légion D'Honneur. Français-Allemand-Anglais. Cinquième édition, avec un nouveau grand Supplément de 1901, enrichi de nombreux termes d'électricité, de télégraphie, de téléphonie et autres. Three volumes. Cloth. Price, $2.75 each. Vol. I, pp. 1018. Vol. II, pp. 1040. Vol. III, pp. 1037. New York: The Macmillan Co.

The vast and rapid growth of technical words and expressions in the middle of the last century gave rise to the first edition of this work, which was published in 1877, and at that time contained about 75,000 words. In the present (fifth French and English, fourth German) edition, there has been added to each volume an appendix containing the more recent terms, particularly those connected with the development of electric science and arts. This appendix occupies about 180 pages in the French and English editions and 77 pages in the German. This work will doubtless continue to prove useful to those for whom it is apparently intended, viz., those interested in the industrial arts, applied sciences, etc. It does not, however, include the biologic sciences, simple or applied with the exception of some terms in dentistry.

Manual of Diseases of the Eye. For Students and General Practitioners. By Charles H. May, M.D., Chief of Clinic and Instructor in Ophthalmology, College of Physicians and Surgeons, Medical Department, Columbia University, New York. Fifth Edition. Revised. Illustrated. Cloth. Pp. 391. Price, $2.00 net. New York: William Wood & Co., 1907.

This popular manual is essentially a work for the general practitioner. While it does not aim to take the place of the larger text-books on ophthalmology, it covers the subject concisely and clearly. The illustrations are good.

Queries and Minor Notes

Anonymous Communications will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

OCULAR TUBERCULIN REACTION.

Staunton, Va.

To the Editor:—Can you refer me to the literature regarding the value of the ocular tuberculin reaction as an aid to the diagnosis of tuberculosis? Bertha D. Berger.

Answer.—The ocular reaction to tuberculin has been the subject of a large number of reports which have generally been favorable, but it must be regarded as still in the experimental stage. The literature is extensive, the following being a list of the principal articles as obtained from The Journal indices:

Alessandri, G.: Ocular Reaction to Tuberculin, *Gaz. d. Osp.*, Nov. 10, 1908; abst. in The Journal A. M. A., Jan. 4, 1908, p. 34.

Bing, H. J.: Ocular and Cutaneous Reaction to Tuberculin, *Hosp. Tid.*, Nov. 6, 1907.

Calmette, G.: Ocular Reaction to Tuberculin, *Presse méd.*, June 19, July 13, 1907.

Calmette, G.: *Lancet*, Dec. 21, 1907; abst. in The Journal A. M. A., Jan. 18, 1908, p. 243.

Calmette, G.: *Internat. Clin.*, iv, series 17.

Cohn, S.: Ocular Reaction to Tuberculin, *Berl. klin. Wchnschr.*, Nov. 25, 1907; abst. in The Journal A. M. A., Jan. 4, 1908.

Comby, J.: Diagnostic Ocular Reaction to Tuberculin in Children, *Presse méd.*, Aug. 10, 1907.

Downes, H.: Tuberculin Ocular Reaction. *Brit. Med. Jour.*, Dec. 7, 1908; abst. in The Journal A. M. A., Jan. 4, 1908, p. 76.

Eisen, P.: Ocular Reaction to Tuberculin, *Beitr. z. Klin. d. Tuberk.*, viii, No. 4; abst. in The Journal A. M. A., Feb. 8, 1908, p. 488.

Eyre, J. W. H., Wedd, B. H. and Hertz, A. F.: Tuberculin Ocular Reaction of Calmette, *Lancet*, Dec. 21, 1908; abst. in The Journal *A. M. A.*, Jan. 18, 1908, p. 242.

Falkner, E. A.: Ocular Reaction with Calmette's Tuberculin, *Australasian Med. Gaz.*, December, 1907.

Franke, E.: Ocular Reaction in Tuberculin, *Deutsch. med. Wchnschr.*, Nov. 28, 1907; abst. in The Journal A. M. A., Jan. 4, 1908, p. 82.

Hutchings, W. H.: Ocular Reaction to Tuberculosis, *Therap. Gaz.*, December, 1907.

Kohler, F.: Ocular Reaction to Tuberculin, *Deutsch. med. Wchnschr.*, Dec. 12, 1907; abst. in The Journal A. M. A., Jan. 18, 1908, p. 247.

Letulle, M.: Reaction of Eye to Tuberculin in Pulmonary Tuberculosis, *Presse médicale*, 1907.

Levy, F.: Ocular Reaction to Tuberculin, *Deutsch. med. Wchnschr.*, Jan. 16, 1908; abst. in The Journal A. M. A., Feb. 22, 1908, p. 652.

MacLennan, W.: Ocular Reaction to Tuberculin, *Brit. Med. Jour.*, Dec. 7, 1907; abst. in The Journal A. M. A., Jan. 4, 1908, p. 77.

Mainini, C.: Cutaneous and Ocular Reaction to Tuberculin, *München. med. Wchnschr.*, Dec. 24, 1907; abst. in The Journal A. M. A., Feb. 1, 1908.

Olmer and Terras, M.: Cutaneous and Ocular Reaction to Tuberculin, *Presse méd.*, Sept. 18, 1907, p. 593.

Plehn, A.: Ocular Reaction to Tuberculin, *Deutsch. med. Wchnschr.*, Feb. 20, 1908; abst. in The Journal A. M. A., March 28, 1908, p. 1085.

Rosenberg, A.: Ocular Reaction to Tuberculin, *Berl. klin. Wchnschr.*, Jan. 27, 1908.

Schenck, E.: Ocular Reaction to Tuberculin, *Deutsch. med. Wchnschr.*, Jan. 9, 1908.

Schroer, H.: Value of Cutaneous and Ocular Reaction to Tuberculin, *Lancet-Clinic*, Jan. 11, 1908.

Smithies, F., and Walker, R. E.: Calmette's Ophthalmic Reaction to Tuberculin, The Journal A. M. A., Jan. 25, 1908, p. 259.

Stadelmann, E.: Ocular and Cutaneous Reaction to Tuberculin, *Deutsch. med. Wchnschr.*, Feb. 13, 1908; abst. in The Journal A. M. A., March 21, 1908, p. 1000.

Stoll, O.: Ocular Reaction to Tuberculin, *Cor.-Bl. f. Schweiz. Aerzte*, Jan. 15, 1908.

Thiis, K.: Ocular Reaction to Tuberculin, *Norsk Mag. f. Laegevidenskaben*, January, 1908.

Webster, J. S., and Kilpatrick, J. A.: One Hundred and Twenty-one Cases Tested with Tuberculin, *Brit. Med. Jour.*, Dec. 7, 1907; abst. in The Journal A. M. A., Jan. 4, 1908, p. 76.

Wiens, Günther and Klieneberger: Cutaneous and Ocular Reaction to Tuberculin, *München. med. Wchnschr.*, liv, No. 52, p. 2581; abst. in The Journal A. M. A., Feb. 1, 1908, p. 411.

Wolff-Eisner, A.: Ocular and Cutaneous Diagnosis of Tuberculosis, *Beiträge z. Klinik d. Tuberkulose*, ix, No. 1; abst. in The Journal A. M. A., March 7, 1908, p. 806.

Zaniboni, B.: Ocular Reaction to Tuberculin, *Policlinico*, Jan. 5, 1908; abst. in The Journal A. M. A., Feb. 8, 1908.

DOSE OF DIGITALIN.

Kalamazoo, Mich., May 1, 1908.

To the Editor:—I had occasion to order some digitalin recently and find the greatest discrepancy as to dosage. Merck gives the dose as from 1/10 to ½ grain, while Wood's "Therapeutics" gives absolutely no dosage, saying simply that a dose of "1/9 grain has been recovered from." I see now that in a little note, it gives 1/50 grain as a dose, but adds that "there is no sufficient reason for its employment." Will you let me know something about it? E. J. Bernstein.

Answer.—The chemistry of digitalis is after much investigation still somewhat uncertain. The drug contains several substances of the nature of glucosides which it is difficult to isolate in a pure condition. Hence the preparations put on the market are seldom pure and in the case of the pure principles it can not be said that any one of them represents the therapeutic virtues of digitalis in their entirety.

The preparation known as digitalin is on the market commonly in two forms—the German and the French. The German consists of a mixture of the principles found in digitalis and has considerable use in Germany. It is soluble in water and may be given in doses varying from 1/50 to 1/32 grain and this may be increased with safety to ⅛ grain as it has been shown by Arnold and H. C. Wood, Jr., that ¼ of a grain is about equivalent to 15 minims of tincture of digitalis. The French digitalin which is official in the French pharmacopeias is insoluble in water and is given in much smaller dosage beginning with 1/250 grain and increasing rapidly to 1/40 grain a day the maximum daily dose being 1/30 of a grain. In addition to these two forms, Merck lists a crystallized digitalin which is said to have no physiologic action on the heart.

German digitalin appears to be a mixture of digitonin with a much smaller amount of digitalein, crystallized digitalin, and the *digitalinum verum* of Kiliani. Digitonin is said to have an action similar to that of saponin which is antagonistic to that of digitalis. This may explain why the dose of the German preparation is so much larger than that of the French preparation. The French digitalin is believed to be composed mostly of a glucoside similar to digitoxin. Digitoxin is the most poisonous principle contained in digitalis and appears to have an action on the circulation similar to that of the crude drug. It should not be given in doses larger than 1/240 grain to begin with, and this may be cautiously increased to 1/60 as a maximum. Digitalein (not digitalin) is a diuretic and heart tonic; the dose is from 1/64 to 1/30 grain from two to four times a day.

Since the action of these supposed active principles is so uncertain, it is probably better at present to use the official preparations of digitalis itself.

ACTION OF ALKALIES ON CALOMEL.

Sheboygan, Wis., April 29, 1908

To the Editor:—When a medical student, I was warned not to administer calomel and lime water together for fear of the formation of mercuric chlorid (corrosive sublimate). I was considerably concerned some time ago on learning that the mother of one of my little patients had given him calomel and milk of magnesia together but fortunately the combination did no harm. What reaction takes place in this case and how great is the danger of the formation of mercuric chlorid? S.

Answer.—Mercurous compounds are decomposed by alkalies, such as sodium, potassium, calcium or magnesium hydroxid with formation of mercurous oxid which latter readily decomposes into metallic mercury and mercuric oxid. Mercuric oxid dissolves in hydrochloric acid with formation of mercuric chlorid. On these changes the reputed danger of the administration of calomel and lime water is based. Against the occurrence of these reactions operates the fact that calomel is very insoluble and that hence alkalies do not readily act on it. Second, that when alkalies are administered the acid in the stomach is neutralized and hence can not dissolve the mercuric oxid. While calomel and an alkali should not be administered simultaneously it is probable that the danger of such administration has been overestimated.

FORMULA OF HARRINGTON'S SOLUTION.

YORKTOWN, TEXAS, May 6, 1908.

To the Editor:—Please give the formula of Harrington's solution.

ROBERT WESTPHAL.

ANSWER.—Harrington's solution consists of commercial alcohol (94 per cent.), 640 c.c.; hydrochloric acid, 60 c.c.; water, 300 c.c.; corrosive sublimate, 0.8 gm. It is intended for hand disinfection. The hands and arms should first be thoroughly washed with sterile soap and hot water and then bathed in the solution for half a minute or longer.

COUCHEE COUCHEE AS A MEDICAL SUBJECT.

NEW YORK, May 7, 1908.

To the Editor:—Permit me to add to your editorial, April 25, on "Medical Nomenclature," a new curiosity in medical language, the word "gastrouyorrhea," which I found on the program of the American Gastro-Enterological Association, which is to meet in Chicago, next June. Translated, it is "running away of gastric muscles" suggesting some kind of *"danse de ventre"* first introduced in this country at the great World's Fair in Chicago.

A. ROSE.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending May 16, 1908:

Baker, F. C., captain M. C., ordered to Ft. Moultrie, S. C., for temporary duty during army and militia defense exercises, June 18 to 28.

Koerper, C. E., captain M. C., granted leave of absence with permission to visit the United States, to sail from Havana May 22, and to sail from Newport News, returning June 15.

Ashford, B. K., captain M. C., relieved from duty at Washington Barracks, D. C., about July 1, and ordered to San Juan, P. R., for duty.

Rafferty, O., major M. C., when relieved from duty at San Juan, P. R., ordered to Ft. Wayne, Mich., for duty.

Raymond, H. I., major M. C., ordered to Washington Barracks, D. C., for treatment at the general hospital.

Vedder, E. B., captain M. C., granted leave of absence for four months.

Deshon, G. D., major M. C., relieved from duty and station at Ft. Des Moines, Iowa, and assigned to station and duty at the Army and Navy General Hospital, Hot Springs, Ark.

Whinnery, J. C., dental surgeon, ordered to Ft. Stevens, Oregon, and Ft. Columbia, Wash., for temporary duty.

Hussey, S .W., dental surgeon, ordered to Ft. Assiniboine, Mont., for temporary duty.

Rhoades, R. H., dental surgeon, granted leave of absence for four months, about June 1.

Gunckel, G. I., dental surgeon, left Ft. Barrancas, Fla., for duty at Key West Barracks, Fla.

Hussey, S. W., dental surgeon, left Ft. Yellowstone, Wyo., for duty at Ft. William Henry Harrison, Mont.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending May 16, 1908:

Dennis, J. B., surgeon, detached from the *South Dakota* and ordered to the *Virginia*.

Lowndes, C. H. T., surgeon, detached from the *Virginia* and ordered to the *South Dakota*.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended May 13, 1908:

Kerr, J. W., asst.-surgeon-general, granted leave of absence for 15 days, to be taken en route between Chicago and Washington, D. C.

White, J. H., surgeon, detailed to represent the service in the Section on Hygiene and Sanitary Science, of the American Medical Association, to be held in Chicago, June 2-5, 1908.

Rosemau, M. J., surgeon, detailed to represent the service in the Section on Pathology and Physiology, of the American Medical Association, to be held in Chicago, June 2-5, 1908.

Mathewson, H. S., passed asst.-surgeon, granted leave of absence for one month, from May 15, 1908.

Corput, G. M., passed asst.-surgeon, granted leave of absence for 10 days, from May 11, 1908.

Hamilton, H. J., acting asst.-surgeon, granted leave of absence for 9 days, from May 10, 1908.

Reimer, H. B. C., acting asst.-surgeon, directed to proceed from Boston to New York for special temporary duty, on completion of which to rejoin his station.

Royster, W. L., acting asst.-surgeon, granted leave of absence for 4 days, from May 7, 1908, under Paragraph 210, Service Regulation.

Walkley, W. S., acting asst.-surgeon, granted leave of absence for 10 days, from May 18, 1908.

BOARDS CONVENED.

A board of medical officers was convened to meet at Port Townsend, Wash., for the purpose of making a physical examination of an officer of the Revenue-Cutter Service. Detail for the board: Surgeon W. G. Stimpson, chairman; Acting Asst.-Surgeon R. Lyall, recorder.

Boards of medical officers were convened to meet on May 11, 1908, for the purpose of making physical examination of applicants for the position of cadet engineer in the Revenue-Cutter Service, as follows: At New York: Passed Asst.-Surgeon, J. A. Nydegger, chairman; Acting-Asst.-Surgeon F. Mahoney, recorder. At Baltimore: Surgeon: L. L. Williams, chairman; Passed Asst-Surgeon J. T. Burkhalter, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended May 15, 1908:

SMALLPOX—UNITED STATES.

Alabama: Mobile, city and county, April 1-30, 17 cases.

California: Los Angeles, April 11-18, 1 case; San Francisco, April 18-25, 9 cases.

District of Columbia: Washington, April 25-May 2. 2 cases.

Illinois: Danville, April 26-May 3, 3 cases; Galesburg, April 25-May 2, 1 case; Rockford, 1 case; Springfield, April 23 30, 5 cases.

Indiana: Anderson, April 23-30, 1 case; Indianapolis, April 26-May 3, 4 cases, 1 death; Lafayette, April 27-May 4, 1 case; Muncie, April 4-May 4, 6 cases.

Iowa: Ottumwa, April 25-May 2, 2 cases; Sioux City, April 1-30, 17 cases; 2 deaths.

Kansas: Kansas City, April 25-May 2, 10 cases; Topeka, April 25-May 2, 2 cases; Wichita, April 25-May 2, 3 cases.

Kentucky: Henderson, April 1-30, 3 cases.

Louisiana: New Orleans, April 25-May 2, 2 cases.

Michigan: Kalamazoo, April 18-25, 3 cases; Port Huron, April 25-May 2, 3 cases; Saginaw, April 18-May 2, 4 cases.

Minnesota: Stillwater, April 23-30, 1 case.

Mississippi: Gulfport. April 24, 1 case.

Missouri: Kansas City, April 25-May 2, 18 cases; St. Louis, April 25-May 2, 1 case.

New York: New York, April 25-May 2, 1 case; Niagara Falls, 2 cases.

North Carolina: Charlotte, April 25-May 2, 1 case.

Ohio: Bucyrus, April 18-25, 1 case; Cincinnati, April 24-May 1, 8 cases.

Tennessee: Knoxville, April 25-May 2, 1 case; Nashville, 1 case.

Texas: San Antonio, April 25-May 2, 5 cases.

Virginia: Newport News, April 1-30, 1 case.

Washington: Spokane, April 18-25, 11 cases.

Wisconsin: Beloit, April 23-May 7, 1 case.

SMALLPOX—FOREIGN.

Africa: East London, March 21-28, 2 cases.

Arabia: Aden, April 6-13, 3 deaths.

Austria: Trieste, April 4-11, 1 case, 1 death.

Belgium: Ghent, April 11-18, 2 cases.

Canada: Halifax, April 11-May 2, 3 cases.

China: Hongkong, March 7-14, 33 cases, 29 deaths; Shanghai, March 15-April 5, 11 deaths.

Ecuador: Guayaquil, April 1-11, 4 deaths.

France: Paris, April 11-18, 2 cases, 2 deaths.

Germany: General, April 11-18, 25 cases.

Great Britain: Leith, April 11-18, 1 case.

India: Bombay, March 31-April 7, 61 deaths; Calcutta, March 14-28, 51 deaths; Madras, March 28-April 3, 1 death.

Indo China: Cholen, March 21-28, 1 case.

Italy: Catania, April 16-23, 1 death; Genoa, March 1-31, 8 cases.

Japan: Kobe, March 28-April 4, 4 cases, 6 deaths; Nagasaki, March 22-29, 1 case; Osaka, March 21-28, 190 cases, 129 deaths.

Java: Batavia, March 7-April 4, 28 cases, 1 death.

Mexico: Aguas Calientes, April 19-26, 1 death; City of Mexico, March 14-21, 11 deaths.

Persia: Chiraz, April 6, epidemic; Kirmanshah, April 6, epidemic.

Portugal: Lisbon, April 6-25, 6 cases.

Russia: Libau, March 28-April 25, 9 cases, 2 deaths; Moscow, April 4-11, 17 cases, 10 deaths; Odessa. 3 cases; Riga, April 4-25, 13 cases; Warsaw, March 21-28, 3 deaths.

Switzerland: Zurich, April 1-18, 5 cases.

Turkey: Bagdad, Feb. 28-April 4, 149 cases, 21 deaths.

YELLOW FEVER.

Brazil: Manaos, April 4-11, 1 case, 1 death; Para, April 11-18, 3 cases, 2 deaths.

Ecuador: Guayaquil, April 4-11, 4 deaths.

CHOLERA—INSULAR.

Philippine Islands: Manila, March 7-14, 2 cases, 2 deaths.

CHOLERA—FOREIGN.

India: Bombay, March 31-April 7, 1 death; Calcutta, 456 deaths; Madras, March 21-April 3, 9 deaths; Rangoon, March 21-28, 10 deaths.

PLAGUE.

China: Hongkong. March 7-14, 2 cases, 2 deaths.

Ecuador: Guayaquil, April 4-11, 49 deaths.

Egypt: General, Jan. 1-April 23, 502 cases, 309 deaths; Alexandria, Jan. 1-April 23, 9 cases, 5 deaths.

Japan: March 18-April 4, 107 cases, 82 deaths.

India: Bombay, March 31-April 7, 491 deaths; Calcutta, March 14-28, 219 deaths; Rangoon, March 21-28, 27 deaths.

Japan: Osaka, March 21-28, 1 case, 1 death.

Peru: General, March 28-April 4, 53 cases, 27 deaths; Callao, March 28-April 4, 2 cases, 1 death; Lima, March 28-April 4, 3 cases, 1 death.

Miscellany

HAARLEM OIL.

How a Nostrum Vendor in Olden Times Used Methods Akin to Those of To-day.

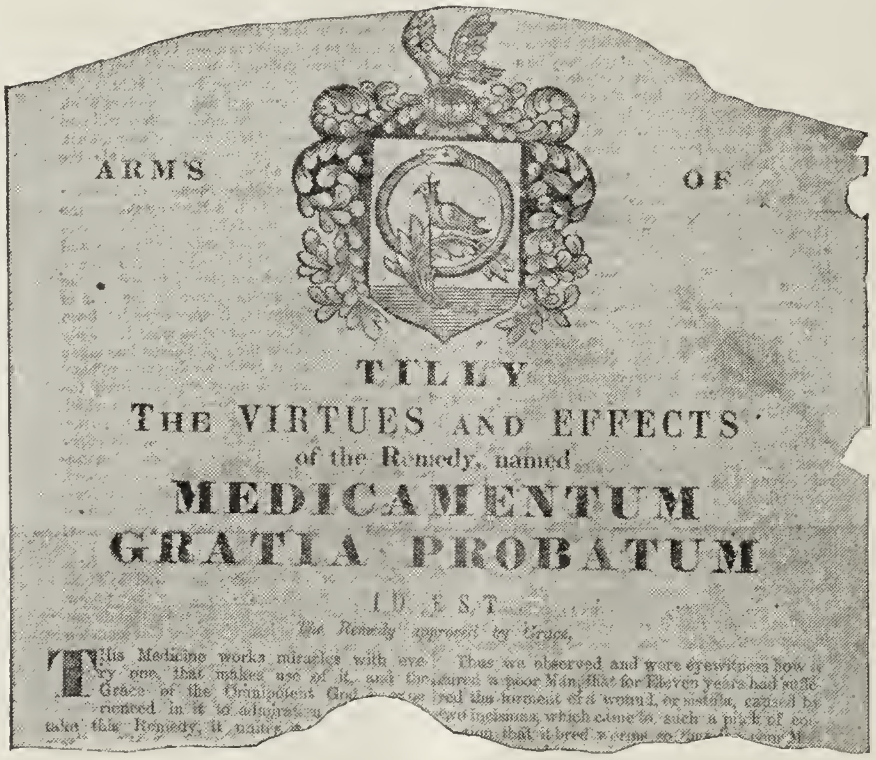
It is interesting to note the close similarity between the methods and claims of nostrum mongers of to-day and of those of a hundred years ago. A circular advertising Haarlem Oil (at that time a secret remedy) the heading to which is here reproduced, contains the embryonic elements of twentieth century "patent medicine" advertising. The advertisement starts out in the approved style with a good strong testimonial —it is, so says the circular, *Medicamentum Gratia Probatum*, the Remedy Approved by Grace. While the more modern Peruna finds difficulty in obtaining testimonials from any source higher than the United States Senate, Haarlem Oil seems to have been in communication with heaven itself.

How familiar does the opening sentence sound:

"This Medicine works miracles with everyone that makes use of it. . . . Thus we observed and were eyewitnesses how it cured a poor Man that for Eleven years had suffered the torment of a wound or fistula caused by two incisions, which came to such a pitch of corruption that it bred worms, so that the poor Man casting from his Urine such a bad smell, he became very troublesome: . . . it is to be admired how much Gravelly Stone came out of the same wound. . . . All whosoever doubts of this truth may examine the same Invalid, by name Adolph Cornelisz, Jonkhout."

Allowing for the difference in time and locality, how Perunaese in style and diction this reads. Farther along we come to the inevitable stereotyped claim for omnipotent therapeusis:

"It is good for all Bruises in the hands or feet, pains of the Reins, Thickness of Blood, all Black and Blue Spots, all kinds of Fevers, and Indisposition of the stomach, Liver, Loins or Lungs, Asthma, Shortness of Breath, Cough, inward or outward sores and Hysterical pains; it advances the Mences and facilitates the Urine and Stool. . . . It cures the Feary, the Dropsy, the French disease and Kills the Worms."


ARMS OF
TILLY
THE VIRTUES AND EFFECTS
of the Remedy, named
MEDICAMENTUM
GRATIA PROBATUM
ID EST
The Remedy approved by Grace,

From an old-time nostrum circular.

Could Lydia Pinkham in her palmiest days have done more? The grouping of liver, loins and lungs, while subjecting one's anatomic sense to a strain, leaves nothing to be desired as an example of alliterative diction. Like most of its class, its superiority to the physician's remedies is evidenced as follows:

" . . . several Disorders of twenty to thirty years' standing which were supposed incurable and given up by the Physicians, nevertheless were miraculously cured by the virtue of this Remedy."

Naturally, such an invaluable preparation would be imitated and the medicine-buying public is warned against substitutes and "worthless imitations" in the following ingenuous language:

"I find no Remedy for those that follow bad Council" [counsel?] "or advice; nor for those that do not like Medicine; much less for those that seem too delicate in taking it."

As some of the essential qualities of Haarlem Oil are its unpleasant odor and its even worse taste, the latter admonition seems necessary. The whole circular shows how little actual progress we have made in rising above the psychic effect of a speciously worded advertisement. Change the language to twentieth century style and it would answer to advertise any one of the hundreds of cure-alls on the market to-day.

Hysteria.—A recent meeting of the French Neurologic Society was devoted to a discussion of hysteria, representing a supplementary session of the last annual congress of neurologists. The speakers were limited to expression of their views on the following five questions: 1. In the clinical picture of hysteria as a whole, is there not some special group of symptoms which may be exactly reproduced by suggestion and which may vanish under the influence of suggestion or persuasion alone, especially certain varieties of convulsive seizures, paralyses, contractures, anesthesias, paresthesias, disturbances in the senses and speech, and in the respiratory and digestive systems, etc.? 2. If the existence of such a group is admitted, is it necessary and wise to give this group a name? If so, is "pithiatism" an appropriate term. 3. Are the so-called hysteric stigmata the result of some unconscious suggestion, generally of medical origin? 4. Is it possible that these stigmata can develop without the influence of suggestion? Can they develop spontaneously under the influence of some still unknown factor? 5. Can suggestion or persuasion have an influence on the tendon, superficial and pupil reflexes? On the trophic and circulatory functions and secretions and on the temperature? 6. If it is admitted that suggestion or persuasion has no action on these phenomena, is it possible that there is any connection between them and the phenomena mentioned in the first question? If this connection exists, should it be regarded as causal or independent, or merely an association or coincidence? These six questions were discussed by the leading neurologists of France, the aim being to gather and correlate facts and opinions without attempting a general review by any one person. In a summary of the proceedings given in the *Tribune Méd.*, April 25, it was stated that Babinski's views were those generally favored by the speakers, especially in respect to the lack of any causal relation between suggestion and the development of trophic disturbances—none of the members present having any actual experience with such cases although familiar by hearsay.

Achalme's Bacillus.—Thiroloix, *Bull. de la Soc. de l'Internat. de hôp. de Par.*, January, 1908, offers the following as the conclusions deduced from his study of the bacteriology of acute articular rheumatism: 1. Achalme, Thiroloix, Carrière, etc., have determined *in situ* the same infectious agent in the fundamental lesions of acute articular rheumatism. 2. Thiroloix, Achalme, de Bettencourt, Savtchenko, Melkich, Carrière and G. Rosenthal have isolated in the blood of rheumatic patients the same microbe, the bacillus of Achalme. 3. Thiroloix and Carrière have experimentally produced by culture inoculation of young rabbits the most striking symptoms of acute rheumatism: edematous endocarditis and proliferative and suppurative endocarditis, and exudative arthritis. The pathogenic causal rôle of Achalme's bacillus in acute articular rheumatism is probable, if not certain. But it is necessary to add that this bacillus is banal, widespread in nature and telluric. It only acquires its rheumatic specificity in certain persons and under conditions that need still to be determined. It is one of a group of bacilli that plays a part in the production of a number of disorders, it shares the ubiquity of the streptococcus, pneumococcus and staphylococcus and it may play a similar extensive part in pathology. Its study is incomplete, but promises great interest for those who will undertake it.

Pure Food Insurance.—A rather novel hygienic measure is being considered by the health officials of Montreal, viz., the starting of a pure food insurance company. The proposition is to have the large, and presumably also the small, dealers use a stamp guaranteeing the purity and wholesomeness of such food products as bear the stamp, which will be an insurance policy, the insuring party agreeing to pay ten times the amount paid by the customer in case the articles are found not as guaranteed. For this protection the customer is to pay a small fee annually (50 cents is the amount stated in the article from which we get the information). There may be communities where such insurance against fraud in foods and other necessities, given by a private company financially duly interested, might be of service in a hygienic way. In this country our national pure food law, supplemented by properly enforced good local or state enactments certainly ought to be sufficient to prevent serious food adulteration.

Ocular Tuberculin Reaction.—M. R. Castex of Buenos Ayres applied the diagnostic instillation of tuberculin in 400 cases and reports in the *Semana Medica*, March 19, his extremely favorable verdict. He found it harmless and reliable not only for diagnosing the disease in adults and children, but also for determining the definite recovery under treatment. In surgical tuberculosis also, he says, it reveals the presence of other unsuspected foci, and it proves that infants born of tuberculous mothers are free from inherited taint. In psychiatry it not only allows the classification of the tuberculous insane but suggests the etiology of certain forms of insanity. In general practice the ocular reaction is proving an important aid in the prophylaxis of tuberculosis in infected families, barracks, etc. Finkelstein recently tabulated in the *Russky Vrach*, April 12, the results reported by twenty-one writers which show that in 768 tuberculous individuals the findings were positive in all but 103, while in 1,106 supposedly non-tuberculous they were negative in all but 113.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Phenomenal Krauss and the Federal Authorities.

The *Journal of the Missouri State Medical Association*, May, contains an editorial regarding "Phenomenal" Krauss, who, it appears, has been arrested by the federal authorities, charged with misuse of the United States mail. As this is a particularly flagrant case, the editorial is quoted in full.

"R. J. ('Phenomenal') Krauss, St. Louis' most shameless medical advertiser, has been arrested by the federal authorities charged with misusing the mails. This step, we hope, marks the beginning of the end to a career which has caused all clean-minded people, lay and medical, to blush for the fair name of our city.

"Krauss' methods of advertising his business did not take the ordinary form usually followed by advertising doctors. Scorning the commonplace advertising in the regular display advertising columns of newspapers, Krauss' advertisements were written in the third person and were published in the regular news columns of the newspapers, with headlines similar to the type used for headings to legitimate news items; thus a cursory reading would leave the impression that the article was written by some person connected with the paper and that it was published as a bit of local news. The only mark in the whole article which showed it to be an advertisement was the insertion of three asterisks at the end. To the initiated this at once stamped it as advertising matter, but few indeed realized the import of these little stars, and usually, of course, they were overlooked altogether. This form of advertising should be suppressed by the newspapers. It is reprehensible at all times and is particularly obnoxious in medical advertising."

As has been demonstrated in a number of cases, the most effective way of bringing these charlatans to justice and putting a stop to their gross deceptions is bringing them to the attention of the United States post office authorities. Prosecutions for practicing medicine without license come under the jurisdiction of the state courts and are consequently first heard in the local courts, sometimes in the police tribunal. The knowledge of the law displayed by some of the judges before whom such cases have come has not been extraordinary, to say the least. In most of the states violations of the medical practice act are at most simply misdemeanors punishable by fine. Unfortunately, the great majority of people regard such an offense as a technical one and consequently little odium is attached to a conviction on such a charge. Prosecution by the federal authorities, however, is based on the use of the United States mail for fraudulent purposes, and conviction consequently stamps the offender as a common fraud, guilty of obtaining money from the people under false pretenses. Not only is such a crime punishable by imprisonment, but what is still more important, the postal authorities promptly deny the use of the mails to the culprit, so that even newspapers containing his advertisement are debarred from transmission through the mails. The result is inevitable. Denied the use of publicity and branded as a fraud, the career of the charlatan in that locality at least is ended.

Practically every advertising doctor is carrying on a fraudulent business, for if his advertising stated only the truth, he would not dupe the public. This fact has long been recognized by the profession, but has not yet been grasped by the laity. The crime is not in the advertising, which in itself would be unobjectionable, were it not accompanied by fraudulent statements. Prosecutions are much more effective and more liable to succeed if undertaken in the federal courts on charges of using the mails to defraud than if undertaken in the state courts on charges of unprofessional conduct or violation of the medical practice act.

Defeat of Chiropractic Bill in Oklahoma.

At a recent meeting of the Oklahoma County (Okla.) Medical Society, resolutions were adopted commending the position of the Oklahoma City *Times* on the "chiropractic bill," which was defeated in the state legislature. The *Times* has opposed the passage of this bill since its introduction and is entitled to much of the credit for its defeat. The following editorial appeared immediately following the defeat of the bill in the senate:

> With the killing of the chiropractic bill in the Senate Saturday by a vote of 23 to 12 when there were but 35 senators present, a light attendance, only reflects all the more credit on the medical profession of the state. For a time it seemed as if the "chiros" would gain recognition despite the vigorous fight that was made on the bill but fortunately there were enough senators to change their positions to give it the fate it deserved. It is due doubtless, more to the doctors who are members of the senate, than perhaps to any other one group of men, that this bill was killed, and it is their judgment in a case like this that should be recognized first of all. It is simple enough to mislead those who have absolutely no knowledge of medicine or anatomy, but to offer such a bill as that which gives recognition to such a practice and hope for reputable physicians to recognize it, is too absurd to consider.
>
> If we were disposed to enter into detail and discuss the chiropractic college that is doing business on Broadway, we could say no more than has been said by the doctors on the floor of the senate.
>
> If a person is willing to place himself in the hands of such practitioners and whip his conscience into believing that the rubbing of the spine and other portions of the anatomy is a permanent cure, then it is none of our concern if the undertaker gets him.
>
> When it requires four long, tedious years for a medical student, to get a license to practice, it looks rather discouraging for the patient's future when these chiros, after a few weeks' course, are full-fledged practitioners and ready to "lay on the hands" for any disease from epilepsy and appendicitis to tetanus and phthisis.

The common sense and good judgment shown in the above editorial is commendable. This evident cooperation and mutual confidence between the press and the medical profession is gratifying and encouraging as an indication of satisfactory legislation in Oklahoma in the future.

A New Board of Health Bulletin.

The first number of the *Bulletin of the Alabama State Board of Health*, just received, is a well-printed pamphlet of twenty-four pages, containing a salutatory, setting forth the objects of the board in issuing the bulletin; a list of the state, county and municipal health officers; an explanation of the scheme of organization as it exists in Alabama, and a number of interesting short articles on the work of the bacteriologic and pathologic laboratory; vital and mortuary statistics; public health laws, and a summary of the law regulating the practice of medicine in Alabama.

There is no state in which the public health authorities are in as close touch with the medical profession as in Alabama. In fact the State Medical Association is the State Board of Health, and the county associations constitute the county boards of health. The legislature of 1907 has supplied the means heretofore lacking for carrying out many of the plans of the state board.

The object of the bulletin, as announced in the first number, is to keep the members of the profession informed as to what the State Committee of Public Health and the State Board of Medical Examiners are doing and to bring all parts of the public health system of the state into close cooperation. The first number is most creditable, and additional issues will without doubt be equally interesting.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES.

DR. JOHN H. BLACKBURN, DIRECTOR.
Bowling Green, Kentucky.

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Ninth Month.

GASTROENTERIC DISEASES OF INFANCY AND CHILDHOOD.

First Weekly Meeting.

- Digestion in Infancy and Childhood.
  - Stomach, Anatomy and Physiology.
  - Intestine, Anatomy and Physiology.
- Acute Gastric Indigestion.

Second Weekly Meeting.

- Acute Gastritis.
- Chronic Gastric Indigestion.
- Acute Intestinal Indigestion.

Third Weekly Meeting.

- Acute Gastroenteric Infection.
  - Etiology and Pathology.
  - Symptomatology.
  - Cholera Infantum.

Fourth Weekly Meeting.

- Acute Ileocolitis.
  - Etiology and Pathology.
  - Symptoms.
- Chronic Ileocolitis.

Monthly Meeting.

- Artificial Feeding of Infants.
- Acute Enterocolitis. Pathology and Treatment
- Cholera Infantum.

First Weekly Meeting.

DIGESTION IN INFANCY AND CHILDHOOD.

Stomach, Anatomy and Physiology.

Shape, size, position, musculature, at birth, at one year. Capacity, by months, up to one year. Gastric juice; constituents, reaction. Changes occurring in human milk, in cow's milk, duration of gastric digestion. Bactericidal action of gastric juice. Elements absorbed from stomach.

Intestine, Anatomy and Physiology.

Size, length, position (a) of small intestine, (b) of large intestine.

Intestinal Digestion: Changes in proteids, active agent. Carbohydrates at birth, six and twelve months. Changes in fats. Action of bile, of succus entericus. Elements, proportion of each, absorbed from small intestine. Absorption from large intestine.

Intestinal Bacteria: *Bacterium lactis aerogenes, Bacillus coli communis;* effect of each.

Feces: Color, consistency, odor, reaction, composition (a) of meconium, (b) milk feces.

Acute Gastric Indigestion.

Causes: Improper diet in quality and quantity, changes in diet, weaning. Depressing conditions, heat, cold, dentition, onset of acute infections.

Symptoms: Food stagnation, vomiting, pain, depression, stupor, temperature, weak, rapid pulse, diarrhea. Usual course. Prognosis.

Treatment: (a) Empty stomach, (b) secure rest to it. Stomach washing. Dietetics. Medicinal treatment.

Marriages

Robert B. Hopkins, M.D., to Miss Christina Nelson, both of Milton, Del., May 2.

Howard K. Hill, M.D., to Miss Ruth Clay, both of Philadelphia, April 29.

George L. Chapman, M.D., to Miss Mary J. Minor, both of Indianapolis, April 28.

Edgar H. Briscoe, M.D., to Miss Grace White, both of Carrollton, Mo., April 29.

George H. Riley, M.D., Bloomdale, Ohio, to Miss Ella Green of Aurora, Ill., April 25.

Orlando H. Petty, M.D., to Miss Marcia H. Mellersch, both of Philadelphia, April 18.

Wright S. Sudler, M.D., Baltimore, to Miss Marietta McClure, in Baltimore, May 2.

Alfred C. Baxter, M.D., Springfield, Ill., to Miss Ethel J. Mitchell of Beacon, Mich., April 15.

George M. Fleming, M.D., Raton, N. M., to Mrs. Katherine A. White of Denver, Colo., April 30.

Grove W. Harris, M.D., Ferguson, Iowa, to Miss Clara Bess Ketchum of Marshalltown, Iowa, April 29.

Andrew Wray Barkley, M.D., to Miss Olive Juanita Whirick, both of Allegheny, Pa., April 29.

Alexander Henderson McLeish, M.D., Seattle, Wash., to Miss Adele Lawrie, at Tacoma, Wash., April 15.

Walter W. Ellis, M.D., Delaware City, Del., to Miss Mary Elizabeth Clark of Wilmington, Del., April 22.

Richard Charles Monahan, M.D., Butte, Mont., to Miss Marie Maguire of Ogden, Utah, at Salt Lake City, May 4.

George Humbley Fay, M.D., East Auburn, Cal., to Miss Orenda Ward of Auburn, Cal., at Somerset Orchard, near Newcastle, Cal., May 1.

Deaths

Thomas Edgar Schumpert, M.D. University of Louisville, Medical Department, 1885; a member of the American Medical Association; formerly president of the Louisiana State Medical Society and Shreveport Medical Society; first vice-president of the Tri-State Medical Society of Arkansas, Louisiana and Texas; a member of the International Association of Railway Surgeons; proprietor of and surgeon to the Shreveport Sanitarium; for seven years surgeon in charge of the Shreveport Charity Hospital; surgeon to all the railways centering in Shreveport; a member of the Louisiana State Board of Health and one of the most prominent surgeons of the state; died at his home in Shreveport, May 16, from hemorrhage due to intestinal perforation in the course of an attack of typhoid fever.

Martin L. Adams, M.D. Vanderbilt University, Medical Department, Nashville, Tenn., 1881; a member of the Washington State Medical Association and King County Medical Society; for 10 years health officer of Ballard, and then for 10 years assistant health officer of Seattle, Wash.; one of the best-known practitioners of Ballard; died at the Seattle General Hospital, May 1, from septicemia contracted while treating a patient a week before, aged 53.

Herbert Henry Lyons, M.D. Medical School of Harvard University, Boston, 1881; a member of the American Medical Association, Fitchburg (Mass.) Society for Medical Improvement and Fitchburg Medical Club; physician at the Worcester County Jail; United States pension examining surgeon; city physician and a member of the staff of the Burbank Hospital; died at his home in Fitchburg, May 6, from pneumonia, aged 52.

Edward Dodd, M.D. New York University Medical College, New York City, 1862; who served in the Army during the Civil War as an assistant surgeon, and was obliged to resign on account of ill health, and never afterward practiced, but resided at North Babylon, N. Y.; died in the Jackson Health Resort, Dansville, N. Y., April 27, from chronic nephritis, after an illness of six months, aged 68.

Charles Pruden Alling, M.D. Western Homeopathic Medical College, Cleveland, 1862; assistant surgeon during the Civil War; formerly a member of the board of health of Dunkirk, N. Y., and city physician of Buffalo; afterward a practitioner of Bradford, Pa.; died at his home in Dunkirk, N. Y., May 8, after a short illness, aged 70.

Charles W. Behm, M.D. Homeopathic College, University of Michigan, Ann Arbor, 1892; Northwestern University Medical School, Chicago, 1900; chief of the bureau of disinfection, Chicago health department; a member of the Illinois State Medical Society; died at his home in Chicago, May 16, from cancer of the liver, aged 38.

Martin Frederick Johnson Cameron, M.D. Baltimore University School of Medicine, 1890; formerly of Oil City, Pa., and said to have been a member of the faculty of Milwaukee Medical College for several years; died suddenly, May 3, at his office in Westernport, Md., from pneumonia, aged 39.

Louis De Barth Kuhn, M.D. University of Pennsylvania. Department of Medicine, Philadelphia, 1854; formerly in the Marine-Hospital Service and later a practitioner of Reading, Pa.; a member of the staff of St. Mary's Hospital, Brooklyn, N. Y.; died at his home in that city, May 7, aged 78.

Thomas Lewis Edwards, M.D. Jefferson Medical College, Philadelphia, 1894; a member of the State Medical Society of Wisconsin and Grant County Medical Society; for many years town health officer; died at his home in Cuba City, March 26, from cancer of the stomach, aged 43.

David M. Ray, M.D. University of Louisville, Medical Department, 1867; a member of the State Medical Association of Texas and Grayson County Medical Society; assistant surgeon in the Confederate service during the Civil War; died at his home in Whitewright, May 7, aged 68.

Henry C. Markel, M.D. Jefferson Medical College, Philadelphia, 1902; a member of the Medical Society of the State of Pennsylvania and York County Medical Society; died at his home in Codorus, Pa., May 8, from pleuro-pneumonia, after an illness of two weeks, aged 30.

Hiram J. Rowell, Jr., M.D. Medico-Chirurgical College of Kansas City, Mo., 1900; a member of the New Mexico Medical Association and Maricopa County Medical Society; physician for the Grant Bros. Construction Company on the Belen cut-off; died at Belen, May 7, aged 30.

James F. Draper, M.D. Geneva (N. Y.) Medical College, 1846; a member of the medical societies of the State of New York and County of Ontario; of Victor, N. Y.; died at the home of his son in Kansas City, Mo., May 4, after an illness of five months, aged 82.

James W. Phillips, M.D. University of Missouri, Medical Department, St. Louis; a veteran of the Mexican and Civil wars; a member of the twenty-sixth and twenty-seventh General Assemblies of Illinois; died at his home in Oklahoma City, Okla., April 18, aged 81.

Thomas Henry Abbott, M.D. Medical College of the State of South Carolina, Charleston, 1855; a member of the South Carolina Medical Association and Dorchester County Medical Society; died at his home in St .George, S. C., May 4, after a long illness, aged 75.

Merritt Hitt, M.D. University of Southern California College of Medicine, Los Angeles, 1890; a member of the American Medical Association and formerly a practitioner of Chicago; died at his home in Los Angeles, Cal., May 10, after an illness of one year, aged 40.

Tisdale E. Linn, M.D. Pulte Medical College, Cincinnati, 1888; and later demonstrator of anatomy and professor of orthopedic surgery in that institution; for 15 years a resident of Asheville, N. C.; died at his home, May 4, after a long illness, aged 39.

Columbus Nathan Udell, M.D. Keokuk Medical College,; Kentucky School of Medicine, Louisville, 1868; formerly of Blakesburg, Iowa; died at his home in Valparaiso, Ind., April 29, a week after an operation for urethral stricture, aged 66.

George Schlereth, M.D. College of Physicans and Surgeons in the City of New York, 1874; for several years house physician at St. Francis' Hospital, New York City; died from pneumonia at his home in New Rochelle, N. Y., May 6, aged 63.

John H. Ruddell, M.D. University of Georgia Medical Department, Augusta, 1858; surgeon of the Seventh Georgia Cavalry, C. S. A., throughout the Civil War; died at his home in Augusta, Ga., May 7, after an illness of six weeks, aged 70.

Robert R. McCandliss, M.D. Miami Medical College, Cincinnati, 1866; surgeon of the One Hundred and Tenth Ohio Volunteer Infantry during the Civil War; for 37 years a resident of Emporia, Kan.; died at his home, May 5, aged 81.

Thomas Withrow Wier, M.D. Medical College of the State of South Carolina, Charleston, 1852; a Confederate veteran; died at his home in Reno, S. C., April 26, from the effects of influenza, after an illness of six months, aged 77.

Joseph W. Clift, M.D. Harvard University Medical School, Boston, 1862; a surgeon during the Civil War and a member of the Fortieth Congress; died May 2, at his home, "Cliftwood," near Rock River Falls, N. Y., aged 69.

Thomas S. Harper, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1843; one of the founders of Howard Hospital, Philadelphia; died at his home in that city, April 27, after a long illness, aged 87.

Edgar Theodore Billmyer, M.D. Physio-Medical College of Cincinnati, 1865; for several years school trustee; died at his home in Cherry Valley, Ill., May 9, from senile debility, after an illness of several months, aged 75.

Albert Bassett Smith, M.D. Medical College of Ohio, Medical Department University of Cincinnati, 1878; formerly of Des Moines, Iowa; died at his home in Norwalk, Cal., recently, aged 73.

Daniel Joseph O'Sullivan, M.D. Bellevue Hospital Medical College, New York City, 1889; died at his home in Lawrence, Mass., May 8, after a long illness, aged 50.

Gustavus A. Henrich, M.D. Marion-Sims College of Medicine, St. Louis, 1899; died at his home in New Athens, Ill., May 9, from throat disease, aged 32.

Thomas James McCorkle, M.D. Medical College of Alabama, Mobile, 1883; died at his country home near Faunsdale, May 4, after an illness of two days.

John Wills, M.D. Cleveland Medical College, Medical Department of Western Reserve College, Cleveland, 1863; of Beecher City, Ill.; died May 3, aged 84.

Foster Walter Greenhalge (Certificate, Tenn.), 1889; for more than 70 years a resident of Nashville; died recently.

Society Proceedings

COMING MEETINGS.

American Medical Association, Chicago, June 2-5.

Rhode Island Medical Society, Providence, May 26.
Connecticut State Medical Society, New Haven, May 27-28.
American Pediatric Society, Delaware Water Gap, May 26-28.
American Gynecological Society, Philadelphia, May 26.
American Laryn., Rhin. and Otol. Society, Pittsburg, May 28-30.
American Academy of Medicine, Chicago, May 30-June 1.
American Association of Medical Examiners, Chicago, June 1-2.
American Gastro-Enterological Association, Chicago, June 1-2.
American Proctologic Society, Chicago, June 1.
American Urological Association, Chicago, June 1.
Nat. Confed. of State Med. Examining, etc., Board, Chicago, June 1.
American Orthopedic Association, Chicago, June 4-6.
Massachusetts Medical Society, Boston, June 9-10.
American Climatological Association, Boston, June 9-11.
Maine Medical Association, Bangor, June 10-11.
Indiana State Medical Association, French Lick, June 18-19.
Medical Society of New Jersey, Cape May, June 18-20.
Medical Society of State of North Carolina, Winston, June 16-19.
Michigan State Medical Society, Manistee, June 24-25.
State Medical Society of Wisconsin, Milwaukee, June 24-26.

AMERICAN SURGICAL ASSOCIATION.

Meeting held at Richmond, Va., May 4-6, 1908.

The President, Dr. William H. Carmalt, in the Chair.

Officers Elected.

The following officers were elected for the ensuing year: President, Dr. C. B. G. DeNancrède, Ann Arbor, Mich.; vice-presidents, Drs. A. G. Gerster, New York City, Leonard Freeman, Denver; secretary, Dr. Robert G. LeConte, Philadelphia; treasurer, Dr. Charles A. Powers, Denver; recorder, Dr. Richard H. Harte, Philadelphia.

Philadelphia was selected as the next meeting place.

Advances in Pathologic Anatomy.

Dr. W. H. Carmalt, Pittsburg, in his address as president, referred to the advance in medical science, particularly in pathologic anatomy, during the last half century, brought about especially by the greater facilities of surgical technic. The discoveries of anesthesia and asepsis paved the way to early operations and thereby at once opened a new field, giving the opportunity to early observations of pathologic processes. Instead of operations being done as a last resort to obviate impending death, they are now largely undertaken for distinctly therapeutic purposes. The local character of the initial stage of tuberculosis was cited and its transference from internal medicine to surgery remarked on; tuberculous peritonitis was cited as a striking instance. The knowledge gained of the internal secretions as shown in operations on the thyroid gland has been obtained almost exclusively by surgeons. The recent investigations on the parathyroids are instances of physiologic and pathologic advancement obtained altogether by surgical activity. The relations of pancreatitis to gall-bladder diseases and the pathology of chronic diverticulitis of the sigmoid are further instances of the debts of the pathologic anatomist to the surgeon. The establishment of fully equipped pathologic laboratories in hospitals was strongly urged and the advantages to the hospital of clinical teaching in its wards insisted on.

Reminiscences of the Early Days of the American Surgical Association, by One of Its Founders.

Dr. J. Ewing Mears, Philadelphia, spoke of the beginning of the association and placed on record some of the notable occurrences of its existence. Reference was made to its influence on surgical science in this country and of its development in the future. An account was given of the early meetings of the association and a tribute paid to its founder, Dr. Samuel D. Gross. With Drs. P. S. Conner, W. W. Keen and Solon Marks, Dr. Mears is the fourth of the survivors of the original fellows of the association. An appreciation was given of Dr. J. Collins Warren. Dr. Mears considers it an open question whether or not a fixed place of meeting would not contribute to a more serious execution of the scientific work of the association, and suggested that the selection of a permanent place of meeting might result in the erection in the city of Washington of a building suitable for this purpose. This would also provide quarters for the future accumulation of surplus volumes of the transactions and the archives of the association. A notable event which had its origin in the association was the movement resulting in the foundation of the Congress of American Physicians and Surgeons carried forward by Dr. Claudius H. Mastin. Another event of special interest was the erection of a bronze statue of the founder of the association in the city of Washington.

DISCUSSION.

Dr. Maurice H. Richardson, Boston, urged that in the discussion of the scientific papers the unfavorable as well as the favorable side should be given.

Dr. A. Vander Veer, Albany, N. Y., agreed with Dr. Mears that no other man could have done the work executed by Dr. Samuel D. Gross in the organization of the American Surgical Association.

Surgery of the Gasserian Ganglion.

Dr. Stephen H. Weeks, Portland, Me., stated that the operation for the removal of the Gasserian ganglion as a primary operation for the relief of tic douloureux is not justifiable, but that the extracranial operations on the branches of the fifth cranial nerve should be first made. These almost invariably give relief which is not infrequently permanent. The osteoplastic flap in the temporal region called the Hartley-Krause operation is the one Dr. Weeks employs. A pint of normal salt solution with an ounce of brandy should be injected into the rectum about half an hour before the operation commences. In all his operations on the brain he has used ether. In the operation the second and third divisions of the nerve are put on the stretch with the blunt hook and divided close to the foramen rotundum and foramen ovale respectively. He dissects them back to the ganglion and lifts the ganglion from its bed by making traction on the inferior maxillary nerve, having first divided the superior maxillary nerve and removed the parts of the ganglion corresponding to these various divisions, leaving untouched the first division, with its corresponding portion of the ganglion. If the first division of the nerve and its corresponding portion of the ganglion be retained there will be no danger to the eye, and the only protection needed to the eye will be a simple compress and bandage. Sometimes the dura mater is considerably torn and the cerebrospinal fluid escapes during the manipulation of the brain. Dr. Weeks has seen no bad results follow this. On the contrary, it has seemed to be an advantage, as it allows the lifting of the temporosphenoidal lobe more freely from the middle fossa, giving a better view of the ganglion and its nerves. In his last case, when the dura was dissected from the ganglion, though quite a little brain matter escaped, no unpleasant symptoms followed. The mortality of the operation thus far in his hands has been *nil.*

DISCUSSION.

Dr. A. Vander Veer, Albany, N. Y., said that several times he has done successfully the operation for removal of the Gasserian ganglion for trifacial neuralgia. Hemorrhage has always been to him an important element in this operation.

Dr. S. J. Mixter, Boston, removes the Gasserian ganglion in two stages. While the method is not so brilliant as the one-stage operation, he thinks it better for the patient.

Dr. S. H. Weeks said that he had operated four times and all the patients had recovered. In one case in which at the time of operation a small portion of the brain escaped nothing untoward followed. Later, since the writing of his paper, the patient reported that she had some difficulty in pronouncing certain names.

Acute, General Perforative Peritonitis.

Dr. John B. Murphy, Chicago, desired it to be understood that in his paper he referred to free, spreading, perforative peritonitis. He included in his paper only such cases as resulted (a) from direct communications of the alimentary canal into the free peritoneal cavity; (b) from perforations of the appendix with primary retention of the infective material in a circumscribed zone and subsequent rupture into the free peritoneal cavity, so that there was a communication from the intestine, through the appendix, and through the abscess in the free cavity. He did not include any cases of peritonitis with circumscribed abscess not communicating with the free peritoneal cavity, no matter how much pus was present in the general cavity. The cases included in the series cover a period of a little over five years since instituting his present plan of treatment, and practically all of them have been managed in identically the same way. The patients have all been operated on in public institutions, the records of which are open for inspection. There were 48 cases in all: 2 were gastric perforations, 1 duodenal, 4 typhoid, 41 appendiceal. The sixteenth and forty-sixth patients died; the first from a double pneumonia on the sixth day after the operation; the second from a mechanical ileus and strangulation of the intestine around the omentum which was adherent to an old hernial opening. There were no deaths from peritonitis *per se.* When the plan of treatment was first followed out it was believed that the recoveries were coincident. Now, however, the number is so large and the results so uniform that it must be concluded that they are the sequence of the treatment. Dr. Murphy believes that the results of the future will be uniformly good. This estimate involves the assumption that the medical profession will make early diagnoses, insist on early surgical intervention, limit its surgical procedures to the least possible handling and trauma consistent with closure of the opening and relief of pus tension, limit the anesthesia, shorten the operation, insure the continual absence of pus tension, eliminate the sepsis already in the blood, restore the blood pressure and inhibit septic absorption by position. The most important of these elements is the limitation of intestinal manipulation and exposure of the abdominal contents.

DISCUSSION.

Dr. John B. Deaver, Philadelphia, emphasized the necessity of attacking the condition early and of doing as little manipulation as possible. He has no hesitancy in reopening the abdomen for obstruction. In ten consecutive cases all the patients recovered. Short anesthesia he regards as important. He uses eserin reinforced with strychnin. In some cases there has been slight cardiac disturbance from the eserin. He has no hesitation in setting his patients up in bed. Concerning the giving of morphin, he "does not know what a hypodermic syringe looks like for the purpose of giving morphin."

Dr. A. G. Gerster, New York, within the last two years in his hospital service has abandoned methods of irrigation and mopping formerly employed and has followed the plan laid down by Dr. Murphy, with the Fowler position, and the results have been markedly improved. He has used eserin in the treatment of tympanitis following diffuse peritonitis, but is not so enthusiastic concerning the results as others are. Contributory to the improved results in the treatment of general peritonitis are the facts of improved technic, early recognition of cases and the inclusion in the group of general peritonitis of cases easily cured by proper treatment. He described a simple modification of the enemata by which the irrigating rectal injection is carried high into the rectum and after being allowed to escape, repeated. Peristalsis is thus accomplished and large quantities of gas allowed to escape. He finds it more effective than eserin and being a mechanical procedure, may be safely left in the hands of the nurse. He thinks Dr. Deaver's stand in regard to the giving of morphin an extreme one. While the excessive administration of morphin is wrong, the entire withholding of it he regards as unnecessary and cruel.

Dr. Arthur D. Bevan, Chicago, in some cases of fluid in the peritoneal cavity employs a female glass catheter, using it as a pipette, taking up the pus not only in the cul-de-sac, but in other directions. Many cases in which there is free pus and cases of duodenal ulcer in which operation is done early and in which there is a considerable amount of fluid, are regarded by him as cases in which general peritonitis has been prevented by early interference, and not as cases of general peritonitis. This obviously has a determining influence on statistics. He has found nitrous oxid gas of much value as an anesthetic. Frequently the giving of either ether or chloroform in these cases turns the scale between recovery and death. He disagrees with Dr. Murphy regarding the danger of washing out the peritoneal cavity, believing that irrigation is good surgery and that it can be done without loss of time. In the matter of drainage he favors the large cigarette drains in preference to rubber tubing.

Dr. Dudley P. Allen, Cleveland, agrees with Dr. Bevan that the washing out of septic material from the peritoneal cavity is a valuable aid in treatment. He places the patient on the side when draining, to have the aid of gravity and limits the washing to the area involved.

Dr. Joseph Ransohoff, Cincinnati, fears that if the dictum went out to the general profession that patients with free general peritonitis recover in the proportion of 44 to 3, the average practitioner would delay in seeking surgical aid with the thought in mind that if the patient did get worse he had 44 out of 47 chances of getting well. He asked Dr. Murphy in closing to state in how many of the 47 cases the operation was done after four or five days subsequent to the development of symptoms of general peritonitis and in how many cases he operated in which death seemed imminent. Dr. Ransohoff called attention to the general use of the word peritonitis, suggesting that but few understand by the term exactly the same thing. Free fluid in the peritoneum is not necessarily infected and its presence should not be regarded as evidence of peritonitis until cultures show infection.

Dr. A. T. Bristow, Brooklyn, showed a device which regulates the passage of the fluid to about 90 drops a minute in rectal irrigation.

Dr. George E. Armstrong, Montreal, has followed the teaching of Dr. Murphy in the treatment of peritonitis with marked improvement in results. He attaches great importance to induced drainage by rectal injection in the sitting position. In two cases recently under his care, with persistent vomiting and with swelling in the epigastric region, he, thinking the condition due to retromesenteric pressure on the transverse duodenum, reversed the position of the patients from the Fowler to the Trendelenburg with satisfactory results.

Dr. John C. Oliver, Cincinnati, inquired of Dr. Murphy whether his method of treatment had been applied to gunshot wounds of the abdomen, especially to cases in which injury had been inflicted several hours before operation, as while there might be an honest difference of opinion concerning the forms of peritonitis following appendicitis or perforated gastric or duodenal ulcer, all agree that the form of peritonitis following gunshot wounds is apt to be general.

Dr. James E. Moore, Minneapolis, protested against the dictum laid down by Dr. Deaver that abdominal patients should be deprived of morphin. Concerning this question he said his position was like that of the old man who, when he came to die, told his son he knew honesty was the best policy because he had tried both ways. In the beginning of his abdominal surgery he withheld morphin, but after having had an operation himself he insisted on having morphin. He has since given it to his patients and his results are improved.

Dr. Maurice H. Richardson, Boston, said that peritonitis still remains the most important disease with which he has to deal, causing more deaths in his own cases, those of his colleagues and in literature than any other disease. He referred to the evolution in treatment from the time when a man's abdomen was made to look like a colander to the present, when a small incision and very little disturbance of the abdominal viscera are the rule. In his hospital service he does not know that they use Dr. Murphy's method exactly, though they do not disturb things very much. They do not wash out. They do not wipe extensively. They do not make multiple incisions. They depend on rectal lavage, and rather than have patients toss all night, they give small doses of morphin.

Dr. John B. Roberts, Philadelphia, said that Dr. Murphy's paper disproved effectually the oft-repeated statements of operators who for years have contended that all cases of perforative appendicitis and similar lesions should be treated by an insistent search for the offending organ. Also, it has shown effectively their error in believing that patients after abdominal section or with peritonitis from perforation should be tortured by persistent immobility in the dorsal recumbent position, by absolute deprivation of water, and by the anteoperative and postoperative withholding of morphin and pain-obtunding drugs. Dr. Murphy's results thus justified those who for twenty years have contended against such surgery.

Dr. Richard H. Harte, Philadelphia, thinks it obvious that no hard and fast rules can be laid down in the treatment of peritonitis, each patient being treated rather according to the conditions found. He thinks that error sometimes exists in the use of rectal irrigation in not having the tube of sufficient size and held at a proper height to favor the ready flow of the fluid toward the bowel. He described a frame made to support the weight of the patient by the buttocks and thighs as a satisfactory method of maintaining the Fowler position. He approves the plan of having patients sit up even in the typhoid perforation cases in which the perforation occurs at the end of a long illness. He favors gauze for drainage rather than tubes.

Dr. M. L. Harris, Chicago, has tried repeatedly the principles laid down by Dr. Murphy, and his patients get well. Relative to the inquiry of Dr. Allen concerning gunshot wounds of the abdomen, he stated that he had had within a few months seventeen cases of these wounds involving the intestines in which there were from one to eight perforations. Every patient was operated on early, all were drained and all recovered.

Mr. G. B. A. Moynihan, Leeds, England. said that at the Leeds Infirmary they grouped their cases according to those occurring previous to their having learned of Dr. Murphy's treatment, and those occurring subsequently. Those of the former group they had been accustomed to lose; those of the latter usually recovered. Only in insignificant particulars do they vary from the method laid down by Dr. Murphy. They operate in the least possible time, and in drainage employ what they term the split tube. This is a large-sized rubber tube split along the wall of one side, which when in position drains along its whole length, and can collapse if pressure from tissue occurs. He takes issue with Dr. Deaver in the matter of morphin, a small dose being given in every case before the patient leaves the operating table. No house physician, however, is allowed to repeat the dose without instruction from his superior officer. They usually do not employ general anesthesia, but operate with lumbar anesthesia. An advantage of this method is the passing of abundant quantities of flatus. This makes the operation distinctly easier. The patients are placed in bed in an exaggerated Fowler position. The position is maintained by a bolster beneath the buttocks and thighs attached by straps to the head of the bed. No restraint is put on the amount of water the patient desires to take, for the nurse leaves a vessel containing water on the table beside the bed.

Dr. J. B. Murphy emphasized his positive conviction that every patient with general perforative peritonitis ought to get well if properly handled. Such handling, however, involves timely and intelligent action, and the following of definite lines to results. Answering Dr. Ransohoff's question, he said he did not have any cases four or five days old, and trusted he never would have. All of his cases were under forty hours; all cases should be under twenty-four hours, and under twelve would be better. When surgeons appreciate this fact the same results as seen in early operations for appendicitis will obtain in peritonitis. Dr. Murphy does not make the distinction made by Dr. Bevan between cases with intestinal leakage without peritoneal inflammation and those with intestinal leakage with peritoneal inflammation. The presence of a yellow creamy fluid in the peritoneum does not constitute peritonitis. There must be a perforation of the intestinal canal and a direct communication from the lumen of the canal into the free peritoneal cavity. The free yellow creamy fluid is often a conservative fluid carrying away infective organisms. The short duration of the anesthesia as brought out by Dr. Bevan he regards as important and the operation under nitrous oxid is to be desired. The forty-eight cases reported included every case of general suppurative perforating peritonitis coming under his observation and were not selected cases.

(*To be continued.*)

OHIO STATE MEDICAL ASSOCIATION.

Annual Meeting, held in Columbus, May 6-8, 1908.

The President, **Dr. Charles L. Bonifield**, Cincinnati, in the Chair.

The House of Delegates met at 11 a. m., Wednesday, May 6, 1908. Thirty-nine delegates responded to the roll call. Resolutions offered by Dr. Brand of Toledo, creating a Section on Hygiene and Sanitary Science, were referred to the Council. On motion, a committee of three was appointed by the chairman to act as a reference committee on amendments to the constitution and by-laws. The Association of Assistant Physicians of Ohio State Hospitals asked for the organization of a section on mental and nervous diseases. The Council approved this plan and appointed Dr. Brooks F. Beebe, Cincinnati, chairman, and Dr. S. P. Fetter, Gallipolis, secretary.

The treasurer's report showed a balance on hand Jan. 1, 1908, of $154.00, with total receipts of $7,787.97, and total disbursements of $7,633.59.

Legislation of the Year.

The report of the legislative committee showed that during the past session of the state legislature fourteen desirable bills had been enacted and six undesirable bills had been defeated. No undesirable bill was enacted; six good measures were lost. The bills enacted were as follows:

To regulate maternity boarding houses and lying-in hospitals; to authorize the State Board of Health to regulate the disposition of sewage and public water supplies and to protect streams against pollution; to provide county hospitals for patients suffering from tuberculosis; to authorize municipal corporations to regulate the use, control and maintenance of buildings used for human habitations; to provide against the misbranding and adulteration of food and drugs; to establish a bureau of vital statistics; to provide for the registration of all births and deaths; to restrict the selling and giving away of cocain; to prohibit the feeding of dairy slops to dairy cattle; to provide Pasteur treatment for rabies produced by a cat; to provide for county detention hospitals for the insane; to provide for a public comfort station in the state house grounds; to revise and consolidate the laws relating to the appointment, powers and duty of the State Board of Health, State Board of Registration of Ohio, Board of Pharmacy and State Board of Embalming Examiners; to petition Congress for the establishment of a national bureau of health and to provide for county hospitals. The report of the committee concluded with a discussion of the principles underlying the state regulation of the practice of medicine.

On motion, the house voted that the expenses of the secretary to the meeting of the American Medical Association in Chicago in June be paid from the general funds of the state association. A communication from the General Secretary of the American Medical Association regarding the organization of branch associations was read. On motion, such action was disapproved at this time.

Officers Elected.

The election of officers resulted as follows: President, Dr. D. R. Silver, Sidney; vice-presidents, F. F. Lawrence, Columbus; J. Eakins, Gallipolis; A. B. Walker, Canton; Harry S. Noble, St. Mary's; councilor of the fifth district, Clyde E. Ford, Cleveland; councilor of the tenth district, C. D. Mills, Marysville; member of the national legislative committee, B. R. McClellan, Xenia; committee on public policy and legislation; Dr. J. W. Clemmer, Columbus; G. H. Matson, Columbus, and W. H. Snyder, Toledo; committee on publication, C. F. Clark, Columbus, and C. S. Hamilton, Columbus.

Cincinnati was selected as the place of meeting for 1908, the time of meeting being left to the Council.

Address of Welcome.

The Ohio State Medical Association met in Memorial Hall, Wednesday morning, and was welcomed by Dr. Wells Teachnor, president of the Columbus Academy of Medicine, addressing the meeting in behalf of the local society and the public medical institutions of the city.

Dr. Wells Teachnor said that, from a membership of 650 members in 1906, the medical society of the state has now about 4,500 members, and out of the seventy-two Ohio counties, Hocking County is the only one without a medical society. He strongly urged the establishment of a literary bureau for the distribution of literature to the laity in pamphlet form, answering the vicious suggestions of the faker.

President's Address.

Dr. Charles L. Bonifield said that it was to be regretted that so few medical men were able to serve as legislators. Reasons for physicians avoiding politics are even more fancied than real.

Prognosis—Address on Medicine.

Dr. F. Forchheimer, Columbus, said that prognosis is the most difficult branch of practical medicine, involving a human element as well as a knowledge of all previous discoveries, but as based on the present state of science should be more accurate than ever before. We have, however, allowed ourselves to be carried off our feet by statistics, notwithstanding all know that there are many factors which can not be calculated by mathematics. There has been great progress in the efficiency of treatment and faith in therapeutic measures makes for greater success in their application to man. Prognosis should not be based on one symptom only. Great care should be taken not to make the prognosis, even in unfavorable cases, unnecessarily gloomy. The prognosis should be properly expressed; the patient should be told the truth and enough of it to leave the responsibility with him, but not enough to do him harm. Still greater care is needed in favorable prognoses, as if a patient dies without warning it is always counted up not only against the individual physician, but against the whole profession.

The Diagnosis of Tumors of the Spinal Cord.

Dr. W. B. Laffer, Cleveland, said that meningeal tumors are the most important; there are ten malignant growths to one benign. Single tumors are chiefly situated in the dorsal region and laterally, two intradural to one extradural, the former being usually easily separated because encapsulated. Slow progression of the spinal lesion upward is suggestive of tumor, especially of glioma. In intramedullary growths neuralgia-like pain is absent, but perversions of sensation are seen. Inflammatory edema may cause symptoms leading to localization at the wrong level.

DISCUSSION.

Dr. T. A. Miller, Toledo, said that before operating it is important to determine the actual level of the tumor. Heretofore, when paralyses have not been present, one could only rely on objective anesthesia, which is not always entirely reliable, because dependent to an extent on the statements of the patient. Pilocarpin may be used hypodermically to bring on sweating, which it will do at all levels above the lesion. Below the lesion the sweating will not take place. The test is made by covering the patient with bed-clothes raised on a frame, and after thirty minutes one can determine the limitations of the sweating. Experience has recorded this as more accurate than the anesthesia tests.

The Relative Indications for Cesarean Section.

Dr. Charles N. Smith, Toledo, said that Cesarean section should not be made to bear the brunt of maternal deaths attributable to previous mutilation, exhaustion and infection, but should be judged by its success when used as an operation of first resort. He presented statistics from 15,611 cases of labor, which showed a fetal mortality from induced labor, 39 per cent.; high forceps, 33 per cent.; ordinary forceps, 14 per cent.; version, 40 per cent.; and craniotomy, 100 per cent. By these measures the unborn child is not given a fair chance. Cesarean section insures the safe delivery of every child which was alive at the beginning of the operation, as well as freedom from injury by pressure of forceps, or a narrow birth canal, or by arrest of circulation. Its mortality and morbidity rate are lower for both mother and child than those of any other obstetric operation. The operation should be performed prior to or at the onset of labor. In placenta prævia with dangerous hemorrhage before the onset of labor, Cesarean section will probably find its broadest field for usefulness. It offers to both mother and child in eclampsia a greater promise than any other obstetric operation.

DISCUSSION.

Dr. R. E. Speele, Cleveland, said that he did not agree that it is always possible to secure a living child when the child is living at the beginning of the operation. Neither did he agree with the speaker in the latter's statement that rapid delivery was necessary to control eclampsia, as this would leave the large number of postpartum eclampsias unaccounted for. He would remove the individual from the dangers of eclamptic fever for the same reason he would remove a splinter from the hand of a man that was septic—because it is the starting point of the trouble. Vaginal section, if the child is not too large, will succeed this operation. Decision for Cesarean section depends not only on estimating the size of the pelvis, but the size of the fetus as well. Until this becomes a matter of scientific exactitude it will not obtain its proper place in the medical world.

Dr. J. U. Barnhill, Columbus, defended the dependence on statistics given by the essayist. Comparing craniotomy with Cesarean section, he said the former not only sacrifices the child, but when the pelvis is small, there is danger of doing damage to the soft parts, and the chances of sepsis are almost infinitely greater than in Cesarean section.

Sciatic Pain as an Orthopedic Symptom.

Dr. A. H. Freiberg, Cincinnati, called attention to the considerable number of cases in which chronic sciatica is due to pressure on the nerve either at the intervertebral foramina or at the sacroiliac joint. Such cases could be promptly relieved by surgical treatment.

Dr. W. G. Stern, Cleveland, said that a large number of laborers, who meet with severe trauma of the back, will in a short time complain not only of backache, but of sciatica. If we but consider the points the doctor has brought out, we can relieve the patient of his physical suffering and his mental distress.

Dr. Freiberg said that many of these lesions are of traumatic origin, but by no means all of them. The conditions are by no means hopeless, but can be given considerable relief if diagnosis is made early and proper treatment given.

The Spread of Trachoma in Ohio.

Dr. W. H. Snyder, Toledo, said that this disease is spreading in consequence of the influx of a foreign population. Health boards should declare it a dangerous disease, and the expert examination of the eyes of school-children should be provided for. Trachoma clinics should be established and every possible means employed to prevent the spread of the disease. Half-way measures are of no avail.

DISCUSSION.

Dr. W. W. Brand, Toledo, said that in Toledo this disease is confined chiefly to the Bulgarian and Hungarian element but in a short time it will affect the other foreign settlements of the city, through the people of the different races employed in the same factory. Careful supervision should be made by the state, and it is due to the physicians of the state that they should have trained sanitarians or trained hygienists to study these things, rather than the usual political appointee.

Dr. Snyder said that the general spread of the infection among school-children will entail an enormous money loss to this state, and a dollar spent now would save a hundred that will be spent later. Germany has spent millions on this account; England, France, Russia—all have spent and are spending enormous amounts. Trachoma causes sufficient blindness to unfit the victim for lucrative work, and this country will most assuredly have to fight this later, as they are doing in Germany.

Medical and Surgical Treatment of Exophthalmic Goiter.

Dr. Frank Warner, Columbus, said that, while the pathology of this disease is not clearly understood, it seems difficult not to conclude that the thyroid gland is the cause of the exophthalmos. Medical treatment should be tried for a short time at least before turning the case over to the surgeon. If rest, diet, drugs, external applications, and, finally, the serum treatment, produce no improvement, surgical measures are appropriate. It is inadvisable to operate at the height of the disease, but in patients in fairly good condition, the half of the gland most enlarged with the isthmus should be removed, taking especial care to prevent hemorrhage. The serum of Beebe should not be pushed too far lest the activity of the gland be reduced too much. To secure the best results the operation should not be one of last resort.

DISCUSSION.

Dr. J. P. Sawyer, Cleveland, said that he radically disagreed with the essayist. Both exophthalmos and goiter are absolutely non-essential in the disease. The tachycardia is found when looked for, and it should be the routine examination for every patient that comes into the office, being far more important than looking at the tongue and taking the pulse. Tremor and tachycardia, paroxysmal as well as continual, should be sought for. It is prevalent to a degree of which few have any suspicion until this routine examination is made.

In an astounding proportion of patients there is but slight exophthalmos. In the last 600 cases examined by this speaker, he said he had found 337 showing tremor, tachycardia, and most of them a slight degree of the ocular sign, and goiter. Operative treatment for this condition is to be undertaken with impunity only by the very few. The Mayos are largely responsible for its use in this country. It is not an operation that can be done with safety. The speaker said he had not yet advised a single case to go to operation. Four patients who had been operated on under other advice had died, and it was not for want of skilful operators. A patient with greatly enlarged thyroid who had been advised to have an operation, had by him been treated by other measures, and is now well. There is as much careful work to be done in the careful medical treatment of this disease as in typhoid or scarlet fever, nor is Beebe's serum the only thing. This is valuable, but subject to some difficulties from the fact that there are strains, and it is difficult to pick out which particular serum to use in a given case. The essential thing to remember is that this is a vasomotor disturbance; it means blood pressure increasing the beating of the heart, causes a sweating and vomiting, and in cases of mental depression gives psychoses—people practically beside themselves and not responsible for many of their actions.

Much value should be placed on rest. Mental worry should be avoided. Vasomotor control bears a relation to the humidity of the atmosphere. There is an unconscious perspiration going on all the time, and if the humidity increases 90, 95 or 100 per cent these cases will have a very serious time. The hint is to send the patient to a dry climate. The speaker had seen patients sent to climates where the humidity was 20 to 30, or as low as 5, make decided improvement. Galvanism has value if correctly applied, that is, directly to the thyroid. The faradic and static currents actually do harm. With galvanism he usually uses iodin, the marked effect of which can be seen on the skin.

Dr. G. H. Baker, Cleveland, said that the oculist had occasion to see many of these cases, and the only deaths he had ever known of were those which had occurred on the surgeon's table. The tendency is to recover in from one to five years, and he questioned whether it is right and fair to order patients to an operation. Nearly all of them have suffered some mental shock. A large majority of them have been disappointed in love, and marriage has cured them! If a marriage does not cure in some of these cases, perhaps divorce will. It is a question of mental rest. In the most aggravated cases where we are obliged to put them to bed to prevent injury to the cornea, they recover. Dr. Baker thought this was what accounted for the cure in operations—they were put to bed.

Dr. C. A. Howell, Columbus, in behalf of the operative treatment, said that thyroid cases, or cases of Graves' disease, should be chosen for operation as one would choose appendicitis cases for operation. As Ochsner has said, "Some cases are too early for an early operation, and some too late for a late operation." It would be as wrong to operate on a patient with a large thyroid, and pulse at 160, in an acute stage, as it would be to operate on a patient with acute appendicitis and pulse at 160. The patient should be put to bed and given Beebe's serum. There should not be a drop of blood spilt during an operation for exophthalmic goiter. The patient should not know that he is to be operated on that morning, otherwise the psychic effect is so great as to throw the heart to 120 or 160, or even 170. Steal the thyroid when he does not know it. The patient, having been carefully prepared, is put on the table at an angle of 20 degrees. The anesthetic is given by tubes passed through the nose. The artery is ligated, and the position of the patient controls the venous supply. The skin alone is cut through, the superficial tissues carefully dissected with the cleanest, sharpest knives possible and each tissue recognized before cut. An elevator is placed under the neck so that it is in a convenient position. The thyroid will be seen bulging out of its bed. Separate it and ligate the four thyroids. After ligating, begin shaving down with the scissors, thus getting just as much as desired. He warns against pressing on the skin, as the squeezing out of the juice into the cellular tissue causes a hyperthyroidism which is alarming. With respect to hemolysis, it is the experience of Dr. Baker and that of Dr. Crile that the blood of a person with Graves' disease does not cause this.

Dr. E. R. Hamilton, Columbus, agreed that many cases of this condition were unrecognized. While many patients will recover under mental suggestion, etc., there are a number who must be operated on, because there is an organ which is producing too much secretion. It is a mechanical proposition. Thyroid extract should not be administered, as the trouble is due to too much thyroid secretion, and it increases the distressing sysmptoms. A pathologic condition in hyperthyroidism is in the pressure of a cyst instead of a gland, in which there is an excessive giving off of the colloid material on account of the pressure of the cyst. All the gland is capable of producing will be used up and there will be a condition of hyperthyroidism, followed by a condition of myxedema.

Dr. H. T. Sutton, Zanesville, said that he believed such tables of mortality as come from certain sections of the country could not be produced unless the patients were corralled and operated on regardless of whether they are sick or well.

Dr. Warner said that in spite of the fact that a great number do recover, there is still a certain amount of danger and many die from the result of this infection, often before diagnosis is made. Even the conservative Billings would not have the rest-cure continued if there be no result. One reason that the operation had been brought into disrepute was that it had been reserved as an operation of last resort. Operations on the thyroid are not particularly dangerous. It seems to be the policy of the Mayos to use the *x*-ray in serious cases for from three to six weeks before operation. It is done with the idea of minimizing the hyperthyroidism; Dr. Warner's experience has been that the adhesions seemed no greater with than without it. Dr. Sawyer's suggestion as to altitude is at variance with that of most observers, as the altitude has usually increased the tachycardia.

Backward School Children.

Dr. Charles A. Hough, Lebanon, said that the term "defective" is sometimes improperly applied to all children who are backward in their classes. Many backward children have no mental or physical defect whatever, their inability to do good work being dependent on unfavorable home surroundings, improper or insufficient food and clothing, excessive physical labor out of school and other causes. These cases would be discovered under proper school inspection, and if the parents are unable to remedy them, the public should assume the obligation.

DISCUSSION.

Dr. E. W. Mitchell, Cincinnati, said that the larger cities have already instituted medical inspection, but it will require time in the smaller towns and country districts, and that physicians should keep working until medical inspection is obtained. He thought that the physicians of the small towns might unite and serve in turn in the performance of the duty of school inspection, without waiting for public action.

Dr. J. J. Moore, South Charleston, said that this is of vastly more importance than all the surgery in the world. France has instituted a laboratory in connection with the school, and each child is studied with relation to the physical and mental force, and goes through school according to a prescription, the record showing good results.

Dr. Ormsby, Cuyahoga, said that in one school in New York 90 children were operated on for enlarged tonsils and adenoids, and reports from these 90 two years later show them able to do more school work in six months than in two years before operation.

Dr. E. J. Emerick, Columbus, said that family physicians should pay a great deal more attention to school children, as they have an opportunity to advise with parents as to the best course to pursue in the education of backward children.

Dr. Andrus, Marion, alluded to the demonstrated fact that children defective through impairment of hearing and visual defects are a menace to the other children in the school, as these troubles are great factors in the production of criminals.

Dr. Hough said he thought the suggestion that in the country the duty of examining school children for defects of sight and hearing should rotate among the physicians would not be feasible unless all were specialists, for obvious reasons.

The Potentiality of Habit.

Dr. C. D. Mills, Marysville, said that home laws should be as habitual and unchangeable as the laws of Nature. It is not so important that the child be taught the laws of habit, as that home life and government should be faithfully executed in harmony with these laws. Maturity should not be burdened with the simpler ethical problems that should have been made already habitual in childhood. The "wild oats" idea is fallacious and unscientific. The addiction to alcohol is a symptom of a functionally unstable nervous system. The typical dipsomaniac is, to all intents and purposes, a maniac before he takes a drink.

DISCUSSION.

Dr. E. E. Gaver, Columbus, said that in the dipsomaniac there is a diseased condition as an endowment even before he ever has a touch of liquor. He has a peculiar array of symptoms: mental depression, sleeplessness, a sense of discomfort. One of the distinctions between the dipsomaniac and the common drunkard is the periodicity of the condition. The former does not drink daily, but these cravings come on at times and he must satisfy them. It is not the liquor, but the satisfaction that it gives him that he wants. He is not fastidious in his taste. He will take such things as vinegar and petroleum to satisfy his cravings.

MISSISSIPPI STATE MEDICAL ASSOCIATION.

Annual Meeting, held at Natchez, April 14, 1908.

(*Continued from page 1634.*)

The President, Dr. R. S. Curry, Columbus, in the Chair.

Presentation of Gavel.

After the invocation, which was offered by Rev. Robert Selby, Dr. W. H. Aikman, on behalf of the Adams County Medical Society, presented the association with a gavel, wrought of silver and five pieces of wood from as many historic places associated with Natchez and vicinity. These were red cedar from "Windy Hill Manor," where Aaron Burr was concealed in 1807; white cedar from "The Briars," where Jefferson Davis was married Feb. 26, 1845; poplar from "Longwood," where Sergeant Prentiss was married March 12, 1842, and died July 1, 1850; walnut from "Concord," where stood the residence of the last Spanish governor in 1789; hickory from Monmouth, the home of Gen. John A. Quitman, hero of the Mexican War.

In accepting the gavel Dr. Curry paid a fitting tribute to the Adams County Association for its loyalty, assuring it that he appreciated the honor of being the first to wield the mallet.

Address of Welcome.

Mr. W. P. Reese, Natchez, spoke with feeling of his inherent partiality to the doctor, recalling his own father's devotion to his profession, and his solicitude for his patients. His pride of ancestry and his hope of posterity are centered in the medical profession. Mr. Reese spoke of the struggles and sacrifices and triumphs which the profession has made from he age of Æsculapius, who suffered from Olympian jealousy of the mythical god, to the present time. He doubts if the nostrums of the dark ages were more diabolical than many of he "patent medicines" of to-day. In conclusion he asked the visitors to surrender themselves to the people of Natchez and o visit their historic homes, where southern hospitality has eigned for generations. He asked them to visit the spots around Natchez associated with many of the leading names in American history. Briefly but eloquently he outlined the tories of Prentiss, Burr, Quitman, Davis and others.

RESPONSE.

Dr. D. W. Jones, Fernwood, responded to the Address of Welcome. Speaking for the association, he said that Mr. Reese's words made them feel at home. Not only his words but the actions of all the people of Natchez made them feel welcome. welcome. "We have been looking forward with pleasure to this visit. We wanted to see and meet your people and we wanted to see your historic places. As Mississippians we are proud of these places and the men whose names are linked with them. We want to see your famous 'Under-the-Hill,' once the trysting place of the flotsam and jetsam of civilization." Dr. Jones also complimented the loyalty and zeal of the Adams County Medical Society.

The annual address of the president, Dr. Curry, was curtailed on account of his illness, which necessitated his return to his home in Columbus.

The X-Ray as a Diagnostic and Therapeutic Agent.

Dr. S. W. Lawrence, Memphis, read a paper with this title which was discussed as follows:

Dr. Brown, West Point, said that he had done some x-ray work, and has observed that if two or three treatments fail to relieve the pain the continuation of the treatment is useless. He has secured excellent results in the treatment of carbuncles by the x-ray.

Dr. Frank Smythe, Memphis, said that it is time to sound a note of warning with reference to the inexperienced operator. Many cases of injury done by inefficient operators have come within his observation. An operator should know how to define the line of demarcation between a large and small dose. Undoubtedly, the x-ray in capable hands is a great agency for good, but it is equally harmful in unskilled hands.

Dr. Lawrence, in closing the discussion, spoke of the relative merits of the coil and the static machine, maintaining that he secured in two or three minutes' use of the coil better results than in ten minutes' treatment by the static machine.

Pre-Cancerous Skin.

Dr. H. E. Menage, New Orleans, read this paper, which was discussed by Drs. Wiss and Lawrence.

Dr. Rosa Wiss, Meridian, contended that the cataphoric method has been attended by the best results in the treatment of epithelioma, especially when the cells are far below the surface. While she conceded the value of the x-ray as a diagnostic agent and its efficiency in the treatment of the malady in its superficial stages, it is her opinion that the cataphoric method is more generally satisfactory. Dr. Wiss supported her theory by quotations from eminent authorities, as well as by the results of her own observation and research.

Dr. Lawrence agreed with Dr. Menage's conclusions that the x-ray is the most effective method of treatment. Though he does not altogether agree with Dr. Wiss, he is of the opinion that the cataphoric method is effective in many cases.

Dr. H. E. Menage, in closing the discussion, admitted that the method advocated by Dr. Wiss has merit, but insisted on the superior results from the use of the x-ray in the conditions mentioned in his paper.

Dr. McCormack's Address on Organization.

Dr. J. N. McCormack, Bowling Green, Ky., spoke briefly on the subject of medical organization. When he began work for the American Medical Association, eight years ago, his first business was to "take stock"—to find out what sort of material he was to work on. He found that 90,000 doctors in America were not affiliated with any organization, and about 30,000 were organized. The prejudice against the profession was general, due largely to the poverty, discord and lack of pride among physicians. He recited the early struggles of the profession for national legislation in the interest of national health. Instead of physicians working in harmony there were individual hostilities in small communities and factions in the cities. He referred facetiously to the medical colleges of an earlier day, where this spirit of hostility and competition was formerly fostered. Doctors who have done more charity than all the charitable organizations combined yet could not dwell together in harmony. He contrasted the conditions that formerly obtained with the present order of things, the American Medical Association, now having a membership of 80,000 representing 2,500 out of a possible 2,800 county organization. The plan formulated for bringing physicians together has been successful. Dr. McCormack recited the story of his early practice, when, having graduated from a leading institution and spent two years in a great hospital and building up a large surgical practice, he seriously contemplated abandoning his profession, because he thought he was not equal to its responsibilities. Years later, he took a postgraduate course. He reminded his auditors that a diploma is not a license for criminal negligence, and that every doctor in Mississippi is a criminal who fails to take advantage of every opportunity. This brought him to the discussion of the American Medical Association's plans for the further improvement of the work of the county societies and the broadening of their scope. To this end he outlined a postgraduate course conducted by county societies. Dr. McCormack paid a glowing tribute to the genius of the country doctor. The greatest names in the profession are those of country doctors. Dr. McCormack's talk was rich with humor and eloquence. He talked in a conversational tone, sitting in a chair on the stage, and emphasizing his strong points with vigorous gestures. Laughter and applause punctuated the impromptu address throughout. His appeal for the elevation of the ethical standards of the profession, and for a broader fraternal feeling was received with prolonged applause.

The Surgical Versus the Medical Treatment of Appendicitis.

Dr. E. M. Holder, Memphis, advocated an avoidance of opiates when possible and also of cathartics until after the acute stage has passed.

DISCUSSION.

Dr. L. H. Lamkin, Natchez, believed that a patient should be relieved from the pains, and said that the judicious use of an opiate is beneficial. He also said that the bowels should be emptied and drainage of the abscess established as early as possible.

Dr. Turner, Leland, favored the use of a purgative when the diagnosis was determined. The patient is always grateful for the relief from the pains by an opiate. The pains, Dr. Turner said, are very severe, and he believes that opiates should be employed to allay them.

Dr. G. L. Harbour, Vosburg, said that if absorption is produced, the parts relieved of distention and the patient's pain subdued by medical treatment, the individual will recover. He is absolutely opposed to surgical treatment.

Dr. Martin, New Orleans, said that there is no cure for appendicitis except surgery. Medical treatment is preparatory. Purgatives are apt to produce an unfavorable condition. He advocated starvation and an ice bag. A recurrence means a badly diseased appendix.

Dr. Miller, New Orleans, advocated drainage and saline solution. The enema and the stomach tube he had found invaluable.

Dr. Frank Jones said that the title of Dr. Holder's paper is a misnomer. He put himself on record as saying that appendicitis is absolutely a surgical disease. The appendix is the abdominal tonsil. Medical methods are merely palliative. Medical treatment is used only to make the patient's life as comfortable as possible. To effect a cure the cause must be removed, and this can not be done by medical agencies.

Dr. B. F. Turner, Memphis, spoke for the doctor ten miles from the nearest associate, the doctor who had not surgical facilities at hand in emergencies. Formerly he stood in awe of the dictum that there was a period in every case when it should be operated on. Dr. Turner said that he had patients who were treated by medical methods fifteen or more years ago without recurrence of the disease. He does not condemn operations, but he does not endorse the dogma that appendicitis is essentially a surgical condition.

Dr. Rowan asked how the physician is to know within twenty-four hours that the case is appendicitis. It has not been his experience that the patient can not recover except by operation after the appendix has become inflamed.

Dr. Shivers, Greenville, commended Dr. Holder's paper by saying its most valuable point is the association of the physician and surgeon.

Dr. Holder, in closing the discussion, said that appendicitis is third in the list of abdominal troubles, the maladies being extrauterine pregnancy, strangulated hernia and appendicitis. Answering his critics as to the use of purgatives, he showed that their tendency is to distend the intestine in the vicinity of the paralyzed and weakened parts. If an operation is contemplated he insisted that opiates should never be used.

Successful Ligation of the Innominate Artery.

Dr. B. Burnes, Memphis, gave statistics showing the work of others in aneurism of the subclavian artery, and exhibited a patient on whom he had operated for this condition by ligation of the innominate artery.

A Case of Malignant Tumor, with Treatment.

Dr. W. L. Little, Wesson, reported a case of epithelioma of the cheek treated with trypsin.

DISCUSSION.

Dr. Rosa Wiss, Meridian, thought that the lump should have been taken out by cataphoric operation.

Dr. Rowan said that the same case had been under his observation. The patient had come to him a short time ago with a small lump near a former tumor, and he had no doubt that the tumor would return.

Dr. Lawrence, Memphis, does not approve of the trypsin treatment in tumors generally. He is of the opinion that *x*-ray treatment is more efficient. He knew of a case in which a man tried the *x*-ray treatment for a time, then abandoned it for Christian science, and was healed. He was fast improving under the *x*-ray, but Christian science received credit for the case. He brought out the point that the benefit of the *x*-ray is often seen only after its use has been discontinued.

Technic of Closing Bladder Fistulæ, with Report of Cases.

Dr. C. J. Miller, New Orleans, read a paper on this subject in which he emphasized some points to be observed in closing fistulæ of the bladder. The paper was discussed by Drs. Clark and Martin.

Dr. Clark, New Orleans, said that Dr. Miller had touched the keynote in the treatment of these fistulæ by the separation of the vaginal wall and the wall of the bladder. He recommended the umbrella catheter in drainage.

Dr. Martin, New Orleans, said that he had treated six patients with this lesion, five of whom had been cured. He had followed to a large extent the methods outlined by Dr. Miller.

Dr. Miller said that he uses the ordinary soft rubber catheter in the drainage; there is not always need for the umbrella catheter. He uses plain catgut sutures.

The Present Status of Uterine Carcinoma, with Especial Reference to the Early Diagnosis and Radical Operation.

Dr. S. M. D. Clarke, New Orleans, read this paper, which was discussed as follows:

Dr. Darrington, Yazoo City, said that every physician in actual practice encounters these cases. He thinks that the time will come when a specific will be found for cancer.

Dr. Smythe said that it is recognized that cancer is on the increase and the mortality rate frightfully high. From a professional point of view it is the duty of the physician to point out the symptoms and determine as early as possible the presence of malignancy. The first symptom is usually hemorrhage.

Dr. Rosa Wiss, Meridian, commended Dr. Clarke's insistence on a thorough examination in any pelvic disorder.

Dr. Rowan said that in his practice he has found not more than 50 per cent. of tumors malignant. The cases should be diagnosed early.

Dr. Clarke insisted that as the disease generally does not remain local more than three months, the first distress signal should be heeded. Not many years ago the percentage of mortality in breast cancer was 100, while now 33⅓ per cent. of the patients are cured. He hopes for as satisfactory results ultimately in other cancerous troubles.

Fissures in the Female Urethra.

Dr. E. D. Martin, New Orleans, read this paper, which was discussed by Dr. Smythe, Memphis, who said that the parts affected by fissure can not heal until they are set at rest. The surgeon should not hesitate to resort to the operation when warranted by the diagnosis. Cancer of the urethra is comparatively rare, fortunately.

Extrauterine Pregnancy.

Dr. F. D. Smythe, Memphis, read a paper on this subject, in which he discussed the frequency, the difficulty in diagnosis, and the treatment prior to rupture, after rupture and after the stage of viability. The paper was discussed as follows:

Dr. J. W. Barksdale said that in his experience and observation appendicitis is more frequently mistaken for this condition than abscess. It is always possible when in doubt to secure an absolute diagnosis by sending specimens from the uterus to a capable pathologist. He agreed with Dr. Smythe that an immediate operation should follow the determination of the presence of this condition.

Dr. M. O. Shivers, Greenville, said that in operating there are two methods, the vaginal and the abdominal. He thinks the safest method in cases without complication is through the vagina.

Dr. John Darrington, Yazoo City, thinks that in the majority of fatal cases death is due directly to hemorrhage. Hence he favors abdominal section as less likely to aggravate the condition by hemorrhage.

Dr. Crisler, Memphis, thinks that the condition of extrauterine pregnancy too often escapes diagnosis.

Dr. W. W. Crawford, Hattiesburg, declared that the patient with ruptured extrauterine pregnancy stands in great need of a surgeon. The patients should be closely watched as soon as suspicion of the condition is aroused.

Dr. Beekman stated that the early diagnosis is very difficult, and that not enough importance is attached to the early symptoms, prior to rupture. When a woman gives a history of having passed a menstrual period a week or ten days, and then the function appears and continues to dribble intermittently, it is time for the physician to take alarm, especially if on vaginal examination tubal enlargement can be made out. These enlargements usually vary from that of ordinary pus tubes, in that they are usually freely movable and glide away from the examining finger.

Dr. Miller, New Orleans, wanted to know how many cases of death from rupture in extrauterine pregnancy the members had seen. He believes that the method of treatment will change, as it has done in appendicitis. He does not believe a rupture is necessarily fatal.

Dr. Clarke, New Orleans, gave his observation on a series of interesting experiments on dogs, in which the uterine and ovarian arteries were cut and allowed to bleed, showing that death in no case had resulted from hemorrhage.

Dr. Butler gave the history of a case showing hemorrhages for two weeks. The patient was sent to a hospital and operated on. The patient recovered.

Dr. Smythe agrees with Drs. Crisler and Darrington in their ideas as to the frequency of the disease. He has operated on sixty patients; of this number one died from the operation, plus the shock and the anesthetic.

(*To be continued.*)

SOUTH CAROLINA MEDICAL ASSOCIATION.

Sixtieth Annual Meeting, held in Anderson, April 14-16, 1908.

The President, Dr. Legrand Guerry, in the Chair.

Election of Officers.

The following officers were elected for the year: President, Dr. Samuel C. Baker, Sumter; vice-presidents, Drs. Hugh R. Black, Spartanburg; Waller H. Nardin, Jr., Anderson, and Andrew T. Baird, Darlington; secretary, Walter Cheyne, Sumter; treasurer, Dr. Charles P. Aimar, Charleston; delegates to American Medical Association, Dr. Cyril T. Wyche, Prosperity, and Dr. Walter Cheyne, Sumter.

A committee with Dr. J. L. Dawson of Charleston as chairman, was appointed to organize a branch of the American Anti-Tuberculosis League. Dr. Mary R. Baker of Columbia was elected a member of the State Board of Medical Examiners.

The honored guests of the occasion were Dr. J. M. T. Finney, Baltimore, who gave an address on "The Differential Diagnosis of Appendicitis," and Dr. Richard Cabot, Boston, who, in his address, "Psychotherapy," spoke of the use of mental suggestion in general practice, with particular reference to nervous disorders.

Reorganization Plan Works Well.

For the first time since the reorganization under the plan of the American Medical Association, the business affairs were transacted by the house of delegates without in any way interfering with the scientific sessions. The attendance was good and marked interest shown both in the excellent program of scientific papers in the lively discussion, and in the matters of vital interest to organized practitioners.

The division of the business and scientific sessions was found to be so beneficial that a resolution providing for a further division of the scientific sessions into two sessions—surgical and medical—was unanimously adopted.

The following papers were read:

"Acute Bowel Obstruction," by Dr. A. B. Knowlton, Columbia; "Retroperitoneal Abscess: Probably Caused by Diverticulitis," by Dr. C. M. Rees, Charleston; "Skin Grafting," by Dr. Mary R. Baker, Columbia; "Is Medicolegal Legislation Needed in South Carolina?" by Dr. Walter Cheyne, Sumter; "A New and Effective System of School Hygiene," by Dr. E. A. Hines, Seneca; "Successful Treatment of Catarrhal Deafness with Especial Reference to Conditions in Rosenmüller's Fossæ," by J. W. Jervey, Greenville; "Some Nervous Manifestations of Gastrointestinal Autointoxications," by Dr. J. C. Sonowski, Charleston; "Do We Pay Enough Attention to Prophylaxis," by Dr. W. J. Burdell Lugoff; "Tumor of the Carotid Gland, with Report of a Case," by Dr. R. S. Cathcart, Charleston; "Placenta Prævia," by Dr. H. R. Black, Spartanburg; "Puerperal Eclampsia," report of cases, by Dr. H. L. Shaw, Fountain Inn; "Recent Discoveries in Intestinal Digestion and Disorders," by Dr. Fillmore Moore Aiken; "The Value of *X*-Ray Photography in Treatment of Fractures, Dr. S. C. Baker, Sumter; "Have the Recent Reported Deaths from Diphtheria Antitoxin Injections Been Satisfactorily Explained?" by Dr. L. C. Stephens, Greenville; "Uncinariasis," by Dr. William Weston, Columbia; "Ophthalmic Reaction in Tuberculosis," by Dr. E. W. Carpenter, Greenville; "Gallstones," by Dr. W. C. Black, Greenville; "Continued Fevers," by Dr. J. J. Watson, Columbia; "Physician in Politics and the Political Physician," by Dr. Julian Carroll, Summerville; "Torsion of the Omentum," by Dr. T. P. Whaley, Charleston; "The Proposed Work of the South Carolina Anti-Tubrculosis League," by Dr. A. Bethune Patterson, Barnwell; "Pneumonia and Complications," by Dr. E. L. Patterson, Barnwell; "The Influence of a Pathologic Tonsil on Health," by Dr. J. F. Townsend, Charleston; "Some Disadvantages of Prescribing Proprietary Preparations," by Dr. J. B. Townsend, Anderson.

Insurance Fees.

In the house of delegates the proposition for reduction of the examination fee for fraternal order insurance was again brought up, and the proposition of the South Carolina medical fraternity was again energetically emphasized by a reiteration of the resolutions heretofore passed, that no examination requiring uranalysis, should be made by any member of the association for less than a five-dollar fee. The suggestion for reduction came from the Anderson County society, which was not in good standing a year ago because of its failure to comply with this requirement of the state association. Through strenuous efforts on the part of President Legrand Guerry, this society was persuaded to come in during the past year and take this method of bringing the matter again before the state association. It is now believed that it will abide by the result and continue in harmony with the state association.

Political Action.

A resolution introduced by Dr. Davis Furman of Greenville, ex-president of the association, will probably have good results although overwhelmingly defeated. Dr. Furman wanted each county society to induce one of its members to become a candidate for the state legislature, for the avowed purpose of securing favorable sanitary and health legislation by that body. The discussion of the resolution was prolonged. The legislation passed in Columbia this year was very satisfactory in certain particulars, and the concensus of opinion seemed to be that better results would be obtained in the future. Dr. C. T. Wyche of Prosperity, Newberry County, a prominent member of the legislature, to whom the credit is largely due for the satisfactory legislation of the past year, was present and took part in the discussion.

Venereal Prophylaxis by Education of Young.

Special interest was shown in the annual address of President Guerry, who directed attention to the necessity for the teaching in the schools of hygiene and physiology of sex as the greatest possible factor in controlling the spread of the "Great Black Plague." In the line with his suggestion, a committee was appointed to formulate plans for the organization of a South Carolina branch of the American Society of Sanitary and Moral Prophylaxis.

Dr. Walter Cheyne of Sumter, secretary of the association, in his annual report, advocated a change of the present law relating to county coroners, and the appointment by the governor of a competent medical man in each judicial district to fill the coroner's position.

The association will meet April 21-23, 1909, at Summerville.

MEDICAL JURISPRUDENCE SOCIETY OF PHILADELPHIA.

Meeting, held Monday, April 20, 1908.

The President, Dr. William M. L. Coplin, in the Chair.

The Bar as Seen from the Witness Box.

Dr. Henry Leffmann read this paper. His experience has been principally in local criminal courts, but partially in other states and in federal courts. He has seen many changes in the more than quarter century that he has been in expert practice. His impressions are that the practice of law is very different from the theory. The principle of law was said to be an attempt to establish a system of ethics supplementing the so-called fundamental moral codes, not expecting to render absolute and exact justice at all times, but average justice. Human life is too intricate and human impulse too uncertain to admit the attaining of absolute justice, but in practice the law is principally exerted to secure a proof. The dominating motive of the lawyer is to win his case. While not implying dishonesty, Dr. Leffmann says that the practice of law has developed codes of legal ethics and systems of procedure in which technicality and insincerity have become not only legitimate but necessary. It is said that while the medical profession is the subject of criticism in regard to its changing theories in pathology and therapeutics, and that while much of the criticism may be acknowledged as just, there may be seen throughout the profession the dominating object of the amelioration of suffering and the saving of life, the net result of medical activity being to make a community more comfortable, longer lived and more efficient. Such is not the result of legal activity. While the state and national legislatures swarm with lawyers, reform in judicial procedures moves with leaden feet. Nothing is more uncertain than a legal opinion. Regarding the allotment of fees, it is said that lawyers have two distinct codes—one for themselves and one for outsiders. Courts are extremely liberal in allowing fees to attorneys. Dr. Leffmann has known of $250 having been allowed as a lawyer's compensation for a small service, the trial judge remarking that it was little enough, when a similar charge by an expert witness for several times the amount of the work would have been regarded as extortion. Further, lawyers do not hesitate to put witnesses to loss of time and expense without compensation.

DISCUSSION.

Dr. Charles W. Burr believes that one great difficulty between medical experts and judges arises from their entirely different points of view. He does not think the plan of having medical experts paid by the state would be a good method, because there would be appointed men not skilled in learning, but men who had backing of whatever political power might be in the ascendancy.

Dr. Charles K. Mills regards the idea of having state experts an impractical one and one that would cause very much greater abuses than now exist.

Dr. J. Hendrie Lloyd referred to the carelessness with which lawyers sometimes prepare their cases in which expert testimony is concerned, and gave some instances in his experience. He feels that there is too much democracy in the courts to-day, and that they have unfortunately lost to a great extent the old monarchical power so effectual under the English government.

Dr. S. Solis-Cohen considered the point raised by Dr. Lloyd regarding the absence of monarchical power in the judge rather a misunderstanding of the situation; sometimes the question is one of the absence of common sense rather than of power. When judges will rule in a diametrically opposite way on a point which ought to be a settled principle of an exact science, there is little wonder at the conflict which expert testimony sometimes arouses. The failure of some attorneys to consult experts in time for a careful preparation of their cases, mentioned by Dr. Lloyd, he regards as the keynote of the whole question. Personally, he has been amazed at the certainty of the lawyer that in a given case he would testify as the attorney desired, without having had time to study the question. The idea that the physician can adopt within five minutes any opinion desired by the attorney should be eradicated by physicians refusing all such cases. It has been his good fortune to find very eminent members of the bar willing to receive suggestions from a physician as to the manner in which a case should be prepared. He believes that the trained lawyer and man of sound judgment, of learning and insight is anxious to have instruction on the scientific aspect of the case and to know the exact value to be attached to different matters that can be brought forth. He has always felt that he could be of more service to counsel by assisting in the preparation of the case than by going on the stand, because of the difference between an advocate and a witness. The expert witness should merely go on the stand to testify to the facts of his observation and his scientific judgment. On the other hand, the physician who is consulted with the idea of serving the interests of the side which the lawyer represents, may state what sort of testimony should be sought for, but having done that he is morally disqualified from going on the stand.

Finally, Dr. Solis-Cohen believes that it would be possible after perhaps several centuries of intermingling in such a society as the Medical Jurisprudence for a comity to arise between lawyers and physicians that would prevent any lawyer from attempting to "bullyrag" any physician giving his honest opinion on the witness stand. That would also tend to make judges desire to restrain any such undignified, indecent and insolent exhibitions.

Adolph Eichholz, Esq., said that the question of the lack of consideration received by the expert at the hands of the lawyer, while an undoubted evil, is a part of a larger evil, the remedy for which is not at present apparent. The court was compared to a big battle field, where human contentions, private difficulties, factions and adverse opinions were fought out and necessarily many things are done and said that would not happen in gentlemen's parlors. Such evils do not affect the medical profession alone, but almost any class of men called on in the administration of justice.

MEDICAL SOCIETY OF THE STATE OF CALIFORNIA.

Thirty-eighth Annual Meeting, held at Coronado, April 21-23, 1908.

The President, Dr. George H. Evans, in the Chair.

The officers elected for the ensuing year were given in The Journal, May 16. San Jose was chosen for the place for next meeting. Resolutions were passed endorsing the two bills in Congress dealing with the betterment of the U. S. Public Health and Marine-Hospital Service.

The meeting was in every way a satisfactory one. Owing to the fact that it was held in the extreme southern part of the state, the attendance of members from the northern sections was not so large as usual, though the registration showed that over 200 members were present. All papers were limited to ten minutes; this limitation the president absolutely insisted on and the result was most satisfactory. The time limit of discussions also was rigidly enforced, and to this action was largely due the crisp, interesting and profitable discussions. The sessions of the house of delegates were held on Tuesday and Wednesday evenings.

The President's Address.

The first session, Tuesday morning, was devoted to the president's address and to the reports of scientific committees. The president dwelt principally on the duty of the profession toward the public in sanitary matters and cited the enormous influence which had been exerted in San Francisco in stirring up the antiplague fight as an example of what our profession should be doing in many and various ways for the public safety.

Committee Reports.

The reports from the board of examiners and the committee on medical education were listened to with great interest and the work of the educational committee toward the rigid investigation of credentials of preliminary education and strict compliance with the standards fixed by the Association of American Medical Colleges were applauded by the members present and subsequently endorsed by the house of delegates. Much of the trouble and confusion found in medical schools and many of the grievous errors detected were due, in the opinion of the committee, to a deplorable ignorance on the part of college deans as to the standards and requirements in force and effect. The committee was instructed to proceed in the matter in such a manner as it saw fit, with the object of educating deans on the various points involved.

Report of Pure Food Commission.

One of the most interesting and valuable features of the whole meeting was the report of the pure food commission, appointed last year, which report took the form of a series of papers on various pertinent subjects and an exhibition of material gathered by the commission. A room had been set aside for this exhibit, which consisted of copies of all health and sanitary ordinances and laws, federal, state and municipal; photographs of dairies and water supplies, clean and unclean, and a large quantity of similar matter. A lunch table had been set, on which every article was either adulterated, misbranded or preserved with some deleterious preserving agent. Great interest was taken in this exhibit, and the room was well filled during all the time between sessions.

Tuesday afternoon two sessions were held simultaneously, the one on eye, ear, nose and throat topics, and the other genitourinary and urologic. In both instances the programs had been so arranged as to provide topics which would be of interest to the general practitioner, and both sessions were largely attended. Otitis media was the principal subject of discussion in the first-mentioned session, and gonorrhea that in the second. The discussions were full and brought out much of value.

The Plague.

Tuesday evening was given up to a discussion of plague. Drs. Rupert Blue and W. C. Rucker, of the U. S. Public Health and Marine-Hospital Service, talking on "The Eradication of Plague," illustrated by a large number of lantern slides covering the whole subject. It was clearly evident that the whole state is alive to the danger from plague and that all are taking a great interest in the disease and its eradication.

Symposium on Syphilis.

Wednesday morning's session was devoted to a symposium on "Syphilis," and from diagnosis to treatment it was well covered and well discussed. In the afternoon of Wednesday there were no sessions; automobile trips and excursions about the Bay of San Diego provided for the members a most enjoyable afternoon.

Symposium on the Thyroid.

Thursday morning brought a resumption of scientific work, and a symposium on the "Thyroid Gland," with five papers of interest and value, were presented. The afternoon was devoted to miscellaneous papers, all of value and some of unusual interest, and the session closed exactly on time.

Medical Education and State Boards of Registration

COMING EXAMINATIONS.

Indiana Board of Medical Registration and Examination, Indianapolis, May 26-28. Secretary, Dr. W. T. Gott, 120 State House, Indianapolis.

Nebraska State Board of Health, State Capitol, Lincoln, May 27-29. Secretary, Dr. E. J. C. Sward, Oakland.

Minnesota State Board of Medical Examiners, Old Capitol, St. Paul, June 10-12. Secretary, Dr. W. S. Fullerton, 217 American National Bank Bldg., St. Paul.

Iowa State Board of Medical Examiners, Capital Building, Des Moines, June 4-6. Secretary, Dr. Louis A. Thomas, Capital Bldg., Des Moines.

Ohio State Board of Medical Registration and Examination, Columbus, June 8-10. Secretary, Dr. George H. Matson, State House, Columbus.

Michigan State Board of Registration in Medicine, University Bldg., Ann Arbor, June 9. Secretary, Dr. B. D. Harison, 504 Washington Arcade, Detroit.

South Carolina Homeopathic Medical Examining Board, Columbia, June 9. Secretary, Dr. J. A. Whitman, Beaufort.

Kansas State Board of Medical Registration and Examination, Kansas City, June 9. Secretary, Dr. D. P. Cook, Clay Center.

South Carolina State Board of Medical Examiners, Columbia, June 9-11. Secretary, Dr. W. M. Lester, Columbia.

Wyoming Board of Medical Examiners, State Capitol, Cheyenne, June 10-12. Secretary, Dr. S. B. Miller, Laramie, Wyo.

Oklahoma State Board of Medical Examiners, Shawnee, June 15 (about). Secretary, Dr. J. C. Mahr, Shawnee.

Texas State Board of Medical Examiners, Waco, June 16. Secretary, Dr. G. B. Foscue, Waco.

Maryland Homeopathic Board of Medical Examiners, Baltimore, June 16. Secretary, Dr. Joseph S. Garrison, 848 W. North Ave., Baltimore.

New Jersey State Board of Medical Examiners, State House, Trenton, June 16-17. Secretary, Dr. J. W. Bennett, Long Branch.

Preparation for Medicine.

In his address before the meeting of the American Academy of Medicine at Pittsburg, Jan. 2, 1908, and published in the Academy's *Bulletin* for April, Prof. W. F. Mercer of the Ohio University laid emphasis on the value of a thorough preliminary education, and favored the requirement of one, or better, two years of study in the liberal arts' college, including courses in physics, chemistry and biology. This work should not be offered by the high school and could not be done there satisfactorily, since "it needs equipment and trained teachers to teach science in these days." The value of these studies is more for the training; for the experience in doing the work and for the spirit of investigation which the work arouses, rather than for the mere memorizing of isolated facts.

The old thread-bare argument that if a higher preliminary education is required the country would lose all its doctors because all these higher trained men would want to practice in the cities is answered by the statement that all men will find their level and some men, even though highly trained, will find themselves better adapted to country practice than city practice.

Another oft-heard statement that medical colleges with higher preliminary requirements will make theorists rather than train men to do practical things is branded as merely an argument of the weaker colleges to influence prospective students. "A man to be a physician should know more than merely how to do things; he must have a thoroughly trained and mature judgment. . . . We need the very best men and the most thoroughly trained men in the medical profession, not for the money that is in it, but for the good of humanity. No man lives a successful life who does not in some way help on society to a higher level."

Surgeons' Club Adopts Resolutions.

The Surgeons' Club of Rochester, Minn., at a meeting held April 16, 1908, attended by representatives from several states, adopted resolutions favoring (a) a single board of medical examiners for each state; (b) the omission of the subject of therapeutics from the license examination; and (c) the granting of authority to the examining board to revoke the licenses of practitioners guilty of inebriety, cocain or morphin habits, of causing criminal abortions, and of misrepresenting themselves in the public press or in any other way.

Adopt Higher Entrance Requirements.

Three more colleges, the University of Oregon Medical Department, the Louisville and Hospital Medical College and the John A. Creighton Medical College have voted to demand higher standards of preliminary education beginning with 1910. The first two adopted a requirement of one year's work in a college of liberal arts, and the last named a requirement of two years of such work.

The Colorado Board of Medical Examiners will require that all applicants graduating after Jan. 1, 1912, must have had one year's work in an accredited college of liberal arts before matriculation in a medical college.

There are now 53 leading medical colleges which by 1910 will be requiring for admission at least one year of work in a college of liberal arts, in addition to the usual four-year high school education. Twenty-seven of these colleges will require two years of such work.

Already the examining boards of five states—Minnesota, North Dakota, Connecticut, South Dakota and Colorado—have adopted similar requirements which apply to all students hereafter matriculating in medical colleges who expect to locate in those states. The two first named states will require two years of liberal arts' work and the last three, one year.

COUNCIL ON MEDICAL EDUCATION OF THE AMERICAN MEDICAL ASSOCIATION.

Fourth Annual Conference, held at Chicago, April 13, 1908.

(*Continued from page 1647.*)

Report of the Committee on Preliminary Medical Education.

Following the secretary's report, Dr. John H. Long of Chicago, chairman of the Committee on Preliminary Education, submitted the report of that committee.

About a year ago I had the honor of reading to the Council the report of its special committee on Preliminary Medical Education, in which certain data regarding courses in physics, chemistry, biology and languages given in the universities and colleges of the country were presented, and in which some recommendations were made. Since then the Committee has been at work gathering further information on the subject, which I now take pleasure in reporting.

OBJECTIONS TO THE TERM "PRELIMINARY YEAR."

In our report of last year the views of a number of educators on the practicability of the suggested schemes were given, and something was said about the objections which were raised against calling the work required a *preliminary year*. It was held by the objectors that the work in physics, chemistry, biology and languages which our committee considered as desirable, if not absolutely necessary prerequisites to study in the medical school, could not be done by the end of the freshman year in our colleges, even in the way of electives, and that it should be called the work of two years, rather than that of one. Further study has not led us to agree with this view as expressing the situation in the best of our colleges, but we must admit that for many of the smaller ones it is possibly not far from correct.

In the several reports read last year two facts, among many others, were brought out clearly. First, that in the large number of medical schools of the country there are about 80 which are well equipped, and which actually accomplish a grade of work that entitles them to be placed in a class by themselves, or, as it may be called, the acceptable class. Secondly, it was shown that a far better preliminary education on the part of those entering the medical schools is desirable, and that a very considerable number of our colleges and universities are prepared to give this desired training in the first year of their schedules.

During the course of our correspondence in the last twelve months it has become plain that an increasing number of good schools of liberal arts are prepared to offer a wider range of electives from which selections in science may be made. There is, then, an improvement in this phase of the situation.

Everything, therefore, seemed to work harmoniously toward the end sought for; namely, the announcement of a marked advance in the work of the 80 schools of the higher grade. In this hope we are somewhat disappointed, as the canvass shows that about one-fourth of these are not yet willing to take this important step, and the reasons urged in some cases are such as to call for a further discussion of first principles.

In a few cases, it must be said, the replies returned to our letters of enquiry were really evasive and showed a disposition to avoid giving a fair answer to our questions. In two or three instances the replies were equivalent to the statement that the colleges addressed were able to manage their own affairs without advice from our committee. This is doubtless true, for the moment, but we hope other days will bring a change of views.

But in some instances definite reasons were urged for failure to comply with our suggested educational requirements, and the most important of these will now be discussed, as practically they represent types, rather than individual cases.

1. In a neighboring state there are a number of schools of medicine which draw their students almost wholly from within the borders of the state. One of these schools is of sufficient merit to belong in the first group of the classification, but it suffers from the rather severe competition of the others with lower entrance requirements. In explaining the situation to our committee, the president of the university, of which this school is a part, asserts that a further increase in the requirements for admission would probably be fatal to this school at the present time, as admission now is relatively difficult and no moral support is afforded by the State Board of Health. This president is a man of high ideals and broad views, and we feel that we must admit for the time the validity of his explanation. At the same time we wonder why some boards of registration are sometimes so blind to their possibilities as well as to their duties. What is told us of this locality is doubtless true of others.

HIGH SCHOOL PHYSICS NOT SATISFACTORY.

2. Another man writes that our requirements are too high, and that preliminary work in the three fields of science and in languages is more than we can practically secure. He suggests that probably the physics of the high school might be accepted as sufficient in place of calling for a year of college physics. Most of this objection was considered in our report of last year and should need no further discussion now. But in regard to the definite suggestion that the course in high school physics should be considered satisfactory for our preliminary work, more may be said. In urging this suggestion the writer made the very plausible assertion that in recent years a number of very excellent works on elementary physics have appeared, and that these are used in the high schools very generally. The excellence of some of these text-books must be granted, but that they are used in a way to satisfy our requirements is another question. To gain light on this point letters were addressed to the presidents and professors of physics in a number of larger institutions in several states. The answers to these letters were in general such as to warn away from the notion that high school physics, even under the most favorable conditions, covers what we want. In some cases the college men addressed were quite outspoken in their condemnation of the idea. But this does not exhaust the question; there is a growing sentiment against the belief that the high school should be called on to give so much advanced work to take the place of what has long been considered as proper freshman work in college.

RELATION OF THE HIGH SCHOOL TO UNIVERSITIES.

It is an old question, and yet a very live one, that of the relations of the high school to the colleges and universities. Recent discussions in this city bring it to the fore again, and certain arguments advanced at the meetings of the North Central Association of Colleges and Secondary Schools by the men representing a few of the high schools were very strong against some of our tendencies. It has been held that the sooner we get away from the notion that the high school is the only proper and natural feeder for the universities, the better will it be for all concerned. In the high school a certain amount of training in the sciences must be given, but it is agreed that this should be the general training for the boy or girl going out into the world equipped for some practical pursuit, rather than the special systematic training leading directly into more advanced work in the same lines in the college or university. The high school is already overburdened with subjects which perhaps more properly belong in other institutions, and to attempt to make the physics or chemistry or biology of the last year of the public school course suitable for our medical school requirements is certainly absurd. In order to clear up our conceptions here it may be necessary to begin to insist on a more rigid distinction between high schools, academies, colleges and universities. We are working toward the ideal condition in which our medical school work will be considered as real university work.

THE "LET-WELL-ENOUGH-ALONE" ARGUMENT.

3. A third answer to our questions regarding the intentions of these schools was even more surprising, in view of the full discussions of the last two years on the subject. This answer maintains that the present situation satisfies all reasonable needs, and that students are sent out with an equipment which is as full as is practically required. The validity of this answer hinges largely on what we may understand by the word "practical," and, as is readily apparent, it must be colored by the peculiar viewpoint of the man giving the answer. To illustrate, consider the natural requirements of the teacher of obstetrics, and the teacher of pharmacology, and in doing this we are not making any comparison of the one field with the other, or asserting that one is in any sense more important than the other. Both specialities are extremely important. But this is true, that a boy of very limited preliminary education, if he happens to be industrious and observant as to details can develop into a skilful operator within the limits of the college course, while in the domain of pharmacology no such thing is ordinarily possible. The latter subject, from the very nature of the case, makes for different requirements, and what the student can acquire through his course in this field is relatively small. Unless he comes to the work with a good intellectual equipment, with considerable special knowledge, his success will be of a doubtful character. This illustration is chosen because the chairman of your committee has had occasion to discuss the question with a well-known obstetrician, on the one hand, and with a well-known pharmacologist, on the other. Both men are industrious workers in their chosen fields, and both possess more than the usual amount of general education. But the first is satisfied that boys with a high school training, or in some cases with a grammar school training, are well equipped for the study of medicine, while the second man is quite distrustful of the whole situation, and disposed to be very pessimistic regarding the work of most of our schools in the fields of materia medica and therapeutics. This man insists strenuously on far better preliminary work, especially in chemistry and biology, and we can not avoid the conclusion, knowing something of his specialty, that his claim is a perfectly just one. We feel that our obstetrician friends, and others, too, who have been doubtful, must begin to look at the problem in a broader light, and that they will join us in asking for more scientific work at the outset.

SUBJECTS FOR THE PRELIMINARY COURSE.

These remarks have all been suggested by answers received in the course of discussion or correspondence on our topic. Other questions also suggest themselves in this connection, and one is with reference to the order and relations of studies in the schools which adopt our proposals. In asking for a year of preliminary college work we can not expect that organic chemistry will be included. It may be assumed that under this provision students will come to the medical school fairly well equipped in inorganic chemistry and elementary qualitative analysis, at most, in addition to their courses in physics, biology and languages. The medical schools, at least most of them, may have to include in their curricula courses in organic chemistry and a good outline of volumetric analysis. In those schools of medicine which have heretofore given general chemistry and qualitative analysis in the freshman year, bacteriology may now properly become a first year study, and whether it be taken before or after the organic chemistry makes but little difference. Bacteriology as required in the medical school, is a fundamental and elementary science, and may be taken even in the first semester. To be sure, in some of the higher fields of bacteriological work, a good knowledge of organic chemistry is necessary, but the converse may be said with equal truth, that is, in many problems of the new physiological chemistry acquaintance with bacteriology is indispensable. However, in the ordinary student courses we are not dealing with such situations and the general bacteriology courses may well be taken by freshmen, thus permitting more and better work in other lines to be done in the sophomore year, where bacteriology is now usually given. The preliminary year in biology should have an effect in modifying materially the amount of work given to freshmen in some parts of the courses in embryology, histology and physiology. In following out some such scheme as was suggested last year the young man in preparation for the medical school should acquire a real working knowledge of the microscope, and much of the theory and practice of section cutting, staining and mounting. It is not necessary to enlarge on the importance of all this with reference to the medical school work. With such knowledge already in possession of the student, the instruction in histology may begin at once with the real work of the course, thus securing an enormous advantage in time, as well as the possibility of greater thoroughness.

A STRONGER FOUNDATION NEEDED.

The answer received from one of the schools which have not yet agreed to make an increased entrance requirement, calls for further discussion on a fundamental point which we supposed was everywhere regarded as settled. This school is one of the best known in the country, yet is very lax in its entrance requirements and is not willing to announce an improvement. The claim made by the authorities of this school is to the effect that what is needed to advance medical education is not so much better preliminary work, but better clinical instruction. Your committee can not accept this doctrine. In this particular institution the clinical teaching is already in advance of the students' power of real comprehension, and, doubtless, the same may be said of many other institutions. As intimated above, the difficulty is not as much in the various fields allied to the departments of surgery, obstetrics or gynecology, but in that other broad group of subjects making up what is designated as internal medicine. The general anatomy and histology related to medicine are already much more highly developed than are the physics and chemistry related to medicine, yet it seems to be true that it is on the more advanced development of chemistry that the future of scientific internal medicine depends. To-day many of the world's most famous workers in general, organic and physical chemistry are straying from these fields over into the field of biological chemistry, because it is evident that here the future development must be the greatest; here the most important problems are to be attacked and solved, and here the rewards for research must be the most certain and lasting. It is strange that medical men have been the last to recognize this invasion of their field, but it is a fact that the chemist is finding in the subjects of internal medicine an opportunity for research of the highest practical importance. In every great medical problem there are two fundamental questions: What is the matter, and what is to be done, or more technically expressed, the questions of correct diagnosis and treatment. Diagnosis was at one time largely a matter of interpretation of signs; it is still a question of signs, but year by year more and more signs may be brought under observation, and more methods may be called in for their interpretation. It may be the blood, the urine, the sputum or the feces that we interrogate chemically or bacteriologically, or it may be the mode of the heart's or lung's action, or the temperature of the body, or some other point that we observe physically, or the appearance of a certain thin section under the microscope, but in any event our questions are becoming more precise, and we demand greater and greater precision in the answers. What a vast deal of knowledge must be drawn on to reach the logical conclusion, but when once reached, it must have a correspondingly great importance.

KNOWLEDGE VERSUS NOSTRUMS.

Next, having located the trouble, what is to be done. Assume for the moment that the ailment is one that may yield to medication, and we are at once burdened with a superabundance of riches. From the days of Galen, or, better, from the later iatro-chemical period inaugurated by Paracelsus we have been deluged with remedies. There is scarcely a thing under the heavens which at some time in its history has not been used in the cure of disease, and think how many of these have been "absolute specifics!!" We have discarded thousands of these absurdities, and think ourselves now wise, but alas, modern advertising methods have made us familiar with a lot more just as wonderful, and when their great value is attested by numerous reports from Bugelheim-Kartenspiel's world-renowned clinic in Vienna, Prague or Berlin, and later by numerous remarkable cures from the practice of Dr. XYZ of Hooppole Town, Posey county, we are perhaps almost persuaded that the real thing has been found. But even if we are not fully convinced, our friend who is less familiar with the details of organic chemistry may be. He may not be able to see the absurdity of the hy-sko-mors, gin-rik-shas, or the panc.-ext.-sub-gum, or the various other hyphenated monstrosities which remind one of the bill of fare of a chop-suey establishment. Our friend, our brother physician may be fooled by all this because he has not been taught in the right way to discriminate. We may be able to recognize it, but he, for the time, is unable to see the absurdity in the oft-repeated assertion: "I put him on gin-rik-sha, and he made a rapid recovery." Disgusted by the apparent success of nostrum fakers many good men are inclined to go to the other extreme and become adherents of an almost equally fatal therapeutic nihilism.

BETTER EDUCATION IN FUNDAMENTALS NEEDED.

What is the remedy for all this! Not more or better clinical teaching, as our correspondent above referred to asserts, however desirable improvements in this direction may be, but primarily better education in fundamentals. This we believe is our main chance for salvation. In one department of medical education there is just now a great awakening, and that is in the field of pharmacology. We do not mean the old-fashioned materia medica jumbled up with a somewhat doubtful therapeutics, but the real science of the constitution of remedies in relation to their physiological behavior, experimentally determined. An honest study of pharmacology, we believe, will do more to cure these growing evils than anything else hitherto attempted. But pharmacology is not play, and to properly master it the student must bring to the medical school a far better scientific knowledge than is now usually the case; he must, in fact, be in a position to work into the spirit of real laboratory methods.

POSSIBLY TWO YEARS NEEDED.

It is such considerations as these which lead to the conclusion that the preliminary work should be even more thorough than that advocated in our report of last year, and sooner or later what was described as a preliminary year of college work must develop into two solid years of such preparation. Some of our larger medical institutions are insisting on this now, and all the others which expect to remain in the first class must come to it. Of course it can not be hoped, even if it were desirable, that all will be brought to the standard of Harvard or Johns Hopkins.

THE OBJECT IN VIEW.

It is, of course, not held that in the time given to the preliminary courses in the sciences, or to the later courses in organic and physiological chemistry in the medical school, the students will become proficient analysts, and so able to recognize at once the composition of the various new remedies exploited from time to time. This is not possible and it is not necessary. But the student can at least learn enough chemistry and pharmacology to be able to judge fairly well of the honesty of the claims made, or the validity of the criticisms of those who are fitted to publish the composition of things in question. With a proper training in pharmacology his judgment will be strengthened to the extent that the gross and absurd frauds, now so common, will no longer appeal to him, and claims chemically and physiologically impossible may be at once recognized. Above all things the medical student needs the material from which he can form rational judgments, and for this purpose, as for many others, nothing is better than a training in the exact sciences.

It may be added, finally, that an advantage of no small import derived from the more thorough training of medical students in the fundamental branches is the appreciation of the value of scientific research work. Experience has shown over and over again that the scientific curiosity of the laboratory of to-day develops into the valued routine of the clinician of to-morrow, and the student should be so stimulated as to keep this thought always in mind.

Committee on Preliminary Education.

J. H. Long, Chairman.
C. R. Bardeen,
G. A. Piersol.

Report of Committee on Definition of Medical College in Good Standing.

The Chairman: The next report is the "Report of the Committee on What Should Constitute a Medical College in Good Standing?" The chairman of that committee is Dr. Victor C. Vaughan of Ann Arbor, Michigan, the other members being Dr. William J. Means of Columbus, Ohio, and Dr. George W. Webster of Chicago. The chairman of the committee, Dr. Vaughan, then submitted the following report:

Below is a schedule of the minimum requirements, laboratory equipment and clinical facilities which should obtain in a medical college before it can be considered as giving a satisfactory course or be determined as a medical college in good standing:

I. REQUIREMENTS.

1. Matriculation.—For matriculation the medical college should require of each student:

(1) A certificate of good moral character, signed by two reputable physicians of the state in which the applicant resides; and,

(2) As evidence of satisfactory preliminary education, a medical student's matriculation certificate, issued by the state board of medical examiners or its authorized agent, this certificate to be issued on (A) acceptable credentials, or (B) on successfully passing a preliminary examination.

A. Acceptable Credentials.—(a) A degree from an accredited university or college of arts or science; or,

(b) A diploma from an accredited four-year high school, normal school or academy which required for admission eight years of study in the primary and intermediate grades and which furnished a preliminary education of at least 15 units (30 points or credits, or 75 counts), as given in the following outline (suggested by Dr. W. J. Means, chairman of the judicial council of the Association of American Medical Colleges):

STATEMENT OF ACADEMIC OR SECONDARY WORK FOR ADMISSION TO MEDICAL COLLEGE BY CREDENTIALS OR EXAMINATION.

Required Branches.

	Units.	Points.	Counts.
Rhetoric and composition	1	2	5
History of English and American literature	1	2	5
Algebra, through quadratics	1	2	5
Geometry, plane	1	2	5
Latin, grammar and 4 books of Cæsar or equivalent	2	4	10
U. S. History and Civics	1	2	5
Physics, with laboratory work	1	2	5
Total	8	16	40

Elective Branches.

Seven units, 14 points or credits, or 35 counts to be selected from the following subjects. Not more than 2 units, 4 points or credits or 10 counts from any one group:

	Units.	Points.	Counts.
Group 1:			
English Classics (College Entrance Examining Board list)	2	4	10
Group 2:			
Geometry, solid	.5	1	2.5
Trigonometry	.5	1	2.5
Group 3:			
Latin, Cicero (7 orations)	1	2	5
Latin, Vergil (6 books)	1	2	5
Group 4:			
German, grammar with 2 years' certified work	2	4	10
French, grammar with 2 years' certified work	2	4	10
Spanish, grammar with 2 years' certified work	2	4	10
Group 5:			
History, Greece and Rome	1	2	5
History, medieval and modern	1	2	5
History, England, half year's work	.5	1	2.5
History, France, half year's work	.5	1	2.5
Group 6:			
Biology, with laboratory work	1	2	5
Botany, with laboratory work	.5	1	2.5
Zoology, with laboratory work	.5	1	2.5
Physiology and Hygiene, with laboratory work	1	2	5
Group 7:			
Chemistry, with laboratory	1	2	5
Total	18	36	90

A *unit* is the credit value of 36 weeks' work of 5 recitation periods per week, each recitation period to be of not less than 45 minutes.

A *point* is the credit value of 18 weeks' work of 5 recitation periods per week, each recitation period to be of not less than 45 minutes.

A *count* is the credit of one recitation period per week of not less than 45 minutes through 36 weeks.

It is urged that within a reasonable time the minimum requirements as given in paragraph (b) will be enlarged to include an additional year in university physics, chemistry, biology and a reading knowledge of at least one modern language, preferably German or French.

B. Preliminary Examination.—The preliminary examination should be taken before the board of medical examiners or its authorized agent, and should represent the work of 15 units (30 points or credits or 75 counts) in accordance with the above outline. Under no circumstances must this examination be given by any one connected with the medical college.

Later, when the requirement is considered reasonable, university courses in physics, chemistry, biology and modern languages should be required in this examination.

2. Medical Education.—The medical college should give a strictly graded course covering four years of not less than thirty weeks each year, exclusive of holidays. Each year should cover not less than thirty hours per week of scheduled class room work in lectures, recitations, laboratory and clinical work. At least forty-two calendar months should elapse between the dates of matriculation and graduation. The complete course should approximate 3,600 hours and include:

(a) Two years of study, consisting largely of laboratory work in anatomy, histology, embryology, physiology, chemistry, pharmacology, physiologic chemistry, bacteriology and pathology.

(b) Two years of clinical work largely in hospitals and dispensaries, with thorough courses in internal medicine (including physical diagnosis, pediatrics, nervous and mental diseases), surgery (including surgical anatomy and operative surgery on the cadaver), obstetrics, gynecology, materia medica, pharmacology, laryngology, rhinology, ophthalmology, otology, dermatology, hygiene and medical jurisprudence. There should also be a laboratory course in clinical microscopy, including hematology, and the hospital courses should be accompanied by work in properly equipped clinical laboratories.

3. Advanced Standing.—(a) Advanced standing may be granted to the extent of three years of work taken at other recognized colleges.

(b) In giving advanced standing the college should not discriminate against its own full-course students. It is meant by this that students should not be given full standing when they come from colleges not giving equivalent courses.

(c) Before granting any advanced standing the dean or secretary of the school to which the student seeks admission should obtain from the corresponding officer of the school from which the student comes a full statement of his credentials, so far as preliminary and medical education is concerned, together with the standing of the student in each course he has taken.

4. Graduation.—The medical college should require of each student before graduation:

(a) Compliance with the above given requirements of preliminary and medical education.

(b) An attendance of at least 80 per cent. on each course of instruction above mentioned.

(c) The passing of a final examination in each course of instruction above mentioned with a percentage of at least 75.

(d) The individual dissection of at least one lateral half of a human cadaver.

(e) The individual attendance on and management of at least two maternity cases.

(f) The work of at least the fourth or senior year must be taken in the medical college granting the degree.

II. EQUIPMENT AND FACILITIES.

1. Buildings.—The medical college buildings should be well lighted, sanitary and commodious, with ample space for laboratories, amphitheaters, examining, lecture, recitation and special research rooms, as well as storage rooms and a suitable place for such animals as are used in experimental work.

2. Laboratories.—There should be well-equipped laboratories for practical anatomy, histology, embryology, physiology, chemistry, physiologic chemistry, pharmacology, bacteriology and pathology, and these laboratories should be officered by trained instructors paid to devote their entire time to the preparation of materials used in instruction and to teaching and research. By a well-equipped laboratory is understood a laboratory provided with all the microscopes and other apparatus necessary to enable each student to carry on the work of that department intelligently and successfully.

3. Hospitals, Dispensaries and Clinical Facilities.—(a) The main hospital and dispensary should be in close proximity to the college building, of easy access to the students, and should be under the control of the college at least so far as clinical material is concerned.

(b) The hospital material available for clinical purposes should be in proportion to a daily average of at least 200 patients to 100 students in the senior class.

(c) The dispensary material should be carefully classified and properly used.

4. Library, Museum, Charts, Etc.—(a) Library: The medical college should have a working medical library, including the more recent text and reference books, as well as ten or more of the chief medical periodicals. This library room should be easily accessible to the students, should be provided with suitable tables and chairs, and should have an attendant in charge.

(b) Museum: There should be a medical museum having its various anatomic, embryologic, pathologic and other specimens carefully prepared, labeled and indexed in order that any specimen may be easily found and employed for teaching purposes. The value of the pathologic collection could be greatly augmented by having slides showing the microscopic findings in each case carefully prepared, labelled, indexed and kept easily accessible. Clinical records of these cases should also be drawn up, indexed and filed for easy reference.

(c) Charts, Models, Stereopticons, Etc.—The medical college should have a supply of anatomic charts, embryologic models and other apparatus, such as a stereopticon or a reflectoscope, as well as microphotographic, Roentgen ray or other apparatus, which would be of service in the teaching of medicine.

III. CONDUCT OF THE COLLEGE.

1. The medical college should literally observe its published requirements for admission, tuition, time of attendance on the sessions and graduation, which it should definitely set forth, together with complete lists of its matriculates and annual graduates, in regular annual catalogues or announcements.

2. New medical colleges may be recognized on application if on examination they are found to comply with the above requirements.

(To be continued.)

Reports to the House of Delegates

REPORTS OF OFFICERS.

Advance Presentation of Reports of Officers and Committees for the House of Delegates at the Chicago Session.

The following are reports of officers and committees which will be presented to the House of Delegates at the fifty-ninth annual session of the American Medical Association, to be held at Chicago, June 2-5, 1908. They are printed here that all who are interested may become acquainted with their contents in advance.

Report of the General Secretary.

To the Members of the House of Delegates of the American Medical Association:

Gentlemen:—I submit herewith my report for the year 1907-1908.

MEMBERSHIP.

The membership of the American Medical Association on May 1, 1907, was 27,515. During the past year 252 members have died, 1,227 have resigned, 396 have been dropped for non-payment of dues, 412 have been dropped as not eligible under Section 1, Chapter 1, Book 1 of the By-laws, and 57 names have been removed from the rolls on account of being reported "not found" or on account of mail returned by the postoffice department. This gives a total loss during the year of 2,344 names. During the year there have been added 6,172 names, of which 3,890 were subscribers to THE JOURNAL previous to becoming members of the Association, while 2,282 were new members joining direct. The membership on May 1, 1908, was 31,343, giving a net gain for the year of 3,828.

COMMITTEES APPOINTED.

September, 1907, the President appointed the following as the Committee on Nomenclature and Classification of Diseases: Drs. Frank P. Foster, New York, Chairman; W. A. N. Dorland, Pennsylvania; Victor C. Vaughan, Michigan; Alexander Duane, New York; J. Chalmers Da Costa, Pennsylvania.

Dr. William H. Welch having resigned as a member of the Committee on Medical Legislation, the President appointed Dr. J. B. Roberts, Philadelphia, to fill the unexpired term.

BRANCH ASSOCIATIONS.

The report of the Committee on Organization regarding branch associations, made at the session for 1907, was referred to the Reference Committee on Reports of Officers, which committee recommended that the report be referred to the state associations, with an urgent request for an expression of their views, to be presented to the Association at the next annual session. In accordance with these instructions, a letter was sent to the secretary of each of the constituent state associations, in September, asking that this question be brought before the state association at its annual meeting. Early in April, 1908, a second letter on this subject was sent to all state secretaries. Acknowledgement of the receipt of these communications has been received from 34 states. Of these, two (Delaware and Maryland) voted in favor of branch associations, seven (Colorado, Idaho, Massachusetts, New York, Rhode Island, Ohio and Pennsylvania) voted against and twenty-five, at this date—May 12, 1908, have taken no action.

REPORTS OF COMMITTEES.

At the 1907 session the House of Delegates instructed the Secretary to send to each member of the House of Delegates at least two weeks before the annual session, printed copies of the reports of all committees. The instructions of the House have been complied with so far as possible.

UNIFORM REGULATIONS REGARDING MEMBERSHIP.

Membership in good standing in an affiliated society or association has always been a requirement for membership in this Association. Previous to the reorganization, the enforcement of this provision was practically impossible. Since the uniform plan of organization was adopted, accurate information regarding membership in the county and state societies is obtainable. Much difficulty is encountered, however, in enforcing the provisions of the by-laws regarding membership, since different state associations have different rules on such subjects as the date of the beginning of the fiscal year, the date at which dues must be paid, the length of time allowed a delinquent member in which to reinstate himself before forfeiting his membership, the date when reports are due from county societies, etc. Owing to these varying conditions, it is exceedingly difficult to enforce the membership qualifications of the by-laws with equity and fairness. It is furthermore confusing to a member removing from one state to another to find an entirely different set of regulations and provisions regarding these matters. As the Association and its various constituent parts have become better organized, and as the work of the various secretaries has become more burdensome, it is necessary to formulate a uniform system of procedure for the various state associations and component county societies to follow. Much of the correspondence now being carried on between state and county secretaries and the General Secretary's office would be unnecessary were systematic, routine methods devised by which membership matters could be automatically regulated. I therefore recommend that this entire matter be referred to a committee of three, at least two of whom shall be secretaries of constituent state associations, with instructions to secure data regarding the present provision of the constitutions and by-laws of various state associations on these points—as well as the procedure followed by state and county secretaries and to report its findings and recommendations to the House of Delegates at the next annual session.

PORTO RICO AND ALASKA.

As in previous years, a number of communications have been received from physicians practicing in Porto Rico and in Alaska regarding the organization of a constituent association in these territories. In each case the writer has been advised by the General Secretary's office that such an organization was desired and has been urged to take the lead in effecting it. No definite results, however, have as yet been obtained. Correspondence was recently carried on with the secretary of the Northwestern Alaska Medical Association, which asked for recognition from this Association. That officer was advised that inasmuch as the society in question did not take in the entire territory it probably would not be regarded as a territorial association in accordance with Article IV of the Constitution. It was suggested that it would be advisable to organize an association to take in the entire territory and then to apply for recognition as a constituent association. Nothing further has resulted from this correspondence, but it is hoped that before long an association can be organized in each of the above territories that will become a constituent branch of this Association.

THE BULLETIN.

In the fall of 1907 the name of the *Councilors Bulletin* was changed to *The American Medical Association Bulletin.* This seemed advisabe because the field of this publication had expanded until it had become a means of communication between the Association and the officers of all of its component parts regarding any subject connected with medical organization or the welfare of the profession, instead of being limited to matters of interest only to councilors. *The Bulletin* during the past year has been utilized for the distribution of the outline of postgraduate study formulated by the Committee on Organization, two numbers having been devoted to this purpose. Two numbers have been used by the Committee on Medical Legislation, one for a synopsis and abstract of the medical practice acts of the United States, and one for the official minutes of the Conference on Medical Legislation, held in Chicago in December. The fifth number will contain the minutes of the Conference on Medical Education held in Chicago in April, and other matter relating to medical education. The publication of such matter in *The Bulletin* enables the Association to distribute official proceedings, abstracts, etc., to all officers at a minimum cost.

REPRESENTATION IN THE COUNCIL OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

The following invitation has been received, asking the American Medical Association to appoint two of its members to represent it in the Council of the American Association for the Advancement of Science:

> AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.
>
> WASHINGTON, D. C., April 23. 1908.
>
> *Dr. George H. Simmons, Secretary,*
> *American Medical Association, Chicago:*
>
> *My Dear Sir:*—For some years past a concerted effort has been in progress to bring together in the council of the American Association for the Advancement of Science a compact body of men who shall represent as completely as possible the scientific interests of America.
>
> To accomplish this end, a change was made in the constitution some time ago and representatives of all of the scientific associations of specific scope, which were at that time affiliated with the American Association for the Advancement of Science, were made members of the council. In this way, practically all of the natural and exact sciences are thus represented.
>
> The council feels, however, that the American Medical Association should be included in order to thoroughly round out this movement and to add strength to the organization. By a special vote of the council of this association, I am empowered and directed urgently to invite your association to appoint two of your members who shall, in consequence of this invitation, become members of this council.
>
> Such action on the part of your association will involve no obligation on its part, but will simply enable us to strengthen our organization by making its membership more thoroughly representative. Yours most truly,
>
> L. O. HOWARD.

I believe that this invitation should receive favorable consideration. At present all of the sciences, such as astronomy, mathematics, physics, chemistry, geology, zoology, botany, anthropology, sociology, and economics, anatomy, physiology and experimental medicine, are represented in the council of the American Association for the Advancement of Science, and it seems both for the interests of medicine as well as of the natural sciences that this representation should include practical and scientific medicine. The voice of medicine should be heard authoritatively in the council of this national scientific body; and there are occasions when it is important that medicine should participate in the deliberations of that body and should lend its support to expressions of opinion on questions of importance, especially when these questions relate directly or indirectly to scientific medicine.

PROGRESS AND BETTER CONDITIONS.

The past year has been one of increasing and unprecedented activity and progress on the part of the organized medical profession. Increased membership has been accompanied by greater interest in society work, higher professional standards and wide range of professional activities. The postgraduate course of county societies has been inaugurated and outlined, the first year of the course being distributed to county society officers through *The Bulletin.* County and state societies as well as individuals are taking much more interest than formerly in public affairs while the public is taking much more interest than formerly in sanitary matters. Much of this change in sentiment is due to the splendid work of Dr. J. N. McCormack, whose tours have invariably been followed by better feeling and more hearty cooperation between the profession and the public. The work of systematic organization and the stimulation of county societies should be continued until every reputable, ethical and public spirited physician in the United States is a member of his county society and laboring for the public good.

Respectfully submitted.

GEORGE H. SIMMONS, General Secretary.

Report of the Board of Trustees for the Year 1907.

To the Officers and Members of the House of Delegates and of the American Medical Association:

As required by the By-Laws, your Board of Trustees herewith presents you with a report of the result of the work done in the office of THE JOURNAL of the Association for the fiscal year ending Dec. 31, 1907. We shall endeavor to make this report so plain and explicit that one will not need to be an expert accountant to comprehend it fully in all its details. As has been our custom for several years, we present first the report of "The Investor's Audit Company of Chicago," which has carefully gone over all of the business of THE JOURNAL office and the books and vouchers of the Treasurer of our Association. This examination by a chartered company is done, just as most of the business enterprises of the day are having such work done, by parties in no way interested in the result of such investigations; and hence can be partial neither to the Board nor to The Journal office. Of course, in a business enterprise of such magnitude as that of the publication of The Journal, no one could expect the Board of Trustees personally to undertake such work. This report is given in full as follows:

The Investors Audit Company.

Chicago, Jan. 11, 1908.

To the Board of Trustees of the
American Medical Association, Chicago, Ill.

Gentlemen:

We beg to report that we have examined the books and vouchers of the American Medical Association for the year ended Dec. 31, 1907, and we hand you herewith the following statements:

Comparative Balance Sheet as at Dec. 31, 1906 and 1907.
Revenue Account for the year ended Dec. 31, 1907.
Disposition of Revenue for the year ended Dec. 31, 1907.
Net Investment in Second Edition of Directory.
Inventory of Materials and Supplies.
Details of Bond Account.
Summary of Publication Expenses.
Summary of Organization.
Summary of Association.
Summary of Medical Legislation.
Summary of Medical Education.
Summary of Depreciation.

We would call your attention to the following items in the attached accounts:

On the balance sheet you will notice the item of "Net Investment in second edition of Directory, $5.809.24." This account represents expenditures to date on the second edition of the Directory and consists principally of salaries and other expenditures for revising and bringing up to date the information necessary to complete the second edition.

In the Revenue Account is charged off the expenditures over receipts on the first edition of the Directory, $18,427.44. In connection with this item, we would point out that the loss on the first edition of the directory as shown in the account, includes the following expenditures, the result of which should prove of considerable value in getting out future editions:

Editorial and office salaries	$18.007.73
Composition and proof reading	8.744.92
Amount paid for property of the Standard Directory	6.176.32
Amount paid for Information	8.291.02

With the above comments we believe the statements attached hereto to be self-explanatory, and are prepared upon similar lines of those furnished in previous years.

In the course of our audit we have examined vouchers for all cash disbursements, with the exception of a few issued during the latter part of the year which had not been returned by the bank and these will be examined by us later and if any remain missing we will report to you upon the same. In checking these vouchers for disbursements we have taken care to satisfy ourselves that invoices or other original evidence of the nature of the disbursement were attached to the receipts. Also that the vouchers had been approved by the proper parties and that the invoices had been checked for receipt of goods, prices and extensions.

We verified the cash in bank by means of statements furnished by the bankers and the cash on hand by actual count.

We have examined the securities in the possession of the Treasurer and found them to be in order.

In the bookkeeping and office work the standard of the last few years appears to have been maintained.

We shall be glad to furnish you with any further information in our possession that you may require regarding these accounts.

Yours faithfully,
THE INVESTORS AUDIT COMPANY.
E. M. Mills, Manager.

EXHIBIT A.

Comparative Balance Sheet as at Dec. 31, 1906 and 1907.

ASSETS.

Dec. 31, 1906.			Dec. 31, 1907.
$111,781.91	Real estate and buildings		$112.937.04
45,531.08	Machinery		49.006.76
	Stereotype plant		1,646.95
6.862.43	Furniture and fixtures		7,203.06
1,175.16	Library		1.175.16
43,820.66	Net investment in first edition of Directory to date.		
	Net investment in second edition of Directory to date (see Exhibit D)		5.809.24
14,336.59	Inventory of materials and supplies (see Exhibit E)		19,151.70
40,199.38	Bonds at cost (see Exhibit F)		54,231.88
	Certificate of deposit		15,000.00
	Bills receivable		13.50
14,837.17	Accounts receivable:		
	Chicago Postmaster deposit	$ 460.00	
	Advertising	13,824.23	
	Directory (proportion considered good)	3,000.00	
	Reprints	936.35.	
	Sundry	82.40	
			18.302.98
13,023.51	Cash:		
	Treasurer's account	$20,118.84	
	Office	4,408.95	
	Petty cash	50.00	
			24,577.79
	Rental paid in advance—first installment		250.00
$291,567.89			$309.306.06

LIABILITIES.

$ 21,906.00	Accounts payable		$ 7,435.41
	Advance payments on "The Archives of Internal Medicine"	$ 232.50	
	Less: Commissions	12.00	
			220.50
$269.661.89	Balance: Being excess of assets over liabilities		$301,650.15
$291,567.89			$309,306.06

EXHIBIT B.

Revenue Account for the Year Ended Dec. 31, 1907.

Income:		
Advertising	$ 119.694.67	
Subscriptions	90.570.50	
Dues	122.827.19	
Jobbing	23.747.96	
Reprints	7.542.12	
Books	8,215.14	
Physicians' Manual of U. S. Pharmacopeia and N. F.	2,772.11	
Buttons	1.330.28	
Rents of Association properties	3,200.00	
Sale of waste paper,, sweepings, paper cases, etc.	2.276.12	
Interest on bonds	1,660.00	
Interest on daily bank balances	594.80	
Interest on certificates of deposit	600.00	
		$385,030.89
Deduct:		
Publication expenses (see Exhibit G)	$ 278.995.27	
Organization expenses (see Exhibit H)	9.349.77	
Association expenses (see Exhibit I)	4.701.21	
Medical legislation (see Exhibit J)	2.573.22	
Medical education (see Exhibit K)	5.538.27	
Bureau of information	3.000.00	
Depreciation (see Exhibit L)	6,821.23	
Pharmacy and chemistry	4.705.90	
Books	5,885.34	
Physicians' Manual of U. S. Pharmacopeia and N. F.	2,900.00	
Buttons	1,075.08	
Insurance and taxes	1.905.38	
Discount	1,431.57	
Exchange	1.037.07	
Building maintenance	1,424.71	
House expense	345.97	
Commissions for securing new members	328.60	
Bad debts written off, less recoveries	1,168.74	
Atlantic City Session	4.499.98	
Loss on sale of machinery	76.62	
Excess of expenses over receipts on first edition of Directory (see introductory above)	18,427.44	
Miscellaneous	30.84	
		$356,222.21
Net revenue for the year ended Dec. 31, 1907		$ 28.808.68

EXHIBIT C.

Disposition of Net Revenue for the Year Ended Dec. 31, 1907.

Increase in Assets:		
Real estate and buildings	$ 1.155.13	
Machinery	3.475.68	
Stereotype plant	1,646.95	
Furniture and fixtures	340.63	
Bonds and certificates of deposit	29,032.50	
Inventory	4,815.11	
Bills receivable	13.50	
Accounts receivable	3.465.81	
Cash	11,554.28	
Rental paid in advance	250.00	
Net investment in second edition of Directory	5.809.24	
	$61,558.83	
Add: Decrease in Liabilities:		
Accounts payable	14,470.59	
		$ 76,029.42
Deduct: Decrease in Assets:		
Net investment in Directory	$ 43.820.66	
Increase in Liabilities:		
Advance payments on "The Archives of Internal Medicine"	220.50	
Items applicable against a prior period.	3,179,58	
		$ 47,220.74
Net revenue for the year ended Dec. 31, 1907		$ 28.808.68

EXHIBIT D.

Summary of Net Investment in Second Edition of Directory as at Dec. 31, 1907.

Express	$ 22.88
Postage	187.84
Information	153.96
Salaries	5,187.75
Jobbing	186.25
Miscellaneous	70.56
	$5.809.24

EXHIBIT E.

Summary of Inventory as at Dec. 31, 1907.

Paper stock	$ 7,043.81
Books	2,012.91
Physicians' Manuals	1,224.09
Buttons	146.84
Fuel	164.00
Ink	250.90
Type	3,119.71
Metal	5,189.44
	$19,151.70

EXHIBIT F.

Details of Bond Account as at Dec. 31, 1907.

	Par value.	Cost.
5 Atchison, Topeka & Santa Fe Ry. Co. 4 per cent. 100-year gold bonds	$ 5,000.00	$ 4,988.75
5 Erie R. R. Co. 4 per cent. gold bonds	5,000.00	4,932.50
5 Baltimore & Ohio R. R. Co. first mortage 4 per cent. bonds	5,000.00	5,032.50
5 Reading Company general mortgage 4 per cent. bonds	5,000.00	4,870.00
5 Union Pacific R. R. Co. first mortgage 4 per cent. bonds	5,000.00	5,207.50
14 City of Chicago 4 per cent. school bonds	14,000.00	15,168.13
5 Reading Co. and the Philadelphia and Reading Coal and Iron Co. general mortgage 4 per cent., payable January and July, Nos. 29367, 29366, 24483, 24482, 66964, par value of $1.000.00 each at 94½	5,000.00	4,732.50
5 Atchison, Topeka & Santa Fe Ry. first mortage 4 per cent., payable April and October. Principal due 1995. Nos. 32785, 35162, 40517, 40516, 40515, par value of $1,000.00 each at 90½.	5,000.00	4,532.50
5 Baltimore & Ohio Ry. Co. first mortgage 4 per cent., payable April and October. Principal due 1948. Nos. 53591, 53594, 53593, 34986 and 34987. Par value of $1,000.00 each at 95	5,000.00	4,767.50
	$54,000.00	$54,231.88

EXHIBIT G.

Summary of Publication Expenses as at Dec. 31, 1907.

Paper		$89,548.80
Type, metal and electros		3,956.22
Ink		3,500.65
Salaries		34,655.75
Pay roll		75,799.68
Editorial news and reporting		6,610.60
Binding		2,221.34
Machinery, repairs and renewals		1,750.77
Commissions:		
Advertising	$270.48	
Subscription	10,859.19	
Sales	6.66	
Collection	1,970.28	
		13,106.61
Power		2,516.11
Light		2,108.45
Fuel		676.57
Postage:		
First class	$11,008.65	
Second class	19,203.65	
		30,212.30
Factory supplies		2,645.56
Office jobbing		2,718.45
Express and cartage		2,307.16
Miscellaneous expense		4,660.25
		$278,995.27

EXHIBIT H.

Summary of Organization Account as at Dec. 31, 1907.

Dr. J. N. McCormack:		
Salary for year 1907	$4,999.92	
Sundry expenses	1,751.00	
		$6,750.92
Salary J. H. Blackburn		300.00
Agents' expenses		1,910.60
Jobbing		323.93
Books		25.90
Postage		18.30
Miscellaneous		20.12
		$9,349.77

EXHIBIT I.

Summary of Association Account as at Dec. 31, 1907.

Salary Assistant to the General Secretary	$1,200.00
Trustees' meetings	1,508.45
Sections' secretaries' expense	600.00
Honorarium, Treasurer	300.00
Scientific research	200.00
Jobbing	284.35
Committee on Reciprocity, Dr. W. L. Rodman	130.40
Premium on bond	75.00
Freight and express	33.48
One-half court costs, Lawson case	250.00
Postage	61.13
Binding	44.00
Miscellaneous	14.40
	$4,701.21

EXHIBIT J.

Summary of Medical Legislation as at Dec. 31, 1907.

Dr. C. A. L. Reed, traveling and office expenses	$552.15
Reporting	178.50
Jobbing	332.70
Postage	369.22
Pay roll	954.00
Meetings	104.85
Traveling	19.50
Supplies	53.45
Miscellaneous	8.85
	$2,573.22

EXHIBIT K.

Summary of Medical Education as at Dec. 31, 1907.

Salaries	$1,833,32
Meetings	414.25
College Inspection	1,700.90
Pay roll	823.00
Postage	337.25
Jobbing	229.50
Traveling	50.40
Reporting	70.00
Supplies	28.33
Information	47.00
Miscellaneous	4.32
	$5,538.27

EXHIBIT L.

Summary of Depreciation as at Dec. 31, 1907.

Building	$1,410.61
Machinery	4,494.11
Furniture and fixtures	693.31
Laboratory equipment	140.33
Stereotype plant	82.87
	$6,821.23

TREASURER'S REPORT.

Report of the Treasurer for the Year Ending Dec. 31, 1907.

RECEIPTS.

1906.	
Dec. 31—Cash balance in bank	$11,697.38
1907.	
Feb. 1—Cash received from Editor of Journal	10,000.00
May 1—Cash received from Editor of Journal	15,000.00
June 1—Cash received from Editor of Journal	10,000.00
Aug. 6—Interest at 3 per cent for 6 months on $15,000 certificate of deposit, Feb. 2 to Aug. 6, 1907	225.00
Nov. 5—Interest at 3 per cent for 6 months on $15,000 certificate of deposit, May 5 to Nov. 5, 1907	225.00
Nov. 5—Deposit in checking account from certificate of deposit	15,000.00
Dec. 6—Interest at 3 per cent. for 6 months on $10,000 certificate of deposit, June 6 to Dec. 6, 1907	150.00
Dec. 6—Deposit in checking account from certificate of deposit	10,000.00
Interest coupons on 5 $1,000 bonds for 6 months	100.00
Interest coupons on 39 $1,000 bonds, 4 per cent	1,560.00
Interest 2 per cent. on daily balance (on $5,000 or more) of checking account for 1907	193.96
	$74,151.34

DISBURSEMENTS.

1907.	
Feb. 2—By order of Trustees, placed on special deposit in First Trust and Savings Bank at 3 per cent	$10,000.00
May 5—By order of Trustees, placed on special deposit in First Trust and Savings Bank at 3 per cent	15,000.00
June 6—By order of Trustees, placed on special deposit in First Trust and Savings Bank at 3 per cent	10,000.00
Nov. 21—Paid on order of Trustees for 5 $1,000 4 per cent. bonds	4,532.50
Dec. 9—Paid on order of Trustees for 5 $1,000 4 per cent. bonds	4,767.50
Dec. 16—Paid on order of Trustees for 5 $1,000 4 per cent. bonds	4,732.50
Dec. 31—Cash balance in checking account at First National Bank	20,118.84
	$74,151.34

Property of American Medical Association in Hands of Treasurer, Jan. 1, 1908.

	Cost.	Par value.	
Cash balance in checking account First National Bank, Chicago			$20,118.84
Certificate of deposit at 3 per cent. in First Trust and Savings Bank			15,000.00
5/1000 bonds U. P. Ry., 1st 4s	$ 5,207.50	$5,000	
5/1000 bonds Erie Ry., 1st 4s	4,932.50	5,000	
10/1000 bonds Reading Gen. 1st 4s.	9,602.50	10,000	
14/1000 Chicago School bonds, 1st 4s	15,163.13	14,000	
10/1000 A., T. and S. Fe bonds, 4s.	9,521.25	10,000	
10/1000 B. & O. bonds, 1st 4s.	9,800.00	10,000	
	$54,226.88	$54,000	54,000.00
			$89,118.84

Respectfully submitted,

Frank Billings, *Treasurer.*

As a further comparative table we submit the following:

EXHIBIT M.

Amount received from	1906.	1907.		
Dues.	$103,076.10	$122,827.19	Gain	$19,751.09
Subscriptions.	87,694.97	90,570.50	Gain	2,875.53
Advertisements	98,458.85	119,694.67	Gain	21,235.82
Jobbing.	18,707.22	23,747.96	Gain	5,040.74
Reprints.	5,417.75	7,542.12	Gain	2,124.37
Buttons	1,519.89	1,330.28	Loss	189.61
Interest.	2,537.25	2,854.85	Gain	317.60
Rents	3,240.00	3,200.00	Loss	40.00
Books	$3,008.56	8,215.14	Gain	5,207.58

The above embraces the most important items, showing a substantial gain in every case except two—buttons and rents. In the item of rents we explain with the statement that we are now using the house next to The Journal office, and thus our rent account will be still further reduced hereafter. As our business increases, more space will be needed for storage purposes, especially for keeping a supply of paper. There was used in the office, including mailing paper, the past year, 1,051 tons of paper, a fraction more than twenty tons—about one car load—each week. You can easily see the space needed for storage purposes of this one item. Up to the present time, the office has been keeping about one week's supply ahead, but in view of possible strikes, which grow more frequent, it will be wise to keep more than double that amount on hand, or perhaps enough to supply the office for one month, thus demanding much space.

ADVERTISING.

The amount received from advertising during the year was $119,694.67.

During the year, there were 257 pages unproductive of cash income, and were not reckoned in the earnings above mentioned. These pages were devoted to "Contents and Digest," Association and Journal announcements, national and state society announcements, "New and Non-Official Remedies," "Index to Advertisements," etc.

In 1906 the income from advertising was $98,458.85; in 1907, $119,694.67—an increase of $21,235.82. This in spite of the fact that there was a decrease of 157 productive advertising pages. This increased income, of course, is the result of an increase in the rates. The decrease in the number of advertising pages comes from the fact that we have strictly adhered to the rules of the Council on Pharmacy and Chemistry regarding the acceptability of advertisements. Owing to the financial stringency, however, the outlook is not as promising for 1908 as for the past year.

SUBSCRIPTION DEPARTMENT.

The regular weekly issue of The Journal of the American Medical Association, from January 5, 1907, to December 28, 1907, inclusive, 52 issues, was as follows:

January 5	50,108	
January 12	50,150	
January 19	49,440	
January 26	49,108	
		198,806
February 2	49,270	
February 9	49,264	
February 16	49,261	
February 23	49,460	
		197,255
March 2	49,197	
March 9	49,333	
March 16	52,333	
March 23	52,492	
March 30	52,420	
		255,775
April 6	52,670	
April 13	51,783	
April 20	51,559	
April 27	51,712	
		207,724
May 4	54,593	
May 11	50,584	
May 18	52,463	
May 25	53,116	
		210,756
June 1	53,278	
June 8	51,117	
June 15	52,371	
June 22	52,460	
June 29	51,925	
		261,151

July 6	52,342	
July 13	52,007	
July 20	51,508	
July 27	51,966	
		207,823
August 3	51,625	
August 10	51,883	
August 17	54,882	
August 24	51,399	
August 31	52,030	
		261,819
September 7	52,799	
September 14	53,644	
September 21	53,001	
September 28	53,725	
		213,169
October 5	53,608	
October 12	54,263	
October 19	54,080	
October 26	54,021	
		215,972
November 2	54,073	
November 9	53,123	
November 16	52,986	
November 23	51,460	
November 30	53,992	
		265,634
December 7	54,149	
December 14	55,164	
December 21	55,090	
December 28	55,006	
		219,409

Total issued for twelve months	2,715,293
Weekly average	52,217

The total number of copies issued during 1907 was 2,715,293; the total number of copies issued during 1906 was 2,416,877, indicating an increase of 298,416, or about 12.5 per cent. over 1906.

The following is an approximate count of the mailing list of members and subscribers by states on January 1, 1908. It also indicates the gain or loss in each state during 1907. Copies sent to the Medical Department of the United States Army, Bureau of Medicine and Surgery (Navy), United States Public Health and Marine-Hospital Service, and foreign, are omitted.

State.	Members.	Subscribers.	Totals.	Gain for Year.	Loss for Year.
Alabama	376	282	658	64	...
Arizona	76	39	115	13	...
Arkansas	413	499	912	321	...
Alaska	3	5	8	3	...
California	1,063	523	1,586	107	...
Colorado	453	269	722	95	...
Connecticut	411	226	637	48	...
Delaware	59	26	85	5	...
Dist. of Columbia	272	191	463	41	...
Florida	132	104	236	20	...
Georgia	354	245	599	15	...
Idaho	79	49	128	...	1
Illinois	2,378	2,179	4,557	280	...
Indiana	926	561	1,487	...	62
Indian Territory	125	217	342	75	...
Iowa	885	709	1,594	...	60
Kansas	611	483	1,094	...	24
Kentucky	644	438	1,082	22	...
Louisiana	406	312	718	16	...
Maine	253	118	371	18	...
Maryland	502	368	870	76	...
Massachusetts	1,750	631	2,381	45	...
Michigan	920	862	1,782	161	...
Minnesota	752	421	1,173	153	...
Missouri	1,282	1,076	2,358	...	28
Mississippi	283	256	539	26	...
Montana	121	67	188	12	...
Nebraska	421	315	736	...	18
Nevada	46	22	68	8	...
New Hampshire	228	63	291	10	...
New Jersey	655	297	952	67	...
New Mexico	91	62	153	27	...
New York	2,780	1,959	4,739	837	...
North Carolina	245	232	477	...	8
North Dakota	171	168	339	27	...
Ohio	1,740	1,252	2,992	219	...
Oklahoma	197	174	371	95	...
Oregon	212	129	341	1	...
Pennsylvania	2,661	1,380	4,041	581	...
Rhode Island	218	74	292	21	...
South Carolina	203	168	371	...	37
South Dakota	183	133	316	21	...
Tennessee	466	337	803	...	13
Texas	1,130	816	1,946	535	...
Utah	95	74	169	18	...
Vermont	174	39	213	...	4
Virginia	380	250	630	...	20
Washington	343	232	575	61	...
West Virginia	318	170	488	...	10
Wisconsin	770	506	1,276	47	...
Wyoming	41	40	81	9	...

The following figures indicate the count of the mailing list Jan. 1, 1908, compared with that of Jan. 1, 1906 and 1907:

	Jan. 1, 1906.	Jan. 1, 1907.	Jan. 1, 1908.
Copies to members	20,826	26,255	29,382
Copies to subscribers	17,669	20,166	20,880
Copies to exchanges	216	214	200
Copies to advertisers	310	293	276
Complimentary (libraries, medical colleges, etc.)	240	242	249
	39,261	47,170	50,987

The following table shows the number of members and of subscribers for each year, commencing with 1899:

	Members.	Subscribers.
January 1, 1899	7,997	2,453
January 1, 1900	8,445	4,633
January 1, 1901	9,841	8,339
January 1, 1902	11,107	10,795
January 1, 1903	12,553	12,378
January 1, 1904	13,899	14,674
January 1, 1905	17,570	15,698
January 1, 1906	20,826	17,669
January 1, 1907	26,255	20,166
January 1, 1908	29,382	20,880

The above tables indicate an increase in members and subscribers of 3,841 during 1907 over 1906. During the year.

however, there were actually 12,196 additional names placed on the mailing list; 8,355 represent the discontinuances by deaths, non-payment of dues and subscription, ineligibility to membership, and resignations. As heretofore the greater portion of the increase in membership came from the subscription department by transfer. As in previous years, we are continually suggesting to subscribers who are eligible to become members, and as a result of this 3,722 names have been transferred from the subscription to the membership list during the year.

PERCENTAGE OF PHYSICIANS RECEIVING THE JOURNAL.

This table gives the number of physicians (based on the American Medical Directory, first edition) in the United States, and the number receiving THE JOURNAL, and the percentage in each state. Copies to physicians in the United States Army, United States Navy, Marine-Hospital Service, etc., omitted:

State.	Physicians. in State.	Number receiving Journal.	Approximate per cent.
Alabama	2,117	658	31.0
Arizona	203	115	56.6
Arkansas	2,322	912	39.2
Alaska	57	8	14.0
California	3,990	1,586	39.7
Colorado	1,550	722	46.5
Connecticut	1,332	637	47.0
Delaware	222	85	38.2
Dist. of Columbia	1.100	463	42.0
Florida	619	236	38.1
Georgia	2.778	599	21.5
Idaho	259	128	49.4
Illinois	9,419	4,557	47.3
Indian Territory	964	342	35.4
Indiana	4,908	1,487	30.2
Iowa	3,517	1,594	45.3
Kansas	2,321	1,094	47.1
Kentucky	3,761	1,082	28.8
Louisiana	1,551	719	46.4
Maine	1.116	371	33.2
Maryland	1.810	870	48.0
Massachusetts	5,372	2,381	44.3
Michigan	4.066	1.782	43.8
Minnesota	1.946	1,173	60.2
Mississippi	1,760	539	30.6
Missouri	5.956	2,358	39.5
Montana	335	188	56.1
Nebraska	1,668	736	44.1
New Hampshire	646	291	45.0
New Jersey	2,332	952	40.8
New Mexico	221	153	69.2
New York	11.982	4,739	39.5
Nevada	138	68	49.2
North Carolina	1.453	477	32.0
North Dakota	451	339	75.1
Ohio	7,710	2.992	38.8
Oklahoma	905	371	40.9
Oregon	696	341	48.9
Pennsylvania	9,957	4,041	40.6
Rhode Island	727	292	40.1
South Carolina	1.023	371	36.2
South Dakota	545	316	57.9
Tennessee	2,980	803	26.9
Texas	4,825	1.946	40.3
Utah	304	169	55.6
Vermont	646	213	32.9
Virginia	1.945	630	32.4
Washington	1.023	575	56.2
West Virginia	1.409	488	34.6
Wisconsin	2.430	1,276	52.5
Wyoming	174	81	46.5

North Dakota shows the largest percentage of physicians receiving THE JOURNAL, viz., 75.1 per cent, with New Mexico next with 69.2 per cent., and South Dakota third with 57.9 per cent.; while Georgia has the smallest, 21.5 per cent.. Tennessee next with only 26.9 per cent., and Kentucky with 28.8 per cent. This is not a pleasant page to dwell on. At least one-half the profession in every state should be subscribers to THE JOURNAL.

REAL ESTATE.

No special repairs have been made on the houses during the past year, excepting that there has been added to the cost of the property—as an asset—three-fifths of the costs of repaving the alley, which amounts to $195.72.

The following table indicates the receipts and disbursements of the Association properties located at 95-97-99 Dearborn Avenue and 239-41 Indiana Street:

RECEIPTS.

The following statement covers rents received:

239-241 Indiana St.	$1,520.00
95 Dearborn Ave.	720.00
97 Dearborn Ave.	600.00
99 Dearborn Ave.	360.00
Total	$3,200.00

DISBURSEMENTS.

The following statement covers the disbursements that have been made for various repairs, etc.:

239-241 Indiana St.	$161.72
95 Dearborn Ave.	55.70
97 Dearborn Ave.	78.20
99 Dearborn Ave.	50.35
Total	$345.97

RECAPITULATION.

	Receipts.	*Disbursements.*
239-241 Indiana St.	$1,520.00	$161.72
95 Dearborn Ave.	720.00	55.70
97 Dearborn Ave.	600.00	78.20
99 Dearborn Ave.	360.00	50.35
One-third taxes Lots 7 and 8		202.22
One-third taxes Lot 6		60.68
Total	$3,200.00	$608.87

Total receipts	$3,200.00
Disbursements	608.87
Net gain	$2,591.13

The above refers only to the houses which occupy three-fifths of the ground owned by the Association.

The net gain is $2,591.13, or approximately 7.5 per cent. on the investment.

Heretofore no depreciation has been charged against these houses, as they were not considered a depreciative asset, but beginning with this year a depreciation should be charged against the buildings, as they are now depreciating in value year by year.

PAPER STOCK.

Last year we called attention to the fact that there had been a considerable increase in the price of pulp and other material that goes into the making of paper and that, naturally, the price of paper had increased. This gradual increase in price has been continuous. After a thorough investigation and a careful comparison of the prices offered by some of the largest mills in the country, we renewed the contract of last year at an advance on the prices of the preceding year.

This increase in the cost of paper should be kept in mind and emphasized when estimating the profits and the increased expenses for the current year. Had we paid last year the price we are now paying for paper, the extra expense would have amounted to practically $5.600 and consequently the profits would have been reduced accordingly.

The following tables gives the amount of paper stock used in reams and tons, and is merely carrying on the statement made to you in previous reports:

	Reams.	Tons.
1898	3,395	157
1899	4,832	230
1900.	6,747	303
1901	9.052	407
1902	10,230	469
1903	12,368	586
1904	14.399	648
1905	17,783	788
1906	21,729	930
1907	25,914	1,029

The above figures do not include the paper used for wrappers in mailing THE JOURNAL, which of itself amounted to nearly twenty-two (22) tons for the year 1907.

You will note that we used in printing THE JOURNAL in 1907 ninety-nine (99) more tons of paper than were consumed in 1906, and within a small amount (20 tons) of seven times as much as was used in 1898.

MACHINERY.

During the past year there has been installed a new gathering machine, which has been of immense advantage, not only in making it possible to get out THE JOURNAL more rapidly, but also in a considerable saving in the expense of labor.

A Cottrell rotary press has also been installed and works very satisfactorily.

INCREASED EXPENSES.

We submit below the various tables illustrating the gradual increase in expenses. This is merely a continuation of the tables of previous years:

PAY ROLL AND SALARY.

1899	$31,448.69
1900	37,359.49
1901	40,416.01
1902	46,316.65
1903	57,067.34
1904	64,471.26
1905	78,874.79
1906	96,578.71
1907	110,455.43

PAPER STOCK.

1900	$25,598.00
1901	29,835.00
1902	35,675.06
1903	43,966.57
1904	51,190.05
1905	57,526.69
1906	65,381.17
1907	89,548.80

POSTAGE ON JOURNAL.

1899	$ 3,905.65
1900	5,616.06
1901	7,591.37
1902	8,595.63
1903	9,828.41
1904	11,773.44
1905	14,360.28
1906	17,066.62
1907	19,203.65

INK.

1899	$ 718.44
1900	1,145.45
1901	1,753.31
1902	1,930.65
1903	2,055.95
1904	2,225.58
1905	2,765.64
1906	3,500.34
1907	3,500.65

DIRECTORY.

In last year's report, after summarizing the work done on the Directory, we stated that of the future to be:

Keeping up the records regarding the licensed physicians in each state, by adding to the list the names of the new licentiates as they were granted certificates by the licensing boards.

Keeping up the records relative to the graduates of the individual medical colleges.

The compilation of a biographical card index of all physicians.

This work has been carried on.

Of the 161 existing medical colleges, 160 have supplied us with a list of the graduates of 1907.

As soon as the first edition of the Directory was printed, the work was begun of transcribing on cards the biographical data on file for the purpose of getting up a permanent index. This work is being carried on as time permits. This is necessarily slow work, as the names and all dates and statements made regarding the individual must be verified before transferring them to the permanent records.

In compiling the first edition of the Directory, it was impossible to obtain official information regarding the alumni of many colleges, without delaying the publication of the book. The lack of this material was sorely felt, since without it we had no official data as to college of graduation of a large percentage of physicians. Accordingly, as soon as the first edition was published, steps were taken to obtain a complete list of the graduates of all existing medical colleges. This work, necessarily tedious and involving a large amount of correspondence, is very near completion. We have received complete lists from 146 colleges, or all except 15. Of the latter, nine have agreed to furnish the lists, or are at present engaged in preparing them for us; six have thus far been unable to supply this material. In one case the college records were destroyed by fire, and in another only partial reports have been received.

When it is considered that these alumni lists are the only records of graduation, and that if a college goes out of existence, or the records are not kept, this information is lost, the value of our duplicate lists is apparent.

Revisions and corrections of material that forms the basis for the Directory are kept up to date. As the Directory is in type, the next edition will require only a revision of the standing matter.

With a view of ascertaining the opinion of those who are using the Directory, a circular letter and a report blank were sent to each subscriber, asking him to express an opinion as to the advisability of including in subsequent editions statements regarding medical college positions, hospital positions, life insurance positions, as well as general criticisms and comments. Over 2,000 answers have been received. They contain a large number of valuable criticisms and suggestions which will be abstracted and reported later.

As will be noticed, the auditors have charged off $18,427.44 as a loss on the first edition of the Directory. They have explained this in their introductory comments. It is impossible to tell the exact value of the information and material on hand. In the first place, a large part of the amount credited to salaries, etc., was invested in labor that has produced information of as much value for the future as for the past; in other words, basic information. Another portion of the expense went into the composition and make-up. This matter is all standing. The only changes that will be necessary for the next edition will be the corrections and additions necessary to bring it up to date. What percentage of the entire matter this will amount to is uncertain. Consequently, it is impossible to say how much of the old matter can be utilized in the next edition.

It is in accord with conservative business methods, whenever there is a doubt, to give the benefit of the doubt to the debit side of the ledger, and therefore it is better to charge it off to profit and loss.

In this connection it must be remembered that there is charged to the Directory Department the entire expense of accumulating and preserving information regarding the entire medical profession of the United States. This material is used not only for Directory purposes, but also in other departments of the Association, and is at the disposal of the secretaries of state boards, the secretaries of state societies, medical colleges and others who are making use of this mass of information to a constantly increasing extent. It is, in fact, a general bureau of information, in addition to being a basis for the publication of the Directory.

The General Manager was directed to proceed to get out the second edition of our Directory next winter.

APPROPRIATIONS.

As will be noticed by the Auditor's report, the present worth on Dec. 31, 1906, is given as $269,661.89 (see Exhibit A); the present worth Dec. 31, 1907, is given as $301,650.15, making an increase in our assets, or present worth, during the year of $31,988.26, whereas the net profits for the year are given as $28,808.68, a difference of $2,179.58. This is explained in Exhibit C under "Items Applicable Against a Prior Period." This item covers $3,000 which was paid in 1906 to the San Francisco Relief Fund Committee, and returned by the committee in 1907. The balance—$179.58—represents recovery on bad debts charged to profit and loss in 1906.

In nearly every case in which appropriations in sums exceeding $1,000 have been made, the amount set apart has been exceeded. This matter will be discussed at greater length in the subsequent part of this report.

At the last meeting of the Association there were referred to the Board of Trustees by the House of Delegates many requests for appropriations. All of these matters received careful consideration at the hands of the Board.

The request for money with which to secure "certificates of awards and medals," in addition to the customary appropriations for the Committee on Scientific Exhibit, was granted, a sum not to exceed $225 being set apart for that purpose.

There was appropriated to the Board of Public Instruction on Medical Subjects $1,800. This sum was agreed on after consultation with the Chairman of the said Board.

In the matter of postgraduate work, the sum of $600 was asked for. Your Board, after carefully considering the matter, and consulting with Dr. McCormack, included this amount in the reorganization account, setting apart the sum of $7,500 to cover the entire account, including the traveling expenses of the organizer. We feel, however, that it will be extremely difficult to adapt a postgraduate course to the needs of both the city and country physicians, the city and country medical societies. As we could include the entire outlay in one appropriation, we thought it right and proper to test the matter.

In regard to the resolution of Dr. Peterson of Michigan, in reference to supplying The Journal free to members of the Association of Medical Librarians, investigation shows that The Journal goes to the libraries belonging to this Association that need this encouragement, as well as to a still larger number of worthy libraries that do not belong to the Association.

The Board of Trustees most respectfully declines to adopt the suggestion of Dr. Marcy of Boston, in regard to appropriating $5,000 toward the erection of a monument to Dr. N. S. Davis. Such a precedent should never be established.

In response to the request for an appropriation for the use of the Anesthesia Commission, we have placed at the disposal of the commission the sum of $200 as finally asked for by the chairman of that body.

In regard to the work of the Bureau of Medical Legislation, where an increase of clerical help is asked for, we would report that arrangements have been made for all such necessary help in The Journal office, and the office is prepared to send out all literature on very short notice.

In addition to the above special appropriation already mentioned, we present you the balance sheet of the appropriations made at the June and October meetings of the Board, as shown at our February meeting:

APPROPRIATION REPORT TO BOARD OF TRUSTEES, FEBRUARY, 7, 1908.

Pharmacy and Chemistry:		
Appropriation June 4, 1907	$2.500.00	
Appropriation Oct. 25, 1907	2.600.00	—$5.100.00
Expenses June 1, 1907, to Feb. 1, 1908		3,444.48
Balance		$1,655.52
Medical Education:		
Appropriation, June 4, 1907	$1,500.00	
Appropriation Oct. 25, 1907	3,000.00	—$4.500.00
Expenses June 1, 1907, to Feb. 1, 1908		3,750.93
Balance		$ 749.07
Medical Legislation:		
Appropriation June 4, 1907	$500.00	
Appropriation Oct. 25, 1907	150.00	—$ 650.00
June 1, 1907, to Dr. Reed	161.50	
Oct. 28, 1907, to Dr. Reed	188.60	— 350.10
Balance		$ 299.90
Expenses, including Dr. Reed's, June 1, 1907, to Feb. 1, 1908		1,581.69
Scientific Research:		
Balance June 1, 1907	$300.00	
Appropriation Oct. 25, 1907	500.00	—$ 800.00
Cash to Drs. Pearce & Jackson		200.00
Balance		$ 600.00
Chemical Laboratory:		
Appropriation Feb. 2, 1906		$2,000.00
Cost of equipments to Feb. 1, 1908		940.90
Balance		$1,059.10
Organization:		
Appropriation June 4, 1907		$7,500.00
Dr. J. N. McCormack, expenses	$1,751.00	
Dr. J. N. McCormack, salary, June, 1907, to February, 1908	3,333.28	
Dr. J. H. Blackburn, salary, July, 1907, to February, 1908	350.00	—$5,434.28
Balance		$2.065.72
Appropriations Not Yet Used:		
Sections		$ 600.00
Scientific Exhibit		500.00
Exhibit of Hygiene and Sanitary Science		250.00
Gold Medal Scientific Exhibit		225.00
Committee on Pharmacopeia		100.00

NATIONAL ORGANIZER.

Your Board of Trustees feels that the time has fully come when the Association can and should dispense with the expense of a salaried organizer. The services rendered the Association by Dr. McCormack have resulted in an inestimable amount of good. The organization has now, however, been perfected and placed on such a footing that each state should now maintain its own status. There has been expended in this work a sum of not less than $40,000, and while, as already stated, great good has resulted from the special work done in this line, and the profession has received a *quid pro quo* for every dollar spent, yet money is needed to push other undertakings; hence our recommendation to discontinue this branch of our work, putting the matter into the hands of the different state associations. The American Medical Association will ever owe Dr. J. N. McCormack a debt of gratitude for the great work which he has done in his special department. In accord with the recommendation of the House of Delegates made at Atlantic City, June 6, 1907, we arranged with Dr. McCormack to enter vigorously on the work therein suggested. We think that his time can be most profitably employed in presenting pure food matters, and the need of uniform state laws governing the practice of medicine before the legislature of the different states, and as an educator of the public in matters medical, as he has been chiefly doing this year, and we would suggest that he be requested to continue in that work for a time yet.

THE ATLANTIC CITY MEETING AND EXHIBITS.

At Atlantic City the Association went through the first meeting where the Exhibit Hall was controlled by, or through, your Board of Trustees, and where all expenses (except self-assumed ones) were met with our own funds. The receipts from the Exhibit Hall were used as far as possible to defray these necessary expenses, and we feel that the experiment was a great success. The local profession voluntarily taxed itself for certain social functions, but with that we had nothing to do.

The following tabulated account shows receipts and disbursements of that meeting. A study of the report will show that the financial outlay of the Association was but little in excess of that of former years, as most of the items under the head of "Expenses Paid Direct from Association Office" have, as a rule, been met in the same way in former years.

ATLANTIC CITY SESSION.

In Exhibit B is given the item, "Atlantic City Session, $4.499.98." The following statement covers the matter in more detail:

Cash paid Dr. Marvel by Association	$5.368.38	
Cash paid Dr. Marvel by local committee	271.30	—$5,639.68
Amount returned to Association by Dr. Marvel		189.09
		$5,450.59

EXPENSES PAID BY DR. MARVEL.

Committee on Meeting Places	$1,412.75	
Committee on Scientific Exhibit	107.50	
Committee on Commercial Exhibit	269.15	
Committee on Local Bulletin	404.88	
Committee on Programs and Printing	271.80	
Committee on Section Entertainments	25.00	
Committee on Badges	1,244.39	
Committee on President's Reception	702.75	
Bureau of Information	96.88	
Bureau of Registration	798.39	
Stenographer for chairman	35.97	
Trustees' committee meetings and expenses	81.13	—$5,450.59
Amount received from local committee and not entered on Association books		271.30
Balance		$5,179.29

EXPENSES PAID DIRECT FROM ASSOCIATION OFFICE.

Buttons for delegates' badges and badges	$ 105.60	
Binding programs and receipt books	52.10	
Employés' expenses and transportation	634.79	
Freight and expressage	65.15	
Section reporting	1.632.16	
Reporting House of Delegates	353.15	
Trustees' expenses	1.145.80	
Jobbing	703.21	
Scientific exhibit expense	465.75	—$5,157.71

EXPENSES ON ACCOUNT OF EXHIBIT HALL.

Electros, plans, etc	$ 51.68	
Jobbing	35.30	
Clerical expense, telegrams and postage	275.00	—$ 361.98
Total		$10,698.98
Less gross income from exhibit hall		6,199.00
Net cost of Atlantic City session		$ 4,499.98

The result of the experiment in so nearly making the meeting self-sustaining has been such as to guarantee in future no desire to return to the old method of managing the affairs of our annual meetings.

REPORTS OF COMMITTEES.

As a number of your committees will report directly to your body, we do not feel that it is incumbent on us as a Board to comment on these reports.

COUNCIL ON PHARMACY AND CHEMISTRY.

As this Council is perhaps more closely allied to the Board of Trustees than any of the others, much of the laboratory work being done in THE JOURNAL office, it may be permitted us in general terms to commend the great utilitarian work which it is doing. Its importance to the whole medical profession daily becomes more apparent. The work of this Council is referred to in the report of the Surgeon-General of the Public Health and Marine-Hospital Service in the following terms, on page 47: "The chief of the division of pharmacology is a member of the Council on Pharmacy and Chemistry of the American Medical Association. The importance of the work done by this Council and the Association in correcting some of the evils of 'patent' and proprietary medicines is generally recognized. Some flagrant frauds have been exposed, and the profession and the public have been informed that some of the medicines widely advertised as harmless contained dangerous substances, while others claiming powerful action consist of inert and harmless mixtures." The work of this Council has also attracted much favorable attention abroad. This Council has boldly exposed to the medical world some of the most outrageous frauds of the age. The profession can never cease to be under obligations to the Council, and should always endeavor to encourage its members in their work.

THE CHEMICAL LABORATORY.

The chemical laboratory, organized a year ago, has already demonstrated its usefulness. Established primarily to aid the Council on Pharmacy and Chemistry in its work, it has independently examined a considerable number of proprietary remedies and exposed in THE JOURNAL many of those found objectionable or fraudulent. The knowledge that this laboratory is investigating the composition and quality of the remedies prescribed by physicians, and that its reports, through publication in THE JOURNAL, will be brought to the attention of those interested, is bound to have a wholesome effect.

The work, however, is not limited to the examination of proprietary drugs; non-proprietary drugs and preparations, official as well as unofficial, are being examined. Publication of the results of these examinations will cause some firms to improve the quality of their product; to many pharmaceutical manufacturers it will be an incentive to continue the high quality of their products; to physicians these examinations, made by disinterested, thoroughly competent chemists, will enlighten them on the quality of the drugs they prescribe and on which they depend to save the lives of their patients. The laboratory has also added to the value of THE JOURNAL by furnishing to its readers much reliable information on the chemistry and pharmacy of drugs.

COMMITTEE ON REVISION OF THE PHARMACOPEIA.

Pursuant to the request of the House of Delegates made at your last meeting at Atlantic City, 1907, your Board of Trustees, from the names submitted to them by the Section on Pharmacology and Therapeutics appointed the following committee on the pharmacopeia: Reid Hunt, Washington; E. E. Hyde, Chicago; George Dock, Ann Arbor; Robert A. Hatcher, New York; W. S. Thayer, Baltimore; S. Solis-Cohen, Philadelphia, and for the use of that committee appropriated $100.00 to meet the necessary expenses of printing and postage.

NEW MEMBERS OF THE COUNCIL ON PHARMACY AND CHEMISTRY.

From the names sent to the Board of Trustees by the Council on Pharmacy and Chemistry, the following new members were elected: D. L. Edsall, M.D., J. A. Capps, M.D., R. A. Hatcher, M.D., and Otto Folin, Ph.D.

The Council on Pharmacy and Chemistry called the attention of your Board to the need of clinical consultants, and suggested that a staff of clinical consultants should be created. This suggestion was adopted by the Board, and the following were elected as members of such a staff:

Drs. Alexander Lambert, New York City; C. F. Hoover, Cleveland, Ohio; A. S. Taussig, Denver; Charles G. Stockton, Buffalo, N. Y.; John A. Witherspoon, Nashville, Tenn.; John T. Halsey, New Orleans; Alfred Stengel, Philadelphia; George E. de Schweinitz, Philadelphia; H. A. Christian, Boston; George Dock, Ann Arbor, Mich.; Le Roy Crummer, Omaha; H. C. Moffitt, San Francisco; J. L. Miller, Chicago; A. T. McCormack, Bowling Green, Ky.; and L. F. Barker, Baltimore.

THE COUNCIL ON MEDICAL EDUCATION.

While the Council on Medical Education will report directly to your body, we can not refrain from commending in the strongest terms the great work that has been done by the Council in eliminating weak and worthless colleges, and in improving the standard of medical education.

THE BUSINESS AFFAIRS OF THE JOURNAL OFFICE.

As stated by the manager of the Audit Company: "In the bookkeeping and office work, the standard of the last few years appears to have been maintained." The books are so kept that one can easily ascertain, almost at a glance, the status of any desired account. Every officer in any way responsible for any of the moneys of the Association is under bond. All of your property is kept insured. No idle money is allowed. Every special deposit draws interest at the rate of 3 per cent., and daily balances of $5,000 and over draw 2 per cent. We would call your attention to the fact that we have invested $15,000 in 4 per cent. bonds during the past year, giving the Association, at the end of 1907, a total of $54,000 in 4 per cent. bonds, which have cost $54,226.88. The policy of your Board of Trustees has been, and should continue to be, to accumulate a reserve fund in proportion to the money used in its business, sufficiently large to tide THE JOURNAL over any period of financial depression or stringency. Had you no reserve fund during the late money panic some trouble might have been experienced in financing all of your enterprises, but as it was, THE JOURNAL office had no part in the financial maelstrom. We desire to repeat what we have said before: That no business enterprise can be safely conducted without a reserve fund in proportion to its undertakings. Your pay roll last year amounted to more than $110,000; and in addition, you spent for paper, postage and ink a little more than that amount—making more than $200,000 paid out on the four items connected with the publication of THE JOURNAL. About two years ago it was suggested that the reserve fund of the Association should be not less than $150,000. It would be well now to fix the amount at $200,000. That amount would enable you at any time to enlarge your present floor space without interfering in any way with your regular work. The greater the growth of THE JOURNAL and the work connected therewith, the larger should be your reserve fund. A fair proportion of the profit from your publications results from your ability to discount your bills.

PLACE OF MEETING.

For the first time since you have made a home for THE JOURNAL, our session is being held here in Chicago, where every one attending the session is urged to visit the property owned by you. It is the earnest wish of the Trustees that at least every member of the House of Delegates, as the business body of the Association, will visit and become personally acquainted with THE JOURNAL in its own habitat. To see it to the best advantage we would suggest that you call on Thursday and Friday, as every part of the work is then being carried on, but you will be welcomed on any other days that suit your convenience. The House of Delegates is asked to appoint a committee to investigate the whole business of THE JOURNAL. You may never have another such favorable opportunity. It is an easy matter to say to you that you own a modern printing office from which between 50,000 and 60,000 copies of your journal are issued weekly, and that in addition to THE JOURNAL office, you have residence buildings; but when you have seen and examined the property for yourselves; have realized the extent of the equipment; have looked over the presses, linotype machines, our own stereotyping outfit, and everything which goes to make up a modern, up-to-date printing office, together with all the necessary offices, nucleus of a library, and the chemical laboratory, then you can understand what use has been made of the profits from THE JOURNAL office, and you will the more readily understand why we are asking you to help us lay by a sufficient reserve fund for future undertakings.

PRIZE ESSAY.

In reading over the history of the Association regarding its efforts in a scientific way, we learn that on several occasions—first in 1850—prizes have been offered for essays. These prizes have varied from $50 to $100. In 1899 there was offered a prize of $100 for the best essay on subjects to be indicated by a committee. As a result of this offer, only one prize has been awarded. Consequently, the Committee on the Award of the Prize Essay recommended, in 1904, that the prize be withdrawn.

Is it not probable that if the prize had been of larger monetary value, it would have succeeded in bringing out better work and the award of the prize each year? We desire to suggest the advisability of making an annual appropriation of $500 for an essay on subjects relating to internal medicine; that this be awarded as a single prize, or as a first and second prize of, say, $300 and $200. We would further suggest that if this should be adopted that the editorial board of the *Archives of Internal Medicine* should have the management ot the award of this prize, or prizes.

We would recommend, further, the following amendment to our By-laws: Amend Book I, Chapter III, of the By-laws by adding the following as Section 9: "Retired members": "Any one who has been a member in good standing of the American Medical Association for twenty years, and who has been placed on the retired list of his state association, shall, on his request, be placed by the Secretary of the A. M. A. on the retired list of the members of this Association. Retired members shall be exempt from the payment of dues."

IN CONCLUSION.

We have endeavored to present to you in a plain, practical manner the work of The Journal office for the year ending Dec. 31, 1907. We trust that each and every one of you has been able to fully understand the report. As stated a year ago, we have sheets showing in detail all amounts paid each officer and employé connected with the office, giving the name and salary by the week or month, as the case may be, which sheets can be seen by any member of the A. M. A., but these matters do not belong to the public. It may be well to explain again that those employés who are paid by the month are termed *salaried* officers, and are the ones meant when salaries are spoken of, while the pay-roll includes all who are paid by the week or day. The report mentions salaries and pay-roll, hence this explanation.

Hoping that this report of the financial affairs of the Association will meet your approval, we leave it in your hands.

Wm. H. Welch,
A. L. Wright,
H. L. E. Johnson,
Philip Marvel,
W. W. Grant,
Miles F. Porter,
E. E. Montgomery,
M. L. Harris, Secretary.
T. J. Happel, Chairman.

Report of the Committee on Medical Legislation.

To the House of Delegates of the American Medical Association:

Gentlemen:—The report of the work of the Committee on Medical Legislation for the past year is herewith submitted.

The work of the committee naturally divides itself under three heads: 1. National Legislation. 2. State Legislation. 3. Work Carried on by the Bureau of Medical Legislation under the supervision of the Committee.

NATIONAL LEGISLATION.

During the session of the Sixtieth Congress, the following measures of interest to the medical profession have been under consideration: (1) A bill for the reorganization of the army medical department. This bill was practically the same as the one first introduced into the Fifty-eighth Congress and later into the Fifty-ninth. In each of the previous years the bill passed the senate and was reported favorably by the committee in the house but failed to receive consideration. In December, 1907, this bill was again introduced into the senate by Senator Warren and into the house by Mr. Hull. It was endorsed by the Conference on Medical Legislation held in Chicago in December and the action thereon was communicated to the members of the committees on military affairs of both senate and house. The committee also cooperated in every possible way with the Medical Department of the United States Army. It is a pleasure to report that this bill finally became a law on April 23, 1908. As it has been discussed at length in The Journal and the *Bulletin of the American Medical Association* as well as in the daily press, it is not necessary to go into the details of its provisions. It is a decided advance inasmuch as it provides an adequate medical staff for the Army, abolishes the contract surgeon system and provides for expansion of the medical department in time of war.

NAVAL MEDICAL REORGANIZATION BILLS.

Three bills relating to the Medical Department of the United States Navy were introduced into Congress. These were: (1) A bill reorganizing and increasing the efficiency of the hospital corps of the United States Navy; (2) a bill authorizing the appointment of dental surgeons in the United States Navy; (3) a bill authorizing the establishment and organization of a corps of trained women nurses. These three bills were endorsed by the Conference on Medical Legislation and the committees on naval affairs of the two houses were so notified. For various reasons the consideration of these bills has not been pressed and none of them will probably become a law at this session.

CARROLL-LAZEAR PENSION BILLS.

Bills increasing the pensions of the widows of Dr. James Carroll and Dr. Jesse W. Lazear were introduced into the senate by Senators Dick of Ohio and Knox of Pennsylvania, later consolidated into one bill and passed by the senate. The bill is now in the hands of the committee on pensions of the House of Representatives. This bill was endorsed by the Conference on Medical Legislation and active work for its passage has been carried on by the conference committee on special national legislation. The Merchants' Association of New York, the Board of Trade of New Orleans and the Merchants' Association of San Francisco have also been interested in the matter.

SECTARIAN BILLS BEFORE CONGRESS.

While no amendment to the medical practice act of the District of Columbia has been under consideration, two separate bills, one providing for the appointment of a board of osteopathic examiners and one providing for a board to examine and license "chiropractics" were introduced into the House of Representatives. Neither of these bills has been reported on by the committee and there is little probability of their becoming laws.

IMPORTANCE OF STATE LEGISLATION.

As emphasized in the report of the committee last year, the question of uniform and adequate state legislation on subjects pertaining to the practice of medicine and preservation of public health has become each year more important. As pointed out in the report of this committee in 1906, the action of the Legislative Council and of the committee so far as national legislation is concerned, should be restricted to measures of paramount importance. "Minor and special measures ought to be considered in conference and, when meritorious, formally endorsed and thereafter left to the labors of their respective champions. Only measures of a strictly national character dealing in a very important way with fundamental questions ought in the future to be referred to our large auxiliary committee." The policy of the committee, therefore, should be only to employ the legislative machinery at its command so far as Congress is concerned, in the case of questions of national importance and of vital interest to the public and the profession.

Most of the questions of importance to the public and the profession from a medical and sanitary standpoint come under the jurisdiction of the state and not of the general government. While originally established as a Committee on National Legislation, the scope and work of this committee has broadened, until its function as an adviser and coadjutor of state medical associations is quite as important as its national functions. As stated in the report of the committee for 1907, "with the increased necessity for the formulation of certain standard laws must come an increasing necessity for securing their uniform adoption by the different states, and this in turn must call for a more or less uniform and harmonious organization with which to carry the plan into effect." This feature of the work of the committee occupied much of the time and attention of the Conference on Medical Legislation, to which reference will be made hereafter. With the organization and establisment of a Bureau of Medical Legislation at the Association headquarters several lines of work become possible that were not previously feasible. Since most of the questions involved come under the police power of the state and since in the regulation of such questions the state is sovereign, the work of the committee in furthering uniform state legislation must necessarily be in the direction of cooperation with the various state associations and the state legislative committees appointed by them. Outlining uniform policies regarding the various questions involved; drafting and perfecting model laws for the use of state associations; accumulating, tabulating and distributing necessary information regarding legislation in the various states, as well as in foreign countries, and constantly aiding the various state associations by advice and cooperation, should be the policy of this committee rather than that of attempting directly to influence state legislation. The actual work of securing the adoption of desired laws should devolve on the state association and its legislative committee. In accordance with this plan, the committee has been working along three different lines, viz:—(1) The accumulation of data regarding medical practice acts; (2) the formulation of a model bill regulating vital statistics; (3) the collection of material regarding pure food and drug acts.

The question of uniform laws for the different states regulating the practice of medicine therein has long been recognized as one of vital importance both to the profession and the public. Whatever reasons may have existed in previous years for diversity in different states, there seems to be no reason at present why state legislation on this subject should not be uniform, at least so far as essentials are concerned. While each state and territory has a medical practice act, comparison shows that they differ greatly, not only in their provisions, but in some cases in the fundamental principles on which they are based. Hardly a session of any legislature passes that some effort is not made to amend or alter the medical practice act. We have, consequently, not only lack of uniformity, but lack of permanency as distinguishing characteristics of the legal enactments by which the practice of medicine is regulated. This subject should be accorded the same careful, exhaustive study that would be demanded by the medical profession on a scientific or technical question of equal importance. Such a general study of the question has never heretofore been attempted. Efforts along this line are now being made by the committee in the following directions: (1) Comparison and analysis of the existing medical practice acts. A preliminary study on this subject, compiled by the secretary of the committee, was published in the *Bulletin*, Nov. 15, 1907. The existing medical practice acts were analyzed and compared under fourteen different heads and a general summary of them instituted. (2) Compilation of a history of medical legislation. Work along this line is now being done, looking toward a careful examination of all previously existing laws in each of the states and with some investigation of their method of operation. It is hoped that this work may soon be completed and published. (3) Compilation and comparison of the medical practice acts of foreign countries. (4) Most important of all is a compilation, collation and careful comparison of the decisions of all the courts of final jurisdiction, both state and federal, so far as they relate to the constitutionality, interpretation and enforcement of medical practice acts. It is obviously useless to attempt to draft a satisfactory law for adoption by the different states without first knowing what the decisions of our courts have been on previous laws and what rulings and interpretations will be sustained by the courts in the future. This task, naturally one of considerable magnitude, has been inaugurated under the direction of the committee and will be pushed to completion as rapidly as compatible with accuracy. Pending the completion of this investigation and the preparation of a model bill, it is recommended that only absolutely necessary changes in state practice acts be undertaken. When these various lines of work have been completed, when we know what laws have been already enacted, what their history has been, what the courts have decided regarding them and what previous interpretations will be sustained by the courts, a law can then be framed which can be adopted by all the different state legislatures, so far as possible, and which when once adopted, may give a reasonable assurance of permanency. This method of solution of this question has been repeatedly advanced and advocated at different meetings of the American Medical Association, but owing to lack of facilities for carrying on the investigation, as well as lack of time on the part of those interested, it has not been possible to accomplish anything definite. Pending the completion of this work only those changes in existing laws which are imperatively needed should be attempted.

VITAL STATISTICS.

At the Conference on Medical Legislation held in Chicago, the Committee on Uniform State Laws for the regulation of vital statistics presented, as a part of its report, a bill adapted to the needs of those states as yet without satisfactory regulation on this subject. This bill was endorsed by the conference and by the committee. Following the conference, correspondence was taken up with Dr. Cressy L. Wilbur, chief of the Bureau of Vital Statistics of the Census Department; with Dr. Charles V. Chapin, chairman of the committee on legislation of the Section on Vital Statistics of the American Public Health Association, with Mr. Walter Clephane of the Conference on Uniform State Laws of the American Bar Association, as well as with the secretary of the American Statistical Association. Several modifications suggested by these gentlemen were incorporated in the bill and a draft was agreed on, satisfactory to all concerned. This bill was then printed and copies sent to the members of all state boards of health as well as to the registrars of vital statistics of all the large cities. The subject was submitted to the secretary of the Section on Hygiene and Sanitary Science of this Association, who arranged for a symposium on the subject to be held at the Wednesday morning session. Further modifications of the bill will doubtless be made in accordance with suggestions from various sources, but the principal features of the bill will undoubtedly be retained. By the time the various state legislatures assemble in the fall, it is hoped to have a vital statistics bill ready for submission which will have the endorsement of practically all of the authorities on this subject as well as of all recognized organizations interested in this matter. A copy of the bill as it stands at present is herewith attached to this report. In order that the committee may have the support of the House of Delegates we ask for a formal endorsement of this bill as a model for state legislation on this subject.

PURE FOOD AND DRUGS.

Owing to the variations in state constitutions and statutes, the task of formulating a model pure food and drugs bill capable of adoption by all of the states has practically been impossible. It has seemed best to the committee to endorse those bills which were the most praiseworthy, leaving it to the committee on legislation in each state to formulate a bill which would conform to the peculiar conditions existing in each state. Accordingly, the pure foods laws of Kentucky and Tennessee, two of the best state laws as yet adopted, have been issued in the form of pamphlets for distribution. These laws, together with the national Food and Drugs Act and the Iowa law, comprise the best examples of pure food legislation and can safely be used as a guide by those state associations or committees desiring to formulate or endorse such legislation.

THE BUREAU OF MEDICAL LEGISLATION.

As stated in the report of the committee for 1907, the establishment of a bureau at the Association headquarters has greatly increased the efficiency of the organization. Not only the mechanical department of the Association, but also the records, indices, files and clerical force of the Association are at its disposal. The coming winter, when a large number of state legislatures will be in session, will afford an excellent opportunity for testing and enlarging the work of the bureau.

COOPERATION WITH STATE LEGISLATIVE COMMITTEES.

During the past year the legislature has been in session in fifteen states. Through the Bureau of Medical Legislation the committee has endeavored to cooperate with the legislative committees of the various states and to afford them every possible assistance in securing the passage of good laws and the defeating of pernicious ones. The results have been most gratifying and encouraging. With the exception of the New York optometry law, which is now in the hands of the governor, not a single objectionable bill has been passed. On the other hand, the medical practice act of Kansas has been strengthened by the adoption of an amendment defining the practice of medicine, the legislature of Kentucky has passed one of the best pure food laws yet enacted by any state; a new board of health law was adopted in New Jersey; an important amendment to the medical practice act was passed in South Carolina while in Ohio a record for a successful legislative campaign was established by the passage of a pure food and drug bill, a bill providing for county tuberculosis hospitals, a vital statistic bill and a number of others. Bills intended to hamper animal experimentation were defeated in New York and New Jersey. An excellent law establishing a Board of Health has been passed in Virginia. During the coming winter a large number of legislatures will be in session. Plans are being made to insure effective cooperation between state legislative committees and this committee.

CONFERENCE ON MEDICAL LEGISLATION.

The Annual Conference of the Committee on Medical Legislation and of the National Legislative Council was held at the

Auditorium Hotel, Chicago, December 10, 11 and 12, 1907. Reports were made either by letter or in person from the representatives of twenty of the state associations. The first day was devoted to the reading of reports and to the discussion and endorsement of bills pensioning the widows of Drs. Carroll and Lazear and bills providing for naval medical reorganization. The second day was devoted to a discussion of the Army Medical Reorganization Bill, of federal and state regulation of public health and of uniform medical legislation, and the third day to uniform legislation on vital statistics, foods and drugs. The resolution on the control of rabies, submitted by Dr. R. C. Cabot, of Massachusetts, to the House of Delegates at the Atlantic City session and referred to the Committee on Medical Legislation, was discussed by the Conference and resolutions were adopted favoring the increase of the scope and power of the United States Public Health and Marine-Hospital Service, in order that the question of rabies and similar questions affecting the public health might be taken up by this service. These conferences are productive of great benefit and should be more largely attended by members of the National Council. Inasmuch as many of the questions relating to medical legislation are closely allied to those relating to medical education, it is suggested that the conference of these two bodies be held hereafter on succeeding days, in order that a larger number may be present at each.

ORGANIZATION.

The organization under the control of this committee at present consists of the committee itself, composed of three members elected by the House of Delegates; of a National Council, composed of one member from each constituent state association; and of a National Auxiliary Committee, consisting of one member from each county. Most of the state associations now have state committees on medical legislation. We recommend that those which have not should consider the advisability of providing for them. State associations have or should have auxiliary legislative committees, consisting of one member from each county society in the state. It is evident that much greater efficiency could be secured and needless duplication of machinery avoided by uniting the offices of member of the National Council and chairman of the state committee on legislation and public policy. This could be most easily accomplished by requesting the president of the state association to appoint the chairman of the state legislative committee as the member of the National Legislative Council. Such an arrangement would bring the legislative organization of the Association and of the various constituent state associations into closer cooperation. It is equally obvious that a gain would be effected by combining the National Auxiliary Committee for each state with the auxiliary legislative committee of the state association, since it is entirely unnecessary to have two men in the same county doing the same work. We therefore ask that the House of Delegates recommend to the various state associations that a state committee on legislation and public policy be established, if this has not already been done, and that the chairman of such committee be appointed by the president as the member of the National Council on Legislation for that state; that the House of Delegates further recommend that each association provide for an auxiliary legislative committee, consisting of one member from each county society, this member also to be appointed the member of the National Auxiliary Legislative Committee for that county.

It is further recommended that Section 5, Chapter X, Book III, page 20, of the By-laws be amended by substituting the title "National Auxiliary Legislative Committee," in place of "National Auxiliary Congressional Committee" as at present. Owing to the enlarged functions of the Committee on Medical Legislation the work of the Auxiliary Committee will hereafter relate as much to state as to congressional legislation.

In conclusion, the committee expresses the hope that it may in the near future, through careful investigation and discussion of the difficult problems involved, make some very definite progress toward realizing some of those purposes of the Association which have been desired for many years past.

Respectfully submitted,
C. S. Bacon,
J. B. Roberts,
Charles A. L. Reed, Chairman,
Frederick R. Green, Secretary.

Report of Council on Medical Education.

The report of the Council on Medical Education is not printed here because it corresponds in contents so nearly with the addresses which the chairman and secretary of the Council made before the annual Conference on Medical Education, published in The Journal, May 9, pages 1543 to 1546, and May 16, pages 1637 to 1647.

Report of the Board of Public Instruction.

To the House of Delegates, American Medical Association:

Gentlemen:—The newly constituted Board of Public Instruction realizes that the first work of organization must be most carefully considered and inaugurated slowly, so that the proposed scheme of education may progress along safe and efficient lines. Since the appropriation was granted in February by the Board of Trustees for this work, the Board of Instruction has devoted much of its time to the elaboration of a provisional scheme which, as yet, is only suggestive in character, and may be subject to curtailment in some parts and extension in others.

CHARACTER OF ARTICLES.

After a consideration of this question it has been decided that the first articles to appear shall be along the line of preliminary education. As the public to-day has no conception of the general principles underlying infection, it should be instructed first on the history and various epochs leading up to the present knowledge of infectious diseases. In order that these articles shall gain prompt recognition, it is deemed wise to select most carefully the various topics and the writers best fitted to present them. To avoid the slightest imputation of promoting the interests of any individual in the practice of medicine, the first writers will be chosen from the ranks of scientific workers who are in no way connected with the practical side of surgery or medicine. It is the opinion of the board that gynecologic subjects and matters pertaining to sexual questions can best be taken up through circular letters to physicians, or by carefully prepared monographs by some first-class authority in the medical profession. Such monographs would be of the greatest value and could be judiciously employed for educational purposes by the medical profession in their association with their patients. For the present, therefore, the board deems it advisable not to attempt to exploit any of these subjects in the lay press. No matter that is open to controversy in the medical profession shall appear in the public press, for only those facts concerning which there is general accord should be presented.

For fear that the imputation of advertising may be brought against the writers, there should be no allusion to details of treatment. Articles on the general principles underlying the treatment of disease, however, may be very valuable and should be considered. For example, the consideration of the modern conception of serum therapy would be the basis for a splendid series of articles, whereas to go into the details of treatment with a given serum would be very ill-advised; for in matters of this nature the patient must consult a physician.

SHALL ARTICLES BE SIGNED?

While the report, as adopted last year by the House of Delegates, provided that all articles should appear as authorized publications by the Board of Instruction, but not signed by the writer, there is yet some question as to whether this is the most advisable course to pursue. Several leading editors and educators have been interviewed, and almost without exception are of the opinion that articles signed by the writer and stamped with the official authorization of the Board of Public Instruction will carry greater weight than if they are issued as products of the Board of Public Instruction. Even though this course may break away from medical traditions, it is a question if the time is not propitious for such a departure. On this point we trust there will be a full discussion, and that the House of Delegates will indicate its preference for one or the other policy.

THE FUNCTION OF A SALARIED SECRETARY.

Although the appropriation for the inauguration of this work was granted in February, a secretary was not appointed until April 1. As the work of this board must involve many details and all literary matters must be duly criticised, the secretary must possess special adaptability. His function will be to deal with authors and publishers, to revise manuscript so that it will present an attractive and popular style, and to elaborate in detail the suggestions of the board. At first this work must necessarily be limited, for in such a movement as this a false step at the beginning may lead to endless difficulties. Your board, therefore, desires that the preliminary details shall be considered carefully before their inauguration, and that they shall be essentially basic, for the outlines must defined, not so much for the immediate present, as for their ider compass in coming years.

Your board has appointed as secretary Dr. R. Max Goepp, ho has had a very wide preliminary education before studying medicine and is especially fitted, on account of his editorial xperience, for this position.

LECTURE SYSTEM.

The board believes that two lecture systems are advisable, ne under the direct authority of the American Medical Association, which shall be national in character, and a local course f lectures under the auspices of county societies. The value f this work can not be lightly estimated, for there is no more omprehensive way of reaching the public than through the nfluence of a brilliant speaker. The educational value of this nethod is splendidly illustrated by the effective work done y the official lecturer of this organization, Dr. McCormack.

For cities and towns local committees under the direct supervicion of county societies should be appointed to arrange ourses of lectures on popular subjects. These courses should onform to the general plan as laid down by the Board of ublic Instruction.

STATE BOARDS OF PUBLIC INSTRUCTION.

The board advises the establishment by the various state ocieties of state boards of public instruction, as subsidiary oards, whose function shall be to take up subjects especially dapted to their given territory. All these boards shall be orrelated to the national Board of Public Instruction, so that ne work may be carried out harmoniously and without unnecessary duplication. In an advisory capacity these state oards may be of the greatest value to the national board.

It is evident that the scope of this work rapidly widens as is considered, and that it can not be satisfactorily prosecuted without a liberal endowment. We trust that all who ake special interest in this subject will use their influence to ecure an endowment for this national board.

PRELIMINARY NOTICE OF FORTHCOMING ARTICLES IN POPULAR PERIODICALS.

Many busy physicians are so closely occupied with their aily routine work that it is practically impossible for them o keep in touch with the circulating literature of the day. herefore, it is deemed advisable to send out through The ournal of the American Medical Association, or through a eparate leaflet accompanying The Journal, a brief epitome f articles and the periodicals in which they are to be published efore they appear. In this way physicians may obtain advance information as to the character of these articles. While ne board looks on its work as directed to the education of ne public, it believes that the necessity of keeping abreast of ny literature pertaining to medicine will stimulate the physician to closer reading and possibly to the acquirement of more ccurate information in his own sphere.

With this general suggestion the board begs to submit the ollowing outline for public instruction. As stated in the opening paragraph of this report, it is but suggestive and must ecessarily be closely revised in many particulars before it is nally carried into effect. Suggestions from members of the merican Medical Association are solicited and, when feasible, ill be incorporated with the general educational scheme. Vith the necessarily limited means at our command wide expansion is not possible. However, we believe that as the ecessity of this educational work becomes more and more vident, an endowment may be provided for its further prosecution.

PROVISIONAL PROGRAM.

There are to be four principal divisions, to which may be dded a fifth, devoted to the history of medicine; or the historical articles may be worked in under other headings.

The principal divisions are:

. Medicine: Bacteriology. The Specific Infections. The Intoxications. The Constitutional Diseases. Diseases Due to Animal Parasites. The Digestive System. The Respiratory System. The Heart. The Diseases of the Kidneys.
. Nervous Diseases: Anatomy and Physiology of the Nervous System. Functional Nervous Diseases. Organic Nervous Diseases.
. Surgery: History of Surgery from Ancient Times to Present Day, Etc. Abdominal Surgery. Surgery of the Bones. Orthopedics. Nerve Suturing and Plastic Surgery. Army Surgery.
. Hygiene: School Hygiene. Domestic Hygiene. Personal Hygiene. Water. Garbage and Sewage. Quarantine.
. History of Medicine.

A. MEDICINE.

I. BACTERIOLOGY.

General Information.—The nature of vegetable parasites, their life history and function in the universe. Distinction between harmless and necessary bacteria on the one hand, and harmful, disease-producing micro-organisms on the other. Function of bacteria in digestion, in the disposal of sewage; conversion of nitrates into nitrites, and further decomposition into nitrogen and water.

Terminology.—Etymology of the terms bacterium, bacillus, micro-organism, microbe, etc. The malarial plasmodium of Laveran, although not a vegetable parasite, should be described in this connection. (Other animal parasites—intestinal worms, trichinæ, echinococci, blood parasites, etc.—to be taken up under "5. Animal Parasites.")

Technic.—Methods of studying bacteria by means of cultures and with the microscope. What is a culture? Description and history of the microscope. Animal inoculation indispensable in bacteriology. Koch's laws. What animal inoculation has accomplished in the discovery of new methods of treatment. Antitoxin in diphtheria and lockjaw (tetanus). Difference between animal inoculation in bacteriology and physiologic experimentation on animals. Theories of immunity and serum treatment of disease.

(In these articles the individual bacteria are to be mentioned only in an illustrative or historical way. Special bacteria to be described in connection with diseases which they produce. The above should make about three articles.

II. THE SPECIFIC INFECTIONS.

What is an "infection"? Historical review of the different theories prevalent during the different periods of medicine with regard to the nature and causes of disease in general, the humoral theory, etc. Discovery of the anthrax bacillus and Koch's discovery of the bacillus of tuberculosis in 1880. Growth of the germ theory of disease. Difference between "infectious" and "contagious." Modes of infection, with examples: inhalation in tuberculosis, alimentary in typhoid fever, direct contact in diphtheria and the contagious diseases, blood in lockjaw (tetanus). List of contagious diseases and of infectious diseases, including those in which the causative micro-organisms still await discovery. Rheumatism as an acute infectious disease.

(The above should supply material for several articles. Then would follow articles on the individual infectious diseases—typhoid fever, pneumonia, tuberculosis, diphtheria, tonsillitis, etc.):

(*a*) *Typhoid Fever.*

1. History of the Disease.—Confusion with typhus fever and differentiation by Louis and his disciples. Biographical sketch of Louis Gerhard and his work. The disappearance of typhus fever under improved sanitation and its reappearance under unfavorable conditions, as during the Spanish-American War.

(Note.—Whenever possible English names are to be preferred to the Latin or Greek names of diseases, as "St. Anthony's fire" for "erysipelas;" "green sickness" for "chlorosis," etc. Biographical notices of distinguished men to be inserted freely.)

2. Causation.—The typhoid bacillus, its life history, etc. The arguments showing that typhoid fever is caused by impure drinking water, especially water polluted by sewage, are based on observations of facts—not on theoretical considerations—and on statistics which show the significance of the water supply in the production of the disease. The Plymouth (Pa.) epidemic. Disappearance of the disease in Berlin and other German cities after the water supply had been improved. Other sources—oysters, uncooked vegetables, milk.

3. Statistics.—A statistical article giving the geographical distribution, the relative incidence and mortality of the different large cities (with special attention to the statistics of the locality where the article appears). Army statistics in different countries and in different wars—Spanish-American War, Russo-Japanese War, etc. (This article would necessitate a good deal of work, but might be acceptable to a periodical like the *Outlook* or the *Independent.*)

4. Medical and Pathologic.—This article would deal with the pathology, danger of complications, the Widal test—in short, the medical aspect of the disease.

The following infections to be treated in the same manner:

(*b*) *Pneumonia.*

History, etiology, bacteriology, pathology. Prophylaxis. Institutional epidemics. Relation to tuberculosis. Effect of age on course and prognosis. Pneumonia, alcoholism and surgical injury. Complications: Pleurisy, empyema, lung abscess (?).

(c) *Pulmonary Tuberculosis.*

Hereditary theories. Etiology and bacteriology; pathology; methods of infection (inhalation and alimentary). Statistics of incidence and mortality. Sanatoria. Duties of state and municipal governments. The Tuberculosis Congress in Washington to be held this year. The prognosis of tuberculosis. The new tests—conjunctival, cutaneous, inunction (?).

Tuberculosis of bones. Tuberculosis of the lymphatic system. Scrofula. The subject of adenoids might be treated in this connection.

Other diseases to be treated similarly are:

Typhus fever (see under typhoid fever).
Relapsing fever (for a sectional article).
Dengue, dandy fever, breakbone fever (sectional).
Malaria.
Yellow fever.
Malta fever (sectional).
Acute articular rheumatism.
Tonsilitis.
Infections of the mouth-noma.
Epidemic cerebrospinal meningitis.
Diphtheria.
Smallpox.
Chickenpox.
Scarlet fever.
Measles and German measles.
Mumps.
St. Anthony's fire (erysipelas).
Contagious Skin Diseases:
  Ringworm.
  Favus.
  Impetigo.
  Scabies (itch).
Lockjaw (tetanus).
Hydrophobia (rabies).
Glanders.
Woolsorters' disease (actinomycosis).
Puerperal sepsis.
Blood poisoning (pyemia and septicemia).

III. THE INTOXICATIONS.

Alcoholism and delirium tremens. The morphin habit. Food poisoning. Sunstroke and heat fever (Osler's classification).

IV. THE CONSTITUTIONAL DISEASES.

(Chronic) Rheumatism. Gout. Diabetes. Obesity. Rickets. Diseases of the blood: Simple anemia, green sickness (chlorosis), pernicious anemia. Simple goiter, exophthalmic goiter, myxedema and cretinism.

V. DISEASES DUE TO ANIMAL PARASITES.

Intestinal worms. Trichiniasis. Filariasis. Tropical medicine.

VI. THE DIGESTIVE SYSTEM.

Physiology of digestion. Classes of foods and their comparative value. Digestibility of foods. Effect of cooking. Constipation and diarrhea. Functional and organic diseases of the stomach. The neuroses. "Gastritis." Ulcer of the stomach. Cancer of the stomach. Intestinal indigestion. Enteritis in children. Cholera morbus. Gastroptosis and enteroptosis. Appendicitis. Pancreatitis (?). Peritonitis. Diseases of the liver: Gallstones, cancer, cirrhosis, abscess (?).

VII. THE RESPIRATORY SYSTEM.

Cold in the head (coryza). Nasal catarrh. Hay fever. Laryngitis. Spasmodic croup (laryngitis stridulus). Bronchitis.

VIII. THE HEART AND CIRCULATORY SYSTEM.

Anatomy and physiology of the heart. The greater and lesser circulation (Harvey). Blood pressure (popularized through life insurance companies). Heart strain (acute dilatation). Athlete's heart. Organic (valvular) heart disease and nervous affections of the heart (cardiac neuroses). Prognosis of heart disease. Prevention. General régime for persons with heart disease (amount of work and exercise, and kind of exercise permissible; relation to school work and athletics). Coffee and tobacco. Arteriosclerosis and alcohol.

IX. DISEASES OF THE KIDNEYS.

History. Richard Bright. Causes of chronic Bright's disease. Prevention. Acute Bright's disease after exposure; after scarlet fever. Uremia. Stone. Use of the x-rays in locating stones in the kidney.

B. NERVOUS DISEASES.

I. ANATOMY AND PHYSIOLOGY OF THE NERVOUS SYSTEM.

II. FUNCTIONAL NERVOUS DISEASES.

General article on the causes of functional nervous diseases; overwork, etc. Neurasthenia: special emphasis to be laid on causes and prevention, avoiding the symptomatology as much as possible (in order to avoid suggesting the disease to susceptible readers). Hysteria (to be treated in the same way as neurasthenia). St. Vitus' dance (chorea). Epilepsy and alcoholism (?). Occupation neuroses (?). Madness (insanity); acute mania, paranoia, melanocholia. Criminal responsibility. Public and private institutions for the insane. Feebleminded children. Stammering and other defects of speech.

III. ORGANIC NERVOUS DISEASE.

Diseases of the blood vessels: Apoplexy (hemorrhage and embolism). Hemiplegia. Aphasia, etc. Disease of the peripheral nerves: Sciatica. Neuritis. Multiple neuritis. Lea palsy.

(The whole subject of organic nervous diseases to be handle very cautiously.)

C. SURGERY.

I. HISTORY OF SURGERY.

Story of Surgery. History from ancient times to the present day. Present state of the art among uncivilized nation Modern surgery: Anesthesia (Morton and Long.) Lister an asepsis. Progress during the past thirty years.

II. ABDOMINAL SURGERY.

Abdominal tumors. Appendicitis. Surgery of the stomac and intestines. Surgery of the liver. Pancreatitis.

III. BONE SURGERY.

Value of the Roentgen rays in surgery. Historical sketc of Roentgen and his discovery.

IV. PLASTIC SURGERY.

Plastic surgery of the face. Correction of nasal deformitie ("Facial blemish" swindlers.) Nerve suturing.

V. BRAIN SURGERY.

Localization of brain lesions. What animal exploration ha done in this field.

VI. ARMY SURGERY.

A splendid series of articles bearing on the Napoleonic, Civil Spanish-American and Russo-Japanese wars. In no way ca the progress of the science be better marked than in this serie

D. HYGIENE.

I. SCHOOL HYGIENE.

A technical article covering such points as buildings an equipment; ventilation and lighting; placing of desks an blackboards with reference to light; suitable models of desks etc.; air space and floor space.

(This article might be written by an architect). A mor strictly medical article dealing with municipal inspection o schools; contagious diseases. Defective eyesight; defects o speech, adenoids, want of concentration (aprosexia). Th question of how to deal with backward children not so defective as to be classed as feeble-minded.

A pedagogical article on child psychology. The age whe school training should begin. Methods of teaching; relation o development of special senses to oral and written work. Lengt of sessions and intermissions. Manual training, Sloyd, etc.

II. DOMESTIC HYGIENE.

Ventilation. Heating. Plumbing. Drinking water: filterin and boiling. Flies and mosquitoes: screening windows, cistern and water barrels. Hygiene of the sickroom. Nursing.

III. PERSONAL HYGIENE.

Bathing. Clothing; suitable kinds of underwear. Mode o life at different ages. Personal habits: alcohol, tobacco, te and coffee, etc. Diet: varieties of food and food values from the standpoint of economy. Components of a perfect diet The most important articles of food taken up separately milk, eggs, meat, green vegetables, fruit, cereals. The Food an Drugs Act, its scope, and what it has accomplished. Diet o children, old persons, and invalids. Diet during pregnancy an lactation (?). Infant feeding (in this article such subjects a cleanliness in the care of milk and nursing bottles, regularity quantity adapted to infants at different ages, the dangers o attempting to select a food without medical advice, would b treated, without going into the question of milk mixtures o any other medical question. Such articles are constantly needed to impart some rational ideas of how to care for the baby t the average mother.)

IV. WATER.

Municipal water supplies. Methods of filtration when th municipal supply is not filtered. (A technical article on this subject would be desirable.)

The water supply in its relation to disease, especially typhoid fever. Stagnant water, mosquitoes, and malaria. Protection of cisterns, and water barrels against mosquitoes.

V. GARBAGE AND SEWAGE.

Municipal disposal of garbage and sewage. Collection an disposal of ashes and waste. "Municipal housekeeping." Civic associations. Disposal of sewage in small towns, country places, detached houses.

VI. QUARANTINE.

Epidemics: Smallpox, cerebro-spinal meningitis, yellow fever, cholera Asiatica, bubonic plague, etc.

E. HISTORY OF MEDICINE.

This division to consist of separate articles dealing with the most interesting periods of medicine: Hippocrates. Galen. Medicine in Biblical times. Harvey and the discovery of the circulation. Jenner and vaccination. Medicine among uncivilized nations. The doctor in literature: Shakespeare, Molière, Charles Reade.

Respectfully submitted.

F. F. SIMPSON.
FRANK BILLINGS.
CHARLES HARRINGTON.
L. S. MCMURTRY.
HOWARD A. KELLY.
L. EMMETT HOLT.
JOHN G. CLARK, Chairman.
R. MAX GOEPP, Secretary.

Report of the Committee on Ophthalmia Neonatorum.

To the House of Delegates, American Medical Association:

Gentlemen:—In the report presented to the House of Delegates by your committee one year ago it was shown that the amount of blindness dependent on the neglect of proper prophylactic care, or right treatment of ophthalmia neonatorum, had not decreased in a degree proportionate to the advance which had been made on other lines in general sanitation. Emphasis was placed on the fact that the amount of blindness, while smaller in many communities, was still so great in the aggregate as to have attracted the attention of the general government and that recommendations had been made in the Census for the Deaf and Blind for the year 1900 urging that more general attention should be given to measures for its prevention. It was at once evident, therefore, that if this pestilence were to be attacked in accordance with the methods of modern sanitary science exact statistical data concerning the incidence, the localities chiefly affected and the results both in blind and disabled eyes must be first secured. In endeavoring to place this subject on such an exact basis it was found that except from the large hospitals no exact data were obtainable, that there are no records to show how prevalent infections from this cause are throughout the country, and they can be only approximately estimated by the number of blind children. These are recorded in such census reports as have been taken and in the annual admissions to the schools for the blind. In the census taken by the commission for the blind in the state of New York, in 1906, there were found to be 6,200 persons. Of these 509 were under one year of age, while of the 3,306 blind in Massachusetts more than 20 per cent. had lost their sight before their fifth year. There was no method of determining exactly how many of these were cases of infantile infection, but if ulcerative conditions due to bad hygiene and insufficient nourishment and the various forms of congenital blindness are excluded it is safe to assume, as blindness in young children from other causes than these is comparatively rare, that nearly one-half of the whole number have become blind as a result of ophthalmia neonatorum.

It is the special schools, however, which form the general clearing-house for most of the young blind, and in order that it might be determined what proportion of those admitted as late as the fall of 1907 had lost their sight from this cause a circular letter was addressed to the superintendent of each of the schools, asking for a report of the causes assigned for blindness, where the investigation had been made by an ophthalmologist. The reports received were somewhat startling and singularly uniform in their results. In a very large number of schools no trustworthy examinations were made, but from the large number of instances in which the causes were marked "unknown" and "inflammation in babyhood" there is little doubt that the proportion would run in parallel lines to those schools in which more exact reports are recorded. Among those received were the following:

REPORTS FROM SCHOOLS FOR THE BLIND, 1907.

Schools for the Blind.	No. of new admissions.	No. blind from ophth. neonatorum.	P. cent.
New York State School for the Blind..	13	4	30.7
Penn. Institute for the Blind, Overbrook, Pa.	27	9	33.33
Institute for the Blind, Austin, Texas..	(Not definite—about 10.)		
Perkins Institute and Mass. School for the Blind.	43	13	30.00
Colorado School for the Blind, Colorado Springs.	7	3	42.8
Western Penn. Inst. for Blind, Pittsburg, Pa.	28	8	28.57
(Percentage of total number in school, 31.37.)			
Missouri School for the Blind, St. Louis.	19	6	31.57
State Board of Education for the Blind, Hartford, Conn.	8	1	12.50
(Since creation of Board in 1893, 34.74.)			
State School for the Blind, Columbus, Ohio.	61	6	9.83
(Reduction of usual percentage and as low as at any time in last twelve years.)			
Maryland School for the Blind........	13	4	30.77
(Percentage of total number in school in 1905, 25.50.)			
Ontario Inst. for Blind, Brantford, Ont.	23	5	21.74
(Percentage of total number in school, 24.7.)			

The average then of the new admissions in the fall of 1907 to the ten schools in which exact records were kept and representing eight states and the province of Ontario was 25.21 per cent., or one-quarter of the whole number, needlessly blind.

That these are not unusual results is shown by the following report from the Pennsylvania School for the Blind for the past eight years.

	Per cent.		Per cent.
1900.......11 out of 25 =	44	1904.....15 out of 56 =	25.00
1901.......10 out of 26 =	35	1905.....21 out of 42 =	50.00
1902....... 9 out of 39 =	23	1906.....12 out of 38 =	31.00
1903.......14 out of 50 =	28	1907..... 9 out of 27 =	33.33

The average percentage of these eight years is 33.36 per cent. of the whole number admitted. As this enormously high proportion of blindness due to ophthalmia neonatorum is found in states maintaining the highest standards of medical education and general sanitation, there is no doubt whatever that when exact statistics can be obtained at least as large a percentage due to this cause will be found elsewhere throughout the country.

Your committee realized, therefore, that if this universal pestilence which is producing such disaster everywhere is to be controlled, the attack must be planned in accordance with the same sanitary thoroughness that would obtain in the event of a more localized endemic infection. That the disease and its consequences exist everywhere makes the problem one differing in magnitude but in no wise in method.

THREE THINGS NECESSARY.

Three things seem to be necessary:

First.—Exact data concerning its incidence and results should be secured in every state.

Second.—As it is a problem vitally affecting the state in making dependents of those who might be productive citizens, its control rests with the state through its department of public health.

Third.—It is important that there be secured united and concurrent action for its control on the part of all of those who know what to do and are willing to aid in stamping out this pestilence.

In order to obtain the first essential your committee addressed a circular letter to the president and secretary of each state medical society, asking that three things be done. In this the president was earnestly requested, first, in his annual address to urge on physicians their duty in actively supporting such measures as may be inaugurated by the health department of the state to wipe out this disease; second, that he appoint a committee having as its chairman one who would assume responsibility for his state in securing effective work through the physicians and in harmony with the health department of that state; and third, that he send the names of the committee as soon as appointed to the chairman of the Committee on Ophthalmia Neonatorum of the American Medical Association. A similar communication was sent to the department of public health in each state in which it was especially urged, as a preliminary step, that inquiries concerning ophthalmia neonatorum be instituted in that state and the summarized conclusions forwarded to this committee. In order that there might be uniformity of plan it was urged that answers be returned to the following inquiries and the summarized conclusions sent to this committee:

Do state or local laws exist in ———— concerning the control or surveillance of midwives or other unlicensed practitioners?
Are birth reports regularly filed by physicians? By midwives?
How many births were reported in the state of ———— in 1906?
In how many of these did ophthalmia neonatorum develop?
In how many of these cases was prophylaxis employed?
What prophylactics were used and in what strength?
What results followed?
Are records regularly kept in the hospitals concerning the development, treatment and results of ophthalmia neonatorum?
If not, will you not require that such records be kept?

The answers to this letter were immediate and gratifying. Within two weeks responses were received from representatives of nearly two-thirds of the states, expressing their hearty approval of the efforts which were being made to control ophthalmia neonatorum and pledging their cooperation so far as it might be possible to give it. In many of them committees were immediately appointed; in some of them, as in Kentucky, this work was already under way, but to obtain the necessary facts in many instances special appropriations would be required, and to take effective action expenses must be incurred. While these would not be large, they could be secured only by the efforts of those of local prominence in the community. The necessity, then, for the third point which was urged in the former report became apparent, viz., concerted and coordinate action on the part of all interested. The way to control this pestilence in all the states is to control it in each of the states. With that idea in view your committee immediately began to organize national forces. There had already been a joint meeting on the subject of the American Ophthalmological Society and American Obstetrical Society at Washington. By invitation the subject was presented at the meeting in Detroit of the American Obstetrical and Gynecological Association; in Louisville at the meeting of the American Academy of Ophthalmology and Oto-Laryngology; at Atlantic City before the American Public Health Association. Among the lay organizations which had considered it were the American Association of Workers for the Blind and the Mothers' Congress recently held in Washington, the latter based on the idea that being a social disorder and one which would properly come under the control of the state authorities through its public health department, it was essential that there should be a wider general knowledge concerning its nature, its cause and its prevention. All these bodies have appointed committees to cooperate in controlling this disease. Letters have been received from the Philippines, the Canal Zone and from Hawaii promising hearty cooperation of the representatives in those territories in the work outlined by the committee.

Dr. Bracken of Minnesota has said: "The health officers in the various states will take any action which they are asked to take by the representative men in their own community and in whom they have confidence."

It becomes imperative, therefore, that men representing the obstetricians and ophthalmologists should join with the health authorities in building up the skeleton organization which has already been formed throughout the country.

SPECIFIC DETAILS REGARDING METHOD OF PROCEDURE.

The matter of specific details as to method is of secondary importance and must be left largely to the judgment of the men in each state. Your committee can only suggest general plans of procedure. It would seem important that certain specific things be carried out in every state and territory throughout the union. The first step of importance is to secure a general registration of births. Accurate and complete vital statistics must form the basis of successful effort on these lines. In all the states these records are defective. In most of them no records are kept whatever. The importance of accurate vital statistics as a prerequisite for any effective work in controlling an endemic infectious disease can hardly be overestimated.

In a most striking address on this subject Cressy L. Wilbur, M.D., chief statistician of the Bureau of Census, Washington, D. C., said at the meeting of the American Public Health Association in 1907: "Vital statistics is the Cinderella of modern public hygiene. She sits in the chimney corner and sifts the ashes of dusty figures while her proud sisters, bacteriology and preventive medicine, go to the ball and talk about the wonderful things they have done. But the Prince's slipper fits no other foot, and when we descend to facts, and not mere empty bombast, about the results of administrative work, vital statistics, and accurate vital statistics, are our sole dependence. The accurate registration of vital statistics is an indispensable requisite of an efficient modern public health service, and the Congress of the United States, by joint resolution, has called on the various states to cooperate in establishing such registration. It is the most important of all sanitary measures and should be unremittingly urged until successfully carried out in every state of the Union."

And, as he goes on to show, in not one single state is this condition achieved. Dr. Wilbur asks whether the births of all Americans shall be registered as are those of human beings in all civilized countries except the United States, and expresses the hope that we may ultimately secure a modern system of registration which will compare favorably with that which the Japanese possess to-day! The registration of the birth is necessary in determining the vital statistics, but it is of no less value in putting the public authorities in touch with the accoucheur, whether doctor or midwife, in keeping accurate records of the births supervised by midwives, who and where these midwives are, and what their character and fitness for their work.

REGISTRATION OF MIDWIVES.

This makes possible the second essential, the registration of midwives. In most of the large cities nearly half the births are attended by these women. In New York City over 40 per cent., and in Chicago, among the Italians, who are most prolific, 86 per cent. of the births are reported by midwives. Many of these are ignorant, untrained and unclean. The blindness of the child is but one of the many disasters that attend their maladministrations. Every midwife should, therefore, be required by law to fit herself for the work which she assumes to do. If the uncleanly can not be made to adopt sanitary methods, they, together with the vicious and immoral, should be put out of business. Every midwife should be licensed and registered. She should be compelled to report every birth and every case of ophthalmia as soon as it develops, as is required by the Howe law, which is now in the statute books of many states. She should be trained as to the best method of conducting the infant's toilet, especially as to the care of the eyes. The license should not be regarded as a diploma, but as a sanitary police measure maintained by the board of public health. In her report of the birth she should be obliged to state whether or not a prophylactic against ophthalmia neonatorum had been employed, which should be required in all except premature births.

If the midwife is to be held responsible for her neglect to use proper prophylactic measures under penalty of losing her license, as she should be, then she should have the prophylactic put in her hands, with the fullest directions for its use. Some plan should be arranged, moreover, by which cases reported by midwives should receive immediate medical treatment. The poor should be placed under the charge of the physicians of the health department, while others should be advised of the danger to the child's eyes that would result from neglect and both should be urged by the health department to immediately secure adequate medical care.

OPHTHALMIA NEONATORUM AS A REPORTABLE DISEASE.

It does not seem practicable to put ophthalmia neonatorum on the list of communicable diseases. Considering the fact that it is so frequently of gonorrheal origin, many physicians feel that to report it, with the name of the parents, would be a breach of professional confidence and it would add, moreover, to the burdens of an already overburdened profession, but for the health officer to take a semiannual canvass of the number of cases occurring in the practice of the physicians, midwives and institutions of the locality, together with a statement of what, if any, prophylactic was used, with the resulting condition of the eyes in each instance, serves the same end and has a double value—namely, serving to impress on each one receiving the card the need of prophylaxis; and in obtaining statistics from which important conclusions may be drawn. It affords an opportunity, moreover, of conveying information to accoucheurs—that often may not, and soon would not, be necessary—but, meanwhile, it would be instrumental in saving eyes that would otherwise be lost.

SOLUTION OF THE PROBLEM.

In its ultimate analysis the solution of the problem would seem to lie not primarily in coercion, but in guidance. Dr. Juan Santos Fernandez, the distinguished Cuban ophthalmologist, touching on this subject, has said: "The important thing is to bring before the public mind, by means of constant propaganda, a knowledge of the danger to a recently born child, who is at all affected as to the eyes, the great harm which a husband affected with gonorrhea, may cause his wife or offspring, and, side by side with these, to call the attention of the family to the facilities which the authorities will furnish them to guard against blindness." "This," he continues, "would be worth much more than penalties, and if there were a physician paid by the state (and in every county in the United States may such a health officer be found) to attend to the poor children affected, or to prevent their becoming affected, and this fact were to become known to the poor, they would surely seek his assistance, and he could fulfill his duties."

In the city of New York it was found that municipal affairs were being conducted inefficiently, extravagantly and in some instances dishonestly. A great reform is being quietly wrought. It is based on the principle that when right doing is made easier and simpler and more comfortable than wrong doing, that human effort will follow the lines of least resistance. It takes into account, moreover, the weakness of human nature, which we must recognize if we would discount success. It also builds somewhat on the belief that the great majority of men would rather do right than wrong, would choose the better rather than the worse if either were equally easy. This condition would be attained in making almost automatic the working of every health department in relation to infantile ophthalmic infections.

MANNER IN WHICH THIS END MAY BE ACCOMPLISHED.

As to the manner in which this might be done the conclusions in detail which are proposed may be broadly outlined as follows:

- Registration.
    - a. Births.
    - b. Midwives.
    - c. Physicians.
- Education.
    - a. Midwives.
    - b. Mothers.
    - c. Medical profession.
- Preparedness.
    - a. Proper dissemination of prophylactic.
- Cooperation.
    - a. United and concerted action in carrying these provisions into effect.

First.—It is necessary to secure the enactment of laws in each state or federal territory requiring the registry of births and placing the supervisory control and licensure of midwives in the boards of health, requiring that all midwives be examined and registered in each county and that they be required immediately to report each case of ophthalmia occurring under their ministrations under penalty for neglect if found guilty, of fine, and for a subsequent offense forfeiture of license. In all states the registration of physicians should be maintained with equal thoroughness.

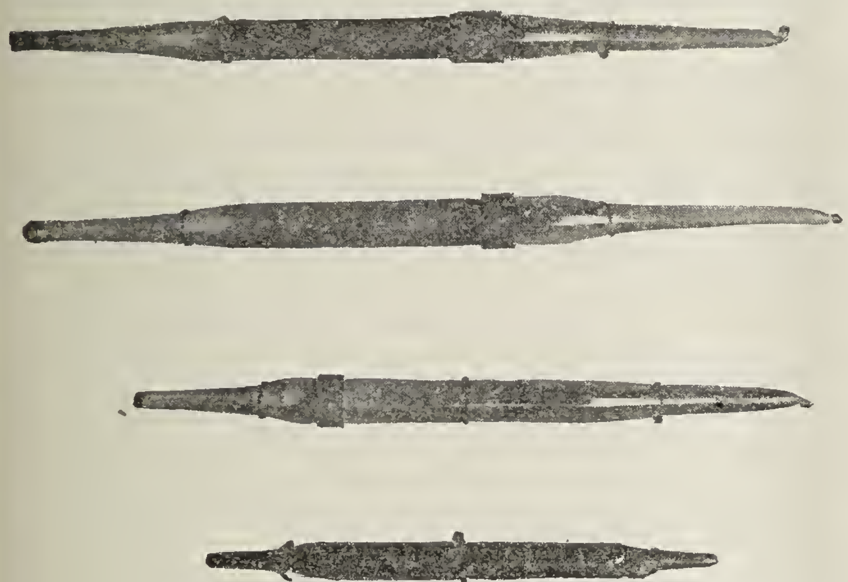


Fig. 1.—Suggested tubes hermetically sealed, made of glass excluding actinic rays. In the smaller tube the upper tip is broken and the wax removed exposing an opening through which the fluid passes to the blunt point and making thereby a Credé rod. The larger tubes are made on the same principle, the small tip is removed and the opening exposed by sliding the rubber. Either can be handled without danger to the child's eyes and permits the flow of a small amount of the prophylactic chosen. (Samples made through the courtesy of Parke, Davis & Company.)

Second.—The distribution by health boards of circulars of advice to midwives and mothers, giving instructions as to the dangers, method of infection and prophylaxis of ophthalmia neonatorum. This has been most effectively carried out by private organizations in England and France. It has also been done to some extent in New York and other cities, but never as a general movement.

Third.—The preparation and distribution by the health boards of ampules or tubes containing the chosen prophylactic, with specific directions for its use. The consensus of opinion on the part of both obstetricians and ophthalmologists is that this should be some solution of silver. The vast majority prefer the 1 per cent. solution of silver nitrate. The special chemical used, however, is merely advisory, each health department should be free to use whatever prophylactic it should deem best. It should, moreover, be provided with outfits for taking cultures from the eyes or suspected secretions on request of those making application for its use.

Fourth.—To insist on the maintenance of proper records in all maternity institutions and other hospitals in which children are born. If reports were filed with the department of health as to the number of infections, the nature of the prophylactic employed and the results as to the corneal integrity not only would the statistics thus obtained be of great value, but the fact that such records were required would cause greater care on the part of the authorities in regard to cases of this character.

Fifth.—Periodic report to boards of health by all physicians engaged in obstetrics of the number of cases of ophthalmia neonatorum that has occurred in their practice within a specified time, whether or not a prophylactic was used—if so, what—together with the result.

Sixth.—Of great importance is it that there may be more widespread knowledge concerning ophthalmia neonatorum and its dangers. Helen Keller voices a very proper public sentiment when she says: "The problem of prevention should be dealt with frankly. Physicians should take pains to disseminate knowledge needful for a clear understanding of the causes of blindness. The time for hinting at unpleasant truths is past. Let us insist that the states put into practice every known and approved method of prevention and that physicians and teachers open wide the doors of knowledge for the people to enter in. The facts are not agreeable reading. Often they are revolting. But it is better that our sensibilities should be shocked than that we should be ignorant of facts on which rest sight, hearing, intelligence, morals, and the life of the children of men. Let us do our best to rend the thick curtain with which society is hiding its eyes from the unpleasant but needful truths."

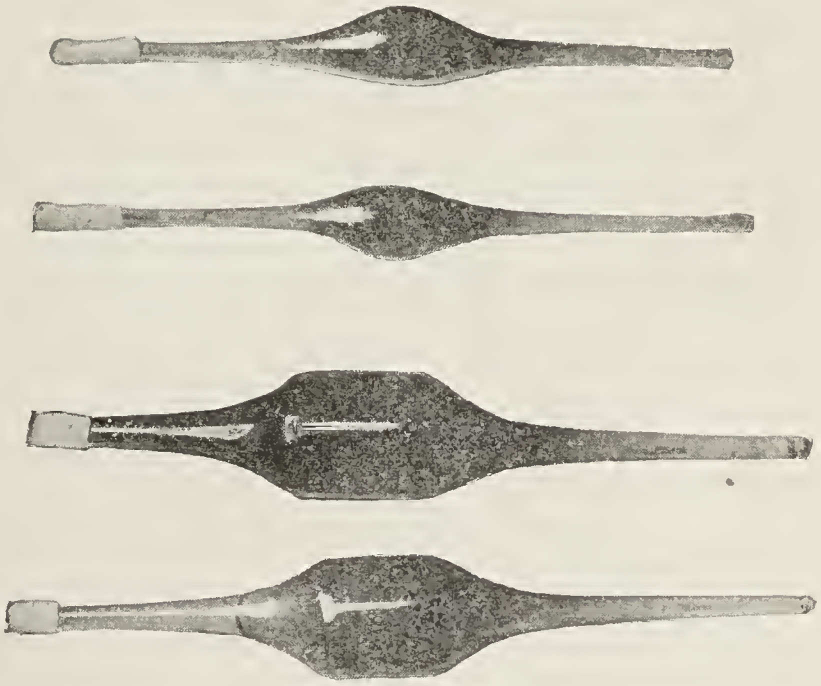


Fig. 2.—Ampules for Free Distribution.—The tip is broken under the rubber which is allowed to remain so that the glasses can not come in contact with the child's eye. (Made through the courtesy of Parke, Davis & Company.)

Seventh.—Most essential is organized and concerted effort throughout all of the states of the Union. The skeleton of such an organization has already been formed and the plan has met with the general approval of the profession in nearly two-thirds of the states. If the chairmen of the Sections on Ophthalmology, on Obstetrics and Diseases of Women, and on Hygiene and Sanitary Science were to select a representative in each state and territory to support and strengthen the movement already under way, a conference of these representatives might be held at this meeting in Chicago and general plans laid down which could be carried out concurrently. As the chairmen of each of these sections has already given his approval of this report, such an organized movement could be started without delay and the inspiration and incentive of united effort would do much to carry it to an effective conclusion.

A CONGRESS FOR THE PREVENTION OF BLINDNESS.

It would seem, however, that the result which we have been struggling so many years to accomplish for the control of this disease throughout the world could be greatly facilitated if when this is done the general organization of forces everywhere could be brought together in a congress devoted to the prevention of unnecessary blindness. When Mr. Snell, in a communication to the British Medical Association, reported that of 333 inmates of the Sheffield School for the Blind 137, or 43.36 per cent., had been blinded by ophthalmia neonatorum, these startling figures led to the unanimous passage of a resolution proposed by Dr. Stephenson and seconded by Mr. Karl Grossman, that in the opinion of the Section on Ophthalmology the time had come for the British Medical Association to take action toward the prevention of ophthalmia neonatorum. With the organization already begun in the United States and a similar body of men at work on it in Great Britain, and all continental Europe actively engaged in combating this disease, it would seem that an international congress with government and other lay representatives would accomplish more in a single conference than individual effort has been able to accomplish in many years. Such a congress should include for its consideration not only ophthalmia neonatorum, but all forms of preventable blindness, such as trachoma, which has become such a menace that the national government has enacted stringent measures for guarding our seaports against its introduction into this country. It should consider the various traumatisms, including injuries which disable working men during the productive period of their lives by the failure on the part of employers to use suitable protective devices and a study of all such forms of blindness as intelligent effort might limit. It should provide measures for the control of the use of toy pistols, explosives and other means of destroying human eyes; for the protection of the public by warning and otherwise against the dangers of wood alcohol and other toxic substances producing blindness, as well as such other subjects relating to the hygiene and sanitation of the eyes as might be deemed wise. If such a congress were to be held in the city of Washington, D. C., in the year 1910, its possibilities might be outlined at the Ophthalmological Congress to be held in Naples in May, 1909, and a plan of procedure might be adopted which, if carried out throughout the world would do more than any other single movement to lessen the unnecessary blindness of the world. Your committee feels, therefore, that in organizing this work much remains yet to be done. It would ask the support of this body in carrying out the program outlined and request that more time be given in which to carry on the work already begun.

F. Park Lewis, Chairman.
J. Clifton Edgar,
F. F. Wesbrook,
Committee.

Approved:
William H. Wilder, Chairman Section on Ophthalmology.
Walter B. Dorsett, Chairman Section on Obstetrics and Diseases of Women.
William C. Gorgas, Chairman Section on Hygiene and Sanitary Science.

STATES AND TERRITORIES FROM WHICH EXPRESSIONS HAVE ALREADY BEEN RECEIVED FAVORING ORGANIZED AND CONCERTED MOVEMENT.

Arizona	State Medical Society
California	State Medical Society—Committee
Colorado	State Medical Society and Health Department—Committee
District of Columbia	Health Department
Florida	State Medical Society
Illinois	Health Department and State Medical Society
Indiana	Health Department
Iowa	State Medical Society (will appoint committee)
Kentucky	State Medical Society—Committee
Louisiana	State Medical Society
Montana	State Medical Society
Massachusetts	State Medical Society
Minnesota	State Medical Society and Health Department
Maine	State Medical Society—Committee
Missouri	State Medical Society—Committee
Maryland	Health Department
Mississippi	State Medical Society
Michigan	Health Department
Nevada	State Medical Society
Nebraska	State Medical Society
New York	State Medical Society
North Carolina	State Medical Society
New Jersey	State Medical Society
Oregon	State Medical Society
Ohio	Health Department
Oklahoma	State Medical Society
Pennsylvania	State Medical Society
Rhode Island	Health Department
Panama	National Government (Reports received through Col. W. C. Gorgas, officer in charge, from all of the stations and hospitals in the department.)
Philippine Islands	Dept. of the Interior—Bureau of Health
Tennessee	State Medical Society
Vermont	State Medical Society
Washington	State Medical Society and Health Department
West Virginia	State Medical Society
Wisconsin	State Medical Society
Hawaii	Territorial Medical Society and Health Department
Wyoming	State Medical Society
Idaho	State Medical Society

COMMITTEES ON OPHTHALMIA NEONATORUM.

California.—Dr. Kaspar Pischel, 1817 California Street, San Francisco; Dr. G. E. Brinckerhoff, 1169 Broadway, Oakland; Dr. Thomas McCoy, Bryson Building, Los Angeles.

Colorado.—Dr. E. W. Stevens, Chairman, McPhee Building, Denver; Dr. Wm. H. Sharpley, Health Commissioner, Denver; Dr. Hngh Taylor, Secretary of the State Board of Health, Denver.

Kentucky.—Dr. S. C. Dabney, Louisville; Dr. J. A. Stucky, Lexington; Dr. L. C. Dunn, Henderson; Dr. T. H. And, Middleboro; Dr. Adolph Pfingst, Louisville.

Maine.—Dr. H. F. Clough, Bangor; Dr. J. F. Hill, Waterville; Dr. F. Y. Gilbert, Portland.

Missouri.—Dr. P. I. Leonard, St. Joseph; Dr. R. McLemore, Nevada; Dr. J. H. Thompson, Kansas City.

American Academy of Ophthalmologists and Oto-Laryngologists.—Dr. A. A. Hnbbell, Chairman, Buffalo, N. Y.; Dr. A. R. Baker, Cleveland; Dr. Edward Jackson, Denver.

American Public Health Association.—Dr. F. Park Lewis, Buffalo, N. Y.; Dr. C. A. Harper, Madison, Wis.; Dr. H. D. Pease, Albany, N. Y.

American Association of Obstetricians and Gynecologists.—Dr. R. E. Skeel, Chairman, Cleveland; Dr. Magnus A. Tate, Dr. O. H. Elbrecht.

American Ophthalmological Association.—Dr. Lucien Howe, Chairman, Buffalo, N. Y.; Dr. Edward Jackson, Denver; Dr. P. A. Callan, New York City.

American Association of Workers for the Blind.—Dr. F. Park Lewis, Chairman, Buffalo, N. Y.

National Congress of Mothers.—Committee not yet appointed.

RESOLUTIONS PASSED BY COOPERATING ORGANIZATIONS.

American Association of Obstetricians and Gynecologists.

Your committee appointed to consider the question of ophthalmia neonatorum begs to make the following report:

Whereas, A committee has been appointed by the American Medical Association on legislative measures to prevent ophthalmia neonatorum; and,

Whereas, It is recognized by this Association that this disease is preventable; and,

Whereas, The Health Department of each state is the properly constituted authority for dealing with preventable and communicable diseases; therefore, be it

Resolved, That it is the expression of the sentiment of this Association that definite steps should be taken to secure the enactment of such laws in the various states as shall compel the use of proper measures of prophylaxis by the attendant at every confinement, the execution of such laws to be under the jurisdiction of the state boards of health, and we hereby pledge our assistance and cooperation to the committee of the American Medical Association in its undertaking.

Signed: R. E. Skeel,
O. H. Elbrecht,
Magnus A. Tate,

Report of the Committee of the American Academy of Ophthalmology and Oto-Laryngology appointed to cooperate with the Committee of the American Medical Association on Legislative Measures to Prevent Ophthalmia Neonatorum.

Your committee presents the following for the consideration of this Academy:

It is well known that ophthalmia neonatorum is the cause of a large proportion of blindness in the United States. No fact in medicine, however, has been more thoroughly established than that it is a preventable disease in a vast majority of cases. Granting this, your committee submits that every state should enact laws having for their purpose the adoption of measures for the prevention of its development, at least, in public institutions where obstetric cases are received, and in the practice of midwives. Precedence has long existed in enactments requiring the carrying out of certain methods and treatment to prevent smallpox and other infectious diseases.

The state department of health seems to be the proper authority for establishing the necessary rules, regulations and ordinances and enforcing their observance, and for publishing and distributing appropriate information and instruction on the subject.

This committee, as will be seen by the draft of law hereby suggested, is of the opinion that legislative action on this subject should at present be limited to the obstetric practice in public or semipublic institutions and to the practice of duly licensed midwives, otherwise leaving the use of prophylactic measures to the judgment and discretion of physicians.

This committee further believes that the specific methods to be followed in the prophylaxis of ophthalmia neonatorum should not be stated in any law, but should be left to the intelligence and judgment of the department of health of each state, respectively, presuming that it will act in accordance with the most advanced existing knowledge.

The following form of law is recommended to the committee of the American Medical Association as a basis for legislative action to be modified to suit the needs and legal situations in each state, and the members of this Academy are urged to cooperate, both individually and collectively, with said committee to secure its enactment:

An Act to Prevent Inflammation of the Eyes of the New-born Babe, or So-called Ophthalmia Neonatorum.

> Section 1.—The department of health of this state is hereby vested with power and authority to publish and distribute such information and instruction, to furnish such remedies, and to make such rules, regulations and ordinances as it may deem expedient to prevent the development of inflammation of the eyes of the new-born babe, or so-called ophthalmia neonatorum, in public hospitals or institutions in which midwifery is practiced either wholly or in part, and in connection with the practice of legally licensed midwives.

SEC. 2.—Said department of health is authorized to enforce its rules, regulations and ordinances at the expense of the state.

SEC. 3.—Any person violating any rule, regulation or ordinance of said department of health regarding the prevention of ophthalmia neonatorum shall be guilty of a misdemeanor.

This act shall take effect immediately.

ALVIN A. HUBBELL, Chairman,
ALBERT R. BAKER,
EDWARD JACKSON,
Committee.

From the Proceedings of the Thirty-fifth Annual Meeting of the American Public Health Association:

Resolved, That a committee of three be appointed by this Association to cooperate with the American Academy of Ophthalmology and Oto-Laryngology, the American Association of Obstetricians and Gynecologists, and other similar national organizations for the prevention of blindness. (Referred to the Executive Committee.)

Motion.—The Executive Committee recommends that the resolution calling for the appointment of a committee of three of this Association to cooperate with the Committee of the American Medical Association on Ophthalmia Neonatorum with reference to measures for the prevention of this disease be adopted, and that such a committee be authorized.

It was moved that the resolution be adopted and the recommendation concurred in. Seconded by several and carried.

From the National Congress of Mothers.

The infections and preventable disease of infants known as ophthalmia neonatorum or "baby's sore eyes" is the cause of nearly one-tenth of the blindness in the United States and has caused the destruction of the eyes of one-third of the children in the schools for the blind; and,

WHEREAS, This prodigal waste of human eyes is due to the neglect of simple sanitary precautions which should always be taken at the birth of the child; therefore, be it

Resolved, That the Congress of Mothers urge on the health authorities of the various states an aggressive and persistent movement to wipe out this prolific cause of blindness; and

Resolved, That the mothers in this Congress assembled pledge their support of all measures designed to protect the eyes of newborn children from needless infection, thereby saving from blindness many yet unborn.

Report of Committee on Section on Tropical Medicine.

To the House of Delegates, American Medical Association:

Gentlemen:—Your Committee on Section on Tropical Medicine begs leave to report that it regards the formation of a section on tropical medicine by the American Medical Associations as unnecessary at the present time, because papers and discussions on topics specially related to tropical medicine can be presented very well in existing sections, more particularly the sections on Practice of Medicine, on Hygiene and Sanitary Science, and on Pathology and Physiology. The committee recommends that, in the making up of the programs for the sessions of these sections, special attention be given to the adequate representation on the programs of matters of importance to tropical medicine. Respectfully submitted,

L. HEKTOEN, Chairman.
MAXIMILIAN HERZOG.
L. F. BARKER,
GEORGE DOCK,
W. C. GORGAS.

Report of Committe on Scientific Research.

To the House of Delegates, American Medical Associaton:

Gentlemen:—I have the honor to report that the Committee on Scientific Research has arranged that the following persons have grants to be applied to work which shall be reported at the coming session of the Association at Chicago:

Drs. D. J. McCarthy and M. K. Myers, Philadelphia, "An Experimental Study of Cerebral Thrombosis."

Dr. Karl Voegtlin, Baltimore, "Chemistry of the Parathyroid Glands."

Dr. Isabel Herb, Chicago, "A Study of the Etiology of Mumps."

Drs. R. M. Pearce, Albany, N. Y., H. C. Jackson and A. W. Elting, "A Study of the Elimination of Inorganic Salts in a Case of Chronic Universal Edema of Unknown Etiology with Apparent Recovery."

Drs. H. C. Jackson, C. B .Hawn and H. P. Sawyer, "A Comparative Study of the Physical Changes in the Blood in Relation to Opsonic and Phagocytic Indices and Cell Content Under Normal Conditions."

Dr. H. T. Ricketts, Chicago, "An Investigation of the Identity of the Rocky Mountain Fever of Idaho with that Found in Western Montana."

The amount of the grants in each case has been fixed at $200, as the character of the work and the expenses in each case seemed to justify this sum. The total amount exceeds the annual appropriation, but there has remained from previous years a credit of $800 which, with the current appropriation placed at the disposal of the committee, makes a total of $1,300.

Your committee feels that it is fortunate in being able to offer the support of the Association for the prosecution of work of the high character of that heretofore published on the grants of the Association and now offered for the coming year.

It has been possible to make the grants above mentioned this year only because there has remained a credit to the year from preceding years which has accumulated by reason of caution in the past in the matter of making grants. Unless the annual appropriation made by the Association to this committee is increased, it will not be possible to continue the same number of grants nor to treat the individuals receiving them with the liberality that is desirable. Your committee believes that the publications of the last few years and the reports made to the pathologic and physiologic section of the Association demonstrate that the moderate support given this committee by the Association has been more than repaid in useful scientific results. For the same reason it feels justified in requesting an increase of the appropriation to $1,000 a year. If the same policy is pursued as in the past, this amount of money can be very usefully employed.

Respectfully submitted,

ALFRED STENGEL, Chairman.
L. F. BARKER.
LUDVIG HEKTOEN,

Report of the Davis Memorial Committee.

To the House of Delegates, American Medical Association:

Gentlemen:—Your committee begs herewith to make a slow report of progress. At the last session of the American Medical Association your committee held a hopeful and, in a measure, enthusiastic meeting. It was voted to request of your honorable body an appropriation of $5,000 toward the Davis Memorial Fund. With this for encouragement, it was believed that the different state societies would actively cooperate and that the total of $30,000 proposed might be reported by the treasurer of the committee, to be placed in your hands for ultimate disposal. As you are aware, by reason of technicalities, action on our request although favorably considered by a large majority, was deferred until the present year. Unfortunately, the effect on the different members of the committee was most disastrous. A number resigned, and others determined to do nothing in their various states until they might follow the encouraging example of your delegated assembly. As a consequence comparative little work has been actively undertaken by your general committee during the last year. I am happy to state that Massachusetts has been a notable exception. Her apportionment to the fund, as estimated by your committee, was $500. As the representative of the state, I inaugurated an active campaign of personal solicitation, the fruitage of which has been over $700.

Doubtless much more would have been done in the different states but for the great financial depression which swept over the entire country early last autumn. This has had a paralyzing influence on public contributions, for such an object, quite as the San Francisco disaster, reacted on the profession during the former year. In the larger sense the late Dr. N. S. Davis needs no memorial. His memory is enshrined in the grateful remembrance of the entire medical profession of this country. Of the many really great men which America has furnished to the medical profession, the fruitage of his life service in no invidious comparison is second to none. It should be the grateful privilege of the entire medical profession of America to honor itself by the erection of some suitable memorial such as in the wisdom of your delegated body shall be determined on. We have been assured that the citizens of his own beloved Chicago will gladly contribute to this purpose. First in every public service for her welfare is perhaps the giving the abundance of the pure waters of the lake for the daily need of a thirsty city. Could anything be more appropriate than the reproduction of Dr. Davis in bronze, gazing in the calm assurance of the future on the broad expanse of the waters which he loved so well!

We bespeak your earnest cooperation at this present meeting and ask that beside the appropriation of the $5,000 which your committee confidently expects the Association will contribute to the fund, a request to the several state societies to appropriate during the coming year such sums as their judgment may warrant for this purpose. In this way your committee feels that the entire medical profession of America would be represented in the memorial, as a voluntary expression from the many, rather than the solicited subscription of the few. Your committee also requests that they may be given power to fill vacancies. Respectfully submitted,

Henry O. Marcy, Chairman.

Boston, May 25, 1908.

Report of Committee on Nomenclature and Classification of Diseases.

To the House of Delegates, American Medical Association:

Gentlemen:—I have the honor to submit the following report of the work thus far done by your Committee on Nomenclature and Classification of Diseases, consisting of Drs. J. Chalmers DaCosta, Philadelphia; Victor C. Vaughan, Ann Arbor, Mich.; W. A. N. Dorland, Philadelphia; Alexander Duane, New York, and myself.

It will be recalled that the appointment of the committee was authorized at the meeting of 1907 by the passage of a motion indicated in the following extract from the minutes:

> "Dr. A. T. Bristow, New York, moved that the President appoint a committee of five on Nomenclature and Classification of Diseases, and that this committee cooperate with representatives from other bodies interested in order to send a suitable delegation to the Paris Commission in 1909, which revises the International Classification of Causes of Death and prepares for the U. S. Census of 1910."

For a time we were in no little doubt as to the precise intent of the motion. We supposed that the phrase "other bodies interested" meant only such bodies as might manifest an interest, also that the cooperation intended was to be only in the work of preparing for a suitable delegation to Paris. We, therefore, communicated with Dr. Bristow, who referred us to Dr. Cressy L. Wilbur, chief statistician of the Division of Vital Statistics of the Bureau of the Census, Washington, D. C., who, he said, had drawn the resolution.

Meantime Dr. Wilbur had communicated with us, generously offering us the utmost cooperation; so also had Dr. Wilmer R. Batt, Harrisburg, Pa., representing the American Public Health Association, and Dr. Robert L. Dickinson, Brooklyn, representing the American Gynecological Society.

We learned from Dr. Wilbur that he had intended to provide for wide cooperation on the part of the national medical organizations, not only in the matter of providing for a delegation to Paris, but also in the actual revision of the nomenclature and classification of diseases. We have, therefore, invited those bodies to take part in our work.

Individual members of the committee have already done a great deal of work on the proposed revision, but we have not been able to complete it in time to be submitted at the session of 1908. Our inability to do so will, we think, be readily understood when it is remembered that the Royal College of Physicians' Nomenclature of Diseases was the work of several years by a general committee of thirty-three members (for the third decennial revision), with twenty-four subcommittees.

We now respectfully recommend the adoption of the following resolutions, drafted by Dr. Wilbur:

1. *Resolved,* That the Nomenclature of Diseases of the Royal College of Physicians of London be recommended for the present use of American physicians in naming diseases and injuries in clinical reports and papers, morbidity and hospital returns, and for certificates of cause of death.
2. *Resolved,* That the International Classification of Diseases and Causes of Death be recommended for all official mortality and morbidity statistical reports.
3. *Resolved,* That the Committee on Nomenclature and Classification of Diseases present a report on the London nomenclature to the Association at its meeting in 1909, with such recommendations as may seem advisable for American usage, and with the assignment of each term indicated according to the International Classification.
4. *Resolved,* That a tentative reconstruction of the International Classification be framed on the basis of the foregoing report, and recommendations be drafted for submission to the International Commission of Revision.
5. *Resolved,* That inquiry be made as to the possibility of holding the next Decennial Revision of the International Classification at Washington in 1910 in connection with the International Congress of Hygiene and Demography.
6. *Resolved,* That after the revision of the International Classication in 1910, the Nomenclature of Diseases be recast in corresponding form, so that there will be available under a uniform arrangement and with precise agreement in the meaning of terms:
   (1) International Classification of Causes of Death.
   (2) International Classification of Sickness and Disability.
   (3) International Nomenclature of Diseases and Injuries.

If your honorable body sees fit to continue the present committee, we shall continue the work assiduously, confidently expecting to submit a completed nomenclature and classification at the session of 1909. If some other course seems to you to be preferable, we shall be glad to cooperate to the best of our ability as individuals. Very respectfully,

Frank P. Foster, Chairman.

Report of Course of Postgraduate Study.

To the House of Delegates, American Medical Associaton:

Gentlemen:—Acting on the suggestion of Dr. J. N. McCormack, the suggestive outline of study which was submitted to this body at the Atlantic City session, 1907, was sent out, with an explanatory letter, to selected workers in the profession all over the country for suggestions and criticisms. In response, replies were received from leading men in every section, most of them merely commendatory of the plan, but many of them suggestive as to subjects for discussion, subject matter, plans, etc. Particular attention was called to the need for the study of materia medica and therapeutics, most of the writers commenting favorably on the work of the Council on Pharmacy and Chemistry, and suggesting that our work be put in line with that. So far as possible, the suggestions and criticisms have been regarded in the elaboration of the course.

On account of lack of time the first year's outline could not be gotten out in one pamphlet for distribution by Sept. 1, 1907, so only the course for the first six months was published at that time. Two editions of this were printed by The Journal, the first, of 1,000, being in blank form, but the second edition, 2,000, was issued as the program of the Warren County (Kentucky) Medical Society, in order that those not familiar with the plans of the work could see how the topics might be used by the different teachers.

It was found that the printing of the complete (first six months) outline in The Councilor's Bulletin, September, 1907, was a great help in getting the course before the profession. The printing of the weekly elaboration in The Journal has also helped to bring it to the attention of many individuals and societies.

However, the greatest interest and enthusiasm has been found in those states visited by Dr. McCormack, the director being able to follow rather closely his itinerary by the requests for outlines and literature from the different towns and cities visited by him.

The outline for the second six months was printed in blank form in one edition of 3,000, for distribution, March 1, 1908. This complete outline was also printed in The Councilor's Bulletin, February, 1908.

The director has corresponded with county society officers and indivduals in thirty-nine states regarding the course, and he has been notified of its formal adoption by ninety county societies.

Five practitioners have been following the outline as a reading course of home study, since they were not able to meet with others as a club.

The first year's elaboration consists of twelve general subjects, but the suggestion of several clubs has been accepted and the outline for the second year, which is now in preparation, will consist of only ten subjects. In order that the course may be uniform, it is desired that all societies taking up the work for next year should begin the first week in September. In this way each society can take its summer vacation during July and August, and not be forced to miss any of the year's work. The outline for the second year will be ready for distribution by August 1, so that all can be prepared to begin active work the first of September.

Many inquiries have been received regarding the examinations and credits mentioned in the literature distrbuted; in response to this it may be said that there is in contemplation a regular quarterly examination, with proper credits, and a certificate or diploma on the satisfactory completion of the four years' course.

The great aim of the course of postgraduate study is the perpetuation of the county society, for on the active operation of this unit of the system of organization depends the success of the American Medical Association.

Experience has shown that the man who has taken part in the active work of a society following this course is best able to instruct others in regard to the plans, and enthuse them with the possibilities of following it systematically. On this account it is urged that councilors familiarize themselves with the plans and details of the course, that they may be enabled to arouse greater interest in the work in established societies, and give to the newly organized society something definite on which to carry forward its work. In addition, it is recommended that, if the greatest good is to come to the greatest number, the work of inaugurating and establishing in the proper manner the course of study should be assigned to those who have given time and study to the work, many of whom may be found in several states.

Respectfully submitted,

John H. Blackburn, Director.

Medicolegal

General Doctrine with Regard to Communications to Physicians Being Privileged.

The Supreme Court of North Carolina says, in the personal injury case of Smith vs. John L. Roper Lumber Co., that, at common law, communications between patients and attending physicians were not regarded as privileged, and the matter has been very generally made the subject of statutory regulation.

The North Carolina statute, which substantially accords with the form more usually adopted in such legislation, provides as follows (Revisal of 1905, Section 1621): "No person, duly authorized to practice physic or surgery, shall be required to disclose any information which he may have acquired in attending a patient in a professional character, and which information was necessary to enable him to prescribe for such a patient as a physician, or to do any act for him as a surgeon: Provided, that the presiding judge of a superior court may compel such disclosure, if in his opinion the same is necessary to a proper administration of justice."

It is the accepted construction of this statute that it extends, not only to information orally communicated by the patient, but to knowledge obtained by the physician or surgeon through his own observation or examination while attending the patient in a professional capacity, and which was necessary to enable him to prescribe. Gartside vs. Insurance Co., 76 Mo. 446; Dilleber vs. Insurance Co., 69 N. Y. 256.

It is further held, uniformly, so far as the court has examined, that the privilege established is for the benefit of the patient alone, and that same may be insisted on or waived by him in his discretion, subject to the limitations provided by the statute itself: "1. That the matter is placed entirely in the control of the presiding judge, who may always direct an answer, when in his opinion the same is necessary to a proper administration of justice. 2. That the privilege only extends to information acquired while attending as physician in a professional capacity, and which information is necessary to enable him to prescribe for such patient as a physician." Wigmore, Section 2286—c.

In the present instance, the trial court having declined to exercise the discretion conferred by the statute, and having admitted the answer of the witness as a matter of right in the defendant, the correctness of the ruling depended on the interpretation put on the second limitation stated: "That the privilege only exists as to information which is necessary to enable the physician to prescribe for such patient as a physician."

Many of the courts have been very liberal in construing this statute in favor of the protection afforded the patient, some of them going to the extent of holding that, whenever a question has been asked by an attending physician, with a view of prescribing, the answer is privileged, however unimportant or irrelevant such answer may prove to be; but this court does not think that such a position can be sustained.

It must be remembered that the privilege did not exist at all at common law. It only arose by reason of the statute, and this statute having provided, as a condition, that the communication, to come within its terms, shall be necessary to enable the physician to prescribe, the court thinks this limitation must be given effect, and that it must rest in the legal discretion of the court to determine, from all the facts and attendant circumstances, including the answer itself, whether the information given was necessary for the purpose indicated.

There are no doubt many occasions when an answer to the question usually asked by a physician, "How were you hurt?" could and should be regarded and held as necessary to intelligent treatment. And when this is true, both the substance of the answer and the incidental details come within the protection provided by the law.

But the court does not think that by any fair or reasonable intendment could the statute be construed as extending to the answer admitted in this case, where a physician was allowed, not as a matter of discretion, but as a matter of law, to testify that he was called to attend the plaintiff, and before treating him asked him how he had received the injury, and that he replied that he was raising an engine with a jackscrew, and he kicked it or wrung it out, he could not tell which, causing the engine to roll back and crush his arm, etc. There was no dispute between the parties that the plaintiff's arm had been crushed by reason of having been caught between a falling engine and brick wall, and it could make no possible difference in the treatment whether this falling of the engine was occasioned by a defective jackscrew or by the plaintiff's conduct in negligently kicking the screw out of place at an inopportune time. This court is of opinion that the judge correctly ruled that the defendant was entitled to have the answer of the witness admitted in evidence as a matter of right, and that his construction of the statute was in accord with the weight of authority. Green vs. Railway Co., 17 N. Y. 201; People vs. Colle, 113 Mich. 83; In re Will Bruendl, 102 Wis. 45; Railway vs. Murray, 55 Kan. 336.

The decision of the Indiana courts relied on by the plaintiff (Pa. Co. vs. Marion, 123 Ind. 415), is based on an interpretation of Indiana statutes (Rev. St. Ind. 1881, Section 497), which is much broader in its terms, permitting a different construction.

Right to Practice Medicine Not Acquired.

The Supreme Court of Iowa says that the point most strongly urged by counsel, and the only debatable one presented by the record, in the case of State vs. Miller, was whether the defendant was entitled to practice his profession without a certificate from the board of medical examiners under that provision of Section 2579 of the Iowa Code which exempts from a compliance with the requirements of said statute all physicians "who have been practicing in this state for five consecutive years, three years of which time shall have been in one locality." This statute appears to have been first enacted in the year 1886, and was re-enacted in substantially the same form in the Code of 1897.

As a witness, the defendant stated that his early life was spent in Iowa; that he had practiced magnetic healing since he was 10 years old; that for about 16 or 17 years prior to the year 1899 he had lived in South Dakota, where he conducted a farm; that since that date he had lived six years in Iowa, the last four years of which had been in Waterloo; and that during all or most of this period he had been practicing the healing art.

The court does not think there was any error in excluding proof of the defendant's practice in Iowa for five years or more prior to his removal to Dakota about the year 1882. The exception made in the statute was very clearly intended for the protection of such citizens of the state as were then, and for five years prior to the enactment of the law had been, practicing medicine within this jurisdiction (Iowa). At that date the defendant was, and for four years had been, a resident of South Dakota, and the fact that he had at an earlier time practiced medicine in Iowa for five years did not give him any advantage under the provisions of the act, over a non-resident practitioner who never resided in Iowa.

In short, the court thinks that, when fairly construed, the words "who have been in practice in this state for five consecutive years" must be held to have reference to those resident physicians who have been in practice for five years immediately prior to the date of the enactment. Such is the obvious import of the language employed.

Lastly, the court thinks it hardly necessary to say that proof that the defendant had been engaged in the practice for five years immediately prior to his indictment could not avail to acquit him of the offense charged. Even if that fact be established, the law prohibiting such practice had been in force for a still longer period, and it would not do to say that the successful avoidance of prosecution for any length of time would operate to give the offender a vested right to continue his defiance of the law indefinitely.

A conviction of practicing medicine without first obtaining a certificate therefor from the State Board of Medical Examiners is affirmed.

What Is Being Under Care of Physicians.

The Supreme Court of North Carolina holds, in the case of Bryant vs. Metropolitan Life Insurance Co., that while a prescription given in response to a casual inquiry, or even after more careful examination, as an exceptional or isolated occurrence, may not suffice to show that the person receiving it is under such physician's care, within the meaning of a stipulation in an application for insurance, it is not required that a patient should be bedridden to constitute the relationship, and if the insured, being apprehensive of his condition, though up and around within the time named, consulted any physician, and intrusted his case to him for regular or continuous treatment, this would come within the representation, and, if false, would relieve the company from the obligations of the contract.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Boston Medical and Surgical Journal.

May 9.

1 *Blood Pressure Observations in Eclampsia. G. S. C. Badger, Boston.
2 Two Cases of Atypical Leukemia. W. W. Barker, Boston.
3 *Toxin of Eclampsia. W. F. Boos, Boston.
4 Tent Ward at the Massachusetts General Hospital. L. H. Burlington, Boston.
5 *Histology of Multiple Myeloma; Comparative Study of Eleven Cases. H. A. Christian, Boston.
6 *Use of Human Milk in Typhoid Fever to Increase Bacteriolytic Power of the Blood. F. P. Denny, Brookline, Mass.
7 Bronchopneumonia: It Clinical Types in Relation to Etiology. C. H. Dunn, Boston.
8 Diagnosis of Circulatory Conditions by Temperature Measurements. T. J. Eastman, Boston.
9 Translation of Clinical Descriptive Terms into Their Histological Equivalents in Diseases of the Nose and Throat. J. L. Goodale, Boston.
10 Clinical Value of Estimation of Ammonia in Diabetes. H. W. Goodall and E. P. Joslin, Boston.
11 Study of the Functions of the Alimentary Tract for the Digestion and Absorption of Food by the Examination of the Feces in Clinical Work. H. F. Hewes and H. M. Adler, Boston.
12 Blood Cultures in Typhoid Fever with Comments on Hospital Treatment. E. P. Joslin and C. L. Overlander, Boston.
13 Tuberculin in Treatment of Localized Tuberculosis, Excluding Pulmonary Tuberculosis. R. I. Lee, Boston.
14 Hodgkin's Disease with Eosinophilia; Report of Case with Autopsy. M. Lincoln, Worcester.
15 *Sahli's Butyrometric Test of Gastric Function. F. W. Palfrey, Boston.
16 Occurrence of Steatorrhea Unassociated with Jaundice or Demonstrable Pancreatic Disease. J. H. Pratt and R. Hatch, Boston.
17 *Fact and Speculation Concerning the Nature of Typhoid Fever. M. W. Richardson, Boston.
18 Primary Sarcoma of the Pleura. W. B. Robbins, Boston.
19 Two Cases of General Streptococcus Infection Through Unrecognized Channels. W. A. Sawyer, San José, Cal.
20 *Origin of Urinary Casts. R. M. Smith, Boston.
21 Age in Its Relation to Arteriosclerosis and Death from Arteriosclerosis. W. H. Smith, Boston.
22 Tuberculous Peritonitis. A. K. Stone, Boston.
23 *Early Diastolic Heart Sound (So-called Third Heart Sound). W. S. Thayer, Baltimore.
24 Value of Lumbar Puncture in Syphilitic and Parasyphilitic Diseases of the Nervous System. G. A. Waterman, Boston.
25 Acute Yellow Atrophy of the Liver. F. W. White, Boston.

1. **Blood Pressure in Eclampsia.**—Badger discusses the relation of blood pressure to eclampsia and reports some observations made with a Janeway sphygmomanometer, from which he draws the following conclusions: 1. The blood pressure in eclampsia is high, and of diagnostic and prognostic importance. 2. In spite of improvement in subjective symptoms and increase in the quantity of urine, the blood pressure may remain high. 3. In which case the prognosis is grave, and labor ought to be induced. 4. The continuance of high blood pressure during the puerperium warrants a grave prognosis as to complete recovery.

3. **The Toxin of Eclampsia.**—Boos describes the earlier researches on eclampsia and his personal observations, begun in 1896 as assistant in pharmacology in the University at Strassburg, with the object of determining whether or not the blood of eclamptic women, or that of the eclamptic placenta, contained an active, non-proteid body, which might perhaps be isolated and recognized to belong to one of the established pharmacologic groups of poisons, or to form a representative of a new group. From these investigations he thinks it appears that there are certain cases of acute intoxication, due to a definite nonproteid active principle, which during life present the clinical picture of eclampsia. Much more experimental work will be necessary to enable us clinically to distinguish the cases in which the toxin is present from cases of eclampsia due to other causes, such as epilepsy and uremia.

5. **Multiple Myeloma.**—Christian summarizes his paper practically as follows: A histologic study of eleven cases of myeloma showed a striking similarity of cell structure with differences of minor degree. The common characteristics of the cells are a finely granular, slightly basophilic cytoplasm, an eccentrically placed nucleus, a nucleolus, centrosomes, a nuclear membrane and a tendency to mural arrangement of the chromatin. Certain nuclear changes, regarded as the results of degeneration, were commonly found. Mitotic figures occured in most of the cases studied, though they were absent in a few. Myelomata are to be classed with the tumors. They tend to remain localized in the bone marrow but almost all show evidence of invasive growth into adjacent structures, and in a few metastasis has taken place. These tumors then are malignant in the usual sense of the word, but their malignant properties are apt to appear relatively late in many cases. With these characteristics there is a greater resemblance of the tumor cells to bone marrow plasma cells than to myelocytes. In most of the cases reported by other observers the cells show these characteristics and these tumors form a group within which the cells of individual cases show no greater variation than occurs in other tumor groups.

6. **Human Milk in Typhoid Fever.**—Denny describes the details of an investigation to ascertain whether or not human milk would avail to increase the complement in the blood in typhoid, and thus destroy the bacilli. It is beyond doubt that human milk in nurslings greatly increases their immunity to infections, and it is held to be also curative in its effects when used in the treatment of infections. There is no known necessary limitation to the period of this action. Milk, therefore, was drawn under the superintendence of a trained nurse from a few nursing mothers who had an abundant excess of milk—both mothers and children being previously examined and found perfectly healthy. Precautions were taken to have the milk drawn in a cleanly way into sterile bottles and kept at the right temperature. It was given in typhoid cases to patients in the same way as cow's milk, and was readily taken. While it is impossible to determine whether the human milk modified in any way the course of the disease, the author concludes that it is desirable that the milk should be tried in a larger number of cases and a study made of the blood of the patients taking the milk. He propounds for further investigation the question: "Can the protective power against infections which human milk gives to the infant be of value to human beings after the first two years of life?"

15. **Sahli's Butyrometric Test.**—Palfrey reports an investition of the gastric function in 38 cases by means of Sahli's test and concludes that we have in this method a procedure which, in spite of a liability in some cases to complete failure, offers in other cases, at the price of an hour's extra work, information, probably at least roughly accurate, of a nature which we can not otherwise obtain. It must be admitted that the method lacks much of being an ideal application of the theoretical considerations on which it is based, but for certain cases, especially when there is question of impaired motility or of hypersecretion, and when circumstances demand that every effort shall be made to arrive at a diagnosis, this method is not without value.

17. **Typhoid Fever.**—Richardson discusses the mode of infection in typhoid fever and suggests that it is essentially a septicemia in which the intoxication occurs through the destruction of the bacilli by the body cells and fluids setting free intracellular poisons. The intensity and rapidity of the intoxication will vary directly as the rate of destruction of the bacilli and inversely as the efficiency of elimination. As to treatment in the absence of a true antitoxin we have had to fall back on various bacterial products having for their aim

the stimulation of the body tissues and the destruction of the bacilli. If this theory be correct the indication may be, on the other hand, in some way to check destruction of bacilli. This might be accomplished (a) by inoculation of the non-toxic typhoid substances to divert destructive agents from the living toxin-bearing bacilli; (b) by cold baths, to combat, by low temperature, rapid phagocytosis and bacteriolysis; or (c) by giving drugs which shall lower metabolic activity (quinin, etc.).

20. **The Origin of Urinary Casts.**—Smith reports a series of investigations by means of artificially induced nephritis in animals into the origin of urinary casts, substances used being uranium nitrate, potassium bichromate, trypan red, arsenic and cantharidin. He concludes that granular casts are the first to appear when the kidney is attacked by an irritant. Casts arise from the degeneration and necrosis of the cells of the tubular epithelium of the kidney. Entire necrotic cells may desquamate and at first remain distinct from one another, then become massed together, and finally formed into a definite plug, taking the shape of the tubule in which it is formed. The same process takes place with cell fragments and granular material derived from disintegrated cells. The casts are all granular at first and later become hyaline as they pass down the tubule in the urinary stream.

23. **The Early Diastolic Heart Sound.**—Thayer summarizes his observations on the so-called third heart sound as follows: In many healthy individuals, especially in the young, there is audible at the apex of the heart a slight third sound, which occurs in early diastole shortly after the second sound. This sound is commoner with a slow pulse; it is better heard in the recumbent posture and, especially, in the left lateral decubitus. It is sometimes more clearly audible during expiration. The sound is not infrequently associated with a shock which may be visible as well as palpable. The sound and shock occur synchronously with the protodiastolic elevation of the cardiogram which is usually prominent in these cases. These events cover a period of time represented on the jugular pulse by the later part of the katacrotic limb of the *v* wave and, generally, a part of the anacrotic limb of an *h* (Hirschfelder) wave (*b* wave of Gibson), which is usually present in these cases. This period corresponds closely to that occupied by the shoulder of the ascending limb of the cardioplethysmogram. Conclusive evidence as to the cause of this phenomenon is, as yet, wanting. From a consideration of the conditions observed in normal individuals, together with various apparently analogous manifestations occurring in disease, we are disposed to incline toward the hypothesis that the sound is produced by a sudden tension of the mitral and, perhaps at times, tricuspid valves occurring at the end of the first and most rapid phase of diastole.

Medical Record, New York.

May 9.

26 *Darwinism and Diabetes. R. G. Eccles, Brooklyn, N. Y.
27 Cerebellar Hemorrhage; Remarks on the Function of the Cerebellum. J. Collins, New York.
28 Nine Cases of Fracture of the Scaphoid. L. W. Ely, New York.
29 *The Pulse of the Nervous System. J. H. Dowd, Buffalo, N. Y.
30 *Management of Burns and Scalds in Infants and Children. M. Leale, New York.
31 Fifty Cases Tested by the Ocular Reaction for Tuberculosis. C. Graef, New York.
32 Success and Failure in Nauheim Cures. P. C. Franze, Bad Nauheim, Germany.

26. **Darwinism and Diabetes.**—Eccles points out that a momentary contemplation of any organism by an intelligent physician demonstrates that it is defended at every point by some more or less effective protective appliance—protective against micro-organisms. These are survivals from past struggles against disease, selected because they are life saving. The healing forces are as truly physiologic as those of assimilation and growth. He shows that Nature carries out its method of defense through many forms of attack, instancing purging in various diseases, thirst, fever, etc., as conservative measures of defense. In some respects we have learned the lesson taught by these observations, but the present attitude of the entire profession toward diabetes—hyperglycemia and glycosuria—is pre-Darwinian. He enters on an elaborate argument to prove that all attempts to check the excretion of sugar in diabetes only make the actual matter worse, and suggests that we try the Darwinian idea, and assume that the sugar is being wasted as a physiologic reaction to overcome some present irritant of exogenous origin. He points out that, no matter what the diet, sugar is still formed in the organism, and if necessary the tissues themselves are used up to form it, and when formed they seem determined to retain it in the system in spite of the most potent diuretic treatment. If, he says, the excess of sugar is of no use in the blood, how came all the organs to be working together to keep it there? He discusses the immediate causes of glycosuria, most of which are too well-established on a basis of clinical evidence to be rejected, and, citing Saundby, indicates them as certain injuries, diseased conditions, poisons. The fasting organism, also, is more susceptible to alimentary glycosuria, and exposure to severe cold and the ingestion of cold food or iced drink, according to Saundby, also tends to induce it. Even in vegetables cold produces an increase in sugar, so that the depressing effects of cold result in sugar formation throughout animated nature. Such facts lead one to the suspicion that past lines of treatment have been the very things that produced the dangerous and appalling symptoms that have all along been attributed to the presence of the sugar. In depriving patients of carbohydrates we are fighting against nature. In the absence of the unknown real irritant in diabetes the presence of sugar in large quantities is known to exist over long periods of years without producing any harm whatever, of which fact cases of Saundby and Hale White are cited in support. Further, where sugar cane is grown, where carbohydrate forms the staple food, diabetes is rare. Where the daily food, on the other hand, comes much nearer to the standard prescribed for diabetics—fish, flesh, fowl, with little room for bread and potatoes—diabetes is common. Great proteid consumption and diabetes stick as closely to each other as shadow to substance.

29. **Pulse of the Nervous System.**—By this term Dowd refers to the alkaline phosphates in the urine, which are precipitated only by an alkaline solution. These he considers indicate the state of the nervous system and form the keynote to all diagnosis, prognosis and treatment. Bedside examinations can be made in ten minutes, using preferably the urine secreted between 8 and 12 o'clock in the morning. In disease of the nervous system, which can not be accounted for, and in the rise of indefinite pains, the phosphatic index should be the guide for medication. When a positive cause has been removed and the phosphates do not rise under appropriate food and drugs, one should look to the assimilation; it may be faulty. Pregnancy, in the third week after conception and up to the third month, is positively shown by the condition of the fern-shaped leaves, a goodly number being found stripped of their feathers; otherwise they are almost perfect. The nervous system controls the whole economy, in health or disease, and if the cells are unduly excited or rendered almost useless by heavy withdrawal of their reserve, conditions may be aggravated or may cease to improve as the case may be.

30. **Burns and Scalds in Children.**—Leale discusses the various factors operating in the case of burns. In regard to treatment, it is of paramount importance to see that everything coming into contact with the wound is sterile. The wound must be carefully freed from all foreign substances, and vesications be carefully drained, as their serum, plus fibrin ferment, on coagulation forms an excellent culture medium. He recommends irrigation of the wound with an antiseptic solution, preferably a warm aqueous solution of peroxid of hydrogen (1 to 6 or 1 to 10), followed with an irrigation of warm normal saline solution or a 3 per cent. solution of boric acid. Protection of the wounded surface is the next important factor, and for this he prefers a thin ointment made fresh at the bedside with a pure sterile oxid of zinc powder and pure olive oil rendered sterile by boiling. When the papillary layer is involved, it is best protected by rubber tissue or silver foil in overlapping strips from half an inch to one inch wide, thus allowing the escape from the wound of discharge, which is immediately taken up by the overlying layers of gauze that are nowhere in contact with the wounded surface. He accentuates the great importance of constitutional treatment.

New York Medical Journal.

May 9.

33 *Restoration of Normal Balance of the Foot. E. G. Abbott and H. A. Pingree, Portland, Maine.
34 *Defective Vision and the Mentally Subnormal Child. S. W. Newmayer, Philadelphia.
35 Psychotherapy in the Treatment of Functional Neuroses. A. P. Herring, Baltimore.
36 Clinical Study of General Anesthesia. A. W. Blain, Jr., Detroit, Mich.
37 Abscess of the Frontal Lobe of Traumatic Origin. F. L. Taylor, New York.
38 Prevalence of Infections in Childhood. M. Ostheimer, Philadelphia.
39 Leprosy in the Far East. C. S. Braddock, Jr., Haddonfield, N. J.

33. **Normal Balance of the Foot.**—Abbott and Pingree take exception to the usual idea that the so-called arch of the foot is half an arch formed by placing the inner borders of the feet in apposition. From plaster casts taken from a skeleton and placed in apposition it is seen as a segment of two arches rather than as one. When the foot is used as a support the arch is held in place by muscles, fasciæ and ligaments. The usual eversion of the foot when used as a support must not be taken for a pronated foot in the sense of a deformity, as this position is caused chiefly by a rotation of the femur, to relieve the strain on the hip structure; and all the normal depression of the arch which is found under these conditions would take place just the same if the foot were inverted. The authors describe a series of experiments, performed by Dr. Bartlett, to illustrate the changes which occur in the arch of the foot when the muscles are severed, the amount of traction requisite to maintain the arch in a normal position, and the amount necessary to raise it to a normal position when depressed; also an experiment on the living subject, showing the alterations in the arch of a weak foot when it is changed from the position of rest to that of pronation. Any change from the normal in the structure and function of the foot to the pathologic of the weak foot must come through a disturbance of the arch. It is, therefore, necessary to consider only the arch and those structures which should control and maintain it. The changes in weak or flat foot are many, but those that prevent the normal maintenance of the arch after all the restriction to passive motion has been removed are the most concerned. The pathologic alterations in the individual ligaments, bones and joints are of little importance in this connection, as they are only incidental to the continued depression of the arch. It matters not in what condition we find the foot, it must first be brought to such a state that it is freely movable in all directions, i. e., to a condition of weak foot. The next step or change from a weak to a normal foot presents a far more difficult problem to solve; therefore, the changes which take place in the joints and ligaments, in so far as they retard motion, may be left out of consideration, and attention given to those parts which, through their pathologic changes, prevent a weak foot from being a normal one, namely, the ligaments and muscles. The ligaments are lax throughout the whole structure, and those muscles which control certain motions are lengthened, while others are shortened. On the inner side of the foot the anterior and posterior tibials are the principal muscles at fault. They are stretched much beyond their normal limit; are pulling at a great disadvantage whenever the foot is in use, and give no support when the foot is at rest. On the outer side of the foot the peronei are found to be shortened and often displaced; but, instead of being weakened in their action, both as a support and as a lever, they are strengthened through this displacement, and work most advantageously in increasing the deformity. It is not unusual to find the heel cord shortened sufficiently to prevent the calcaneum from being held at its normal angle, thereby restraining the arch of the foot from preserving its normal contour when the foot is flexed. The plantar fascia, the principal truss of the arch, is stretched and gives little aid.

34. **Defective Vision and Mentally Subnormal Children.**—Newmayer's article aims to arouse in the general practitioner a greater interest in his responsibility to school children suffering from defective vision. He believes that more than 75 per cent. of the cases of mental retardation are due to (1) disease of the brain with a greater or less degree of absent or undeveloped, untrained latent function; and (2) defects and diseases of the eye. The chief reason for not suspecting the eye as the seat of trouble is that the examiner always expects to find symptoms and signs to point to the eyes, forgetting that ofttimes gross changes may be present in these organs and no outward signs noticeable. Never exclude the eyes, except in the proved absence of ocular disease; the most thorough and systematic examination should be made for possible errors of refraction or abnormality of the binocular vision. The abuse of using the test card for absolute diagnosis, instead of as a valuable aid to confirm findings by instruments of precision, has been the cause of much deception. He discusses the proper use of the test card, and points out that many errors arise from not making allowance for the pupil's capacity for accommodation. Acute vision, rather than farsightedness, may account for a child being able to read the lines at a farther than normal distance. With regard to test types, having had occasion to refract the eyes of a deaf and dumb child, necessity led him to design a card composed of hands with various fingers extended and in various directions. The fingers were accurately measured to conform with the type of Snellen. The success met with encouraged him to use the card in all cases, especially children. It proved the most practical of all the charts. A child not only can imitate the hands, but can be allowed to count the fingers. Newmayer reproduces this chart of hands and also the chart of pictures. He suggests that in the principal school in each section there should be a closet fitted for dark room examination. Children who are too poor to obtain glasses should be supplied with them from a fund appropriated by the city; all books are supplied, and glasses are often more necessary than books.

Lancet-Clinic, Cincinnati.

May 2.

40 *Toxic Amblyopias, with Reports of Twenty-four Cases. L. Stricker, Cincinnati.
41 Nature of the Morphin Disease. C. W. Carter, Richmond, Ind.
42 Incentives to Study. L. Bloom, Cincinnati.
43 What Are the Essential Subjects of General Information that the Physician Should Have to Take His Proper Place in the Community? A. T. Perry, Marietta, Ohio.

40. **Toxic Amblyopias.**—Stricker makes a study of toxic amblyopias based on: Cases having their origin in wood alcohol, 2; chronic ethyl or grain alcohol, 4; chronic tobacco, 2; chronic alcohol and tobacco, 2; chronic alcohol and lead, 7; chronic lead, 5; gout, 5; and carbon bisulphid, 1. Other causes of amblyopia not included in the author's experiences are quinin and filix mas, arsenic, iodids, sulphids and chlorids. As a result of this study he feels that one is justified in classing the toxic amblyopias primarily as a cause of disease of the ganglion cells of the retina. In severe intoxication the ganglion cells die primarily, under which circumstances the acute form of the toxic amblyopias presents itself. The poison acts directly and with great force. In the chronic forms the nutrition of the ganglion cells is altered and the axis cylinders die first. The poison in an attenuated form acts directly on the ganglion cells of the retina or their axis cylinders, or indirectly, due to its action on the vascular system, more specifically in the production of arteriosclerosis which impairs the nutrition, not only of the retina but of the optic nerve. The article is well illustrated.

Archives of Internal Medicine, Chicago.

April.

44 *Rôle of Venous Congestion in Compensation of Tricuspid Insufficiency. W. J. Calvert, Columbia, Mo.
45 *Case of Tuberculous Ulcer of the Stomach. T. A. Claytor and W. W. Wilkinson, Washington, D. C.
46 *Serotherapy of Epidemic Cerebrospinal Meningitis. W. S Chase and M. L. Hunt, Akron, Ohio.
47 Presence of Antagonistic Substances in the Blood Serum in Early and Late Syphilis and in Paresis and Tabes. M. Wollstein and R. V. Lamar, New York.
48 Clinical Manifestations of Hemorrhagic Renal Infarct. G. Halperin, Chicago.
49 Effects of Prolonged Adrenalin Medication on the Human Circulatory Organs. H. Brooks and D. M. Kaplan, New York.
50 *Metabolism Experiments in Artificial Nutrition with Reference to Hypodermic Method. H. S. Carter, New York.

44. **Tricuspid Insufficiency.**—According to Calvert's observations, based on a case, the right ventricle appears to depend on venous congestion of a degree sufficient to maintain a pres-

sure which, with the addition of that contributed by the backflow, may offer resistance enough to act as a substitute for the insufficient tricuspid valve. Now, since the venous congestion depends on, is caused by, and represents the arterial pressure minus friction and flow, or in other words the activity of the left ventricle, it follows that in tricuspid insufficiency the left ventricle bears the brunt of that part of compensation which is played by venous congestion. As the flow of blood to the left heart is diminished, the work of the left ventricle is progressively lessened. The left ventricle, therefore, may remain of normal thickness or it may become atrophied. The large normal excess of arterial pressure over that in the capillaries renders it possible that even with diminished activity of the left ventricle and a lowered arterial pressure, there may yet be a rise in the venous pressure, a portion of which is utilized for compensation, the balance being consumed through friction and flow of blood. Thus, in tricuspid insufficiency the left ventricle and venous congestion play the same rôle as do the right ventricle and the pulmonary congestion in mitral insufficiency. In the latter condition the congestion of the auricle and the pulmonary circulation furnish the resistance against which the hypertrophied left ventricle works; in the former the congestion of the right auricle and the venæ cavæ favor the action of the hypertrophied right ventricle. The remaining factors have a temporary or minor influence on the compensation of insufficient mitral and tricuspid valves.

45. **Tuberculous Ulcer of Stomach.**—Claytor and Wilkinson discuss the historical data and mode of infection in tuberculous ulcer of the stomach, reporting a case in great detail. There are four avenues by which tuberculous infection might reach the stomach, namely, by direct infection of the mucous membrane through the lymphatics, through the blood stream and through the serous coat. The authors' studies show a case of tuberculous infection of the digestive tract, as evidenced by the limitation of the process to the stomach, intestine, liver, pancreas and lymphatic structures draining these organs. There existed a large single tuberculous ulcer of the stomach, with no involvement of other parts of the organ. This ulcer possessed the usual characteristics of a tuberculous lesion—ragged, thickened, undermined edges and the cribriform floor. This was confirmed by histologic examination and the findings of tubercle bacilli in the tissue. The connective tissue hyperplasia, absence of giant cells, and paucity of bacilli in the tissue, speak for an attenuated infective process. The route of infection seems to have been through the lymphatic system of the gastrointestinal tract. Pulmonary origin was absolutely excluded by the absence of any tuberculous lesions in the lungs or bronchial glands. This fact was determined with great care, both macroscopically and microscopically. As to whether the primary seat of infection was the ulcer in the stomach, from which the abdominal lymphatics became infected, or whether the lymphatic glands infected the gastric wall by contiguity, they are unable to say, but the latter seems the more probable.

46. **Epidemic Cerebrospinal Meningitis.**—Chase and Hunt report the case histories of twelve patients with epidemic cerebrospinal meningitis treated at the Akron City Hospital during the epidemic of 1907. All these patients were treated with the Flexner serum, the only other medication any of them received being an occasional hypodermic of morphin, with hyoscin hydrobromid when delirium and restlessness were pronounced. Three patients died and nine recovered, a mortality of 25 per cent., while of the patients outside, none of whom received the Flexner serum, one patient recovered and nine died, a mortality of 90 per cent. The cases in the hospital were for the most part fulminating and all of them were severe. In one of the fatal cases serum was not used until the patient had become pulseless; in another improvement following the first injection was very marked. While not building too much on this small number, the authors consider that the difference in mortality of those treated with and without serum is not due to a greater severity of type in the latter.

50. **Artificial Nutrition.**—Carter presents observations from which he concludes as follows: By the ordinary method of rectal alimentation it is practically impossible to nourish patients properly, or to maintain nitrogenous equilibrium. There are probably few, if any, exceptions to this rule. The hypodermic use of meat peptones and alkali albuminates is not feasible for artificial nutrition, on account of their great toxicity and tendency to cause local necrosis. Skimmed milk, peptonized for from one and one-half to three hours, may prove fatal if given hypodermically. It was found possible to furnish a dog with full nitrogenous requirements in the form of skimmed milk, peptonized for one and one-half hours, and injected hypodermically in gradually increasing doses; when on the larger amounts of food the weight remained almost stationary, the nitrogenous balance showed only 0.3 to 0.5 gram loss, the dog being apparently in good condition. For ordinary use, although successfully carried out in this instance, milk peptone, when injected hypodermically, must be considered dangerous, and until some method for avoiding the greater part of the natural toxicity of the product can be found, it should not be used for nutritive purposes in man.

Surgery, Gynecology and Obstetrics, Chicago.

April.

51 *Surgical Phases in Enteroptosis. J. G. Clark, Philadelphia.
52 *Arteriosclerosis of the Uterus. R. B. Slocum, Wilmington, N. C.
53 *Death of the Mature Fetus in Labor. H. M. Stowe, Chicago.
54 Fallacies of Intra-abdominal and Atmospheric Pressure as Supports of the Uterus and Abdominal Organs. C. W. Barrett, Chicago.
55 The Period of Awakening of Military Surgery. N. Senn, Chicago.
56 Surgical Aspects of Varix of Lower Limbs. R. Russ, San Francisco.
57 *Sequence of Pathologic Changes in Appendiceal Peritonitis. E. M. Stanton, Schenectady, N. Y.
58 *Breech Presentations; Analysis of 250 Cases at Boston Lying-in Hospital. R. L. DeNormandie, Boston.
59 Harrington's Solution in Treatment of Suppurative Inflammations of the Knee Joint. J. E. Summers, Omaha.
60 *Arthrodesis and Tendon Transplantation in Paralytic Club Feet. J. P. Lord, Omaha.
61 *Cyst of the Pancreas with Report of Operation. R. B. Hall, Cincinnati.
62 *The Abdominal Incision. C. U. Collins, Peoria, Ill.
63 Unusual Obstetric Complication Causing Removal of 126 Inches of Small Intestine. H. J. Donaldson, Williamsport, Pa.
64 Traumatic Case of Diaphragmatic Hernia. F. M. Sandwith, London, England.

51. **Enteroptosis.**—Clark discusses this condition, with illustrations from hardened sections and radiographs, and arrives at the following conclusions: No patient with enteroptosis should be operated on until medical and mechanical means have been exhausted without relief. Cases of ptosis due to congenital habitus will not be relieved by operation except in the rarest instances: they should not be considered, therefore, as amenable to surgical treatment. In order to arrive at an accurate estimate of the degree of ptosis the *x*-ray should be employed. In cases following childbirth, when the abdominal wall is very lax, thus destroying the equilibrium between the extra-abdominal and intra-abdominal forces, resection of the relaxed ventral tissue, by the method suggested by Webster, may give perfect relief, provided the diastasis has not been of such long standing that the abdominal organs are far below their normal levels. In the latter case, in addition to the Webster operation, it may be necessary to suspend the colon by means of the omentum, thus relieving the stomach of the weight of this organ, and at least temporarily supporting the stomach until there may be a natural shortening of its ligaments. In a simple gastroptosis without marked participation of the colon, the Beyea operation may be the one of preference. If the cardiac end of the stomach has been greatly dilated, forming a kink in the pylorus and a decided notch in the lesser curvature a no-loop gastroenterostomy may be necessary with closure of the pylorus. This is merely a suggestion, for the writer has had experience in only one case with this operation. In exaggerated cases of ptosis of the transverse colon, where a pendulous loop is formed which produces stasis of the fecal current, as well as tending to twist on itself, with symptoms of partial obstruction, nothing less than excision of the redundant loop with end-to-end anastomosis will effect a cure. In cases of redundant sigmoid, with more or less constant pain in the left side, associated with obstinate constipation a suspension of the sigmoid so as to pull it up out of this bad position in the pelvis may give entire relief. On account of the constant mobility of the sigmoid a recur-

rence may be noted. In exaggerated cases of redundant sigmoid attended with symptoms of extreme constipation, verging on to obstruction, a resection of the sigmoid may be advisable. In all cases a carefully fitted abdominal support or a carefuly adjusted straight front corset should be worn after operation in order to give as much artificial support as possible.

52. **Arteriosclerosis of the Uterus.**—Slocum reports a case of uterine arteriosclerosis and the pathologic characters of the removed organ. He discusses the literature of the subject and concludes that arteriosclerosis of the uterus may cause hemorrhage at the same period of life as cancer would. The diagnosis from very early cancer is difficult. As to treatment, ergot, curettage and packing, and local applications are of no avail. In most of the cases reported a complete hysterectomy was done, rather than a supravaginal operation, because of the questionable diagnosis.

53. **Death of the Mature Fetus in Labor.**—Stowe investigates the death of mature children in labor or in a few hours after delivery where the death was traced directly to the birth, and tabulates 190 cases. He discusses the physiology of fetal life, especially in relation to respiration, and ascribes the death of the mature fetus in labor to one or more of the following conditions: Precipitate or prolonged labor; size of child or pelvic deformity; cord around the neck or prolapsed; dry labor; premature detachment of placenta. He discusses each of these in detail.

57. Abstracted in The Journal, Feb. 15, 1908, page 558.

58. **Breech Presentations.**—DeNormandie, as a result of an analysis of 250 cases, arrives at the following conclusion: Breech cases in primiparæ are common. Manual extraction occurs in one-half of all breech deliveries. The application of forceps to the after-coming head is at times a life-saving procedure. Lacerations of the maternal soft parts occasionally are very extensive. Injuries to the child are much more common than in vertex deliveries. Sepsis is no more common in breech than in vertex presentations. Breech presentations in contracted pelvis call for an early Cesarean section. The fetal heart in breech presentations should be listened to at short intervals after the rupture of the membranes. If the cord prolapses, immediate extraction should be done. A long labor, *per se*, is not an indication for operative interference. Early rupture of the membranes, without advance in the labor, is an indication for immediate operative interference.

59, 60, 62. Abstracted in The Journal, Feb. 1, 1908, pages 394 and 396.

61. Abstracted in The Journal, Jan. 25, 1908, page 311.

Journal of Nervous and Mental Disease, Lancaster, Pa.

April.

65 Hysteria in Children. J. J. Thomas, Boston.
66 Pathogenesis of Some Epilepsies. S. E. Jelliffe, New York.

Virginia Medical Semi-Monthly, Richmond.

May 8.

67 Importance of Cooperation of the Medical Profession in Municipal Health Work. E. C. Levy, Richmond.
68 Surgical Aspects of Tuberculosis. J. T. Buxton, Newport News.
69 Postoperative Abdominal Fistula. M. D. Delaney, Alexandria.
70 Treatment of Epilepsy. T. J. Hughes, Saltville.
71 Kuhn's Suction Mask for Treatment of Pulmonary Tuberculosis. G. J. Williams, Newport News.

Cleveland Medical Journal.

May.

72 Longevity in Its Relation to Preventable Causes of Early Death. D. S. Hanson, Cleveland.
73 Necessity for Consent Before Performing Operations and Autopsies. A. Clum, Cleveland.
74 Submucous Resection of Nasal Septum. I. J. Kerr, Cleveland.
75 Treatment of Ozena. W. H. Tuckerman, Cleveland.
76 Squamous-Celled Carcinoma of Cervix Uteri. A. J. Bower, Cleveland.

California State Journal of Medicine, San Francisco.

April.

77 Symptoms and Localization of Intestinal Obstruction Due to Carcinomata. R. L. Wilbur, Berkeley.
78 Treatment of Syphilis of the Eye. M. W. Frederick, San Francisco.
79 Evils of the Lodge Practice System. R. Brown, Santa Barbara.
80 Early Treatment of Cross Eyes. V. H. Hulen, San Francisco.
81 Impressions of the Killian and Guisez Clinics. C. G. Levison, San Francisco.
82 Bronchoscopy. E. C. Sewall, San Francisco.
83 General Paresis. G. D. Marvin, Agnew.
84 Posology. G. F. Hanson, San Francisco.
85 Indications for Operations on the Stomach. W. I. Terry, San Francisco.
86 Our Lack of Business Methods. K. C. Park, San José.
87 Pyelonephritis Complicating Pregnancy. S. T. Pope, Watsonville.
88 Experimental Feeding of Boracic Acid to White Rats. G. B. Worthington, Marysville.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London.

April 25.

1 Gresham Professors of Physic. F. M. Sandwith.
2 *Anatomy of the Long Bones Relative to Certain Fractures. R. Thompson.
3 So-Called Rheumatic Iritis. C. Higgens.
4 Influenza Bacillus as Cause of Fatal Endocarditis After Eight Years? F. J. Smith.
5 *Accuracy of Opsonic Estimations. L. Noon and A. Fleming.
6 Chronic Polycythemia. E. Cautley.

2. **Fractures.**—Thompson concludes his Hunterian lectures with the application of the principles enunciated in the preceding lectures, when dealing with fractures of the femur, to Colles' fracture, fractures in the region of the elbow joint, the upper end of the humerus and the clavicle, and the separation of the epiphyses. With regard to fractures of the clavicle he advances the following conclusions: 1. No pressure, or very little, is transmitted through the acromioclavicular joint, even when blows are struck on the outer edge of the acromion process. This absence of direct pressure through the acromioclavicular joint is explained by the presence of the trapezoid ligament and its attachment to the coracoid process of the scapula and the clavicle. 2. The pressure which passes through the coracoid process and the trapezoid materially affects the internal structure of the clavicle. 3. The obliquity of the adjacent surfaces of the acromioclavicular joint and the presence of the triangular fibrocartilage still further diminish shock. 4. By direct impinging of the coracoid process against the clavicle fractures of the clavicle between the conoid and the trapezoid ligaments are produced, and with such fractures not only is displacement possible, but impaction may also take place. 5. By bending the clavicle over the coracoid process fracture of the shaft of that bone may be produced.

5. **Opsonic Estimation.**—Noon and Fleming discuss the figures published by Reyn and Kjer-Petersen in the *Lancet*, March 28, in which the latter question whether the tuberculo-opsonic index in tuberculous patients really does present any specific variation from the normal. The authors outline the position of Reyn and Kjer-Petersen and combat it by essaying to show that the variations of normal sera are very small, while those of tuberculous sera are large. They further take exception to Kjer-Petersen's experimental methods.

British Medical Journal, London.

April.

7 *Cystic Forms of Xanthelasma Palpebrarum. J. Hutchinson.
8 Treatment of Puerperal Fever. A. K. Gordon.
9 Diagnosis and Treatment of Renal Mobility. G. Barling.
10 Uretero-Trigonal Anastomosis for Ectopia Vesicæ. J. S. Riddell.
11 Prolapse of the Inverted Bladder Through the Urethra. C. Leedham-Green.
12 Rare Case of Solitary Kidney. B. J. Ward.
13 Traumatic Rupture of the Kidneys. C. A. Griffiths.
14 Infections of the Urinary Tract, Especially Tubercle, Gonococcus, and B. Coli Communis. G. L. Eastes.
15 Diagnosis of Impacted Calculus in the Ureter. C. A. Ball.
16 Physiologic and Pathologic Effects Which Follow Exposure to Compressed Air. M. Greenwood.

7. **Xanthelasma Palpebrarum.**—Hutchinson holds that all the various forms of xanthoma and xanthelasma are undoubtedly allied and make up one family, being all caused by hepatic disorder, but are distinct from one another. Xanthelasma results from recurring functional disturbance, the generalized forms of xanthoma from organic, or at any rate long persisting, disease; while xanthoma diabeticorum is associated with

special disturbance of the glycogenic functions of the liver, is of only temporary duration, and is not usually attended or preceded by any changes on the eyelids. These changes are very common without jaundice or organic disease.

Medical Press and Circular, London.

April 22.

17 Internal Squint. P. Maxwell.
18 *Arrest of Postpartum Hemorrhage. G. de G. Griffith.
19 Sexual Hypochondriasis. F. W. Lowndes.
20 Ascites Relieved or Cured by Paracentesis. F. Hawkins.

18. **Postpartum Hemorrhage.**—Griffith has practiced and has taught since the sixties the method of compression of the abdominal aorta above its bifurcation now being advocated in postpartum hemorrhage. It may be done in two ways: 1. By laying the fingers of the left hand on the pulsating aorta and compressing it against the spine, the fingers being on one side of the aorta and the thumb on the other, the right hand grasping the uterus and making it contract as much as possible. 2. In some cases with the left hand grasping in its hollow the uterus, the edge of the palm of the hand can compress the aorta against the spine, at the same time keeping the uterus contracted in the hollow of the hand, the blood supply to the bleeding part being thus shut off entirely.

Clinical Journal, London.

April.

21 *Diet and Dietetics. F. J. Smith.
22 *Harmless Albuminurias. L. Williams.
23 Contusions of the Eyeball. N. B. Harman.

21. **Dietetics.**—Smith divides dietetics into (1) that in health, of (a) armies, prisons, etc., (b) ordinary individuals; (2) in disease (a) special, e. g., diabetes, gout, etc., (b) general. In this article he deals only with general dietetics in disease. He sums up the fundamental principles as follows: Do not feed sick people too much, and let their appetites general and special be in great measure the guiding rule in feeding. Laboratory experiments may help a little in predetermining digestibility of a given article, but they are not the same thing as the palate and the living stomach working in harmony. With regard to milk, it is a superstition that milk is the most easily digested article of consumption under all and any circumstances. While in some circumstances it may not be true that it is the most indigestible article of diet, Smith's clinical and postmortem experience considers it more nearly so in sickness than most people imagine. In acute illness thirst is a prominent feature; while milk to the palate is only a thirst quencher, to the stomach it may be burdensome. Therefore, leave the soda syphon or the water jug accessible to the patient, but not the milk, which should be added by the nurse, not to exceed two ounces to a drink. In gastritis, direct or indirect, milk may be a light diet, but it is not a nutritious one. As to soups, those made commercially should be avoided in sickness. He describes the making of beef tea and particularly allows its flavoring with sauces if desired. Of meat, tripe is the most digestible; the value of fish lies in the shortness of muscle fiber. With regard to predigested foods, he objects that they have commonly an unpleasant taste, and we can never be sure that the process has been carried just to the right point and not beyond. The best plan is to administer the digestive powder to the patient and give the food ten minutes later. Never disturb natural sleep for food. He discusses the application of these principles in relation to morbus cordis, acute nephritis and primary intestinal trouble.

22. **Albuminurias.**—Williams lays down the following propositions: Albuminuria may be due to a great variety of causes, both physiologic and pathologic, of which structural disease in the kidneys forms but a small, if highly important, minority. The majority of the cases are due either to altered blood states or to failure in the normal vasomotor mechanism. This failure may manifest itself in one of two directions. In the first, chiefly by some means so far undiscovered, the blood pressure in the splanchnic area rises, and is maintained at a sufficiently high level to induce a renal plethora and consequent albuminuria. Of such are the cases of hyperpiesis, as in the instance quoted. In the second place, owing to a local or general vasodilatation, the blood pressure in the splanchnic area falls to the point at which a renal stasis is induced. Of such are the cases of cyclical, postural and athletic albuminuria of which also instances are cited, cases which for the most part occur in young adults, in whom the vasomotor response is either undeveloped or for some reason is inadequate. Having regard to these facts, he ventures once more to insist not only that, of itself, albuminuria affords no evidence of renal disease, but that, of itself, it does not present even a reasonable suspicion of the existence of such disease, any more than, of itself, dyspnea presents a reasonable suspicion of cardiac disease.

Journal of Tropical Medicine and Hygiene, London.

April 1.

24 *The Campaign Against Malaria in Italy. Professor Celli.
25 Rôle of Filaria in the Production of Disease. W. T. Prout.

April 15.

26 Advanced Case of Ainhum, Sarcopsylla Penetrans as Cause of the Disease. The Tabanidæ of Angola. Simple Cyst of Thyroid Simulating Goiter. Sting of the Common Angolan Scorpion and Some Other Venomous Angolan Arthropods. Etiology of Elephantiasis Arabum. Fatal Bite of the Puff Adder. F. C. Wellman.
27 Fatal Case of Onyalai; History, Nature, Symptoms, Prognosis and Treatment. F. C. Wellman.
28 Six Deaths of Cantonese Infants from Overfeeding with Dried Persimmon (King Chee). C. M. Hanley.
29 A Large Fluke of Man Probably not Hitherto Described. Fasciolopsis Buski as a Parasite of Man in Hong Kong; Its Usual Host Probably the Pig. Id.

24. **Malaria.**—Celli discusses the principles of epidemiology of malaria and considers various epidemic types, the measures for combating malarial epidemics, legislation concerning malaria, the organization of the campaign against this disease, and describes the general result of the campaign in Italy, where from 1887 to 1895 over 15,000 people died annually from malaria. In 1895, when the campaign began, a certain attenuation set in, but still nearly 13,000 people died annually on the average until 1902, when the state administration of quinin was begun. That year the mortality fell to 9,908, and has fallen progressively year by year, until in 1906 it was only 4,871; and, further, the characteristic periodic recrudescences have no longer presented themselves. The campaign, then, consists: 1. In destroying or rendering inoffensive the mosquitoes *in externo*. This can be only partially effected, and is moreover costly, the means being physical, chemical and biologic—drainage, chemical means and screening to keep mosquitoes away from persons. 2. The destruction of the malarial parasites in the blood. This can be effected by quinin, for the effective administration of which the author gives the following principles: 1. Quinin, provided that it be administered daily, is in average and even therapeutic doses better tolerated, and for a longer time than one would suppose. 2. Quinin taken daily is always present in the blood, and thus prevents, instead of producing, quinism. 3. If given at longer intervals than three days quinism presents itself every time. 4. Few persons are intolerant of salts of quinin insoluble in water, if administered in average doses daily; and hemoglobinuria has never been encountered. 5. An insoluble salt, e. g., quinin tannate, is slowly absorbed, is generally atoxic, and is particularly indicated for children. 6. Quinin in the basic state is absorbed and acts well. An essential of tolerance is administration in agreeable form, e. g., comfits or chocolates. 7. He who takes quinin every day, and, therefore, has always a supply of quinin in his blood stream, can undergo with impunity inoculations of blood full of malarial parasites, and can expose himself without danger to bites by infected mosquitoes. 8. Arsenic and iron do not display any protective antimalarial action, either experimentally or chemically demonstrable. The author, therefore, suggests that in malarial localities the state itself should manufacture the quinin preparations, so as to sell them at the minimum price, or even distribute them free when necessary, and always in the more agreeable form of comfits. From the immunity thus effected it will be possible without the mortality of earlier times to arrive at agrarian sanitation and colonization of malarious districts, and to improve the alimentation, clothing, education, etc., of man, which augment the organic resistance and thus subdue malaria, even where anophelism can not be entirely extinguished

Annals of Tropical Medicine and Parasitology, Liverpool.

March.

30 Atoxyl and Trypanosomiasis. Sir R. Boyce and A. Breinl.
31 *My Experience of Trypanosomiasis in Europeans and Its Treatment by Atoxyl and Other Drugs. Sir P. Manson.

31. **Trypanosomiasis in Europeans.**—Manson reports 10 cases subjected to various methods of treatment, the atoxyl treatment prevailing, in which three patients are reported as dead, one as improved, five as apparently well, and one as well. He provisionally infers that trypanosomiasis in man is not necessarily a fatal disease. Atoxyl, he states, checks the clinical manifestations of the infection and causes the parasites to disappear from the peripheral circulation. Notwithstanding the continuation of atoxyl treatment, parasites may reappear at uncertain intervals, and generally concurrently with a rise in temperature. Nevertheless, if the drug be persevered with, the parasites ultimately disappear for good and do not return. Large doses of atoxyl are not necessary to secure this result and should be avoided, as they are apt to cause serious lesions, peripheral neuritis, optic atrophy, gastrointestinal inflammation, and other toxic conditions which necessitate suspension of a valuable remedy. Trypanroth, mercury and parafuchsin seem ineffective in human trypanosomiasis. Antimony may have a therapeutic influence, but the hypodermic injection of sodium tartrate is impracticable. The prospects of atoxyl treatment he considers most hopeful.

British Journal of Children's Diseases, London.

April.

32 *Symptoms and Diagnosis of Juvenile Tabes. E. Jones.
33 *Inherited Syphilis as a Factor in the Etiology of Mental Defect in Children. G. E. Shuttleworth.
34 Gummatous and Phagedenic Ulceration of the Skin and Mucous Membranes in Inherited Syphilis. H. E. Jones.
35 *Congenital Syphilis in Infants. G. Carpenter.

32. **Juvenile Tabes.**—Under the heading of general diagnosis, Jones discusses the incidence, the age of occurrence, the value of the history of syphilis, the great frequency with which one or other parent shows signs of metasyphilis, either tabes or general paralysis, and the clinical features. The last refer partly to the course of the disease and partly to the relative frequency of different symptoms. Essential chronicity is the most striking feature; another feature is complication of the disease with general paralysis. As to frequency of symptoms, vesical symptoms are common, also eye symptoms, particularly amblyopia and headache, migraine and neuralgia. As regards lightning pains, there is great discrepancy in different observers' results. Jones' impression is that they occur about as often as in adult tabes, i. e., in nearly two-thirds of the cases. Girdle pains seem to be rare in juvenile cases. Sensory changes are found more frequently than might have been expected. Ataxy is rare, and when present is usually slight. Crises are more common than used to be thought. At present the most probable features distinguishing the symptoms of juvenile tabes from those of the form seen in adults seem to be the early and frequent appearance of urinary incontinence, of headache and of amblyopia, the comparative rareness of girdle pains, and the late onset of ataxy, which is usually little marked. He considers the differential diagnosis from pseudotabes, due to certain varieties of multiple neuritis and from hereditary diseases of the spinal cord. In the last the three main points to be relied on are: 1, Absence of Argyll-Robertson pupil; 2, absence of cerebrospinal lymphocytosis; 3, family arrangement of the cases. The most difficult diagnosis is between juvenile tabes and juvenile cerebrospinal lues. The main features of juvenile tabes are marked lymphocytosis, steady chronic course, and absence of some features characteristic of nervous lues. The Argyll-Robertson and Westphal signs suggest tabes. An intermittent irregular course, with sudden paralysis, incomplete, transitory and nonsymmetrical, and multiple implications of cranial nerves suggests cerebrospinal syphilis, as does also deterioration of the mental state.

33. **Inherited Syphilis and Mental Deficiency.**—Shuttleworth thinks that inherited syphilis is a more frequent factor in the production of mental defect and abnormality in childhood than can be demonstrated from institution statistics, and agrees with Fournier, that many cases of impaired mental development, such as are seen in children relegated to special schools, have their origin in an inherited syphilitic taint, normal brain development having been interfered with by osteitis causing cranial thickening, by meningeal indurations, or by localized cerebral sclerosis. But there is great need for more exact observations in these directions.

35. **Congenital Syphilis.**—Carpenter concludes his paper, discussing syphilis of the testicle, ovaries and internal genitalia and nervous system, and adds an appendix containing a case of coarctation of the aorta, one of congenital syphilitic ulceration of the larynx and interstitial pneumonia, and one of syphilitic cortical sclerosis (encephalitis) in an infant aged five and one-half months, accompanied by histologic report of the brain.

Indian Medical Gazette, Calcutta.

April.

36 Lithotrites. D. F. Keegan.
37 Epidemic Dropsy in the Darjeeling District. D. Munro.
38 *Probable Identity of Beriberi and Epidemic Dropsy. F. Pearse.
39 *Ipecacuanha in Hepatitis. J. G. Murray.
40 Calcium Chlorid and Its Action on the Coagulability of Blood. V. B. Nesfield.
41 New Test for Differentiation of the Bacilli of the Typhoid Group. G. C. Chatterjee.

38. This article appeared in the *Journal of Tropical Medicine and Hygiene*, March 2, 1908, and was abstracted in The Journal, April 11 1908, page 1227.

39. **Ipecacuanha in Hepatitis.**—Murray reports cases to enforce the value of ipecacuanha in that form of hepatitis following dysentery—cases that often drift into liver abscess—but before suppuration has taken place. The leucocyte count and the *x*-rays assist in the diagnosis. If such patients are thoroughly treated with ipecacuanha he believes that the formation of the abscess will be avoided. From the cases the dosage appears to be from 30 to 40 grains of ipecacuanha daily, sometimes in one dose, sometimes in divided doses.

Annales de Dermatologie, Paris.

March, IX, No. 3, pp. 129-192.

42 *Syphilomania and Syphilophobia. C. Audry.
43 Histologic Lesions Consequent on Applications of Gray Ointment. J. Pellier.
44 The Microsporum Lanosum of the Dog. Suis, Suffran and R. Sabouraud.
45 *Histologic Lesions Induced by Scarifications in Certain Dermatoses. L. M. Pauthier and C. Simon.

April, No. 4, pp. 193-256.

46 Histologic Study of the Eruptions of the New-Born (Dermites des nouveau-nés.) M. Ferrand.
47 *Syphilitic Dactylitis Simulating Tendon Sheath Tumor. J. Nicolas.

42. **Syphilomania and Syphilophobia.**—Audry regards severe syphilophobia as one of the most serious complications of syphilis. He has encountered about one case in every thousand of syphilis. One of his patients committed suicide under the influence of the phobia, fourteen years after primary infection. His obsession was that he was constantly contaminating others. Another patient was in good health, thirty years after mild infection, when a casual tinnitus and phosphaturia were ascribed by the attending physician to the syphilis, and a violent phobia was the result, with suicide in less than a year. Specific treatment should never be prescribed in these cases of tardy phobia, but the hygiene should be regulated with minute care, never leaving the patient a moment unoccupied. Hydrotherapy may be useful, but should not be pushed in severe cases. Traveling alone is contraindicated, as also staying in bed and sea voyages. High altitude, relative isolation, the intelligent companionship of some friend, and the persistent firmness of a competent physician are the best means of relieving and curing these patients.

45. **Lesions Induced by Systematic Scarifications in Certain Dermatoses.**—Cases of psoriasis, syphilis and other skin affections display a certain characteristic reaction to systematic scarifications, rendering this a useful means of clinical investigation.

47. **Syphilitic Dactylitis.**—The lesion was assumed to be tuberculous and was excised, but recurrence soon followed, simulating a sarcoma of rapid growth. Tentative antisyphilitic treatment caused rapid retrogression and complete recovery.

Archives des Maladies du Cœur, des Vaisseaux et du Sang, Paris.

April, I, No. 4, pp. 193-272.

48 *Jaundice of Hemolytic Origin. (Les ictères d'origine hémolytique.) F. Widal, P. Abrami and M. Brulé.
49 *Cardiac Symptoms in Course of Cancer in the Thyroid in Exophthalmic Goiter. (Accidents cardiaques au cours d'un cancer thyroidien basedowifié.) J. Clunet.

48. **Hemolytic Jaundice.**—This form of jaundice may be congenital, displaying hereditary and familial tendency, in which case it is absolutely typical, or the condition may be acquired from various influences; the resulting affection then differs widely in different individuals. Both forms, however, show a bright yellow jaundice, quite different from the general dull tint of icterus from cirrhosis. The icterus also varies in intensity from time to time, emotions and fatigue accentuating it while it subsides during rest and in mountain air. Another striking feature is the absence of all signs of biliary intoxication. The stools are not clay-colored, and bilirubin is only in small proportions in the urine. The spleen is generally enlarged. Examination of the blood shows anemia with extremely fragile red corpuscles, large numbers of granulated reds and occasionally auto-agglutinating properties. Examination of the blood will reveal the hemolytic origin of the jaundice, and under iron the condition may be improved—an operation can not relieve the jaundice in these cases. In most of the cases reviewed the patients had been treated for jaundice of supposed hepatic origin without the slightest effect on the jaundice or the anemia, and two patients had been subjected to useless operations on the biliary apparatus. Treatment should be directed against the anemia, but bone marrow and arsenic have not to date displayed any efficacy, while iron has given great benefit in many cases. It is unable to arrest the hemolytic process; the reds continue to be fragile and to be destroyed, but the processes of repair are stimulated by the iron and the blood soon approximates normal. Everything should be avoided liable to lead to excessive destruction of the red corpuscles: the condition improves materially under the influence of rest and nourishing food.

49. **Cancer in an Exophthalmic Goiter.**—Clunet's patient was a woman of 54 with mitral insufficiency who had presented the symptoms of exophthalmic goiter for six months. No benefit was derived from heart tonics, salicylates or thyroid treatment, and the patient succumbed to pulmonary edema. Autopsy revealed an atypical epithelioma in the thyroid accompanied by relics of colloid and fibrous goiter. The parathyroid and suprarenal glands and hypophysis were hypertrophied; the characteristics of the hypertrophy differed from those of ordinary vicarious hypertrophy and seemed to be more of a response to intoxication. The valvular trouble, previously well compensated, began to cause disturbances almost at once as the cancer started to develop. The case suggests that exophthalmic goiter is due more to perverted than to abnormally excessive functioning of the thyroid.

Bulletin de l'Académie de Médecine, Paris.

April 14, LXXII, No. 15, pp. 413-476.

50 *Frequency of Gastric Cancer Following Ulcer. G. Hayem.
51 *Action of Sodium Bicarbonate on the Gastric Secretion. M. Linossier and G. H. Lemoine.

50. **Frequency of Cancer Following Ulcer of the Stomach.**—Hayem found unmistakable signs of ulcer in 94 cases of cancer in the stomach, that is, in 22.34 per cent.

51. **Action of Sodium Bicarbonate on Gastric Secretion.**—Linossier concludes from his extensive research that sodium bicarbonate always stimulates the gastric secretions. In case of hyperchlorhydria the aim is to neutralize the excess of acid and avoid the stimulating effect. For this purpose the bicarbonate should be given in large doses some time after meals so that the food can leave the stomach before the excessive acidity of the chyme has been restored. He mentions that the bicarbonate has a remarkable soothing action on the tardy pain of digestion even in persons with secretory insufficiency. In hypochlorhydria the bicarbonate should be given to insure that the food is still in the stomach at the time when the acidity of the stomach contents is at the highest point under the stimulation of the drug and of the food itself acting on the secretory glands. The length of the proper interval before the meal depends on the size of the dose; the best results in his cases were obtained with an interval of two hours for a dose of 0.5 gm (7.5 grains); three hours for twice this dose, and four hours for a dose of 5 gm. (75 grains). Very small doses can be given even with the meals. The bicarbonate renders the stomach content alkaline, and under the stimulation of this the secretions gradually pour out to neutralize the alkalinity, and normal acidity is thus in time regained or even surpassed. If the chyme passes out of the stomach before normal conditions have been restored, more harm than good has been done. The stomach responds to the action of the bicarbonate in inverse proportion to the amount of hydrochloric acid secreted. The maximum stimulating effect was obtained with 5 gm. (75 grains) taken one hour before the meal. This dose would be too large if the secreting function is below par; one-tenth of this dose would be ample.

Presse Médicale, Paris.

April 15, XVI, No. 31, pp. 241-248.

52 Campaign Against Typhoid Fever. R. Debré.

April 18, No. 32, pp. 249-256

53 *How to Protect Against Dangers of the Roentgen Rays. P. Oudin and A. Zimmern.

April 22, XVI, No. 33, pp. 257-264.

54 The Semicentennial of Laryngology. M. Lermoyez.
55 Amyotrophy of the Aran-Duchenne Type. A. G. Apostolides.

53. **Dangers of Roentgen Rays.**—Oudin is president of the French Society of Electrotherapy, and he here reviews his practical experience with Roentgen apparatus and discusses their dangers and how to avoid them. He never trusts to the "units of radiation," but accepts the first reaction on the part of the skin as the criterion for treatment. He does not necessarily wait for this innocent "precocious erythem" or "prereaction," but he never goes beyond it, accepting it as a sign that the limits of tolerance have been reached. When cancer develops on an *x*-ray burn or dermatitis, he does not believe that there is anything specific in the *x*-ray cancer, but merely that the chronic hyperkeratosis induced by the Roentgen rays affords a favorable soil for the development of ordinary cancer. In a certain factory where anthracene is extensively used the workmen often acquire chronic hyperkeratosis very much like that induced by the Roentgen rays, and epitheliomatous degeneration is of frequent occurrence.

Semaine Médicale, Paris.

April 22, XXVIII, No. 17, pp. 193-204.

56 Apraxia of the Muscles of the Head. F. Rose.

Revue de Chirurgie, Paris.

April 19, XXVIII, No. 4, pp. 411-584.

57 Branchial Cysts of Pharyngo-Salivary Structure, Especially Presternal Cysts. M. Chevassu.
58 Rational Treatment of Congenital Dislocation of the Hip. (Luxations congénitales de la hanche.) P. Le Damany.
59 *Treatment of Anuria. R. Uteau. Commenced in No. 2.

59. **Treatment of Anuria.**—Uteau advocates operating at once, without waiting for symptoms of uremia; when they appear it is liable to be too late for operation to be successful. Even in the most desperate cases, however, the operation should be attempted; Chevallier has reported a cure on the fourteenth day. Experience seems to show that the chances are better when the kidney that has been affected last is the one operated on. He has collected and summarizes from the literature 14 cases of anuria with a single kidney, from obstruction by a calculus. All the patients died, some with and some without operative intervention, with two exceptions. In 12 other cases the anuria in the single kidney was due to pathologic changes in the organ and all the patients in this group succumbed except two. In 15 other cases the anuria was the result of bilateral obstruction of the passages and only 2 patients survived. In 8 other cases the anuria was evidently due to reflex action, either from the presence of calculi or of some neoplasm in the pelvis. Comparing the results of the various operations done in all these cases and in others on record, nephrostomy seems to be the operation which offers the best chances for success. In conclusion he reviews 10 cases of anuria due exclusively to reflex action either from the ureter, bladder or one kidney, or from the effects of contusion. Differentiation, the technic for operation and the

various indications are reviewed in detail. In a later study he intends to take up anuria from burns, intoxications and nephritis.

Berliner klinische Wochenschrift.

April 20, XLV, No. 16, pp. 773-820.

60 Study of Normal Histology of Suprarenal Cortex. (Nebennierenrinde.) O. Stoerk.
61 Primary Carcinoma of Appendix. S. Isaac.
62 *Uterine Myomata Under Thirty. (Gebärmuttermyome bei jugendlichen Individuen.) L. Landau.
63 *General Anesthesia by Suggestion. (Suggestivnarkose.) B. Hallauer.
64 Treatment of Bartholinitis with Bier's Hyperemia. T. Plass.
65 Three Cases of Idiopathic Cutaneous Gangrene in Infants. (Hautgangrän im Säuglingsalter.) P. Heim.
66 Action of Sulphur. (Schwefelwirkung.) Diesing.
67 Modes of Oxidation of Sugar. (Oxydationswege des Zuckers.) G. Rosenfeld.
68 Etiology of Tuberculosis. M. P. Ravenel.
69 Urine-Gelatine-Bile. Culture Medium for Typhoid Bacillus. (Die mit Galle beeinflusste Harngelatinmethode.) R. Güterbock.
70 *Importance of Close Work in Etiology of Myopia. (Bedeutung der Nahearbeit für die Entstehung der Kurzsichtigkeit.) W. Thorner.
71 Electrolysis with Cicatricial Stenosis of Esophagus. A. W. Zuberbühler.
72 Blood Findings on the North Sea Coast. (Blutbefunde an der Nordsee.) Häberlin.

62. **Uterine Myoma Under Thirty.**—Landau has encountered 42 cases of uterine myoma in women between 20 and 30. In three cases the women bore healthy children after excision of the myoma. In three other cases the myomectomy was required during pregnancy. In another series of cases the removal of the myoma did not interfere with an existing pregnancy. With one exception the patients recovered. In one case multiple myoma caused symptoms at 15.

63. **General Anesthesia by Suggestion.**—Hallauer states that he has been successful with a sham anesthesia: merely a few drops of chloroform and the imposed suggestion of sleep and absence of pain. He has been using this combination since he noticed that some of his patients sank to sleep before the anesthetic could possibly have produced this effect. He accompanies the various steps of his operation with some remark to explain them, as, for instance, when he begins to dilate the cervix, he says, "Now we will pack a little gauze in the vagina," or when he curettes, he says, "We will now apply hot water." He has applied this method in 40 cases and in the last 20 it was a success in all but 5 cases in which he had to continue with the ordinary technic.

70. **Etiology of Myopia.**—Thorner shows that reading is the severest tax on the eyes of all kinds of close work. The eyes in reading move from side to side and are jerked back again about six or seven times a second, so that in an hour they have to stand the strain of thousands of these jerking movements. Sewing or any other kind of continuous close work is by no means such a tax on the eyes.

68. This article appeared in the *American Journal of the Medical Sciences*, October, 1907, and was abstracted in The Journal, Nov. 16, 1907, p. 1717.

Deutsche medizinische Wochenschrift, Berlin.

April 16, XXXIV, No. 16, pp. 681-720.

73 Experimental study of Local Tetanus and Its Origin. C. Pochhammer.
74 *Pathogenesis and Operative Treatment of Prolapse of Rectum. J. Rotter.
75 *Treatment of Fractures in and Near Joints. Hinz.
76 Barberio's Spermatic Fluid Reaction. P. Fraenckel and R. Müller.
77 Serum Treatment of Pneumonia. (12 Fälle von Lungenentzündung im Kindersalter mit Römers Pneumococcenserum behandelt.) Crux.
78 Serum Diagnosis of Syphilis. (Zur Methodik des serologischen Luesnachweises.) J. Bauer.

74. **Rectal Prolapse.**—Rotter commends the Rehn-Delorme technic as fulfilling the conditions for correction of prolapse of the rectum better than any other technic. He has applied it in 3 cases, Rehn in 11, Delorme in 9, and Bier in 3. Rotter found that the circular fold taken up above the anus atrophied in one of his cases, leaving a tendency to recurrence, so that he advocates, in case of an unusually wide anus, making the opening narrower or else re-enforcing the floor of the pelvis according to Hoffmann's method.

75. **Treatment of Fractures in or Near Joints.**—Hinz reports a number of cases in which function was approximately restored by operative reduction and suture of the bones. He advocates a prompt decision as the earlier the operation the simpler it is and the better the results, although restoration of perfect function can scarcely be expected in such a delicate piece of mechanism as a joint after loss of one or more of its parts. The injury was fracture of the neck of the radius in four cases, of the internal meniscus in several and of the neck of the femur in others.

Medizinische Klinik, Berlin.

April 12, IV, No. 15, pp. 523-560.

79 Borderland of Orthopedic and Operative Therapy in Gynecology. O. Küstner.
80 *New Problems in Cancer Research. (Geschwulstlehre.) G. Schöne.
81 *Treatment of Syphilis. M. v. Zeissl.
82 Importance of Roentgen Rays for Internal Diagnosis. F. Wohlauer.
83 Spectroscope for the Blood. (Blutspektroskop.) O. Schumm.
84 Binding of Complement in Anatomic Diagnosis of Syphilis. L. Pick and L. Proskauer.

April 19, No. 16, pp. 561-608.

85 Progress in Laryngology since Türck and Czermak. O. Frese.
86 *What Can We Expect from Treatment of Laryngeal Tuberculosis? (Kehlkopftuberkulose.) E. P. Friedrich.
87 *Enlargement of Lymph Glands in the Neck. (Schwellung der Halslymphdrüsen.) C. Partsch.
88 *Graphic Registration of Blood Pressure and Sphygmobolometry. (Graphische Blutdruckbestimmung.) E. Münzer. Commenced in No. 15.
89 Connection Between Affections of the Orbit and Accessory Cavities of the Nose. (Zusammenhang der Erkrankungen der Orbita und der Nebenhöhlen der Nase.) O. Chiari and H. Marschik.
90 *Curative Tracheotomy in Laryngeal Tuberculosis. Hinsberg.
91 Radiography of the Organs in the Chest. M. Weinberger.
92 Action of Dead Tubercle Bacilli in the Human Body. H. Noesske.
93 Present Status of Agricultural Breeding of Plants. (Landwirtschaftliche Pflanzenzüchtung.) C. Fruwyrth. Commenced in No. 15.

80. **Curability of Cancer.**—Schöne says that the recent research on experimental cancer has shown that there is a possibility of spontaneous retrogression of cancer. The practical consequence is the encouragement for intervention in cases hitherto deemed inoperable. Some of the cancers are liable to be favorably influenced by some of the various measures at our command; certain types evidently respond better than others.

81. **Treatment of Syphilis.**—Zeissl advocates symptomatic treatment as the only principle to be followed. He thinks that it is wrong to give mercury before general symptoms appear or during the intervals between periods of symptoms. It has been his experience that relapses were more frequent and the course of the disease more severe after what is called preventive treatment than in cases in which treatment was not commenced until the general symptoms were evident. He thinks that possibly preventive general treatment interferes with the spontaneous defensive processes of the organism. Anemic and badly nourished persons do not tolerate mercury and iodids as well as the more robust, so after the first stage of incubation he gives iron and arsenic to strengthen the patient and prepare him for the specific course to follow, supplemented, possibly, by surgical treatment of the primary sore. It is important, he adds, to forbid alcohol and tobacco, but hydrotherapy is particularly useful in case of involvement of the nerves, spinal cord or brain. He does not begin with mercury until the general manifestations have reached and passed their climax. In his experience in southeastern Europe, among 700 syphilitics, he never found one with the nervous system involved, although many had had the disease for years and few had ever been adequately treated. He thinks this lack of nervous manifestations is due partly to the lesser use of alcohol and partly to the less strenuous life.

86. **Treatment of Laryngeal Tuberculosis.**—Friedrich insists on the importance of extremely early diagnosis and general treatment. He advises sanatorium treatment, believing that there is always a concomitant pulmonary process. The appearance of edema in the throat is a sign of profound infection, as a rule; it is liable not only to interfere with breathing, but also with nourishment. He reviews the various measures in vogue for treatment, endorsing the efficacy of lactic acid in particular, and advising a trial of phototherapy.

87. **Enlargement of the Lymph Glands in the Neck.**—Partsch states that when an infectious process in the teeth is propa-

gated to the glands it is usually tuberculous. He has encountered two cases of this kind in which a tuberculous tooth affection spread to the glands below and involved the jaw. An early diagnosis allowed operative treatment with complete recovery. The new differential tuberculin reactions will aid in early diagnosis.

88. **Sphygmobolometry.**—Münzer concludes his extensive research on the blood pressure and its graphic registration by calling attention to the way in which his findings harmonize with the teachings of physiology. They reveal also the existence of changes in the large vessels before any clinical changes in the heart are apparent, and before the peripheral vessels have become tortuous and the pulse waves high. He gives the details of twenty cases of various cardiac irregularities.

90. **Tracheotomy in Laryngeal Tuberculosis.**—Hinsberg reports four cases in which tracheotomy proved effectual in promoting the healing of a laryngeal tuberculous process. One patient is still wearing the cannula, three years since the operation. The processes in both larynx and lungs were healed or arrested. The results were equally favorable in three other cases, but another patient after local benefit is succumbing to his pulmonary process. The tracheotomy was borne without any essential reaction on the part of the lungs and the general health essentially improved as the larynx healed. The expulsion of the sputum requires more exertion than expectoration by the normal route, and the heart and lungs must be equal to this task, or otherwise conditions will be aggravated by the tracheotomy. It is important to determine whether the pulmonary process displays a tendency to spread or to heal, its character must also be considered and the conditions of the environment. A certain number of cases are adapted for this curative tracheotomy, but some patients shrink from the cannula. His four patients say the cannula gives little inconvenience.

Münchener medizinische Wochenschrift.

April 14, LV, No. 15, pp. 777-832.

94 *"Accidental" Heart Murmurs in the Pregnant. (Akzidentale Herzgeräusche bei Schwangeren.) R. Link.
95 Practical Value of Opsonic Index. Saathoff.
96 Marmorek Antituberculosis Serum in Surgical Tuberculosis. Hohmeier.
97 Epidemiology and Bacteriology of Epidemic Cerebrospinal Meningitis. H. Trautmann.
98 *Serum Reaction in Scarlet Fever and Measles. (Serumreaktion bei Scharlach und Masern.) J. Schereschewsky.
99 Composition of Whale's Milk. (Walfischmilch.) A. Scheibe.
100 Borderland of Gynecology. (Aus gynäkologischem Grenzgebiet.) F. Brewitt.
101 Treatment of Heart Affections. (Therapie der Herzkrankheiten.) R. Freund.
102 *Intermittent Claudication. (Dysbasia angiosclerotica, Erb.) K. Grube.
103 Phosphoric Acid in Urine, Phosphaturie, and Phosphatometer. Friedmann.

April 21, No. 16, pp. 833-888.

104 *Pneumonia Induced by the Friedländer Bacillus. F. Apelt.
105 *Serum Treatment of Streptococcus Infections. W. Zangemeister.
106 Determination of a Precipitable Toxin in the Urine and Stools of Infants. (Absättigbaren Toxin im Harn und Stuhl von Säuglingen.) W. Gellhorn.
107 *Biologic Differentiation of Milk. (Milchdifferenzierung.) J. Bauer.
108 Epidemic of Itching Affection Caused by Red Bug. (Juckepidemie bedingt durch Leptus autumnalis.) v. Notthasst.
109 Etiology of Acquired Asphyxia of the New-Born. A. Feuchtwanger.
110 Technic of the Keating-Hart Lightning Treatment of Cancer. F. Dessauer.
111 *Antituberculin in Blood During Tuberculin Treatment. H. Lüdke. Commenced in No. 15.

94. **Accidental Heart Sounds in Pregnancy.**—Link reports the findings in 330 pregnant women examined toward the close of pregnancy and after delivery. An accidental systolic murmur was evident in 41, that is, in 12.4 per cent. The murmur vanished after delivery in all but 3 of the women, and one of these was chlorotic. Mitral insufficiency was discovered in 9 out of the 330; when the murmur was loudest at the apex and diminished in intensity toward the pulmonary artery, mitral insufficiency was assumed and confirmed by the course of the case. Restriction of the murmur to the pulmonary artery and its vicinity speaks strongly in favor of its accidental nature. Still more important for the differentiation is the accentuation of the second pulmonary sound in case a lung affection can be excluded. This is strong presumptive evidence of mitral insufficiency. The accidental heart sounds are probably due to mechanical crowding up of the heart with more or less kinking of the arteries. He failed only once to differentiate the accidental murmurs correctly.

98. **Serum Reaction in Scarlet Fever and Measles.**—When serum from an individual with secondary syphilis is poured on top of serum from an individual in the later stages of syphilis, a ring forms at the line of contact, as in Heller's ring test. This ring is not observed with serum from persons free from syphilis. Similar tests with serum from persons with scarlet fever in its incipiency and late into convalescence or later, and with serum from measles patients during and after the disease, have given similar findings. The reaction seems to be specific and to be due to the interaction of a precipitin in the early serum and a substance in the late serum which Schereschewsky calls precipitinogen. The findings with 30 scarlet fever patients, 25 non-scarlatinal patients and 10 with measles, all seem to speak in favor of the specific character of the reaction and its value for differentiation.

102. **Intermittent Claudication.**—Grube gives the details of four cases of angiosclerotic dysbasia with no pulse in the foot. Three of the patients were diabetics and one had contracted kidney. Abuse of tobacco was evident in two cases. These are the only diabetics with intermittent claudication out of 2,000 diabetic patients whom he has examined since 1899, seeking for traces of this affection.

104. **Pneumonia from the Friedländer Bacillus.**—Apelt reports 10 cases. In one a cavity in the lung was opened about two weeks after the beginning of the pneumonia, with the evacuation of an abscess and recovery of the patient. In another case the cavity was opened on the fourth day as the symptoms were severe, but the operation was unable to save the patient.

105. **Antistreptococcus Serum Treatment.** — Zangemeister marvels that the uselessness of ordinary antistreptococcus serum therapy has not been more vigorously proclaimed. His experimental research has shown that the antiserum is of no use unless derived from some closely allied species. Horse or rabbit serum will protect mice and rabbits against all strains of streptococci, but it has no action on man and monkeys. On the other hand, an antistreptococcus serum derived from monkeys has no action on mice or rabbits, while it is effectual for monkeys and probably will prove so for man. Antistreptococcus serum should be tested on monkeys rather than on any other animals, as the monkey is closely allied to man, while the monkey is as refractory to horse immune serum as man. He thinks it a significant fact that the horse immune serum proved not only useless in his tests, but was evidently directly responsible for the deaths of the monkeys. This occurred constantly in both series of tests and with each specimen of the horse immune serum, similar to the injurious effect of the monkey immune serum on the mice. The foreign serum evidently has a toxic action, and even seems to promote the streptococcus process. This may occur also in other infections. The damage from large doses of serum from another species may paralyze any possible beneficial action.

107. **Biologic Differentiation of Milk.**—Bauer uses about 15 liters of breast milk, drawn to give to infants who are unable to suck or for other reasons can not be given to a wet nurse. He has found that the deviation of complement test will reveal adulteration of the milk with any other kind of milk. With the aid of a titrated serum it is even possible to determine the amount of the foreign milk that has been added.

111. **Tuberculin and Antituberculin.**—Lüdke found antituberculin in 17 out of 31 patients taking tuberculin treatment. In these cases the injections of tuberculin did not induce any reaction. When there was much reaction to the injection of tuberculin no antituberculin could be found in the serum. No antituberculin was found in a number of non-tuberculous patients under the influence of tuberculin.

Wiener klinische Wochenschrift.

April 9, XXI, No. 15, pp. 517-552.

112 *Thermo-penetration. W. v. Preyss and C. Radonicic.
113 Influence of Athletic Competition on Heart, Kidney, Blood Pressure and Temperature. (Einfluss sportlicher Extremleistungen.) R. Beck and E. Epstein.

April 16, No. 16, pp. 554-605.

114 The Vienna Clinic for Nose and Throat. O. Chiari.
115 Modification of Chimney Cannula for Treatment of Cicatricial Laryngeal Stenosis. (Schornsteinkanule.) L. Harmer.
116 Small Gumma Syphilid of the Throat. H. Marschik.
117 Suppuration in Maxillary Antrum with Necrosis. (Zur Klinik der mit Knochennekrose einhergehenden Kieferhöhleneiterungen.) E. Kellner.
118 Diverticulum in the Pharynx. P. Albrecht.
119 Treatment of Postdiphtheritic Stenosis of Larynx and Trachea. H. Koschier.
120 Dental Empyema of Maxillary Antrum. M. Hajek.
121 Malformation of the Larynx. (Missbildungen des Kehlkopfes.) F. Hutter.
122 Diagnosis of Acute Lymphoid Leukemia in the Throat. F. Hanszel.
123 Laryngoscope in the Service of Vocal Music. (Kehlkopfspiegel im Dienste des Gesanges.) L. Rethi.
124 Exploratory Puncture of Maxillary Antrum Through the Nose. (Probepunktion der Kieferhöhle vom unteren Nasengange aus.) A. Heindl.
125 Unilateral Spasm of the Larynx. (Einseitiger Kehlkopfkrampf.) K. M. Menzel.
126 Folds and Congenital Diaphragm in the Larynx. (Kongenitale Kehlkopfdiaphragmen und Faltenbildungen.) E. Glas.
127 Genesis of Cholesteatoma of Accessory Cavities. O. Kahler.

112. **Electric Application of Local Heat.**—Zeynek observed a few years ago that high-frequency currents of a certain wave length did not cause any other sensation in the human body but that of warmth, and that these high-frequency currents did not remain at the surface of the body, but flowed through from one electrode to the other. Currents with comparatively low tension and high amperage were found to be able to induce warmth in the deeper parts of the living body without other physiologic action. He has been applying this thermopenetration, as he calls the procedure, at Ortner's clinic in various internal affections with favorable results, especially in gonorrheal arthritis and muscular rheumatism. The effect can be increased by combining it with the Bier hyperemia technic. He gives the particulars of 10 cases and states that the rapidity with which the pain is arrested is amazing; this has never failed in any case. To exclude suggestion, the patients were tested with and without the current turned on, and all those who spoke of improvement or warmth when the current was not passing are excluded from the group of cases summarized. The affection was chronic and had resisted other measures. In this article von Preyss and Radonicic report the experiences to date.

Zentralblatt für Chirurgie, Leipsic.

April 18, XXXV, No. 16, pp. 489-520.

128 *Symptomatology of Gastric Cancer. (Magenkrebs.) B. Przewalski.
129 Plastic Restoration of Defect in Bile Duct with Gall Bladder. H. Liebold.
130 Resection of Muscle and Tendon Tissue in Thumb on Account of Tuberculosis. Recovery of Complete Function. K. v. Schiller.

128. **Symptomatology of Gastric Cancer.**—Przewalski calls attention to the contraction of the middle intercostal spaces on the right side of the thorax as an early sign of carcinoma of the stomach. It is probably a reflex contraction from the nerves of that part of the stomach wall most frequently affected with malignant disease. In the latest stages all the intercostal spaces are contracted on both sides, as also in case of cancer of the esophagus. He examines for this contraction with his finger tips between the axillary lines.

Zentralblatt für Gynäkologie, Leipsic.

April 18, XXXII, No. 16, pp. 505-544.

131 *Sellheim's Extraperitoneal Cervical Cesarean Section. (Sellheim's Kaiserschnitt.) O. Küstner.
132 Treatment of Retention of Membranes. (Eihautretention.) E. Engelhorn.
133 *Heating Arrangement for Operating Table. (Heizvorrichtung.) P. v. Kubinyi (Budapest).
134 Nomenclature of Gynatresia. L. Pincus.
135 Osteoplastic Enlargement of the Pelvis. (Osteoplastische Beckenerweiterung.) P. Mathes.

131. **Sellheim's Extraperitoneal Cesarean Section.**—Küstner has applied Sellheim's extraperitoneal section in two cases and found it extremely satisfactory. The laparotomy and entire intervention are outside the peritoneum. He thinks it is the preferable technic in all cases in which infection is suspected. It was mentioned in these columns March 14, page 926.

133. **Heating Arrangement for Operating Table.**—Kubinyi does not warm the table, but only the air around and beneath it. An air chamber below, heated with about 20 incandescent lights, accomplishes this.

Policlinico, Rome.

April 19, XV, Practical Section, No. 16, pp. 485-516.

136 Surgery of the Large Vessels of the Neck. (Chirurgia dei grossi vasi del collo.) V. Bernabai.

Hospitalstidende, Copenhagen.

March 4, LI, No. 10, pp. 249-280.

137 *Deficiency of Amniotic Fluid and Absence of Kidneys. Hauch.

March 18, No. 12, pp. 305-336.

138 Malformation of Hairs. (Lepothrix.) H. Boas.

March 25, No. 13, pp. 337-368.

139 *Microscopic Retention in Stomach. S. Kemp.

April 1, No. 14, pp. 369-400.

140 Differential Tuberculin Test. (Vurderingen af den v. Pirquet'ske Tuberkulinprove.) A. Bartholdy and G. E. Permin.

April 15, No. 16, pp. 433-464.

141 Astasia-Abasia. A. Wimmer. Commenced in No. 15.

137. **Deficiency of Amniotic Fluid and Absence of Kidneys.**—Hauch adds a fourth to the three cases on record of otherwise apparently normal children born without kidneys. The child lived thirty-six weeks. He thinks that this case shows that the kidneys are not so indispensable for the metabolism as generally supposed, but that they are important for the production of the amniotic fluid, as there was a strikingly small amount in this case.

139. **Microscopic Retention.**—Kemp has been examining 75 patients in respect to microscopic retention, and announces that it can not be pathologic, as he found it in a large number of healthy individuals. The normal stomach, as a rule, shows no traces of retention twelve hours after the test meal. In chronic gastritis microscopic retention seems to be almost constant. In other stomach affections there may or may not be retention; motor insufficiency, of course, favors it, but hypersecretion seems to have the opposite effect.

Hygiea, Stockholm.

March, LXX, No. 3, pp. 225-320.

142 *Treatment of Milk with Peroxid of Hydrogen. (Behandling af mjölk med vatesuperoxid.) O. Medin.
143 Direct Visual Examination of Rectum and Sigmoid. C. O. Olin
144 Trichomonas in the Stomach Content. (T. hominis i maginnehåll hos människa.) B. Henning.

142. **Imperfect Sterilization of Milk with Peroxid of Hydrogen.**—Medin states that he has encountered six or eight cases of typical infantile scorbutus in children fed with milk sterilized with peroxid of hydrogen according to Budde's technic. Bacteria were also found numerous in the milk. He thinks it is probable that this treatment destroys one of the enzymes in the milk.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

Fourth Annual Message of John Weaver, Mayor of the City of Philadelphia, with the Annual Reports of the Director of the Department of Public Health and Charities and Superintendent of the Bureau of Charities for the Year Ending Dec. 31, 1906. Paper. Pp. 175. Philadelphia: Dunlap Printing Co., 1907.

New Hampshire Pharmaceutical Association Proceedings, Thirty-fourth Annual Meeting Held at Magnolia, Mass. Paper. Pp. 107. Penacook: W. B. Ranney, Printer, 1908.

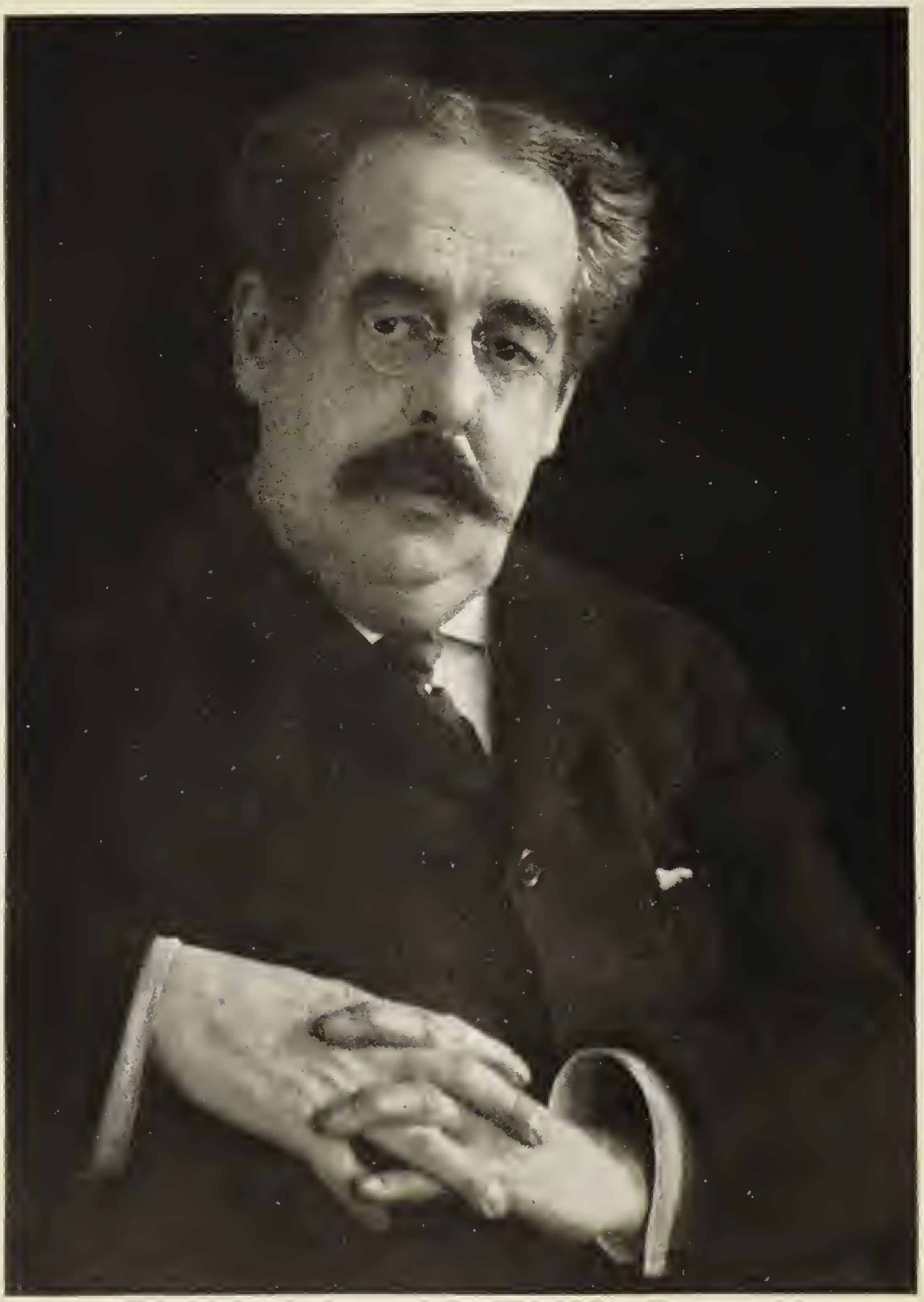
Die Lehre von der Intubation. By Prof. Dr. J. Von Bókay. Paper. Pp. 250, with Illustrations. Price, $2.50. Leipzig: Verlag von F. C. W. Vogel, 1908.

The Standardization of Tetanus Antitoxin. By M. J. Rosenau and J. F. Anderson. Paper. Pp. 59. Washington: Govermnnt Printing Office, 1908.

Thirty-fourth Annual Report of the Medical Director of the Cincinnati Sanitarium for the Year Ending Nov. 30, 1907. Paper. Pp. 16.

Quarterly Bulletin Illinois Board of Charities, May, 1908. Paper. Pp. 63. Springfield: Phillips Bros., State Printers, 1908.

Pocket Dictionary of the American Press for 1908. Flexible leather. Pp. 810. Chicago: Lord & Thomas.



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Herbert L. Burrell.

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Original Articles

INCOMPLETE MYXEDEMA (HYPOTHYROIDEA).

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In recent medical literature frequent reference is made to irregular or atypical forms of thyroid disease, the so-called "*formes fruste*" of French authorities. Discussions on this interesting subject have hitherto been mainly confined to that aspect of thyroid disease which is constituted by morbid hyperfunction of the gland; so-called "incomplete Graves' disease" or "hyperthyroidea."

The object of this communication is to draw attention to a condition of early thyroid disease characterized by morbid hypofunction or insufficiency of the gland secretion, the direct antithesis of hyperthyroidea and which may be designated "hypothyroidea." This is an aspect of thyroid perversion which is still less perfectly understood than hyperthyroidea.

Clinical enlightenment is much needed in this direction as it seems probable that the condition is by no means infrequent although usually overlooked or misinterpreted. These cases are probably early or incipient myxedema; *myxœdema fruste,* "incomplete myxedema." They differ from myxedema not in kind but merely in degree. The symptoms are not yet sufficiently pronounced or typical to be recognized easily and consequently they are apt to be attributed to some other cause or to be overlooked altogether. The symptoms are the same as in fully developed myxedema only less intense and not typically grouped. They disappear under thyroid feeding as does the fully-developed disease.

CHRONIC ATROPHIC THYROIDITIS.

Myxedema is not a proper name for that disease inasmuch as myxoid or solid edema is merely a symptom of an underlying atrophic thyroiditis. Murray insists that there is no more warrant for calling a thyroid cirrhosis "myxedema" than there would be for similar use of the term "dropsy" to designate Bright's disease, or "ascites" to characterize hepatic cirrhosis.

What is known in clinical medicine as myxedema is chronic atrophic thyroiditis; a cirrhosis of the thyroid gland resulting in more or less complete destruction of its secreting structure. It is usually marked by shrinking of the thyroid so that the gland can not be palpated and even is identified with difficulty at autopsy. It is not essential to the development of the disease that the gland undergo reduction in size. In rare cases the gland may even be enlarged but histologically it will be found that its true secreting structure has been destroyed by colloid degeneration. Goitrous cretinism is an example of enlargement of the thyroid with loss of function. Paradoxical coexistence of myxedema and Graves' disease in the same subject probably constitutes another instance in point.

We have been taught to regard myxedema as a disease possessing marked and characteristic symptoms and as with other diseases having cardinal symptoms this has placed us off guard when we come in contact with imperfectly developed examples. Moreover, myxedema in its full development is not a frequent disease in America and our very unfamiliarity with it renders us indifferent to the many transitional forms which undoubtedly must occur.

Chronic atrophic lesions no matter what gland or structure is involved are invariably slow in their development and progress. Witness the gradual evolution of contracting kidney and hepatic cirrhosis. There is no apparent reason why we should constitute atrophic thyroiditis an exception to this rule. Myxedema does not spring into existence fully developed, but follows the rule of slow development. At what point in its progress symptoms of thyroid insufficiency appear it would be difficult to say, but it is probable that they exist for a long period before the cardinal symptoms of fully developed myxedema become manifest and that we fail to interpret them is no proof to the contrary but merely evidence of our inability to appreciate their true significance.

DIAGNOSIS.

The diagnosis of a well marked, fully developed case of myxedema is readily made owing to the striking character of the symptoms. The appearance of the patient is so peculiar that the disease can be recognized at a glance. It is quite otherwise when the disease is encountered in its early stages or in atypical form. Slight evidences of the condition may readily be overlooked. The profound nutritional changes, which are so striking in cases of more complete development, are absent, or present only in modified degree. Most of the cases of hypothyroidea are encountered in woman at, or approaching, the climacteric and the symptoms are usually ascribed to the menopause. The predominance of myxedematous states in the female is well attested by statistics, the ratio being 7 to 1. This undoubtedly is due in great measure to the repeated hyperfunction and irritation of the thyroid resulting from the vicissitudes of woman's reproductive life.

ETIOLOGY.

A history of hyperthyroidea in earlier life is not without value from the etiologic standpoint. Hun and Prudden point out that the great majority of women who suffer from myxedema have borne children and only a small proportion are unmarried. This may point to secondary atrophy following puerperal hyperthyroidea. In no other way can the great disproportion in frequency between the two sexes be explained than by interpreting many of the cases in the female as due to secondary atrophy induced by the thyroid hyperfunction of pregnancy and lactation.

A few cases both of the fully developed and modified forms of myxedema have been reported in which the apparent starting point was an acute infection, as in a case presently to be reported (Case 1). It is very doubtful whether such cases are true instances of postinfective myxedema although such a possibility can not be denied. It is more probable that the disease had previously existed in a latent form and that the acute infective toxemia provoked an exacerbation. In my own case there exists distinct evidence pointing to previous latent hypothyroidea. Hypothyroidea and myxedema may develop following Graves' disease, sometimes years afterward. Glandular hyperemia and hyperfunction have here passed over into a state of secondary atrophy with hypofunction. Case 2 constitutes a striking example of this transition.

SYMPTOMATOLOGY.

The symptoms which may be present in cases of incomplete myxedema are neither very definite nor characteristic, but taken as a whole they form a symptom group which, to say the least, is very suggestive. Some of these subjects have for years had slight indications of impaired nutrition such as transient edemas, bagging of the eyelids, dry scaly conditions of the skin, thin hair, joint pains, muscular pains and aches, neuralgias, paresthesias, etc. Their chief complaint is often a great susceptibility to cold so that they become chilled on the slightest exposure and one finds them laden down with heavy woolen clothing. One of the most characteristic developments is dryness of the skin so that effort even in hot weather causes little or no perspiration. The scalp is scaly, the hair poorly nourished, dry and thin, and a thinning of the outer half of the eyebrows is often noticed. The fine hair of the nape of the neck may be lost leaving a shiny bald appearance up to the occiput. There may be partial or complete pubic and axillary alopecia. On removing the stockings a fine powdery exfoliation from the skin may adhere to the inner surface of the garments, and there are frequently dry scaly patches over the knees and elbows.

A yellow tinging of the skin is very characteristic. This has none of the saffron tint of true jaundice but is of a pale lemon color. Swelling of the eyelids of a peculiar translucent watery appearance, is among the most constant symptoms and associated with it there may be defective lachrymal drainage resulting in more or less constant weeping. The puffiness of the upper eyelids compels a compensatory elevation of the eyebrows to widen the palpebral fissure and deep furrows form across the brow in consequence. A distinct disposition to obesity exists in these patients. A slow and progressive gain in weight is pretty generally observed and this may stand in marked contrast to the patient's former physical habit. Fat pads may form above the clavicles and not infrequently a similar accumulation may appear over the upper dorsal vertebra. Thickening of the subcutaneous tissues across the lower ribs and above the elbows and knees, and a bib-like roll over the upper sternum have been noted.

The increase of body weight and bulk is not attended by any improvement in strength, but on the contrary by a marked diminution of vigor and resistance. Disinclination to exertion and early fatigue following effort whether bodily or mental and a notable diminution in resistance to infections so that colds and anginas are easily contracted furnish evidence of the altered nutritive state. Pains in the knees and ankles and occasional "giving way" of the legs are pretty constant symptoms. Loss of memory and impairment of mental alertness characterize the cerebral function. These patients are usually stolid or on the other hand they may display irritability of temper and be sensitive regarding their altered personal appearance. Loss of visual and aural acuity are common accompaniments and the voice has often a peculiar husky quality. The deep reflexes are impaired, there is constipation and the action of the kidneys is sluggish. The thyroid may or may not be diminished in size and occasionally it is even enlarged.

NOT ALL CASES ARE TYPICAL.

It goes without saying, that in a condition so relative and of such transitional character as hypothyroidea, not all nor even the majority of the symptoms above detailed may exist in any given case. The most frequent and suggestive of the symptoms is the yellowish subicteroid tinging of the skin. When encountered in individuals of middle age without indications of hepatic or blood disease this symptom may well suggest the possibility of thyroid insufficiency. The face may not be swollen and "moon-shaped" as in fully developed myxedema, but is yellowish, with watering of the eyes and slight swelling of the loose orbital tissues and a peculiar reddish flush over the malar prominences is often observed. The subcutaneous swelling may be only slight or intermittent, coming and going without apparent cause, and it is often confined to the tissues of the eyelids. The facial appearance and edemas are not unlike those observed in certain cases of nephritis, but the urinary and cardiovascular indications of the latter disease are lacking.

The temperature may be normal or only occasionally subnormal. The skin may be still soft and moist and at times there may be free perspiration. There is usually slight symptomatic anemia. Diagnosis in such cases as these can be but tentative, but acting on the suspicion formed as to their thyroid nature the careful administration of thyroid extract will serve as a simple test to prove the correctness of one's conclusions inasmuch as a gradual clearing of the various symptoms may be confidently expected as in fully developed myxedema.

That the type of case thus briefly described is really myxedema in the earlier stages of its development there seems little room for doubt, and if left untreated there is strong probability of development into the typical fully-formed disease. There appear to be cases where this transition fails to take place, but such an arrest can not be anticipated in any given case. Owing to the essentially chronic nature of the underlying thyroid lesion the advance will be slow. Once the potency of thyroid extract to control the symptoms has been demonstrated it should be continued in such minimal doses as suffice to hold in check the nutritional disturbance.

The following two cases will serve as clinical illustrations of the points noted in this brief sketch:

Case 1.—*Patient.*—Male, American, aged 39, average weight 165, weight at time of first consultation 175, married, one child.

Family History.—This is unimportant; his parents are living and in good health and there is no consanguinity.

Personal History.—Scarlet fever at the age of 12. Has had numerous attacks of abdominal colic, the last one ten years ago. No lues, habits good. It had been observed by the patient's wife during the past two years that his face would swell, particularly about the eyes, for a few days; no imporance was attributed to this symptom, which always disappeared without treatment. In April, 1907, he had a severe nfection of the throat with a retrotonsillar abscess and a good deal of inflammatory edema of the glottis so that his breathing was considerably embarrassed until the abscess discharged, which it did spontaneously. Cultures from the throat showed he infective agent to be the streptococcus. Opsonic vaccine therapy was employed, four inoculations being given. The opsonic index rose from 0.875 to 2. About June 25 there appeared a general subicteric tinging of the skin, the eyelids became swollen and there was malleolar edema with stiffness and swelling of the hands. Beyond a considerable degree of physical languor and excessive fatigue following exertion, there were no subjective symptoms. Shortly after the appearance of these developments the case came under my observation through the courtesy of the attending physician.

Examination.—Patient appeared to be a man of good physique with moderately thick but prematurely gray hair. The most striking thing about his personal appearance was the peculiar color of the skin, which was pale yellow, distinctly different from the saffron of true jaundice. This coloration was most noticeable on the face and palms of the hands; there was no tinging of the conjunctiva. The eyeballs were unusually prominent, and the loose orbital tissues were the seat of a translucent swelling which narrowed, somewhat, the palpebral fissure; there was a moderate amount of lachrymation. Patient's wife stated that he had for some years shown a tendency to puffiness about the eyes and lachrymation. No other edema was to be detected, although during the previous week it had been noted that there was some swelling about the ankles. The hands were not swollen, although the patient stated that they felt stiff and clumsy, especially when he wrote or essayed fine movements. There was no elevation of the eyebrows or frontal furrow. The scalp was dry and scaly and there had been some loss of hair. The skin was drier than normal, but the patient had remarked no change from his normal in regard to perspiration. Physical examination showed the chest and abdomen to be normal. Deep reflexes, sluggish. Pulse, 96, regular, soft and compressible. Blood pressure, 95 mm. (Stanton). Urine, 1800 c.c.; sp. gr., .010; urea 26 gms.; sugar, albumin indican, bile pigments, and casts absent. Blood examination: Erythrocytes, 4,387,-000; whites, 9,800; hemoglobin, 78 per cent.; color index, 0.88. Two blood cultures on bouillon incubated at temperature of 37 C. for seventy-two hours showed no growth of organisms. Ophthalmoscopic examination revealed a few pinpoint chorioidal degenerative markings. Throat examination negative, hearing impaired (right, watch 3 inches; left, 12 nches). Rectal temperature, 99.6 F.

Some uncertainty was felt as to the diagnosis. A ferruginous tonic was ordered and the patient advised to spend the summer in the open air. This he did by taking a long yachting trip, and he returned in September stating that he felt very much improved. The blood count now was: Reds, .960,000; whites, 8,500; hemoglobin, 92 per cent. Body weight, 172 pounds. Blood pressure, 105 mm.; pulse, 84. The face was still yellowish, although less so than formerly; there was still some swelling about the eyes. It is interesting to note that the patient suffered severely from the cold all summer, no matter how comfortable the temperature was to others he was always less than warm. He also recorded the facts that he felt a very pronounced degree of weakness in the legs and observed that his finger nails were very brittle and grew slowly. His voice was frequently husky. One month fter his return home the former languor, depression of spirits and somnolence returned and the icterus and swelling bout the eyes became worse than at any previous time.

Treatment.—Acting on the theory that the edema and cterus were due to thyroid insufficiency (hypothyroidea) the dministration of thyroid extract was now begun. Improvement in all the symptoms was soon apparent. The loss in weight during the first ten days of treatment was eight pounds. The edema gradually disappeared and with it the cterus, so that in one month after starting the thyroid extract the patient's normal appearance was restored and his weight ell from 175 to 163. Accompanying this effect there was a great improvment in physical and mental tone. The maximum amount of thyroid extract taken was 15 grs. daily, but this was for a few days only, the average dose being 9 grs. daily.

Subsequent History.—March 28, 1908, the patient reported that he felt perfectly well; his appearance was normal. For four months he had taken 2 grs. of thyroid extract daily, which was the dosage at this date. Acting under instructions he discontinued the drug for ten days, the effect being to cause the reappearance of the former languor and depression, a sense of oppression about the throat and huskiness. These symptoms promptly disappeared when thyroid administration was resumed. It is interesting to note the fact that the patient's wife had become pregnant since thyroid medication was started; last pregnancy four years prior.

The foregoing case furnishes an admirable example of how obscure hypothyroidea may be in its clinical manifestations and how real the difficulties are in arriving at a diagnosis. The rôle played by the infection in this case was in all probability a secondary one, there being evidence that the thyroid disturbance had existed in latent form for some time previous and that the infective toxemia served merely to accentuate a condition already existent but latent. Without the administration of thyroid extract the disease would undoubtedly develop and eventually become complete myxedema.

Case 2.—*Patient.*—N. O., female, married, nullipara, aged 45.

History.—No definite family history could be secured. Patient stated that she had had "heart disease" since childhood. There was no history of rheumatism. At the age of 33 she developed exophthalmic goiter, her state being characterized by well-marked goiter, exophthalmos, emaciation, extreme nervousness, tremor, sweatings, palpitations, etc. This condition continued for six years with varying severity when the symptoms gradually diminished in severity. The goiter slowly receded until as an appreciable tumor it had disappeared three years ago. It was only recently that her normal weight had been regained. She had always remained very nervous and the exophthalmos persisted when she was seen. During the past year she had been very short of breath and had much cough, which was paroxysmal in nature and apt to cause palpitation and precordial discomfort. Menses regular but scant. The patient stated that she had frequent sinking spells to relieve which she was often compelled to resort to stimulants; she was often dizzy and was much troubled with pains in the knees and ankles. Her legs would often give out suddenly while walking, compelling her to seek the nearest support. She complained much of muscular weakness, with excessive fatigue following exertion. Notwithstanding this progressive weakness she was gaining constantly in weight, having added fifteen pounds during the year past. The bowels were regular, although the movements were small in size; there was much flatulency. She had observed the fact that whereas she formerly was subject to excessive sweating on the least exertion she now had a very dry skin, effort no longer causing her to sweat, and only excessive nervousness bringing moisture to the skin. The hair had gradually thinned out until now it was noticeably scant. During the past three years she had lost all of her teeth. There was marked failure of memory. She complained much of her sensitiveness to cold, the slightest exposure causing chills; so much was this the case that she had been unable during the past year to work with her sleeves rolled up and her arms bare, even this slight exposure of the surface causing repeated chills. At the time she first consulted me, although the temperature was 60 F., she wore, beside heavy outside wraps, two thick woolen petticoats and woolen stockings and underwear. Notwithstanding these heavy coverings the skin was dry.

Examination.—The facies was very striking, the eyes were prominent and staring, but the ocular signs of exophthalmic goiter were lacking. A translucent, baggy swelling surrounded the eyes and a moderate degree of lachrymation existed, the eyebrows were elevated, and a deep furrow ran transversely across the forehead. The cheeks were somewhat pendulous and there was a pronounced bronze-red malar flush.

There was no edema or swelling elsewhere, although the legs had a peculiar stiff-rubber feel when palpated. The neck had lost is normal roundness anteriorly and the thyroid could not be palpated. The deep reflexes were absent. Pulse, 78; irregular. Blood pressure, 210 mm. (Stanton). Apex beat diffuse and heaving and displaced almost to the anterior axillary line. There was a systolic murmur to be heard all over the heart, and the second aortic sound was markedly accented. The urine was very abundant, of low specific gravity and free from albumin. A few short hyaline casts were to be found in the urine sediment.

Treatment.—A diagnosis of chronic myocarditis and high arterial tension due to atheroma was made and the opinion was expressed that there was probably an incomplete myxedema (hypothyroidea) developing on the soil of an old Graves' disease.

The medication consisted of sodium nitrite and strophanthus for the cardiovascular condition and thyroid extract one grain three times a day, was begun one week after the vascular tonics. The result of thyroid feeding was prompt and beneficial. Within a fortnight there was a noticeable improvement in strength, a return of perspiration, and an entire disappearance of muscular and joint pains. Although the dose of thyroid extract has not been increased the improvement above noted has continued and there has been a slight loss in body weight.

103 State Street.

AN ANALYSIS OF FIVE HUNDRED CASES OF SPINAL INFANTILE PARALYSIS.

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AND

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NEW YORK CITY.

The epidemic occurrence of anterior poliomyelitis is firmly established. The dependence of the disease on infection may therefore be legitimately assumed. The epidemic that prevailed in New York in the summer and autumn of 1907 afforded us unusual opportunity to study the disease, and we herewith present in tabulated form the analysis of 327 cases from that epidemic and 173 cases observed previous to that time. We have previously written[1] of some of the more striking features of the epidemic in New York, so we shall confine ourselves here to comments on the facts set forth by the tabulated matter presented, reserving for a future occasion detailed consideration.

STATISTICS OF 500 CASES OF POLIOMYELITIS.

327 epidemic cases occurring in 1907.

173 sporadic cases previous to 1907.

SEX.

	Males.	Females.
1907	200	127
1906	97	76
Total	297	203

Ratio of Males to Females 3 to 2.

MONTH OF ONSET.

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1907	1	1	1	0	0	16	68	81	102	25	4	0
1906	1	0	0	0	1	6	9	28	23	10	6	0
Total	2	1	1	0	1	22	77	109	125	35	10	0

Period of epidemic, June to November, maximum number of cases in September.

AGE.

	(Under 1)	1	2	3	4	5	6	7	8	9	10*
1907	36	101	88	32	22	12	6	3	0	1	1*
1906	26	57	46	13	10	2	2	1	0	2	0†
Total	62	158	134	45	32	14	8	4	0	3	1‡

Most occur between ages of 1 and 3 years.

*In 1907, other ages, not tabulated, were: 4 days, 5 weeks. 11, 11, 12, 15 and 15 years.

†In 1906, other ages, not tabulated, were: 2 months, 17, 31 and 32 years.

‡The extremes were 4 days and 32 years (perhaps one case was intrauterine).

FEVER.

	"No Fever."	"Slight"	"High."
1907	15	148	109
1906	14	43	36
Total	29	191	145

The following table indicates maximum temperature in those "high" fevers in which the degree was ascertainable. They are not included in table above.

	103°	104°	105°	106°
1907	17	20	5	1
1906	0	4	3	0
Total	17	24	8	1

DURATION OF FEVER.

	1 to 4 days.	5 or more days.
1907	191	74
1906	70	26
Total	261	100

Duration of fever in majority of cases 1 to 4 days. Not often longer than 1 week.

Cases without fever doubtful, although many instances with slight fever.

GASTROENTERIC SYMPTOMS, DEFECATION, URINATION.

	Vomiting.	Anorexia.	Diarrhea.	Constipation.	Retention.
1907	120	77	33	76	32
1906	31	1	16	12	5
Total	151	78	49	88	37

	Incontinence Urine and Bowels.	Diarrhea followed by Constipation.	Diarrhea previous to illness.
1907	4	3	3
1906	1	1	1
Total	5	4	4

PSYCHOMOTOR (MENINGEAL) SYMPTOMS.

	Somnolence,	Stupor,	Unconsciousness	Rigidity & Retraction.	Insomnia. Restlessness.
1907	78	31	6	39	29
1906	9	9	4	17	5
Total	87	40	10	56	34

	Twitch.	Convulsions.	Delirium.	Scream.	Cry.	Immotility.
1907	58	10	16	28	40	47
1906	8	8	2	4	19	12
Total	66	18	18	32	59	59

PARALYSIS.

	Leg	Both	Arm	Both	Triplegia	Quadriplegia	Homolat.	Crossed	Other*	Cranial†
1907	137	87	18	2	22	24	11	9	127	23
1906	79	47	18	3	5	8	9	4	29	12
Total	216	134	36	5	27	32	20	13	136	35

* DISTRIBUTION OF OTHER PARALYSIS IN TABLE ABOVE.

	Abdomen & Diaphragm.	Lumbar & Gluteal.	Back.	Chest.	Neck.	Sphincters.
1907	20	53	15	8	27	5
1906	9	12	5	1	2	1
Total	29	65	20	9	29	6

† DISTRIBUTION OF CRANIAL (NUCLEAR) PARALYSIS IN TABLE ABOVE.

	Rectus oculi.	Facial.	Larynx and Tongue. (Aphonia & Anarthria.)	Pharynx.
1907	11	4	12	2
1906	4	5	2	1
Total	15	9	14	3

The following order indicates frequency of parts paralyzed: 1. Leg. 2. Legs only. 3. Arm. 4. Quadriplegia. 5. Triplegia. 6. Hemiplegia. 7. Contralateral. 8. Both arms only.

The figures relative to the age are very striking; 95 per cent. of the patients were under 5 years, 70 per cent. were between 1 and 3 years, and 33 per cent. during the second year. The vulnerable age is, therefore, from 1 to 3 years. This, as well as the seasonal relationship, is graphically shown by the two curves of the text. The age curve indicates the number of cases occurring during each successive year of age, the season curve the number of cases during each month of the year. We have already drawn attention to the occurrence of the disease in more than one member of a family. The most noteworthy features of the paralysis are set forth in the tables, but we comment on the comparatively large number of cases in which paralysis of the abdominal muscles occurs, several of which afterward showed some degree of hernia.

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[1] Med. Rec., Nov. 2, 1907.

In regard to paralysis that accompanies lesion of the epidemic cases of 1907, it may be said that it was most frequently of the lumbar enlargement, next often of the cervical and dorsal cord, but not infrequently bulbar. There were all possible degrees and combinations. Two isolated facial "nuclear" paralyses were observed during the height of the epidemic. These were not included in the above analysis. Paralysis of the diaphragm was observed in one instance only, accompanying forced inspiratory efforts of the intercostal muscles. The number of times palsy of one of the cranial nerves was noted points to the frequency of serious meningeal symptoms.

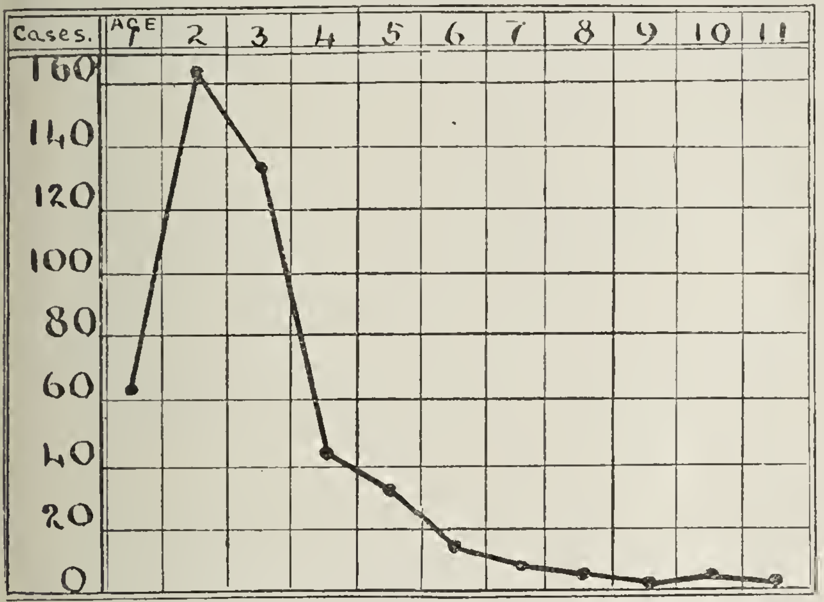

Fig. 1.—Chart based on 500 cases of infantile spinal paralysis both of the the 1907 epidemic and of the sporadic cases; showing age and frequency of occurrence (number of cases for each year of age). Vertical column shows number of cases; horizontal column, age in years.

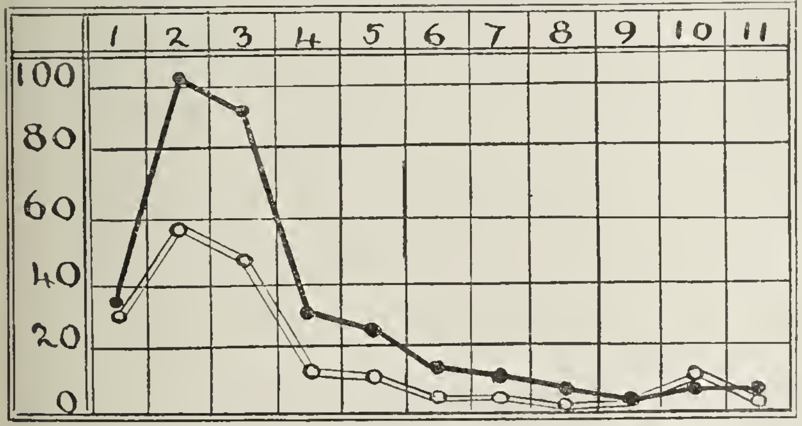

Fig. 2.—Chart showing a comparison of epidemic and sporadic cases of infantile spinal paralysis with age and frequency of occurrence; heavy line curve, epidemic of 1907; double line curve, previous sporadic cases.

The common meningeal symptoms are somnolence, stupor, rigidity of the neck, retraction of the head, twitching of the face and of the extremities both in the waking and sleeping state, sudden starting and screaming and occasional convulsions. It was at first thought that these symptoms occurred much more often in the epidemic cases of 1907 than in the sporadic cases before, but careful examination of the statistics showed that this was not so. Very often restlessness, insomnia, continued crying or moaning, even screaming dominate the initial stage. Occasionally there is unconsciousness, convulsions or delirium for a short time and in a few instances the meningeal *ensemble* is complete even to opisthotonus. This is illustrated by the following case:

A boy 3½ years old was taken suddenly ill last July while visiting in Hunter, New York. Symptoms were pain in the legs, followed by vomiting, high fever, marked irritability and great restlessness. Soon there developed rigidity of the neck, twitching of the face, hands and eyes which occurred when he was asleep and awake. Gradually he became stiff and immobile all over. The fever lasted eighteen days. When he was first examined three months afterward, he was a most typical example of poliomyelitis, with flaccid paralysis of both lower extremities due to symmetrical atrophy of all the muscles and involvement of the muscles of the pelvis and back.

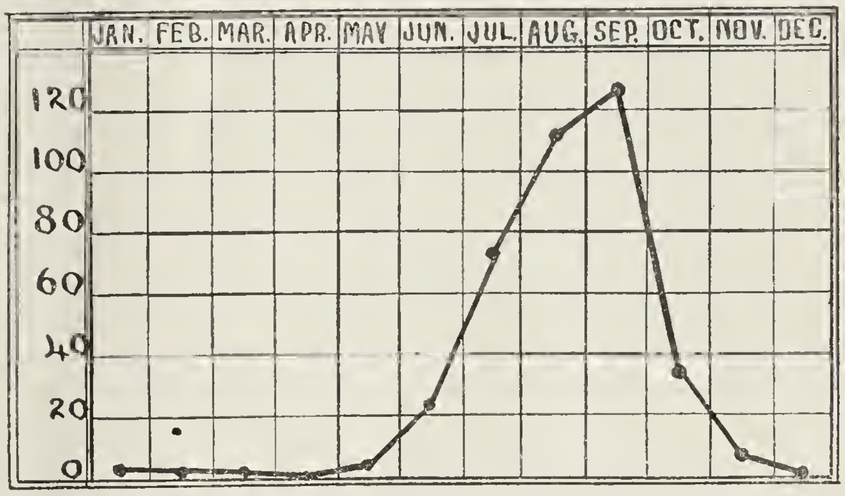

Fig. 3.—Chart showing seasonal frequency of occurrence (number of cases a month), based on total cases, both of epidemic of 1907 and previous sporadic cases.

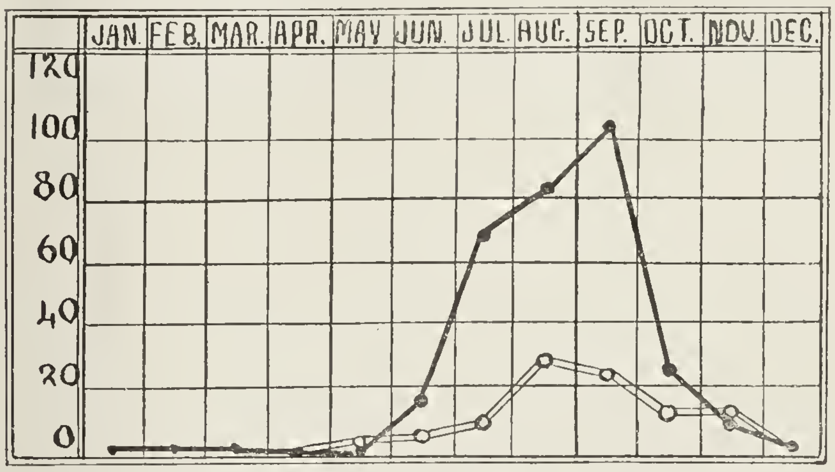

Fig. 4.—Chart showing a comparison of epidemic cases and sporadic cases with regard to seasonal frequency. Heavy line curve, epidemic of 1907; double line curve, previous sporadic cases.

In interpreting the figures that show the frequency of gastroenteric symptoms it must be borne in mind that they express the relative frequency of symptoms as compared to each other, more than the actual number of instances in which digestive disturbances occur; for instance, several of them may have occurred in the same case. Vomiting was the most common of these symptoms, but it is noteworthy that constipation occurs twice as often as diarrhea. Fetid stools were noted in many cases in which neither diarrhea nor constipation were present. In no instance was incontinence of urine a permanent symptom, and in no instance was trophic lesion of the skin, such as decubitis, noted. A triad of symptoms to which especial attention is called is abdominal paralysis, retention of urine and constipation.

No definite or constant relation was observed between the degree or duration of fever and the severity or extent of the paralysis, but it was distinctly made out that in all quadriplegias there had been a distinct febrile stage, whereas it was chiefly in the monoplegias that a history of "no fever" or "slight" was obtained.

Trauma, such as a fall, or physical exhaustion is sometimes, though not often, a definite antecedent. One child fell out of the window. Another, 2 years old, walked the unusual distance of three miles just previous to the onset of the fever, and in several instances there was a history of profound fatigue. In general, physical shock or overexertion plays a minor rôle in the etiology and is at most a predisposing factor. Occasionally a fall while walking is the first indication of a pre-existent paralysis. A striking feature is the fact that by far the greater number of children were in the best of health at the time of onset, many of them without previous illness of any moment.

In regard to the onset it may be said that the disease develops with and without warning, but usually with vomiting and fever. In many instances the child had gone to sleep apparently well. Sometimes the paralysis was evident the next morning, but usually from two to four days afterward. In few cases only was it noted that the fever continued after the appearance of the paralysis. As the somnolence, pain and hyperesthesia (especially marked on active or passive movements) are accompanied in many cases by immobility, it is often days and sometimes a week before the paralysis is noted. The definite time and order of onset and even initial distribution of the paralysis is not often determinable with the exactness which the statistician requires for reliable conclusions. Both the ascending and the descending "Landry" types of paralysis were observed in a few instances.

Paresthesias and objective sensory disturbances preceding or coincident with the onset are not so rare in older patients. In most cases the age of the child precludes the determination of objective sensory disturbances. They are of rare occurrence, but more frequent than formerly taught. Anesthesia and analgesia were determined in a few cases.

Other symptoms occasionally noted are teeth grinding, especially at night, rolling of the eyes, staring immobile expression, sleeping with the eyes open, tremor of the limbs, rolling of the head from side to side, flexion of one or more limbs with gradual relaxation after days or weeks, eruptions upon the skin, most commonly a fine papular reddish rash (similar to prickly heat), and in many cases local cyanosis. Herpes was noted in but one instance.

Deformities such as are described in the books were the kind most commonly seen; oftenest eversion of the foot, equino-valgus or equino-varus, calcaneus, dangle-foot, genu recurvatum, occasionally subluxation of the hip, or localized abdominal paralysis simulating hernia. Occasionally serratus paralysis with winged scapula occurred. We have instances of the latter in which the deformity of the shoulder blade is exactly similar to that which occurs in the scapular form of dystrophy.

The atrophies are often obscured by fat, but they usually correspond very closely to the paralysis.

In many instances slight edema of the paralyzed part was made out, occasionally about the more dependent joints also.

The symptoms that occurred in cases of anterior poliomyelitis constituting the epidemic of 1907 show one thing very clearly and that is the infection which causes the disease finds the entire central nervous system and its coverings susceptible. The gray of the anterior horns is merely the most susceptible or the most perishable under its influence. The meninges, the gray matter of the cortex, of the bulb and of the brain stem, and even the white matter, may all be affected. The intensity of affection of these parts rarely, however, goes beyond the stage of irritation.

Another thing that may be concluded is that the prognosis in anterior poliomyelitis is, like the prognosis in other infectious disease, such as pneumonia, typhoid and meningitis, a variable quantity. In some epidemics many cases recover; in others very few. Formerly it was widely taught that poliomyelitis never ended in complete recovery. Although we are not yet ready to publish the statistics of complete or fairly complete recovery of our cases, we are justified in saying that a considerable number of them have made a fair recovery.

SPONDYLITIS DEFORMANS: WITH CLINICAL REPORTS OF FIVE CASES.*

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Osteoarthritis of the spine, a subacute or chronic progressive ankylosing disease affecting the vertebral column, to which attention was particularly directed by a paper published by von Bechterew in 1893, has, in more recent years, been the subject of much discussion and investigation by German, French and American physicians, and it is to be hoped that the healthy interest now aroused will do something toward answering the several mooted questions as to the etiology, pathology and diagnosis of the disease. Our purpose in this paper will be to give a brief description of this disease, as understood by us in the light of recent literature, and by the clinical study of five cases which have come under our observation.

A considerable number of cases have been reported in the literature, and it now seems probable that the disease is not so rare as formerly believed, although it is very likely that some of these cases of "stiff spine" are not cases of spondylitis.

Guffy[1] in 1905 collected 131 cases for analysis, 14 of which had been previously studied by McCarthy of Philadelphia. Arthur Krause[2] and Focken[3] have also collected many cases and made careful reviews of the whole subject.

ETIOLOGY.

The etiology of spondylitis deformans has not yet been fully determined. The disease is about three times as common in men as in women, and it occurs most frequently between the ages of 25 and 45. Habits involving exposure to changes in temperature, hard work and poor hygiene generally are important predisposing causes. Heredity and trauma appear to play a rôle in some cases. Finally it seems probable that some toxic or infectious agent acts as an important factor in many cases.

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* Read before the Allegheny County Medical Society, March 17, 1908.

[1] Guffy, D. C.: Univ. Penn. Med. Bull., November, 1905.

[2] Krause, A.: Inaug.-Diss., Berlin, 1905.

[3] Focken, R. H.: Mitt. a. d. Grenzgeb. d. Med. u. Chir., xi, part 5.

As is usual in diseases of obscure origin, trophic and metabolic disturbances have been regarded by some authors as playing an important part in the etiology. Silver,[4] in a paper read before the Pennsylvania Medical Society in 1907, analyzed 163 cases carefully collected from the literature. He assigns an infective agent as probably the definite cause in over one-fourth (46) of the cases, and as very probably the cause, conservatively stated, in at least one-third of the number. In his paper he shows how acute osteomyelitis attacks the spine and states his belief that the infection apparently arises spontaneously in the majority of instances. But he shows that many cases are demonstrably secondary to a primary focus elsewhere. Silver also shows how the spine is frequently involved in certain acute infectious fevers, as typhoid, scarlet fever, pneumonia, measles, acute rheumatic fever, influenza, and empyema, and infectious conditions of the mouth and throat. In all he has collected eighty-six cases in which spondylitis of greater or less degree followed acute infections.

In view of this fact, then, that the spine may be acutely involved following a variety of infections, it seems safe to conclude that chronic ankylosing spondylitis itself is more than probably due to some infectious agent; that this agent is not specific; and that in those cases in which no definite infection can be found the possibility of hidden sources, as the tonsils, the intestines, the genitourinary tract, should not be forgotten. As showing the relation to each other of all inflammatory conditions of the spine Silver's conclusion is interesting and worthy of quotation in full:

"From a study of the subject the impression is created that in early life when the tissues are especially vulnerable infection is very likely to result in suppuration; in young adult life, when the resistance is greatest and regenerative processes most active, suppuration is less frequent and recovery without rigidity more probable; while in later adult life there is a tendency to permanent ankylosis of the spine. That a great variety of bacteria may give rise to spinal inflammation is evident from clinical observation and pathologic findings."

Ploos Van Amstel,[5] believing that chronic stiffness of the spine is in the majority of cases a distinct disease, and not a symptom of another, tries to strengthen his views by giving as a definite cause a mixed infection of a saprophyte, as yet unknown, and a specific bacterium, as the gonococcus or tubercle bacillus. This theory is an attractive one and would do much to simplify matters; but in the absence of definite proof we can present it only for what it is worth.

So much for the etiology.

PATHOLOGY.

As regards the pathology of spondylitis deformans, generally speaking, it is that of osteoarthritis elsewhere, involving the bones, cartilages and the ligaments. There is proliferation of cells in the fibrous and cartilaginous tissues with a subsequent ossification. Pressure on the weakened discs may cause atrophy, allowing the vertebræ to come in apposition and to fuse in greater or less degree; and this, with the ossification of the ligaments and the interlocking of the bony nodosities outgrowing from the cartilages, causes the stiffness of the spine, which may be so great as to prohibit all movement, depending on the stage the disease has reached. Further, the nodosities or exostoses above described may encroach on the intervertebral foramina and the spinal canal, and pressing on the cord, spinal ganglia, nerve roots and the spinal nerves cause sensory and motor disturbances varying in degree.

Unfortunately autopsies reported are few. We have reviewed the findings of one case by Ruhräh,[6] one by Dana,[7] one by McCarthy,[8] one by Collins, one by von Bechterew,[9] and one by André Leri.[10] The scarcity of autopsies is to be deplored for the reason that further investigation might settle the question as to whether the ankylosing process is primary and the nerve disturbances secondary to pressure as just described, or whether the nerve disturbances themselves may not be primary and cause ankylosis secondarily by trophic changes. Bechterew describes a case of the so-called Bechterew type of spondylitis (which will be described later). He found a chronic inflammatory process in the pia mater of the cord which, he believed, secondarily involved the nerve roots, the cord and the ganglia, and that these in turn caused the bony changes in the spinal column through trophic influences. Remembering that joint changes may be seen in tabes and syringomyelia the possibility of arthritic diseases secondary to nerve changes must be admitted. Leri's case showed no diseased condition of the cord and membranes, but, nevertheless, quite a degree of ankylosis, with, however, no narrowing of or encroachment on the foramina. McCarthy gives a complete autopsy report with a careful gross and microscopic examination of the nervous system, which showed, however, no more changes in the nervous tissue than the arteriosclerosis present in his case would explain. In Dana's case there was noted only an absence of the lumbar enlargement.

SYMPTOMS.

As regards the symptoms, these are referable, as would be expected, to the spine, and to other joints involved in the same osteoarthritic process, to the spinal nerves. The onset is gradual and insidious, very rarely acute, though this may occur. The first symptoms noted are pain and stiffness in the spine, in the earlier stages most noticeable after a period of rest, as when the individual is getting out of bed or out of a chair. At times this may be felt only on nodding the head or on stooping. The pain may be in the spine itself or referred to the nerve distribution, accompanied also by anesthesias, paresthesias, hyperesthesias and trophic disturbances. Pains early in the disease are characteristic; later as movement in the spine is limited or lost and there has been a contraction and ossification of the exostosis, pressure on the nerve roots is relieved and pain may practically disappear.

With the gradual extension of the process, movement in the spine becomes more and more limited and finally *nil*, so that the sufferer is unable to move his spine at all or even nod his head, a condition well meriting the oft-applied term "poker-back." Depending on the seat of onset this stiffness may be limited to the cervical, thoracic or lumbar region and progress no further. Beside the spine, any other joints may be involved, more especially those of the shoulder and pelvic girdle. The ribs by reason of ossification of the costovertebral articulations may lose their normal range of motion, which is noticed early by the patient on attempting a deep inspiration.

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[4] Silver, David: Penn. Med. Jour., February, 1908.

[5] Van Amstel, P. J. de B. P.: Klin. Vorträge. (Series xiv, part 19), new series, No. 409 (Chirurgie, No. 112), Jan., 1906, Leipsic.

[6] Ruhräh: Am. Jour. Med. Sc., 1903, xcvi.

[7] Dana: Tr. Assn. Am. Physicians, 1901, xvi.

[8] McCarthy, D. J.: N. Y. Med. Jour., 1905.

[9] von Bechterew: Deutsch. Ztschr. f. Nervenh., 1899, xv.

[10] André Leri: Rev. de méd., 1899.

As has been stated, the symptoms are insidious as a rule, though they may be acute, but the disease process may stop at any time, leaving changes in the spine which are not recognized by the patient or diagnosed by the physician. Not infrequently, because the pains are referred pains, and because pain referred to the spine itself is slight or absent, the condition is diagnosed as muscular rheumatism and so treated. But in advanced cases the disease is distinct and the patient presents a striking appearance. The spine becomes deformed, usually with a dorsal kyphosis and a diminution of the lumbar lordosis. Standing, the patient holds himself carefully rigid, with the head bowed toward his chest, his back curved forward, the thighs flexed on the pelvis and the knees on the thighs with outward rotation; in walking he moves slowly, awkwardly and laboriously, often finding a cane necessary. Lying down, his knees are bent and his chest propped up on pillows. If an attempt is made to lie flat on the back the pelvis is raised and *vice versa*. In advanced cases walking may be impossible and the patient becomes bedridden. Breathing may become entirely abdominal and the chest flat. There is much wasting of the muscles of the shoulders, back and pelvis, partly from disease and partly from trophic changes.

In some cases the exostoses may easily be felt, especially in the cervical region. If joints other than those of the vertebræ are involved we may find simply pain and limitation in motion. At times bony nodes and deposits may be felt with, perhaps, some deformity; but bony nodes and deformity are not, as in arthritis deformans, constant. One of our cases presents all these symptoms so beautifully that further description is best deferred to its consideration.

In much of the literature one may find mention made of two distinct types of chronic ankylosing spondylitis, the von Bechterew and the Strumpel-Marie. Von Bechterew has given the subject much study and written much about it, and the disease bearing his name is characterized by a rigidity of the spine, complete or incomplete, with a dorsal kyphosis, weakness of the muscles of the neck, back and loins, and accompanied by nervous phenomena due to irritation of the spinal nerves. The Strumpel-Marie type includes cases that show involvement of the hips and shoulders in addition to the spine with much less prominence of the nerve symptoms. To this type the French, who have given it much study under the leadership of Marie, have given the name *spondylose rhizomélique*. Bechterew himself has reported cases belonging to this latter group and holds that cases of the von Bechterew type are different and that they belong in fact to a distinct clinical entity and are of nervous origin. His autopsy findings have already been mentioned. Perhaps we may be pardoned for repeating that he found a thickened pia matter which caused secondary nerve disturbances; and these in turn he held resulted in trophic changes causing ankylosis.

The question as to whether these two types are entirely different or really variations of the same disease has stirred up a controversy, especially on the continent. In 1907, fifteen years after his first paper, von Bechterew[11] still insisted that there were clinical and anatomic differences in the two types. But cases have been described in which some of the characteristics of the v. Bechterew type are seen in the Strumpel-Marie, and some of the characteristics of the Strumpel-Marie in the v. Bechterew. Moreover, the pathologic anatomic differences described by von Bechterew have not been confirmed by others. Arthur Krause,[2] after an analysis of seventy-seven cases, opposes v. Bechterew's view, as do v. Lagiewski,[12] Fränkel,[13] Ploos Van Amstel,[5] Allbutt,[14] Oppenheim[15] and Osler.[16] In short, the weight of opinion, in the light of the more recent investigation and study, favors the view that the difference is one of degree; that it is "quantitative rather than qualitative." However, there can be no objection to classifying cases as belonging to one or the other of these types for clinical purposes. Before labeling a case one of the v. Bechterew type, the precaution advised by McCarthy to wait a sufficient length of time to preclude the possibility of the involvement of joints other than the vertebral should be observed.

The relationship of this symptom-complex to arthritis deformans no doubt has already arisen in the mind and deserves brief discussion. According to McCarthy,[6] there may be ankylosis and rigidity of the spine in cases of advanced arthritis deformans; and, moreover, there may be cases of arthritis deformans in which spinal involvement with root symptoms is an early manifestation of the disease. Osler[17] in 1901 reported five cases of spondylitis deformans, and at that time expressed the opinion that they were all varieties of arthritis deformans; and in his latest text-book we find both the v. Bechterew and the Strumpel-Marie types so disposed of. Magnus Levy[18] speaks of deforming spondylitis as arthritis deformans with *"besonderer lokalisation."* However, many of the German and French writers, and v. Bechterew himself, as we have seen, are not so agreed. Garrod,[14] who wrote the article in Allbutt's system, says that these cases of spondylitis deformans as seen in the v. Bechterew and Marie types are to all appearances distinct, although he asserts that arthritis deformans may attack the spine.

The difficulty in making any definite statements on this question arises, it seems to us, in the really incomplete knowledge we possess of chronic arthritic processes, among these arthritis deformans itself. Believing that many etiologically and perhaps pathologically different processes have been classed under the one disease called spondylitis deformans, or chronic stiffness of the spine, we are ready to admit that some of these cases are cases of arthritis deformans as at present understood. To be more explicit, we mean those cases occurring as a rule in people past middle life in whom in addition to the stiffness of the spine there is involvement of the smaller joints with nodosities and deformity. Cases of the so-called *spondylose rhizomélique* as described by Marie, can not, we feel, be definitely separated from arthritis deformans as it is at present understood. Cases of the so-called v. Bechterew type with limitation of the arthritic disease to the spine and prominence of nerve symptoms can with much less certainty, we think, be classed with arthritis deformans.

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[11] von Bechterew: Monatschr. f. Psychiat. u. Neurol., 1907, xxi, 527.

[12] von Lagiewski, Th.: Inaug. Diss., Leipsic, 1905.

[13] Fränkel, Eugen: Fortschr. a. d. Geb. d. Röntgenstrahlen, 1907.

[14] Allbutt's System of Medicine, iii, 1907.

[15] Oppenheim: Diseases of Nervous System.

[16] Osler: Practice of Medicine, 1907.

[17] Osler: Tr. Assn. Am. Physicians, xvi., 1901.

[18] Levy, A. M.: Mitt. a. d. Grenzgeb. d. Med. u. Chir., 1902, ix.

DIFFERENTIAL DIAGNOSIS.

As regards the differential diagnosis, early cases of Pott's disease may present some difficulty, and one may not be certain until after several examinations or until the disease has further progressed. In general the patient is apt to be younger; there may be an antecedent tuberculous history; the pain and tenderness remain localized to a limited area, and the nerve disturbances are central in type. Later the angular deformity of Pott's disease and the involvement of other joints clear up the diagnosis. Tuberculin and the *x*-ray will be of assistance in doubtful cases.

The spinal form of hysteria, or traumatic neurasthenia, or railroad spine, may present a rigid spine with pains and tenderness to a marked degree. A careful history of the illness, supplemented by a thorough psychic and physical examination, will direct attention in the right direction. There is something about the temperament of these patients, and even their manner of telling their stories, which must strike even the inexperienced observer. In cases of doubt anesthetization will reveal the true condition.

In those cases of compression fracture of the spine described by Kimmel there may be pain, rigidity and deformity. Here a careful inquiry will show that the spine was struck with considerable force and that the trouble dates immediately from that time. Examination should show localized pain and tenderness, a defect in the alignment of the spinous processes, and that the greater part of the rigidity of the spine is due to voluntary limitation of movement to avoid pain.

Henle describes a variety of spondylitis traumatica, which is not hysterical, which is not due to a fracture as in the Kimmel variety, and leads to pain, deformity and limitation of movement in the spine. These symptoms develop gradually, either some time after the immediate injury, or after an interval sufficiently long for the patient to have recovered from the direct results of the injury, which itself may have been almost forgotten. The cause of this spondylitis is supposed to be some injury to the cord leading to vasomotor changes, as a result of which the metabolism of the vertebræ is disturbed. The bony substance is lost and the vertebræ are weakened in much the same way as they are in osteomalacia; hence the term spondylomalacia. Examination, then, will reveal abnormal weakness of the spinal column, which is the distinguishing feature from spondylitis deformans.

Hypertrophic cervical pachymeningitis beginning with stiffness of the neck and radiating pains may be likened to spondylitis, but the former is more acute in onset, is limited to the cervical region, and is accompanied by mental symptoms. It is a rare condition.

Coxitis may cause stiffness in the spine due to voluntary efforts of the patient to avoid movements which cause pain. The examination of the hip joint should reveal the true condition.

The occupation kyphoses or laborer's spine, the *duplicature champêtre* of Marie, occurring in hard workers in a stooping position is not to be confused with spondylitis, because there is never a "welding together" of the entire spine, a very pronounced ankylosis of the joints of the extremities, or exostoses.

As a symptom in certain nervous diseases whose diagnosis is easy by reason of other characteristic symptoms, stiffness of the spine occurs and should be mentioned. Among the more familiar of these diseases may be noted hereditary ataxia, syringomyelia, tabes dorsalis and paralysis agitans.

Before leaving the question of the differential diagnosis some special stress should be laid on the *x*-ray as a diagnostic help. If there is considerable ossification of the ligaments the radiogram will reveal it, especially if it be in the cervical or lumbar regions. A negative picture is not by any means evidence that there are no arthritis changes.

PROGNOSIS.

The prognosis has been regarded as unfavorable, not as regards life, but as regards the course of the disease. Yet if the disease is recognized early and proper treatment instituted we believe from our own experience that much can be done. The need of an early diagnosis can not be too strongly urged; for many cases are treated as rheumatism until the development of deformity and nodosities renders opportunity of doing much good very small. As the disease manifests a tendency to progress, sometimes in spite of all treatment, prognosis should be guarded. Given an early case, however, with pain, stiffness, no nodosities, and a little deformity, much may be done to arrest the disease and bring about even an apparent cure. Much of the stiffness in the early stages being due to pain and muscle spasm, relief of irritation on the nerve roots may bring surprising results. Cases further advanced may at least be relieved of pain, for which these poor sufferers will be truly grateful. Of course nothing can be done to remove the exostoses and the ankylosis once they have formed. On account of the limitation of the movements of the chest, tuberculosis is perhaps the most common intercurrent disease causing death.

TREATMENT.

Once the diagnosis is made we believe that the patient should be put into the hands of a competent orthopedic surgeon, as was done in three of the cases to be reported. The patient needs most painstaking care, both as to his general and local condition. The general health should be improved to the highest possible degree and the faulty action of any organ in the body corrected. Any possible source of infection should be removed; and to this end a careful examination should be made of the nasopharynx, the gastrointestinal and genitourinary tracts, and the skin. On account of the danger of upsetting the stomach, there is little place for drugs. Tonics, fresh air, sunlight, good nutritious food, rest and restfulness should comprise the armamentarium.

As regards the local treatment, in the early stages some method of fixation for the spine should be used, either of plaster or steel. This prevents the irritation of the diseased vertebræ and relieves pain and stiffness. Later, as the process has subsided, passive motion and massage may be used with benefit. The spine in old cases should not be fixed, for here our object should be to ward off by massage and movements the tendency to complete ankylosis.

CASE REPORTS.

CASE 1.—The first patient is under the care of Dr. Silver, who has kindly given us an opportunity to study and report it.

Patient.—Mr. McD., white, American, automobile repairer, aged 34 years.

History.—The history is good until the age of 19, when he began to be troubled with a tired feeling in his legs, and later in the same year suffered with what was called sciatic rheumatism in his right hip, which continued to trouble him up to the time of the present illness. He denies all venereal disease.

Present Illness.—The present illness began in the winter of 1905, while the man was working as an engineer in an ice-plant, with diffuse pains, intermittent in character, in the dorso-lumbar region. Attributing this trouble to the frequent and sudden changes in temperature to which he was exposed by the character of his work he left the ice plant and took up automobile repairing. He was now free from pain for a period of six months. But again, being exposed to chillings by going out of the shops, while overheated, to test the running of the machines, he noticed about the middle of August, 1906, that his trouble was returning. In December, 1906, the pain, which up to this time had been located in the lower back, shifted to the neck and shoulders; the neck became stiff, and since then he has been unable to move it much. The intensity of the pain and stiffness varied, and at one time the head was drawn down toward the chest, the movements of the jaws were restricted, and swallowing became difficult. At times he suffered from cramps in the muscles of the neck, chest and shoulders. The chest expansion diminished from five inches to *nil*. His trouble was diagnosed as rheumatism by the attending physician and so treated. His condition became worse. From this time, December, 1906, the patient dates the beginning of his loss in weight and his pallor. Twice during 1907 he took baths and massage with much benefit.

Examination.—The complaint, at the time of the examination, January, 1908, is pain and stiffness in the back, stiffness in the right hip joint, slight limitation of motion in the jaw (much less than it was), loss of weight (from 185 to 118 pounds), weakness, and susceptibility to the weather. He can walk with greatest difficulty and only by the use of a cane. Examined, stripped, he shows much emaciation. He gets out of bed with extreme difficulty, and arises to his feet slowly and laboriously. The head is slightly bent forward, the spine is evidently rigid, and the knees and hips are somewhat flexed on standing. The color is fairly good, the skin is clear, and the lymphatic glands only slightly enlarged. Examination of the heart, lungs and abdominal organs reveals nothing noteworthy. The spine is practically stiff, except for a slight movement backward and forward and sideways in the cervical region. At the dorso-lumbar junction there is perhaps some little movement forward. There is marked atrophy of the suprascapular muscles and less marked atrophy of the deltoids. The arms are weak, but the hands and forearms seem to show normal strength. At present, the patient suffers no pain in the spine except on movement. The spine is not tender on pressure. The breathing is abdominal. The chest expansion measures ¾ of an inch (previously, 4 to 5 inches). The right thigh can be raised to a little less than a right angle, and rotation is practically lost. The left hip joint is restricted in movement, but to a less degree. There is much wasting of the right gluteal muscles and some less marked in the left. None of the other joints is involved except the temporomaxillary and those only slightly. At one time there had been some limitation in movement of the right knee. The muscles of the thigh and legs are much atrophied.

Reflexes: The knee jerks are exaggerated, the right more than the left. The Achilles jerks are quite active; there is no Babinski reflex, no plantar toe reflex. Sensation everywhere is practically normal.

Blood Vessels: Especially noteworthy in this case is the great degree of arteriosclerosis, easily felt in the femorals, anterior and posterior tibials, brachials, radials, ulnars and carotids. [As the autopsy in one of McCarthy's cases showed nerve changes explainable by this cause alone, the condition of the blood vessels in this case is given more than passing note.]

Urine: The urinary examination was negative.

Blood: The blood examination shows red blood corpuscles, 3,710,000; white blood corpuscles, 7,500; hemoglobin, 72 per cent.

Treatment and Result.—This case may be classed with the Strumpel-Marie type of spondylitis. At the time the patient was first seen by Dr. Silver his trouble seemed hopelessly far advanced; and we wish to call particular attention to the results of treatment. The tonsils were cauterized, the general health was given the best attention, and a steel brace was made, to be worn part of the day. *X*-ray treatment is employed.

Subsequent History.—An examination made recently revealed considerably more movement in the spine and right hip joint, and almost entire relief from pain. The patient is strikingly encouraged and hopeful. One unfavorable factor in his case is, however, the great degree of arteriosclerosis.

CASE 2.—A man, aged 60, referred to Dr. Diller for examination by Dr. McKelvey, is married, a roller by occupation. He never drank or smoked, and never acquired venereal diseases.

History.—The man's health had been very good until about a year before, when he began to lose weight and complain in a rather indefinite way. For the previous seven months he has been subject to "rheumatic" pains located chiefly in the back, along the spine, and also in the right ankle and the toes of the left foot. He has complained that the right ankle is weak. Immediately on awakening in the morning he experiences pain across the small of the back. The hip becomes sore when he lies long on it, and so he turns from one side to the other. He states: "When I sit in one position and straighten up I am all sore." He has aged very much during the last year. His weight has run down from 170 to 135, and he now has an old man's gait. He states that the pains in the small of the back were most severe last February, and that the pain radiated down the legs. He further states that the pain is not severe now. It appears to him to radiate from the spine.

Examination.—The patient is senile in appearance. His gait is constrained and shuffling and somewhat suggests paralysis agitans. But other signs of that disease are lacking. Examined, stripped, at the Allegheny General Hospital, it was discovered that the movement of the spine was very limited and in the lower region almost absent. This limitation appears about equal whether in forward, backward, or lateral movement. The right ankle is much swollen, apparently due to bony deposit. The patient walks with a limp. Sensation is normal; knee jerks normal; pupils sluggish.

Subsequent History.—Dr. McKelvey reported a few months later that the patient had, at his request, been fitted with a jacket by Dr. David Silver, and that the device had greatly relieved the pains. It may be remarked in passing that this report furnishes strong evidence in favor of the correctness of the view that the case was one of arthritis deformans affecting the spinal column and producing nervous symptoms by pressure on the posterior nerve roots. Restraint of movement would naturally relieve to a degree this nerve irritation. A later communication from Dr. McKelvey informs us that this man's improvement had remained about the same during the previous nine months. Interesting also from the standpoint of etiology is Dr. McKelvey's report that every once in a while there is clear evidence of a toxemia which is promptly relieved by periodical courses of elimination. In the early part of this paper mention was made of the fact that heredity at times seems to play a rôle, and noteworthy here is the statement of Dr. McKelvey that several of this man's children suffer with shooting pains at times.

CASE 3.—The next case is that of a woman, single, aged 53, whom Dr. Diller saw with Dr. Welsh on June 30, 1906. The only point of importance in her family history is the fact that one sister has had exophthalmic goiter for many years in an exaggerated form.

History.—The patient's previous history is not remarkable. Since early the previous March she had been complaining of pain in the left arm and shoulder and running down to the fingers and also in the left chest and back and sides. These pains, intermittent at first, have grown to be almost constant and at the same time more severe. During this time she has lost a great deal of power in the arms. These pains are much worse on damp days; and movement is apt to bring them on. There have also been pains in the right upper arm.

Examination.—The movements of the spine, particularly the upper dorsal and the lower cervical, are much restricted, although not entirely absent. There is some swelling of the second joints of the fingers. Movements of these joints produce acute pain. Movements of the spine generally, either active or passive, produce pain and discomfort. There is some loss of power in the left arm and hand, the extent of which it is difficult to determine because of the pain in the fingers. There is only a moderate degree of wasting in the arms, which is not localized. The knee jerks are exaggerated, the right being rather more active than the left; no clonus; no toe reflex.

Termination of Case.—The patient grew progressively worse and died in two months.

This case can be classed with the v. Bechterew type of spondylitis, although it does not conform exactly to the description as originally given by him. The swelling of the second joint of the fingers strongly suggests to us arthritis deformans. Yet Bechterew himself reports one case with enlargement of the toes.

CASE 4.—A priest, aged 68, of German origin, who had been a stout, vigorous man until the onset of his present trouble, was seen by Dr. Diller on April 18, 1904, in consultation with Dr. Peoples; and three days later with Dr. J. J. Buchanan and Dr. Peoples. The family history is negative.

History.—His personal habits have been good; he uses no tobacco, and he takes a single glass of beer daily and occasionally light wine. "Time and again" during the past five or six years he has been troubled with "rheumatism," located chiefly in the neck and shoulders. The pains are now very marked and have been during the past year, and especially about last September. Since the middle of December, 1903, they have been almost constant and were especially severe about a month ago. Since then they have somewhat abated. They are located chiefly at the back of the neck and in the shoulder, but they radiate down the arms and hands and, to a less extent, down the legs also. Since Christmas the patient has been steadily losing strength of the arms and legs. For the past six or eight weeks he has had edema of the legs and of the right arm. Since March 1, 1904, he has been unable to raise the left arm to his head, although he could perform this action with the right arm. Now the reverse of this is true. For at least a year it has been noted that his head has been drawn forward on his chest; and this posture has been steadily growing more pronounced. The patient states his gait has been stiff for the past three or four years.

Examination.—The patient is barely able to stand with assistance and to walk a few steps. The steps are very short, scarcely more than three or four inches long. There is marked edema of the right hand and of both legs and feet. The heart and lungs appear normal. The eye grounds, pupillary reflexes and ocular movements are all normal. Dr. Peoples' examination showed the urine to be normal. The patient's figure, as he sits on his chair with his head drawn forward so that the chin is almost in contact with the chest, is a striking one. He is able to move the head backward voluntarily only to a very slight extent. Passive forcible movement backward caused him much pain and was resisted by him. In a similar way, the lateral movement of the neck is restricted, although to a rather less extent. A marked posterior curvature in the cervical region is noted. Palpation here reveals a hard, apparently bony mass. Evidently there are large masses of exostoses on the cervical vertebræ. The whole spine is stiff, and movement is apparently only from the pelvis. The grasp of the hands is feeble. Dynamometer: right, six pounds; left, ten pounds. There is no special wasting of the muscles, and there is no pain on pressure along the great nerve trunks. The reflexes and the knee jerks are both exaggerated; Babinski toe reflex and ankle clonus are marked on both sides. There is no objective disorder of sensation. The question of the possibility of relief of the severe pains by surgery was raised, but Dr. Buchanan was of the opinion that the patient could not bear an operation, and so it was not attempted.

This case can perhaps with more certainty be classed with the v. Bechterew type of spondylitis, considering the prominence of the nervous disturbance, the limitation (at the present time) to the spine, and the beginning of the disease in the upper part of the spine. Here again we wish to call attention to the benefits of treatment, for a late report from Dr. Peoples states that the patient had made considerable improvement and was once more able to attend to the duties of his calling.

CASE 5.—Our last case is that of a married woman, aged 46, the mother of two grown children.

History.—For years she has been a very hard worker and has suffered with endless worry over a worthless, dissipated husband. She conducted a bakery, getting up early in the morning and working until late at night, frequently exposing herself to changes in temperature by making large quantities of ice cream, chopping the ice and packing the freezer herself. Two years ago her left breast was removed for cancer. Since Oct. 15, 1907, at which time she states she was a "nervous wreck," the patient has been under the care of Dr. Dutton. She was unable to sleep and complained of pain in the right shoulder and right arm, and also in the ribs and in the ovarian region. In June, 1907, she developed a facial paralysis, followed by some ulceration of the cornea. Her appetite is good; she is not constipated. For five weeks the patient had been, in a measure, confined to her bed, and for three weeks complained very much of severe pain at the back of the neck, at the base of the spine, and especially in the right leg. Pains in the left side and left leg have not been so marked. The patient is introspective, talks of cancer and fears its return.

Examination.—The patient is a thin, emaciated woman with an anxious expression. The mucous membranes are fairly red. She can not close her right eye fully (seventh nerve palsy). She walks with difficulty and can take only a few steps without assistance. The spine, from the last cervical vertebra to the pelvis, is rigid. There is little or no movement backward or forward and only slight movement laterally. The cervical vertebræ seem uninvolved. The right shoulder is very much enlarged, and also the upper part of the humerus, the general enlargement being apparently bony in character. Movements of the right arm are limited, and efforts to raise it beyond an angle of 45 degrees cause great pain. The calves of the legs are very thin and flabby, and over the right one there is considerable tenderness on pressure. The knee jerks and the Achilles jerks are absent. The dorsal arteries of both feet are distinctly sclerotic, while the radials appear about normal. The scar of the operation for the removal of the cancer seems perfectly healthy and shows no evidence of a recurrent growth. Examination of the abdominal and thoracic organs reveals no evidence of metastasis. There is no evidence of the return of the cancer.

Treatment.—This patient was sent to the Allegheny General Hospital for further study and treatment. There an *x*-ray picture was taken, and, according to the report of Dr. Silver, the plate shows the undoubted presence of spondylitis.

CONCLUSION.

In conclusion, we wish to state:

1. An infection of some kind, apparent or hidden, plays an important rôle in the etiology of this disease.
2. Except for clinical purposes, we are not yet warranted in classifying this disease into two separate and distinct types.
3. The probability is that spondylitis deformans is not a distinct entity, but a clinical term covering many perhaps etiologically and pathologically distinct diseases in which spinal stiffness is the most prominent symptom.
4. Proper treatment in early cases, as a rule, brings good results; in later cases it relieves distressing symptoms.
5. There is need of clinical records covering the subsequent history of these cases, for further developments may throw new light on the etiology and exact diagnosis.
6. There is great need of additional evidence from the postmortem table.

A VISIT TO STIRLING ASYLUM.

JULIA C. LATHROP.*
CHICAGO.

In January, 1907, I visited the Stirling Asylum at Larbert, Scotland, in order to see the system of nursing which has been gradually worked out there by the superintendent,[1] Dr. George M. Robertson.

On my arrival I was given the keys of the institution and during the week of my stay I went in and out of all the wards freely at whatever hours I chose. In every respect I was given the fullest opportunity to judge of the quality of the service.

For some years the reports of the General Board of Lunacy for Scotland have shown an increasing employment of women attendants for men patients in the Scotch institutions, a practice widely followed in the United States as well. In addition to this feature, though dependent on it, is the original organization of the entire nursing staff, or, more strictly, of all the employés who come in contact with the patients in the house. This general organization is worthy of careful study. Its head under the superintendent is a graduate of a general hospital training school. Her title is Head Matron and she has general control of the housekeeping and the hiring and management of the subordinate inside employés as well as the usual supervision of patients, attendants and nurses. Next under the head matron is a group of assistant matrons, who with two exceptions are graduate nurses from general hospitals. The matron in charge of the laundry and the matron in charge of the kitchen for the preparing and serving of the food are graduates of schools of domestic science. The matrons who are graduate nurses are in charge of the wards and the patients, nurses or attendants thereon. Thus wherever the patient is, on the ward, in bed or going about some work, employed in the laundry or the kitchen, he or she is under the supervision of a person of special training.

In direct charge of the patients, under the graduate-nurse assistant matrons, is a full corps of attendants, men and women. The women attendants are called nurses in contradistinction to the men attendants and they outnumber the men more than three to one. The assistant matrons in charge of the wards train the nurses and attendants in the actual physical care of the patients, especially of those who are acutely or violently ill, and are responsible by day and by night for the condition of the patients. The staff physicians and the matrons give lectures and bedside instruction to the nurses so that those who desire to go up for the examination of the Medico-Psychological Association of Great Britain and Ireland are prepared to pass it. Two years' training in a recognized institution for the treatment of mental disorders is required before a nurse can take the examination.

During my stay at Stirling the weekly dance occurred, at which a nurse who had just passed this examination was called forward and the fact that she had successfully undergone the test was announced to the assembly by the superintendent, who presented her with the badge to which she was entitled. The system of examination by the Medico-Psychological Association, a medical body of national character, gives uniformity and dignity to the certificate as "mental nurse" while it leaves each institution free as to the details of training its own staff. The association has published a handbook which is used in many institutions, including those of Illinois.

At Stirling, with about 700 beds, there are seven graduate nurses, the matron, the night superintendent and five assistant matrons. The ratio of nurses or attendants to patients is one to five in the hospital, and one to ten in the other buildings. The night corps is half as large as the day corps. One of the assistant matrons is detailed as night superintendent, thus securing a responsible and closely supervised night service.

As to this plan of Dr. Robertson's, I can not do better than to quote from his thirty-sixth report as follows:

> The care and treatment of the insane in this asylum has proceeded along the same lines as in the past. The object has been persistently kept in view of hospitalizing the asylum, and year after year changes have been effected wherever possible, by which old and objectionable asylum features have disappeared, and hospital methods have taken their place. Mechanical restraint has been abolished, the locking up of patients in solitary confinement either by night or by day has been discarded, and all methods of management and mechanical or structural devices which were suggestive of prisons have been given up or done away with if possible. All features which were peculiar to asylums have been subjected to severe criticism, and unless there were good reasons for their retention they have also been replaced by hospital methods, which have in all instances been preferred. By the persistent application of these views for the last six years, the whole atmosphere of the asylum has been changed. Constant personal supervision and attention has taken the place of former restrictions to prevent the patients from indulging in insane manifestations. While it will always be true that treatment in an asylum will be based on compulsory detention and on the exhibition of superior force if necessary, in these respects it does not differ essentially from the maintenance of law and order in the ordinary community, and by the exercise of unfailing tact and of justice tempered by a sympathetic insight into the failings of the insane, it is possible to govern an asylum with almost as little resort to force, and with as few outbreaks of violent behavior as in any village of the same size.
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> In carrying out these ideals the medical staff of the asylum has been most ably seconded by the matron and assistant matrons. The head of the whole nursing staff of this asylum, both male and female sides, is the matron, as is the case in all our large general hospitals, and this arrangement has also been adopted at Bangour Village, Edinburgh, and at Kingseat Asylum, Aberdeen. Miss Jean D. S. M'Grigor (Victoria Infirmary, Glasgow), who discharges the duties of this important post most efficiently, is a certified hospital and mental nurse, and is assisted by a staff of eight assistant matrons, who are all well-educated women who have been specially trained for their duties. The night superintendent, and those in charge of the wards by day, are all certified hospital nurses, while the kitchen and laundry superintendents hold certificates from schools of domestic economy.
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> The creation of this supervisory staff of officials has been one of the innovations introduced into asylum service during the last seven or eight years, and while this departure was adversely criticised by some when originally started, it has gradually worked its way into favor by its obvious merits, and is now being adopted even by those who originally objected to it. The constant presence in the wards among the patients, both male and female, of these highly trained women of good social position has been attended by the most beneficial results, by the introduction of refinements and increased decorum, and by the diminution of forceful methods of management. There has also resulted a tightening up of discipline such as never existed under the former régime, when the responsible head of a group of nurses continued on terms of extreme intimacy with her subordinates, and when, selected for promotion from among her friends, was placed in charge of them. It was ask-

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[1] Dr. Robertson has since succeeded Dr. Clouston as head of the Royal Edinburgh Asylum, Morningside.

> ing too much of average human beings to expect that the shortcomings of one's most intimate friends should be faithfully reported, and when this was the keystone of a system of discipline, its failure was inevitable.
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> It is an indication of the success which has attended the system in operation here, that fourteen of our assistant matrons have, during the last five years, been appointed matrons of other institutions, and I am especially pleased to be able to record that two English asylums selected for the second time assistant matrons from this asylum to fill matronships on their staffs, and the secretary of state for the colonies asked for my assistance in the selection of a matron for South Africa.

In an earlier report, Dr. Robertson says:

> It is recorded that ten years elapsed before official approval was accorded to Dr. Connelly's practice of non-restraint in the treatment of the insane, and many more years elapsed before this great reform was adopted by conservative physicians bound to old asylum traditions. We live under happier auspices, for after a probationary period of less than three years has the seal of official approval been placed on the developments mentioned above, and an impetus has also been given to the more extended employment of women on the male side of other asylums, since their introduction as a result of Dr. Turnbull's successful pioneer experiment in 1896. It is trying, however, to bear with misrepresentation, for example, that women have been employed instead of men because their wages were less. It is therefore necessary to state explicitly that this was not regarded as a reason at all for their employment on the male side here. It can not be denied that the services of four women can be obtained at the same cost as those of only three men, and one woman does as much work as a man when it comes to sick-nursing, personal attendance, bed-making, care of clothing, and household duties generally, and as this work is "natural and habitual" to her, she probably does it better. It must also be admitted that no other important advance in asylum management that I know of is attended by a diminution and not an increase in expenditure. Nevertheless, I do not imagine the public will regard this feature of the system with serious disapproval, if in other respects it is satisfactory. It may be interesting to mention that the saving effected here by the system was put to immediate use, and enabled us, without adding to our wages bill, to add to the numbers of our night staff. This accession of strength enables us to abolish altogether that "baneful" and unmedical practice to which his majesty's commissioner has referred, of habitually locking up patients at night in single rooms like prisoners—patients who were placed in our hands for care and supervision and for the treatment of a disease, and who, for want of an adequate staff, required to be kept in solitary confinement for ten hours out of every twenty-four.

Dr. Robertson's suggestions as to offering inducements for securing the best quality of employés are also interesting and suggestive. Regarding pensions for long service his thirty-sixth report says:

> The backbone of the asylum service consists of the attendants and nurses, who are in immediate contact with the patients, and who have ultimately to give practical effect to every measure designed for the welfare and treatment of the patients. The demands continually made on the self-denial and the inteligence of mental nurses and attendants are infinitely greater than ordinarily occur in the practice of hospital or sick nursing, and it is desirable that the very best material in the country should be attracted to the asylum service. Very great improvement has taken place in this respect in my own experience, and it is continuing to take place, but there is still room for progress, and every measure that ameliorates the condition of asylum nurses and attendants receives careful consideration. Numbers enter the asylum service and leave again just when they are beginning to be valuable, and it is believed by the General Board of Lunacy that longer service would be obtained were pensions legalized by statute for long service in district asylums, as is the case in England and elsewhere.

Another expedient employed at Stirling and in other Scotch asylums for improving the service is to provide cottages and gardens for married employés, so that by these additions to their wages they can suitably maintain their families.

Again, a separate nurses' home for assistant matrons and women nurses was in process of erection at the time of my visit, and Dr. Robertson's report says as to its effect:

> When this is occupied, our asylum nurses will be as well off, so far as their comforts are concerned, as the best provided-for hospital nurses. It is hoped by supplying these privileges, and thus meeting the wants of nurses, that the asylum will attract as good a class of applicants as our general hospitals, and that the best material will be available for the service that makes most demands on its practitioners. If in the future the asylum does not get its share of the personnel desired, it will not be owing to the conditions of service, but solely to a preference being given to sick nursing as compared with mental nursing.

At first it was with the greatest difficulty that Dr. Robertson obtained suitably trained nurses to act as assistant matrons. He tried in vain at Glasgow, Edinburgh and London, but no one would come. Finally, by persistent efforts, he made a beginning because of friendly relations with Edinburgh. The training has proved so good for matrons of other institutions that at the time of my visit twenty-one assistant matrons had been taken from Stirling as head matrons for other institutions. The effect of the good appointments thus secured has brought many applicants to Stirling, and the pick of the best nurses.

The employment of women nurses on men's wards is one of the marked features of this asylum. Some years ago it was begun conservatively with one or two women in the male wards by day; the number has steadily increased until about one-half of the nurses in the male wards are women, and the sick wards are in charge of women nurses by night as well as by day.

Another valuable feature is described in the words of the report of the General Board of Lunacy for 1903:

> The disuse of single rooms, either by day or by night for the seclusion of noisy, restless or troublesome patients, and the absence of all forms of restraint or seclusion.

The commissioner of lunacy, in a report of a visit of inspection, makes the following statement regarding night supervision:

> The night supervision of the patients continues to receive the prominent attention to which reference has been made in previous reports. There are in all twenty night attendants, ten on each side of the asylum. This gives a proportion of one night attendant to 33.7 patients. As to the benefit of such an extended night supervision on the mental health, habits and welfare of the insane in asylums there is now, fortunately, ample testimony; but in an asylum where the baneful method of locking up excited cases in single rooms during the night has been discarded, there can be no question as to the necessity of this numerically strong night staff. The close attention of the night attendants to their duties is secured by the appointment of a lady superintendent who supervises both the male and the female sides of the institution during the night.

Many patients are brought to the asylum by nurses or attendants sent out from the asylum for this purpose. While this practice is not compulsory, it is found to work well, and the escort of a nurse rather than an officer of the law certainly aids the hospital impression. The newly arrived patient is received by the staff physician and put to bed in the hospital as a sick person. If the case ultimately proves to be chronic the patient is carefully re-educated in personal care and habits, and the laborious patience on the part of the nurses and attendants necessary to this end is well repaid by the notably clean appearance of the patients and by the absence of those hopelessly foul wards which are usually to be found somewhere in the ordinary institution.

A violence book is kept at Stirling. In explanation of this Dr. Robertson says that three-quarters of the excitement of patients could be avoided by tact; that when one tries to get at the history of an attack or violent outbreak on the part of the patient, this history omits the real cause. It begins with a blow given by the patient, for example, and much shrewdness is required to learn what irritation or provocation preceded that blow. The violence book proves doubly useful to record facts and to show accurately under what nurses the black eye and the bruise are most frequent. When a number of cases of violence are thus recorded as occurring under one nurse or attendant, they must, even if accompanied by explanation, discredit that nurse or attendant, and as patients can not be heard as accredited witnesses in their own behalf, it becomes the duty of a superintendent to discharge summarily a nurse or attendant on whom suspicion rests. A discharge on suspicion had just been made at the time of our conversation. The record contained in this violence book has proved so valuable at Stirling that the lunacy committee has directed the use of such a book in each of the Scotch asylums.

The atmosphere of homely comfort at the Stirling Asylum was especially noticeable. I recall a young slip of a nurse, of the attendant class according to our nomenclature, perched at the head of a bed occupied by a patient, a big elderly man who was restless and always wanting to prowl about. The nurse had slipped one hand through his arm to keep him in bed, while with the other hand she was playing checkers with another patient just emerging from a state of silent indifference and beginning to show an interest in his surroundings. The strength of that kindly hand was quite as effective as any one of the many systems of bed restraint which I have observed in use in various institutions, and the training of the assistant herself in dealing with the patients as human beings was going on at the same time. It was the attitude of a mother with a household of children, perfectly direct, simple and effective—the attention of the nurse, order, entertainment—all equally important and all secured by that method of apparently doing several things at once which every mother who cares for her own children learns by daily practice.

Again, when one saw a procession of old men going out beyond the gates to walk along the road, the most helpless led and encouraged by their smiling, rosy young nurses, one had again the comfortable feeling that these children of a larger growth were getting just what they needed.

Women in a state of acute excitement are frequently seen treated with complete bed restraint. Such patients were under the care of nurses at night, in small rooms with doors wide open and locks taken out; the patients were noisy and restless part of the time, but gradually quieted down under the tactful management of the night nurses, who used the same soothing care that a sick nurse uses.

That inevitable occupation of floor-scrubbing, in which one usually sees crisply-dressed nurses standing about and directing the kneeling patients, here was conducted differently. The scrubbing was done and well done, but it was by the attendants or nurses and patients together scrubbing side by side, which means a radical difference of relationship throughout. It meant that the scrubbing was not regarded merely as a task but as a part of the "re-education" of a patient. In this connection it is not amiss to recall that some time ago a young nurse from a celebrated Swiss hospital for the insane came to this country in charge of a private patient. After she was no longer needed by her patient she decided to see something of American institutions before returning to her home, and accordingly took a place in an American hospital. She said afterward:

> It is very different from Dr. Forel's hospital; here the nurses are so fine, they are dressed so nicely, they are so above the patients, they don't play with the patients; here we know exactly when the doctors will come, once or twice a day. There, the doctors come very often, we never can tell when, and always if we are not with the patients they say, "Why are you not playing with the patients?" There the attendant must do the disagreeable work and the patients, they do the pleasant work; but here, the patients, they do the disagreeable and hard work and the attendants do the nice and easy work.

Unquestionably the usual relation of the so-called nurse and the so-called patient in most institutions for the insane gives any intelligent observer the feeling of being in a topsy-turvy house. There seems to be no better way to restore the true relation of patient and nurse than to establish under adequate medical supervision a system of true nursing which shall direct every act of the day and of the night, sleeping, eating, working and recreation alike to one primary object, the improvement and care of the patients. Incontrovertible as is this proposition in theory, the actual working hypothesis is too often the reverse—to get the work of the institution, the feeding, the scrubbing, the exercise, all done in an abstract way for a lump sum of humanity by a lump expenditure of energy to result in the lowest possible cost per capita.

Dr. Robertson is on the staff of the medical school of Edinburgh University and gives his lectures at the Stirling Asylum, which is an hour distant by train from Edinburgh. The regular medical staff consists of two physicians, the pathologist, and the unsalaried assistant or interne; but in summer a number of internes are taken during the vacation terms of the schools. Then every patient in the asylum is carefully re-examined, all the usual tests being made so that all the patients, even of the most uninteresting chronic type, have the benefit yearly of an intelligent re-examination of their cases—a benefit conferred on the patient incidental to the proper training of students of medicine, it should be noted. The work of a pathologic laboratory is enthusiastically carried on here by a trained pathologist and assistant. There is a close relation between the laboratory of the institution and the central laboratory maintained by all the asylums jointly and located at Edinburgh.

In regard to the system of trained nurses in direct supervision of patients night and day, it is plain that the larger the institution the more does this system afford a safeguard to the superintendent and to the welfare of his patients. There are some admirable efforts to install such service in this country, and wherever the service is incomplete it is safe to say that the cause probably lies in the failure of the institutions to pay what nurses of the highest grade can earn outside. Indeed, this system in America would not result in a direct saving of money but in an increase of cost, since the usual pay of trained nurses in Great Britain is less than half that ordinarily paid in the United States. In an examination of the relative cost of maintaining Stirling and the average Illinois institution, it will be seen by the accompanying table that the cost of salaries and wages in Stirling is only 53 per cent. of the sum paid for the same item in Illinois. At Stirling the assistant matrons receive from $25 to $50 per year less than do the men head attendants.

Table Showing Classified Average Gross Cost Per Capita[2] Per Annum of the Six Illinois State Insane Hospitals, Compared with the Cost at the Hospital for the Insane at Stirling, Scotland.

Items.	Illinois, 1906.	Stirling, 1906.	Illinois in excess.	Stirling in excess.	Percentage of excess.
Salaries and wages	$58.76	$38.36	$20.40	....	53
Food	44.69	52.64	.....	$7.95	18
Clothing	9.72	8.12	1.60	....	20
Household, furniture, etc.	9.87	7.74	2.13	....	27
Fuel, light and water	10.95	12.17	.....	1.22	11
Hospital (medical)	1.90	2.15	.....	.25	13
Laundry	1.19	1.31	.....	.12	10
Fees, taxes, etc.	.00	9.55	.....	....	..
Tobacco	.00	2.46	.....	....	..
Grouped not comparable	13.91	.00	.....	....	..
	.....	$134.50	.....	....	..
Less 51 cents for the fractional differences in comparing U. S. money with foreign money		.51	.....	....	..
Total gross cost per capita	$150.99	$133.99	.....	....	..

In private practice the nurse in Great Britain receives about two-fifths of the pay received in the United States; hence a nurse can be secured for institution positions at much lower rate there than here. Thus the system will cost more here proportionately than in Scotland; but if it is valuable for the patients, the public will justify the expense whenever it can be inaugurated.

As an authoritative corroboration of my own impression of the Stirling system of nursing supervision, I am pleased to quote Dr. Owen Copp, secretary of the Massachusetts Board of Insanity:[3]

> The quality of these matrons is worthy of attention. They are all high-class women, refined, educated, graduates of general hospitals for nurses, or otherwise trained in their duties. They are correspondingly well compensated, and move on the plane of officers, though in touch with every patient and employé. Their elevating and leavening influence over the lower and usually weaker ranks seems to me invaluable.

Doubtless some part of the excellent administration of Stirling should be credited to two features not easily secured in institutions already in operation. One point is the character of the buildings, which are one and two stories high and are admirably planned, the hospital building in particular having a combination of the best hospital features and simple homelike comfort especially needful in an institution for the insane.

The other point is that Stirling is a small institution, judged by our giantesque standards. There are usually a considerable number of patients at home temporarily, but the number of patients in the house is about 700, and counting all those on parole the population for which the superintendent is responsible is less than 1,000 souls. It is a primary proposition, recognized by all authorities, that nothing can outweigh the advantage to an institution of being small enough so that the superintendent himself can know the patients personally, and what is even more important, can know personally all his employés of whatever class.

The insane population of Scotland — more than 16,000 in number—is housed in institutions not one of which has more than 1,000 beds. It is significant that, notwithstanding the steady increase in the numbers of insane in that country, there seems to be no disposition to enlarge the existing institutions. New district asylums of about the same capacity are built as occasion demands. Evidently the Scotch have always known what we are gradually discovering—that the large institution is not necessarily more economical and that it has no other claim to consideration.

For more than fifty years the Scotch care of the insane has been carried on under the present general plan and has earned the reputation of being the most complete in the world. Every feature of modern scientific and humanitarian work may be found exemplified there with the exception of highly organized university clinic hospitals. Undoubtedly the best commitment service in the world is that of Glasgow. The central pathologic laboratory is a center of study, and the care of early cases in general hospitals, long urged by Sir John Sibbald, is making headway, while the mixed asylum and the boarding-out for chronic cases are of acknowledged excellence.

The General Board of Lunacy, consisting of three unpaid and two paid commissioners, has general charge of the insane, with powers to which those of the Massachusetts Board of Insanity are analogous. Each unendowed institution is supported by a tax levied on the district it serves and is managed by a volunteer board of local trustees.

It is aside from my subject to enter into a description of the administration of the insanity laws of Scotland. It may be said in fairness that the more closely the Scotch organization and the Scotch law are scrutinized, the more it is seen that the reason for their success lies in the fact that for half a century the system has been in charge of high-minded, competent people, absolutely unhampered by any sort of political control, and that these people have been enlisted in the public service of caring for the insane because they knew they would be unhampered by political control. Of the results which can be thus obtained Stirling Asylum is an inspiring example.

Prophylaxis of Typhoid.—The following rules for prophylaxis in nursing typhoid fever are recommended for nurses both in hospitals and on private duty. Isolate all dishes used by typhoid patients, wash them separately and boil daily. The sordes which collects on the teeth and mouth is a mixture of food fragments or broken-down epithelium and micro-organisms and is capable of conveying the infection. Use a separate thermometer for typhoid cases. Keep it in a solution of bichlorid 1 to 1,000 which is changed daily. Disinfect linen in a solution of carbolic acid 1 to 20 for two hours before sending to be mingled with other clothing in the laundry. Milk of lime is the best disinfectant for stools. Exposure of an hour is necessary for disinfection. The urine in a large proportion of cases contains the typhoid bacilli and should be disinfected; a solution of carbolic acid 1 to 20 may be used. Bed-pans, urinals and basins contaminated by vomited matter should be isolated, disinfected each time, and scalded daily. Separate syringes and rectal tubes should be provided and boiled after use. Tubs and wash-basins should be disinfected with carbolic acid. Special care should be given to hands and nails after contact with typhoid patients. Bedding should be subjected to steam sterilization after the case terminates.—*Nursing Record.*

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[2] Because of a refund to the state made for clothing and incidentals under the law in effect when this table was prepared, the term "gross cost per capita" is used. It represents actual cost, however.

[3] Am. Jour. Insan., 1904-5, lxi, No. 4, p. 55.

HOW A GREAT STATE IS HANDLING THE TUBERCULOSIS PROBLEM.

WITH SOME REMARKS ON THE TUBERCULOSIS DISPENSARY OF THE PENNSYLVANIA DEPARTMENT OF HEALTH FOR THE COUNTY OF PHILADELPHIA.*

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PHILADELPHIA.

The platform on which Governor Stuart was elected pledged the administration to make war against tuberculosis. The governor immediately on his inauguration requested the commissioner of health to formulate a comprehensive scheme to carry out his promise to the people.[1]

The sum of $1,000,000 was appropriated in two sums, as follows: One of $600,000 under an act "to provide for the establishment and maintenance of one or more separate sanatoria, or colonies, in Pennsylvania for the free care and treatment of indigent persons suffering from tuberculosis, and making an appropriation therefor;" the other, of $400,000 provided for out of the general appropriation act, "to enable the department of health to establish and maintain, at such places in the state as may be deemed necessary dispensaries for the free treatment of indigent persons affected with tuberculosis, for the dissemination of knowledge relating to the prevention and cure of tuberculosis, for the study of social and occupational conditions that predispose to its development and for continuing research experiments for the establishment of possible immunity and cure of said disease for two years."

THE SANATORIUM.

Acting under this authority, the commissioner of health has proceeded along the lines indicated by the letter of the law. The legislature having by special enactment called attention to "the sanatorium located on the state forestry reservation near Mont Alto in Franklin County," the commissioner proceeded to determine on the suitability of that location for the more extensive establishment contemplated. This proved to be in every way desirable, having been selected by the state forestry commissioner, Dr. Joseph T. Rothrock, as the one reservation of the state best adapted for such a purpose. Geographic and topographic surveys were at once set on foot in order to determine on scientific lines, what portion of the reservation was best adapted for the object, as well as to make provision for a sufficient supply of pure water and for a system of thorough drainage. When taken over by the department of health, the camp at Mont Alto had accommodation for about 28 cases. Already accommodation has been provided for one hundred and forty patients and plans are under way to greatly enlarge the capacity of the sanatorium. At present only incipient cases are admitted, but to meet the very urgent need for some place where advanced cases may be sent, an infirmary has been planned at Mont Alto with a capacity of one hundred beds, having the double object of segregating these patients for the public welfare and of furnishing them with every opportunity for treatment. There will also be a hospital for cases of transient and intercurrent illness and for surgical cases.

The patients at the sanatorium, at present, are housed in specially constructed tents, though there is one model cottage after designs by the state commissioner, and others of the same kind are to be built. It is planned to erect fifty such cottages, each to accommodate eight persons. The cottages will be one story high and will be so arranged that they can be thrown open to the air, but will afford ample protection from storms. They will be twenty-five feet apart and placed on streets fifty feet wide. A number of pavilions are also planned for, with the same general construction as the cottages, but to accommodate twenty-four persons each.

Dining rooms will be in common, one for each four hundred patients. There will be bath houses provided with spray, douche, and shower baths, but no bath tubs. A modern steam laundry, equipped with disinfecting washes, is under way and plans for store rooms, servants quarters, a central dispensary, mortuary, and laboratory are nearing completion. An ice pond is in course of erection which will furnish ice suitable for cold storage purposes during the summer.

As patients gain strength they will be furnished light employment in gardening, husbandry, farming, carpentry and similar outdoor manual occupations, and when cured the effort will be made to find open-air situations for them. It is intended to establish a similar colony on one of the reservations in the western part of the state. Dr. Dixon anticipates that the sanatorium will in a few years have a capacity of 3,000 patients.

THE DISPENSARY SYSTEM.

In regard to the dispensary system, sixty-seven dispensaries have been established to date, one in every county of the state, either in the county seat or the largest and most accessible town. The dispensary in Philadelphia was established Jan. 7, 1908, and the success which has attended it depends on just two factors—one is the exactness of the methods of diagnosis and treatment, and the other is the ability to supervise the patients.

An interesting feature of the work has been the examination of patients, whose lungs may present more obscure or striking features, by means of the x-ray. The pictures have been taken by Dr. C. L. Leonard with a machine which is almost instantaneous in its action, requiring an exposure of about half a second, producing a plate remarkable for its clearness of detail.

At intervals the medical staff of the dispensary meets of an evening at the office of Dr. Alfred Stengel, who has supervision over the work, for purposes of discussion. At these meetings a comparison is made of the condition of the lungs of the patients as charted by the attending physician and as shown by the x-ray picture. It can be readily understood that this must lead to careful work, as no one likes to find himself in the wrong before his confrères on the medical staff.

METHODS ADOPTED.

All patients are followed into their homes by inspectresses from the dispensary, who show them how to avail themselves of the best opportunities for taking the cure that their homes afford. If no back yard or porch or roof is suitable, they are required to rest from six to eight hours a day in their bedrooms by the open window.

Some of the patients are at work, and with them the progress is sometimes slower, but by following instructions in regard to personal hygiene, the sleeping with their windows open, availing themselves of every opportunity for rest which their day affords, these patients, especially when in the incipient stages of the disease, show a gain in weight and a general improvement commensurate with those taking the cure under more favorable circumstances.

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* The address at the opening of the Tuberculosis Exhibit of the Pennsylvania Society for the Prevention of Tuberculosis, at Reading, Pa., March 18 1908.

[1] Dr. Dixon drafted the necessary bills which were passed by the legislature and became laws by the signature of the governor.

It is insisted on that tuberculous patients shall occupy a room alone, and that the inspectresses instruct them in the destruction of the sputum and in habits of cleanliness. The families are also given instructions and shown how best to protect themselves against infection. Further those members of the family who may have been occupying the same room or who show any suspicious symptoms are encouraged to come to the dispensary for a thorough examination in order to discover the disease while it is still in its early stages.

THE PROPHYLACTIC ELEMENT.

The prevention of the spread of consumption is quite as important in this movement as the cure of already existing consumption. Particularly is this true in relation to advanced cases, who after a first visit may be too ill to come to the dispensary. The responsibility of the dispensary is not done with such cases until some arrangement has been made by which they are properly cared for.

In one instance a family of eight were living in one room, and the father had consumption involving both lungs. It is almost inevitable that had this state of things lasted, several if not all the children, and the wife, too, would surely have contracted the disease. Another family of four, living in the same way, in which the mother had the disease, has also come under observation. It must be plain to everyone what a field for prevention such situations offer. By securing a separate room for the sick father or mother, or when this is impossible, by removing the patient to a hospital and by disinfecting the contaminated room, we surely prevent the development of other cases of the disease.

Of course, in such cases, if the children are too young to take care of themselves, it is necessary to secure their admission to some institution in which they will be properly cared for and educated. All this is part of the work, and we accomplish little if we can not handle these problems successfully.

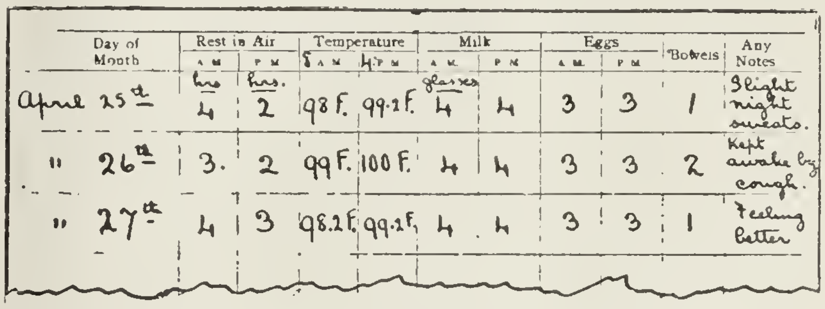
INCIPIENT CASES.

One of the most gratifying features of our work so far has been the relatively large number of very early and incipient cases that have applied. These patients are given free supplies of milk and eggs and are treated right in their own homes, with every prospect of a permanent cure, provided they will follow instructions and provided their homes are not too insanitary. Where the latter is the case, we send them away to the state sanatorium at Mont Alto. But we do not send patients away just because they are early cases and would do well there, for we know that such cases may recover right in the heart of Philadelphia, and we could swamp the sanatorium in a week if we sent all our early cases up.

EDUCATION IN HYGIENE.

Each member of our staff, of which there are five, divides his patients into two classes, which meet at a regular time every alternate week for instruction and a general talk. The patients are instructed in the principles of prevention and cure, the whole matter is explained to them and they are encouraged to ask questions and seek advice. They are also required to keep small record books (see illustration) in which they daily make notes of their temperature, the amount of milk and eggs taken and the number of hours spent resting in the open air, etc. Thus at a glance the physician can see the course of the cases during the past week, and by meeting regularly the patients soon become acquainted with each other, and there develops a friendly competition among them to see which can adhere most strictly to the treatment and show the best results. The treatment most emphatically does not consist in giving a little good advice and a prescription and in passing on to the next case. Every case is studied exhaustively, the conditions are recorded accurately and every detail of the patient's surroundings and daily life is thoroughly understood and discussed with him.

It may be of interest to state the results[2] in the first class of eleven patients, eight men and three women, which was organized in the first week of the dispensary's existence. Out of the entire class all have gained weight with the exception of one woman, who has just come out of a hospital, having undergone a severe operation, and may, therefore, properly be excluded in this computation. The total gain in weight for the other ten has been 29¾ pounds. The largest individual gain was made by a man who has been working steadily as a street car conductor. He has gained 6¼ pounds. The next largest gain among the men was 4½ pounds by a man working eight hours a day regularly as a billing clerk. Among the women one had gained 5¾ pounds and another 3½ pounds. Of these eleven patients all are married and there are fourteen children among their families. These patients are not selected cases (five of them are advanced cases with cavities in the lung), but are among those applying when the dispensary first opened, and so were formed into the first class. The above class represents a relatively small number of those under treatment. We have had to date (May 1) 372 new cases. Were the cases to be selected from the whole number, even more striking individual results could be shown. Incidentally the street car conductor now shows a gain of 15¾ pounds.



Day of Month	Rest in Air		Temperature		Milk		Eggs		Bowels	Any Notes
	A M	P M	8 A M	4 P M	A M	P M	A M	P M		
April 25th	hrs 4	hrs. 2	98 F.	99.2 F.	glasses 4	4	3	3	1	Slight night sweats.
" 26th	3.	2	99 F.	100 F.	4	4	3	3	2	Kept awake by cough.
" 27th	4	3	98.2 F.	99.2 F.	4	4	3	3	1	Feeling better

Sample page from the record books kept by the patients. The hours at which milk and eggs are taken, and the amount of each, are mapped out for each patient.

FREE MILK AND EGGS.

The fact that the state will supply free milk and eggs to all those who can not afford to buy these necessary supplies is also a great boon. It is practically impossible to run a dispensary for tuberculous cases where free supplies can not be given. All patients who are ordered free milk and eggs are visited by an inspectress before they receive them, as, of course, it is necessary to know that they are too poor to buy them for themselves.

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[2] At the time of writing, March 18, 1908.

However, there has not appeared any spirit to take unfair advantage of the state's liberality, and many of the patients say at once that they can afford to buy these necessary supplies themselves. Nor are any cases treated at the dispensary who can afford to pay a private physician. The act provides that the state dispensaries are for "indigent" consumptives, and those who can pay are referred back to their regular physicians. Otherwise, it would be most unfair to the general practitioner.

But to show the extent of the state's bounty to indigent consumptives, it may be interesting to say that between January 7 and May 1 7,480 quarts of milk and 2,485 dozen eggs have been distributed gratuitously. As the work grows these figures will no doubt look small, for as long as there are deserving patients willing to do their best to get well from the disease the state stands ready to do its part in the cure.

Finally, while I believe the vast resources which the State of Pennsylvania has made available for this work, and the splendid organization being built up by the commissioner, now make the state work the most important factor in the crusade in Pennsylvania; yet we must not forget that it is by no means the only force at work, and I should be falling far short of telling all, did I not point to the Pennsylvania Society for the Prevention of Tuberculosis and the other private organizations and institutions at work in this field. They have done much and they will do more. It is the educational work gone before which rendered possible the state's action.

But the state can not accomplish the result alone, nor can the private institutions and organizations. Both are essential, both must be recognized. It is by a united effort, by cooperation, by the harmonizing of all the agencies engaged in this noble work, that we may confidently expect to accomplish our purpose—to see that day which is surely coming, when tuberculosis, from being the most widespread and destructive affliction of mankind, shall be an uncommon malady.

THE WHITE MAN IN THE TROPICS.

C. L. G. ANDERSON.

WASHINGTON, D. C.

To those who are impelled by necessity, or induced by interest, to visit the torrid zone, and relinquish the blessings which flow from exercise in the delightful climates of the earth, in temperate regions—to those who exchange their native countries, which yield the free and unbounded enjoyments of spontaneous health, for such as no care nor art can ever make agreeable—some cautions may be necessary, some precepts useful.—Dr. Benjamin Mosely, 1787.

Le climat n'est dans point resserré dans les circonstances physiques attachées à chaque local, il est cet ensemble lui-même; et tous traits caractéristiques par lesquels la nature a distingué les différent pays entrent dans l'idée que nous devons former du climat—Cabanis.

The United States, with the assurance of robust youth, has entered the tropics, and assumes and presumes to dictate to alien peoples, residing in different climes, their forms of government, trade regulations, modes of life, ethical standards, and to an extent, their religious beliefs.

However much I may sympathize with the natives of our tropical dependencies in having their repose and content disturbed, I acknowledge that my concern is not for them. The obligations of our government require a large number of white American men, women, and children to live and reside for long periods of time, or for life, under abnormal conditions which cause harm to themselves and deterioration of the race. These American citizens have received no warnings that unless their residence in the tropics is merely temporary, their children will be handicapped, and their grandchildren, if any, will see the finish of the family.

While necessity has compelled the authorities to heed the recommendations of medical officers to limit the service of soldiers and sailors in hot climates, yet the tendency in government reports and information about our tropical possessions is to paint them in rose color, to invite employés into the civil service, and to encourage permanent residence in these hot climates.

Human morbidity and mortality are greatest at the equator, and diminish as we approach the poles. This holds good for both natives and aliens. I do not believe much in statistics, but according to Cullimore, the annual death-rate is as follows:

From the equator to 20 degrees latitude, 1 death to each 25 inhabitants.

From 20 degrees latitude to 40 degrees latitude, 1 death to each 35 inhabitants.

From 40 degrees latitude to 60 degrees latitude, 1 death to each 43 inhabitants.

From 60 degrees latitude to 80 degrees latitude, 1 death to each 50 inhabitants.

By the tropics, I mean the equatorial zone extending around the earth between the Tropics of Cancer and Capricorn.

The inclination of the earth's rotative axis to the plane of the ecliptic measures about 23.30 degrees and is limited by the Tropic of Cancer in the northern hemisphere, and by the Tropic of Capricorn in the southern hemisphere. On June 21 the sun is vertical over the Tropic of Cancer. It then starts south, and about September 23 is directly over the equator. Continuing its southward journey, it reaches the Tropic of Capricorn about December 21, when it turns back toward the equator, which it crosses again about March 21.

Outside these tropics, or turning points in the temperate and polar zones, the sun's rays can never fall vertically on the earth. Only between the tropics is the sun ever directly overhead. Practically, days and nights are equal near the equator and there is very little dawn or twilight.

As most of our heat is due to solarization, the long tropical day accounts for the greater heat, while the blanket of moisture always present prevents the radiation of heat by night. It should be particularly noted that these two conditions, heat and moisture, so favorable to the growth of bacterial life, are always present in the tropics, the only checks on the multiplication of inferior forms of life being warring species and lack of food. The latter is seldom wanting.

Every day is summer time in the tropics, and it is this continuous heat and humidity that is so enervating to the white races. In equatorial regions, vegetation, as a rule, is ever green, though the leaves are continually falling and being renewed.

Between the tropics lies one-third of the area of the earth, and four-fifths of this is ocean. Nine-tenths of the islands of the globe are situated within the tropics, and most of the mainland is in close proximity to the sea. This gives a marine climate, which means that the temperature is very equable (hot day and night) and that a high percentage of moisture (75 to 95 per cent.) is always present. While the temperature rarely ranges above 95 F. in the shade in the daytime, it seldom drops below 75 F. at night. It is this constant association of heat and moisture and their unvarying persistence, together with the actinic effects of tropical light, that wear out white men in the tropics.

Instead of the four regular seasons of the temperate zones, there are but two seasons, dependent not on changes of temperature, but on a variation in the amount of rainfall. In Spanish parts of the tropics it is customary to speak of the dry season as summer (*verano*), and of the wet season as winter (*invierno*). At some places this difference is marked, while at others they say that in the wet season it rains all the time; in the dry season, only every day. This is literally true of certain sections, as along the coast of Veragnas; but there are other sites within the tropics, even on the seacoast, where rain seldom falls, as at Ceara on the northeast coast of Brazil, and at Aden on the Red Sea. In the Philippine Islands the wet and dry seasons, generally speaking, are each of about six months duration. In Panama and the Canal Zone the dry season lasts only three and a half months, extending from January 1 to April 15. In India, generally, the hot and dry season lasts from January 1 to June 1 of each year.

As a result of the greater heat at the equator the heated air rises while the colder air from the poles flows along the surface of the earth toward the equator. The rotation of the earth from west to east changes these air currents into northeast and southeast winds, which are so constant in direction and duration as to be utilized by sailing vessels, and constitute the trade-winds of commerce.

Now it is a general law in meteorology that the windward side of mountains, especially if near the sea, is covered with fogs and drenched with rains, whereas the leeward side will be refreshed with the dry descending wind without precipitation. Even where there is but a comparatively narrow strip of land between the oceans, as in Panama, this difference obtains. The annual rainfall at Colon is about twelve feet, while across the low divide at the city of Panama, on the Pacific Coast, only forty miles away, the rainfall is but six feet and sometimes less. So the climate of a place is the sum or resultant of its latitude, altitude, topography and geology of its soil, proximity to sea or mountain, prevailing winds, humidity and precipitation, sunshine or cloudiness and electric states of earth and atmosphere. The stage of civilization and sociologic conditions of the people have a large influence on the welfare of strangers.

A saving factor in the tropics is altitude, each 250 feet of elevation being equivalent to one degree of latitude from the equator. Much of the land area between the tropics, comprising the elevated plains and mountain ranges, while geographically tropical, climatologically is temperate. It is only on these plateaus that the white man has been able to establish himself, and it has been only the Latin race, particularly the Spaniard, who has been able to do this. Quito, Bogota, San José de Costa Rica, Guatemala City and Mexico City, though between the tropics, do not suffer from tropical climates; and in these capitals the Spaniard has taken root. The climate of Petropolis is radically different from that of Rio de Janeiro a few miles away. Benguet differs from Manila, and Simla and Jardeeling from Calcutta, Madras and Bombay.

The English are still exotic in India; the Spaniard remains a resident in tropical America. The Spanish people, by reason of their southerly origin and skin pigmentation, the best fitted of Europeans to colonize the Tropics, have failed, except on the plateaus and in the high valleys; and even there it is largely by fusion with the native Indian thus forming a race of *mestizos* or hybrids, that they have been enabled to perpetuate their kind. On the coastal plains (the purely tropical sections), the Spaniard has not been able to maintain a footing.

Africans are in possession of the West Indies. The old and populous cities of the Spanish main are now given over to the negro and negroid mixtures. To-day, Cartagena, Colon, Bocas del Toro, Puerto Limon, Port-au-Prince, Bridgetown, and Kingston, are inhabited mostly by negroes. A few places, like Panama and Manila, are so important as trade-centers, or seats of government, that white races keep them alive by a constant renewal of fresh blood.

For several hundred years the populous white races of Europe have had plenty of room to expand in the temperate zones: in the United States, Canada, Argentina, Chile, Australia, and Siberia. The populations of all the large cities in the temperate zones are congested. The outlet is in the direction of least resistance and where nature beckons kindly.

The world is becoming crowded. The inhabitants of the earth have doubled during the last hundred years. Not simply in certain congested areas as formerly, but in all the pleasant places of the earth, arable lands in temperate zones, tillable profitably under natural conditions, are now mostly occupied. Intensive farming, irrigation of arid tracts, and reclamation of swamps, will furnish relief for a number of years.

The natural boundaries which separated nations and races have been effaced by steam and electricity. The sea, instead of being a barrier, has become a broad, frictionless highway for quick and easy access. Mountain chains have been tunneled, and wide deserts traversed by railroads. Aerial transportation lies within the near future.

Commercial strife between nations is now acute. Warring strife between races is inevitable. The lands of the tropics are the richest in the world, and yield the greatest return for the least labor. It would seem that here is the natural outlet for the tension in the temperate zones, and a fertile field for conquest.

For control, yes; for colonization, never! The tropics belong to the colored races, and in them they must work out their own salvation through the slow evolution of the centuries.

No white colony has been able to maintain an independent existence in the tropics. When whites invade the torrid zone, they must first subjugate and combat the colored natives, and then keep up a continuous warfare with nature. Under free competition, whites can not compete with blacks within the tropics; and it is only by control of the colored natives, equivalent to enslavement, that white men can exist in the tropics and keep up stable and efficient government. To-day there is control and regulation of the persons and labor of the colored natives in all well regulated tropical countries.

England governs India by relays of officials from home, and not by representation. She is particularly careful not to disturb racial, tribal, or caste customs, and her control will collapse whenever a united India is formed. Even in our sister republic of Mexico, men are practically bought and sold, and can go away from plantation or mine only on pass. This is as it should be. The natives have neither the desire, intelligence, nor energy to govern themselves according to our standards; the white man can furnish the brains, but can not keep up manual labor in the tropics; so there is a fair exchange of efficiency.

To force on an unwilling people a foreign form of government always results in failure. To attempt to force free government and American institutions on colored barbarians, as we are trying to do in the Philippines, is not only an expression of gross ignorance, but distinctly unnatural, criminal, and sinful. To assume that an act of Congress, or that the proclamation of a president, however benevolent, can replace the gradual evolution of ages, is to deny the data of science and the teachings of history. The idea or theory that we can by legislation ingraft on the people of the tropics those principles of government and standards of civilization which obtain among northern races, seems to me as erroneous and presumptuous as does the claim that by missions we can radically change their religious beliefs.

Since the pandemic of the fallacy of the equality of man, pseudo-statesmen, mushroom philanthropists, and false prophets of all kinds have been disturbing the natural course of nature in futile, but tiresome, and expensive attempts to abrogate the laws of nature. The new gospel of liberty induced the French to free the blacks in Haiti, and the negroes immediately massacred the whites on the island.

A great deal has been written by incompetent observers tending to show that white people can live well and continue to live well in the tropics. The general tenor and impression conveyed by United States official reports is that our intertropical dependencies are fitted for permanent residence by whites, and that the natives are competent for self-government. This sort of literature is positively harmful and dangerous.

Popular opinion in our country is soon expressed in Congress, and it enacts laws which are inapplicable in the tropics. While a few individual whites may even be benefited by sojourn in the tropics, and many can pass years there in comparative comfort, yet well marked bodily changes always follow a long residence, and continue even on return to a cooler climate.

Reports by chiefs of service and premature gushing letters are equally misleading. The chiefs live under the best conditions, and make frequent visits to the states, or other temperate regions; the women are often carried to the transport on a stretcher. The correspondent who accepts passes on government steamers and entertainment at the hands of a steering committee becomes blind to the seamy side of things, and dwells on the beauties of waving palms and coral strands. Official and other anticipated inspections do not view usual conditions, and never the worst. Visiting congressmen, however good their intentions and great their zeal, get only snapshots from a steamer touching at the principal ports. They see only the coast towns, *en fête*—palm arches, frothy oratory, and brass bands. When the visitors leave, the Filipino takes off his laundered clothes, patent leather shoes, and derby hat, and reappears as he truly is—a semi-savage, with breech-clout and bolo.

Besides racial and climatic antagonisms, there is bound to be unrest from orders emanating from a seat of government far away, and ignorant of local conditions in the colony. When the notion of independence has foolishly been encouraged among the natives, revolutions are bound to spring up periodically. Equality, independence, fire-arms, and fire-water are dangerous combustibles to put into the hands of a subject race.

History is full of the records of white colonies stranded and coming to grief in the tropics. When Europe awoke from the lethargy of the dark ages, and sailed beyond the Pillars of Hercules, it was along the equatorial belt that new lands were first discovered and settlements attempted. Prince Henry the Navigator and his followers crept down the coast of Africa, while with Italian pilots, Spain invaded tropical America, and was quickly followed by France, Holland, and England. In our expansion in the East and West Indies, we should not forget the dreadful price Europeans have paid for their holdings. The conquerors—Spanish, English, French, and Dutch—soon discovered that they could not work in the tropics as at home without disease and death, so they made the natives work for them—enslaved them. But here they made the fatal mistake of requiring a white man's work from a tropical Indian; so the natives perished rapidly.

When we consider the effects of change of climate and season on the physical features of the earth, and on animal and plant life, it is really wonderful to behold man charging around the globe, and nearly from pole to pole, seeking conquest, fame or riches. Man can live under the most diverse conditions, but he can not there develop his best qualities and propagate robust offspring.

I assume that it is unnecessary to prove that the races of mankind thrive, develop, and reach perfection within well defined climatic areas. Fauna and flora can only exist and persist as distinct species inside certain zones bounded by isotherms. The whole scheme of nature is to preserve and perfect the race at the expense of defective individuals, and to perpetuate that race or people who are best adapted to live under the conditions of a given environment. This environment in course of time becomes the natural habitat for those people. When races emigrate from their natural habitat and try to live under strange conditions, they perish; their blood may be continued by union with native stock; or the survival of the fittest under the new environment may propagate another kind of people. In either case, the characteristics of the old race (immigrants) are lost. The mongrel results of miscegenation are seen all over the tropics in places where a purely white race can not persist.

Health, strength, and long life result only from harmony between the individual and the universe that surrounds him. The same rule applies to race. The common belief, that after a few months' residence in the tropics the white man becomes "acclimated," is erroneous. There is no such thing as acclimatization. By constant care and vigilance a man can adjust himself to his new surroundings, and may escape discomforts, ills, and dangers he would otherwise suffer. For a time, the white individual can do three to five times as much work as the native, but it is at the expense of the vitality he should transmit to his children, and preserve for age. In the tropics, weaklings die off or return home. Those who adjust themselves to the new environment may continue for a generation or two; but the white man seldom lasts beyond the third generation, and then sustained only by long visits home.

The tropics belong to the black and brown races, and there they have sense enough to remain. They have certain inherent rights, one of which is to be let alone; and if ruled, not to have northern ideas inflicted on them. The white man has no business in the tropics. When he occupies them he brings ruin to himself and misery on the natives.

It is unnecessary for us to speculate on or await the results of our own experiments in the tropics. We have at our doors, and partly within our territory, the

West Indies. When first discovered by Europeans these islands supported a happy, gentle, joyous people, thoroughly in accord with surrounding nature. Hispaniola (Santo Domingo and Haiti) alone contained at least a million people. Spain began to enslave their bodies and save their souls. When tired of slaying the Indians, the Spanish soldiers hunted them with dogs, which fed on their flesh. When captured alive, the *padres* burnt them at the stake, holding the cross before their eyes. In twelve years there were not enough Indians left on Hispaniola to work the mines and plantations, so the Spaniards stole forty thousand natives from the Lucayas (Bahamas). These, too, were killed or committed suicide. Too late, they tried to save the Indian by importing the African. The negroes found the same, or a more favorable climate than in Africa; could stand, what the Indians could not, the white man's tasks; so they increased and multiplied, and now possess the islands of the Caribbean.

Spain and France, separately and conjointly, owned San Domingo and Haiti, and each failed. Out of 32,000 soldiers, the French lost 15,000 men in two months, trying to recover Haiti from the blacks; while at the same time Toussaint l'Ouverture died from the cold in a French fortress. The English then tried to establish themselves on the island, but were driven out by the climate, with the loss of 45,000 men.

History is filled with disasters from men getting out of their natural environment. Pizarro lost a fourth of his men by verruga in the rarefied air of the high Andes. Napoleon lost a large army in Russia, and another in Egypt, not so much from fighting as from the climate. Dr. Kane told us that "an Arctic night and an Arctic day age a man more harshly than a year anywhere else in all this weary world."

Formerly, service in the tropics was looked on almost as certain death; the usual time for the disappearance of a regiment was five years. Civilians suffered to a like extent. Of every regiment of a thousand men sent to Jamaica, it was found that four to five hundred perished during the first eight months. A traveler records that out of a regiment stationed at Fort Augusta, Kingston, there were left only a quartermaster and a corporal.

Sir Francis Drake took the cities of Santo Domingo and Cartagena in 1586, but lost so many men from disease that he was forced to retire. Many years later, in 1741, the English again took Cartagena, but the climate drove them out. The same thing occurred at Havana, and the expedition against Santiago was abandoned on account of the mortality from disease.

After several attempts, Patterson's well-planned colony was driven from the isthmus of Panama by the climate, at the close of the seventeenth century.

In 1726, Hosier lost heavily from disease before Porto Bello, and in 1780, General Darling captured the castle of San Juan with 1,800 men, but only 380 lived to get back to Jamaica. It was in this expedition that Nelson contracted his tropical liver.

Spain fought a losing fight with the tropics for four hundred years, and it was the climate, as much as the American soldiers, which finally drove her out of the West Indies and the Philippine Islands.

The flotas and galleons of Spain in the tropics were frequently rendered powerless by the ravages of disease. Notable examples were the losses under Don Domingo Justiniani, commodore of the Guarda Costas, at Santa Marta, in 1729; and those of the galleons of Don Manuel Lopez Pintado, in 1730 before Cartagena. I am, of course, well aware of the rôle played by mosquitoes in the propagation and infection of at least two tropical diseases, and that by taking infinite pains under favorable conditions some of the dangers of the tropics can be eliminated. The essential factors of the climate, however, will always continue to exist.

As late as 1898, our magnificent little army, the Fifth Corps, went to pieces in six weeks before Santiago; and if to-morrow we had to place a large force in the tropics, particularly in the face of an enemy, it would be practically impossible to apply prophylaxis against infection by mosquitoes, to say nothing of combating dysentery, plague, and cholera. If opposed by a native force, immune to the climate and diseases of the tropics, our handicap would be still greater.

In the tropics, the white man can not live with, compete with, nor govern the colored man, superior in numbers, under terms of political equality. After three hundred years of conquest and holdings, at the expenditure of thousands of lives and millions of money, the British are only hangers-on in the West Indies. In 1834, the English government emancipated their negroes, which was well, and paid the slave-holders without civil conflict, which was better and wiser than we did. But they committed the blunder of enfranchising the freed slaves, and thirty years later the United States repeated it.

By reason of liberty and the suffrage, Africans are actually in possession of most of the West Indies. The whites have found the conditions intolerable and unprofitable, while the blacks have rapidly increased and acquired passive possession of the soil. In Barbados, the proportion of blacks to whites is as much as fifty to one. No wonder Great Britain is abandoning her forts and withholding her subsidies!

For years the labor of the West Indies and of the Guianas, has been done largely by Hindu coolies. These East Indians are imported under five-year contracts, and give satisfaction to their white employers. On being granted political equality, the negroes refused to work, and have degenerated into the most worthless people on the face of the earth. It is astonishing that the United States adopted this useless and discarded labor to build the Panama Canal. After three years' trial of the West Indian negro, the Canal Commission has been forced to replace him with the Spaniard, the Italian, the Hindu, and the Greek.

In our successful colonization in temperate zones—United States, Canada, Australia, Argentina—we have lost sight of the failures of our fellow emigrants—Spanish, French, Dutch, and English—in the tropics. The quick amalgamation of colonial America into the independent United States was not a result of the union of the white colonists with the native Indian, nor with the African, who came at the same time, but of the fact that Europeans found here the same climatic conditions under which they had lived and were bred. It is not from political or sociologic reasons that the negro has never flourished north of Mason and Dixon's line. Even the Spaniard, who at first had such a large share of the United States, and who then was the first rate power of the world, has been forced further south to his own environment.

There have always been statesmen and economists who considered colonies, and attempts at colonization, a burden, expense, and menace to the safety of the home government. Adam Smith, from the commercial point of view, had this to say about colonies: "After all the unjust attempts of every country in Europe to engross to itself the advantages of the trade of its own colonies, no country has yet been able to engross to itself anything but the expense of supporting in time of peace, and defending in time of war, the oppressive authority which it assumes over them."

We have at home so many evils to remedy and faults to correct that it would be well to refrain from attending to other people's business.

Americans have little regard for either the sanctity or the value of human life. Railroads, factories, mines, automobiles, and firetraps kill us by the hundreds; preventable filth diseases, adulterated foods, polluted waters, and crowded habitations carry us off by the thousands every year. I affirm that we give Manila and Panama better sanitary supervision than we have in New York or Washington.

If we figure up, in lives and dollars, the cost of our expansion in the East and West Indies, it would be truly appalling. The four or five hundred millions we have spent on the Filipinos in the past ten years, expended with equal energy at home during the same period, would have abolished most of our tuberculosis, typhoid fever, and other avoidable diseases. We are justly called wasteful, spendthrift, and boastful. Must it also be said that we are an ignorant people, unmindful of the lessons of experience? Shall the verdict of nature and the teachings of history go unheeded?

SUMMARY.

1. When a species is well adapted to the conditions which environ it, it flourishes; when imperfectly adapted, it decays; when ill-adapted, it becomes extinct.
2. When a white man, native of a temperate zone, goes to the tropics, there occurs a biologic reaction of his system to the new environment, and a readjustment of co-ordination between his vital processes.
3. In the tropics, the white man, individually, can exist; racially, he can not persist.
4. Acclimatization is not possible.
5. No superior race can successfully govern an inferior race, superior in numbers, with equality before the law.
6. Only by partial enslavement of the colored natives, superior in numbers, can the white man rule and govern the tropics, and it is only by relays of fresh representatives he can continue his sovereignty.
7. No colony of northern origin has ever been able to lead a permanent and independent existence in the tropics.

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THE USE OF GONOCOCCIC VACCINE IN TWENTY-SIX PATIENTS.

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So satisfactory has been my experience with gonococcic "vaccine" or "bacterin" during the past few months that I desire to describe briefly my impressions regarding its use and to report the salient points from the histories of a few patients who have been cured by this treatment. I say cured by this treatment, for in spite of the fact that other measures as urethral injections and irrigations, internal medication and massage of the prostate were used in conjunction with the vaccine, the results were much more prompt than I had ever been able to obtain with these same remedies before beginning the use of the bacterins.

A free streaming of lymph, fresh from the circulation and laden with opsonins, should be promoted and maintained in every focus of infection. Wright has shown that the locality in which bacteria cultivate themselves is deficient in anti-bacterial substances on account of the sluggish circulation and the clotting of lymph in the sinuses. He also calls especial attention to the paralytic action brought to bear on the leucocytes by the tryptic ferment liberated from the disintegrating pus cells in abscess cavities and sinuses, and to the futility of attempting to cure them by vaccine therapy unless they are emptied frequently and flooded with opsonic fluid fresh from the circulating blood. These facts are particularly illuminating when considered with the condition of affairs found in the inflamed prostate. Here we note the effect of the ferments liberated from the pus cells; the proteids being promptly converted into albumose which I have found to be present constantly in the inflamed prostate and to be of distinct value in the diagnosis of such conditions. A correlation of these facts readily shows that out treatment by prostatic massage has underlying it curative factors of which we were formerly unaware. The question of autoinoculation by massage of the prostate must also be considered. As the extent of such inoculations can not be known this part of the treatment or manipulations of gonococcal joints should not be done at the time of injecting the vaccine as an overdose may be thrown into the system.

We can not overestimate the importance of a careful examination in every instance and the institution of appropriate treatment along with vaccine therapy, which should be employed as an adjunct and not to supplant other forms of medication. Success will depend on the recognition of these conditions, on secondary infections and on the time at which the injections are made. Gonococcic bacterin only affects the gonococcus and may leave other micro-organisms to perpetuate the inflammation. For this reason microscopic examinations should be made and other vaccines injected or other measures employed to restrict the action of non-specific germs.

The matter of "personal" or "stock" bacterin is one of considerable interest and importance. As far as I am able to judge from my own experience there is very little variation in the gonococcus and about as good results are obtainable with the stock vaccine as with the personal. The difference in the severity and course of the disease in different individuals is due almost entirely to the varying resistance of the host. I have used the stock vaccine marketed by Mulford & Co., Philadelphia.

So far I have now given the bacterin treatment to twenty-six patients and feel no hesitation in saying that I have been able, in nearly all cases, to obtain more satisfactory results with it than with the various forms of treatment previously used. Eight of these patients had chronic prostatitis; two acute prostatitis; two epididymitis; one a periurethral abscess; three urethral stricture; three urethro-cystitis and one cystitis.

Until recently I have not given the vaccine to patients during the acute stage of gonorrhea, but have waited until the subsiding stage. Injections of ten million gonococci were given to one patient, however, with a profuse discharge and very acute symptoms. He began to improve after the second injection and made an unusually quick recovery in spite of many disadvantages in not being able to take the proper care of himself. He was entirely cured after the fifth injection and has had no return of the discharge or symptoms. Syphilis had been acquired a few months before the gonorrhea was contracted. He received oil of sandalwood internally and urethral injections of argyrol.

In no instance was a patient made worse by the injections, except that in a few cases there was a slight increase in the discharge during the negative phase when the initial dose was too large. Almost invariably, in cases in which the gonococcus was without doubt the cause, there was improvement which lasted from three to seven days after the injection. My best results have been obtained with doses varying from five to fifty million gonococci. In acute gonorrhea the initial dose should not exceed five or ten million, but may be repeated somewhat earlier than when larger amounts are given. The injections were made in the subcutaneous tissue of the buttock, as here the minimum amount of pain is produced. It is well to begin with fifteen million in chronic cases and gradually increase the amount at subsequent injections according to the reaction produced. Usually the succeeding injections should be administered before the improvement of the previous one has entirely disappeared. This varies from five to eight days.

In most cases the vaccine treatment was supplemented with urethral irrigations and injections, prostatic massage when indicated, and suitable internal medication. From five to eight injections were required for the average case, but more in cases in which recrudescences occurred. I will describe briefly the histories of two patients with the infection so deeply seated that invariably such cases are difficult to cure by the usual methods.

History.—Dr. X., one of my first patients, came to me on account of a persistent and recurrent prostatitis. I had been treating him in an irregular manner for about eighteen months; the urethra would clear up entirely at times, not a thread being present in the urine, but the prostate could not be freed from pus. Alcoholic or sexual indulgence would nearly always bring back the urethral discharge in which gonococci could be demonstrated. The vaccine treatment was instituted and continued with local urethral treatment, prostatic massage and internal medication as previously given. He claims that much more benefit was received from the treatment after the injections of bacterin than had been obtained from the same treatment before these injections were given. After eight hypodermic injections of vaccine he seemed entirely cured and has had no further relapses in spite of alcoholic and venereal excesses.

History.—Mr. Y., aged 26, was referred to me on account of a gonorrheal urethro-cysto-prostatitis of ten years' standing, with constant recrudescences. Malarial infection was almost as deeply seated as the gonococcal infection. The attacks of malaria always brought on the discharge and but for presence of the gonococci he would have thought it due entirely to the malaria. Considerable improvement followed the first injection. The discharge and bladder symptoms disappeared after the third injection and the prostatic enlargement was greatly reduced, while after the fifth injection all of the trouble seemed entirely cured and the urethral shreds had disappeared. Not feeling sure, however, that latent infection might not still be present three more injections of vaccine were given. As far as I can judge now, the patient is well. The prostatic secretion is practically normal, both in quantity and quality. Sexual intercourse was indulged in April 6, without my permission, and was not followed by any return of the trouble.

These cases were selected as they represent a type of conditions which we find most difficult to cure permanently. Several others belong to this class, but most of the others thus treated were milder in character and responded equally well or even more satisfactorily to the bacterin therapy. When used judiciously I feel sure that by appropriate administration of vaccines we have a valuable adjunct in the treatment of gonorrheal conditions.

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BERI-BERI WITHOUT A DEFINITE RICE FACTOR.

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On Oct. 23, 1901 the Dutch ship *Nederland* dropped anchor in San Francisco Bay and her master sought the out-patient office of the U. S. Marine Hospital in that port. Here he told one of the tales of sea horrors which officers of this service must listen to, as long as owners are covetous and navigation laws are insufficient. A tale not of brutality of man to man, this, but of a long voyage, poor provisions, scant water, and finally out of the mysterious deep, this strange sickness which made strong men weak even to death. There had been no sickness on the voyage from Hamburg, though the "beans were bad" and water ran low. So the master made port at Santa Rosalia, Lower California, and with refilled tanks put out to sea. A few days later the men noticed a great weariness and weakness in the legs. They could not go aloft and no persuasion could make them move quickly. Then the dragging legs began to swell and the weariness to increase. This ran from man to man, one dying "from ruptures which came." Finally the mate was stricken, and the master by tremendous effort brought his crippled crew and short-handed ship to port at last. Now he had his mate and seven seamen to be treated, pending final disposition at the hands of the Dutch government. So to the hospital came a message to send both ambulances for eight cases of beri-beri, and as I was serving there as interne these cases came under my observation, from their coming ashore in a ship's boat until their final discharge, December 14, at the request of the Dutch government.

I had never questioned the diagnosis which seemed so apparent at the time, until this year, when I read a book on "The Cause and Prevention of Beri-beri" by W. L. Braddon, an officer of the Malay States government. As his book is an emphatic advocacy of the rice theory, and as he recognizes a ship disease resembling beri-beri, I wish to review these cases in the light of his observations, aiming to place them in the proper category.

The first thing noticed in these men was the gait of those who were able to walk. It was with feet wide apart, plunging and yet with a hesitancy about commencing each step. It appeared to be a combination of the ataxic and steppage gaits. In all the cases the temperature ran a nearly normal course, the respiration averaged 20 and the pulse ran between 90 and 100. The urine of all the cases was free from albumin and sugar. The following is a synopsis of each case on examination:

Case 1.—H. K. (Permit 247), age 20.

Onset.—Four weeks before admission, with pain in back and head, swelling of legs, nausea, but no vomiting.

Physical Examination.—Legs and feet edematous, dyspnea and palpitation of the heart on slight exertion. Pain and tenderness on pressure along course of nerves of legs and feet. Diminished power in muscles of legs, areas of anesthesia on legs. Knee-jerks diminished. Romberg's sign present. Heart and lungs normal.

Blood Examination.—Small mononuclears, 24 per cent.; large mononuclears, 8 per cent.; polynuclears, 63 per cent.; eosinophiles, 5 per cent.

This man still complained of pain a few days before his discharge; his legs were swollen, and he was unable to walk without assistance.

Case 2.—H. F. (Permit 248), age 18, a native of Germany.

Onset.—Three weeks before admission, with swelling of the feet, nausea and vomiting, feeling of weakness, no headache, no pain in the back, no soreness of the gums.

Physical Examination.—Edema of both feet and lower part of legs. Knee-jerks active right side, diminished left side. Loss of power, both legs. Hyperesthesia and anesthesia in definite areas of both legs. No Romberg's sign. Heart impulse violent, a systolic murmur at apex of heart, accentuated second pulmonic sound. Slight dulness over left apex of lungs, sounds normal. Abdomen showed tenderness over liver and spleen, no enlargement.

This patient grew much stronger, but at the time of his discharge still walked with difficulty.

Case 3.—M. C. (Permit 249), age 23, a native of the Danish Islands.

Onset.—Four weeks before admission, with swelling of legs and weakness, but no pain. Nausea, palpitation. No soreness of the gums.

Physical Examination.—Edema of both feet, no loss of power, no atrophy, areas of anesthesia on the soles of both feet. Presystolic murmur at aortic area. Pulse small, rapid, and irregular. Lungs normal Abdomen tender over liver and spleen. Liver enlarged.

At the end of a few days the heart murmur disappeared and the man grew much stronger before his discharge.

Blood Examination.—Small mononuclears, 19.5 per cent.; large mononuclears, 10 per cent.; polynuclears, 68 per cent.; eosinophiles, 0.7 per cent.; basophiles, 0.7 per cent.; myelocytes, 1 per cent.

Case 4.—A. N. (Permit 250), age 37, a native of Russia.

Onset.—Three weeks before admission, with loss of appetite, nausea, weakness, and swelling of legs. No soreness of gums.

Physical Examination.—Edema of legs, both knee-jerks lost, no anesthesia or hyperesthesia. Vision in both eyes lessened, hearing poor. Complained of pain on bending knees. Heart normal. Lungs normal. Abdomen, liver and spleen tender. Ascites present. This patient had persistent ascites, difficulty in vision, and difficulty in walking up to the time of his discharge.

Case 5.—I. B. (Permit 251), age 20, a native of Germany.

Onset.—Weakness, edema, vomiting, vertigo, pain in head and legs, dyspnea and palpitation.

Physical Examination.—Edema of both legs from the hips. Knee-jerks absent, areas of anesthesia in both legs. Legs stiff. Romberg's sign present, steppage gait. Heart normal. Pulse small, regular and rapid. Lungs normal. Abdomen tympanitic. Liver and spleen not enlarged. On this patient's history a week later appears a note that he had nose bleed every morning, and from November 11 to the date of his discharge he complained of formication all over the body, but especially on the inner side of the thighs. At the date of his discharge he had pain on walking and numbness in the legs.

Case 6.—C. T. (Permit 252), age 20, a native of Germany.

Onset.—Two weeks before admission, with weakness, swelling of feet, pain in legs and head, dyspnea and palpitation.

Physical Examination.—Slight edema of feet, tenderness along superficial nerves, no areas of anesthesia nor hyperesthesia, no loss of power, knee-jerks normal, no Romberg's sign. Heart normal. Pulse rapid but regular.

This patient had little difficulty in walking, and so was able to desert November 7.

Case 7.—S. B. (Permit 253), age 20, a native of Sweden.

Onset.—Two weeks before admission with weakness, edema, dyspnea and vomiting.

Physical Examination.—Edema of both feet and legs, legs stiff. Little difficulty in locomotion. Both knee-jerks absent. No loss of power in legs. Romberg's sign present. Diastolic murmur at apex of heart, diastolic murmur in aortic area, second pulmonic sound accentuated. Pulse regular, rapid and full. Lungs normal. Abdomen tender over the liver; tympanites.

This patient improved very rapidly, but still had some pain in the legs at the time of discharge.

Case 8.—O. H. (Permit 255), age 26.

Onset.—Two weeks before admission, with swelling in legs and feet, dyspnea on exertion, and difficulty in walking. No vomiting, slight soreness of gums.

Physical Examination.—Edema, pain in feet and legs, not localized to nerves. Anesthesia to touch on anterior surface of legs, pain sense present, power diminished. Walks with heel base extended, no Romberg's sign, no atrophy. Right knee-jerks gone, left present. Heart normal. Pulse rapid, full and regular. Lungs normal. Spleen and liver not tender or enlarged.

This patient deserted.

Treatment.—These patients were all placed on a diet of milk, eggs and fresh vegetables. After an initial dose of calomel, salts were given in small doses three times a day to influence the edema. For the nervous symptoms strychnin sulphate and one of the silver salts were given.

Beri-beri (Japanese, pirri-pirri-formication) is defined by Manson as "a form of peripheral neuritis, which occurs endemically and epidemically, characterized by edema, implication of the neuromuscular system of the central organ of circulation, absence of trophic skin lesions, paresis of the muscles of the head and neck, of marked implication of the organs of sight, hearing, taste and smell, and of the mental functions, troubles of locomotion, paresthesias of various descriptions, especially in the lower extremities, marked hyperesthesia of muscles involved with subsequent atrophy."

The paresthesias of beri-beri are segmental and not zonal. In early cases the skin areas supplied by the second and third sacral segments are anesthetic to cotton-wool touches. Later comes languor, fatigue on slight exertion, dyspnea and tachycardia, and, depending on the variety, edema, which is not present in the "dry" form. The knee-jerks may be exaggerated at first; later they are lost and the affected muscles atrophy.

The pathology of beri-beri consists of a parenchymatous degeneration of the nerves and a congestion of the stomach. It resembles the class of affections produced by ergot or the other cereal parasites as well as the neuritis due to alcohol or arsenic.

Braddon points out that:

1. Every beri-beric in the Orient is a rice-eater.
2. Persons on rice-free diet do not get beri-beri.
3. The importation of machine-milled rice into any part of the world is followed by beri-beri.
4. The users of home-milled rice do not get beri-beri.
5. If from any cause the home supply is exhausted, beri-beri will break out on the importation of machine-milled rice.

He, therefore, concludes that beri-beri is due to a saprophyte in the rice pericarp which invades the dead decorticated rice-grain or aleurone.

In the primitive preparation the rice is husked in a mortar and then boiled, causing the pericarp to adhere to the aleurone, but giving the rice a dull appearance. The adhesion of the pericarp prevents the invasion of the aleurone by the toxic agent, and rice so prepared does not cause beri-beri. But, on the other hand, a final step in the machine milling of rice is its being passed through leather polishers, thus removing the pericarp, whose broken parts mix with the kernels and allow the toxic agent free access to the rice grain, a step which produces a finer-looking grain, but a more dangerous article. Braddon sounds a note of warning against the rice-mill in its present form and suggests boiling the rice before milling to cause adhesion of the pericarp as a prophylaxis against beri-beri. He is of the opinion that the growth of beri-beri in this country will depend on the methods of milling employed in the rice-growing states. So insistent, indeed, is Braddon on his rice theory that he is inclined to discredit any reported cases of beri-beri occurring in the absence of a rice factor in the diet. He points out two ways by which the rice factor may have been unwittingly introduced:

1. By the use of foodstuffs adulterated with rice-powder.

2. By the use of food which has been stored in bins once occupied by rice.

He also describes a ship disease, a form of ptomain poisoning, with gastric symptoms, fatigue and edema, but no nerve implication.

To return to the crew of the *Nederland*. These men lived on ship's bread, salt meat, and beans. From an occidental ship owner's standpoint, rice was far too great a luxury for a merchant crew. The men all spoke of the beans as being "mouldy," and this may have introduced a ptomain factor, though the disease rather followed the slow incubation period of beri-beri than the rapid course of ptomain poisoning.

With regard to the other symptoms of Braddon's ship disease, fatigue and edema, these also occur in beri-beri. The nausea and vomiting present in several of these cases might belong to ptomain poisoning, but the morbid anatomy of beri-beri shows a congested stomach, and some gastric symptoms would be expected. As for rice-bins, these are not so common in European ships as in those plying between the ports of the Orient, which carry native crews and regard rice-bins and great cooking-pots as much a part of equipment as anchors. At this late date I am unable to deal with the question of the adulteration of the ship's bread with rice-flour, but adulteration is usually practiced to cheapen the production of an expensive article, such as arrowroot. Would it be worth while to adulterate hardtack? Braddon's disease shows no nerve implication. How many of Manson's symptoms and signs were present in these cases?

Atrophy was not observed, as the oldest case was only of four weeks' standing when received at the hospital. The men left before any atrophy appeared, and it was not possible to follow them after discharge.

In one case only were disturbances of special senses of sight and hearing noted, while it is very hard to judge of mental disturbances in north-country sailors. The cases showing hyperesthesia were extremely sensitive to touch or grasping of the muscles in the affected areas.

We found in every case edema, dyspnea, tachycardia or palpitation, languor, fatigue on exertion; in every case but one hyperesthesia and anesthesia, in one case definite formication, in one case disturbed vision and hearing; in every case but two, trouble in locomotion, varying from slight stiffness to inability to stand. In every case but two, we found involvement of the knee-jerk, in three cases Romberg's sign was present, and in all cases but one there were pains in the affected muscles.

In the absence of a rice or other toxic grain element in the diet, unless the ship's bread was contaminated, the rice theory will not suggest a cause for what appears to have been an outbreak of true beri-beri.

I have to thank the Surgeon-General of the Public Health and Marine-Hospital Service for permission to report these cases, and also the medical officer in command, U. S. Marine Hospital, Port of San Francisco, California, for copies of the case histories.

HYPERNEPHROMA OF THE KIDNEY,

WITH METASTASIS TO THE MANUBRIUM STERNI, SIMULATING ANEURISM OF THE AORTA.*

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The term hypernephroma has been applied to a new growth that, while exhibiting considerable variability in histologic arrangement, still presents the general structure of adrenal tissue. It may involve the adrenal gland itself, or be situated in some other organ or tissue. In the first instance it is to be looked on as a hyperplasia of normal tissue, while in the second it is believed to arise from misplaced so-called adrenal "rests." Accessory adrenals, or misplaced adrenal tissue, is said to be not uncommon, and has been found not only in the immediate vicinity of the adrenal gland, beneath the capsule of the kidney, in the substance of the kidney itself, but also in the renal and solar plexuses, in the broad ligament and the ovary, in the testicle, between the testicle and the epididymis, along the spermatic vein, in the liver and in the retroperitoneal connective tissue.

The exact histogenetic position of the hypernephroma is not yet definitely established. The macroscopic and microscopic characters of the tumor have been fully described in the literature. Hypernephromata may be small and benign, remaining confined to the tissue in which they originate, or large and malignant, breaking down the characteristic capsule by which they are surrounded, and involving contiguous structures, or penetrating a vein, and giving rise to more or less widespread metastases. In this respect they bear an analogy to adenomata, which, while ordinarily benign, may at any time assume malignant qualities. There is, however, no necessary relation between the size of the neoplasm and its degree of malignancy.

The kidney is the most common seat of primary hypernephroma, while secondary growths have been observed in almost every tissue of the body, especially in the bones. The latter may be the sole seat of metastasis, and the secondary growth may be the first indication of the disease. On the other hand, the metastatic growth may appear many years after surgical removal of the primary growth.[1] In one instance pulsation was observed in a secondary hypernephroma of the tibia.[2] A single metastasis is a peculiarity of hypernephromata. Retrogressive changes often occur in the neoplasm, such as necrosis and fatty metamorphosis, and hemorrhage may result.

The tumors vary considerably in size, and the symptoms to which they give rise correspond in general with those caused by other forms of neoplasm. Small growths may altogether escape clinical recognition and be discovered only at autopsy.

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*Read before the Association of American Physicians, May 14, 1908.

[1] Paul Clairmont (Arch. f. klin. Chir., 1904, lxxiii, 620) reports a case in which, almost ten years after surgical removal of a tumor of the kidney, a hypernephroma developed at the bifurcation of the trachea.

[2] von Bergman. Verhandl. d. Deutsch. Gesellsch. f. klin. Chir., xvi, Congr., 1887, 30.

Hematuria appears to be less common in connection with hypernephroma, both generally and as an early symptom, than with other forms of malignant disease of the kidney. The amount of hemorrhage is extremely variable, as are likewise the intervals between attacks. The bleeding may take place spontaneously or be induced by various causes, such as physical exertion, manual examination or cold. A point in favor of hypernephroma as compared with other forms of malignant disease of the kidney is the long period of time over which attacks of hematuria are sometimes repeated. In the absence of a palpable tumor the site of pain in connection with such attacks is an indication as to the organ affected.

The amount of urine is likely to be diminished, and microscopic amounts of blood, as well as albumin and tube casts, may be present. Pain over the affected kidney, apart from hematuria, is not uncommon. It may be an early symptom, and, like hematuria, it may be present for a long time before the actual disease becomes manifest. It is sometimes radiating in character or referred to the testicle on the corresponding side.

A palpable tumor is present at some period of the disease in most cases, though rarely as the initial symptom. Cachexia is more commonly absent than present. Digestive derangements may be superinduced by pressure from the growth or as a result of reflex influences. Occasionally painless varicocele, not disappearing in the recumbent posture, may develop rapidly in a case of hypernephroma of the kidney. Fever has been noted in some instances.

Nephrectomy is the only permissible treatment when the condition is recognized, except in the presence of multiple metastases and of complete immobility of the tumor.

While most common in adult life, hypernephromata have been observed at all ages, and even in the newborn. Men appear to be the victims in greater number than women. Neither kidney seems to be more predisposed than the other.[3] The affection may last from a few months to a number of years. While not common, it can scarcely be said to be rare.

I have had the opportunity of observing a case of hypernephroma of the kidney in which a secondary growth in the manubrium sterni was mistaken for an aneurism of the aorta, its exact nature, as well as the presence of the primary growth and of other secondary growths, being discovered only at autopsy.

Patient.—A married white woman, aged 60, born in Ireland, was admitted to the Philadelphia General Hospital Feb. 5, 1907, complaining of pain and swelling in the upper extremities.

History.—Her father had died at 75; her mother at 50, from asthma and dropsy. A brother had died at 40 from an unknown cause, and one sister in infancy. A second sister had died insane. The patient had never been pregnant. Menstruation had begun at 15 and had been regluar and painless until the menopause at the age of 45. The woman had used tea and alcohol excessively, but she denied venereal disease. She had had measles and chicken-pox in childhood, and pneumonia at 51. She had suffered from bronchitis and had had both cataractous crystalline lenses removed. She had been treated earlier in life for swelling of the knees thought to be rheumatic, and her kidneys were at one time said to have been diseased. She had also complained of pain in the hips. Eighteen months before coming under observation the patient had noticed a swelling at the upper part of the sternum, which had gradually increased in size until it attained the proportions of a "clenched fist." There was no pain, and the patient could not recall whether there had been pulsation or not. Under treatment with an ointment the swelling diminished considerably in size. Some six months later the patient had attacks of vomiting independently of the ingestion of food, all readily relieved by treatment. After the lapse of a year or more the swelling again exhibited increase in size for a time, subsequently to become smaller. There had been no difficulty in swallowing, no unilateral sweating, no dyspnea, no palpitation. The appetite was poor, the bowels constipated. There had been gain in weight rather than loss, and the patient was quite well nourished and free from cachexia. She occupied the dorsal decubitus principally, and slept much of the time.

Examination.—The skin of the face was pallid and was marked by numerous dilated capillaries. The pupillary area of the right eye was the seat of a dense opacity, while the left pupil was irregular in outline. Neither pupil reacted to light. The pulse was small, infreqnent, arrhythmic, alike on both sides, and the vessels were thickened. The manubrium sterni was the seat of a swelling of considerable size, yielding evident pulsation synchronous with that of the heart and having an expansile character. The tumefaction yielded a sense of elasticity on manipulation and a dull note on percussion. No thrill was palpable, but a loud systolic murmur was audible on auscultation over the mass, together with the second sound of the heart. The apex beat was visible in the fifth left interspace outside of the midclavicular line. The cardiac impulse was of moderate intensity, but a distinct thrill was palpable. The action of the heart was markedly arrhythmic. In the aortic area a short, squeaking systolic murmur was audible and transmitted into the carotids; it could be heard also at the ensiform cartilage. A systolic murmur was audible likewise at the apex of the heart. Except for a few moist râles at the bases, the lungs exhibited no abnormality. An *x*-ray examination made in the hospital laboratory failed to show the presence of an aneurism of the aorta, while the right, and perhaps also the left, ventricle appeared to be dilated and displaced to the left. A few small glands (calcified) were visible at the apices of both lungs and in the mediastinum. Numerous dilated superficial vessels were visible on the lower extremities. The urine contained albumin and ganular casts. The number of leucocytes in the circulating blood was 13,000 to the cubic millimeter. The abdomen exhibited no abnormality.

Subsequent History.—While under observation the patient complained of occasional pain referred to the sternum, while the tumor diminished in size. On April 25, 1907, retention of urine set in, with overflow dribbling, so that catheterization became necessary. On April 28 there were occasional attacks of vomiting after food, and the general condition was growing gradually worse, with increasing weakness. On May 9 a typhoid state had developed, with low, muttering delirium and incontinence of urine. Finally coma set in and death took place on May 16.

Autopsy.—On postmortem examination the body was found to be well developed, with rather an excess of subcutaneous fat, although the abdominal muscles were thin and pale. Over the manubrium sterni was a small lemon-sized tumor of soft consistency, which on incision exhibited a grayish color. This was found to involve the entire manubrium and the cartilages of the first and second ribs at their junction with the sternum. The right kidney contained at its lower pole close to the pelvis a new growth 4 by 5 cm. in dimensions, of firm consistency and gray color, and containing areas of softening. The uterus at its fundus contained two small chestnut-sized growths, and the left lung a calcareous nodule at its apex and a smaller nodule at its base. On histologic examination the growths in the kidney, lung and uterus and sternum exhibited the structure of hypernephroma. The heart was dilated and its musculature the seat of fatty metamorphosis. The aorta was atheromatous and its valves sclerotic. The lungs were congested and edematous. The kidneys were the seat of passive congestion, with probable parenchymatous changes.

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[3] Keen, Pfahler and Ellis (Trans. College of Physicians of Philadelphia, 1904, xxvi, p. 267) found the tumor on the right side in 18 of 26 collected cases; while Albrecht (Arch. f. klin. Chir., 1905, lxxvii, 1073) found the right kidney involved in 9 cases and the left in 19.

The age of the patient, the evidence of arteriosclerosis, the presence of a pulsatile and expansile tumor in the course of the aorta, a murmur on auscultation, improvement in the dorsal decubitus together suggested the existence of aneurism, but this conclusion was not confirmed by the *x*-ray findings. The exact nature of the disorder, however, remained undiscovered until disclosed by postmortem examination.

1019 Spruce Street.

Clinical Notes

A CASE OF NON-TRAUMATIC HEMOTHORAX.

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Non-traumatic hemothorax is a rare condition. It is generally due to the erosion of a vessel due to some pathologic lesion. In tuberculosis of the lung, the pulmonary arteries or their branches are those generally involved. The tuberculous process weakens the walls and in many cases numerous aneurisms are formed. This condition appears to be present more commonly about the middle of the lung and at the periphery (West).

Search through the literature gives ample proof that but few cases of non-traumatic hemothorax occur, or at least, are reported. Sticker and Dieulafoy both affirm that hemorrhage (non-traumatic) from the lungs can take place into the pleura. A case has been reported of hemothorax due to tuberculous erosion of an intercostal artery, and W. H. Walsh[1] reports two cases, recorded by Andral, of hemorrhage into the pleura—"pleurisy had long existed and in both instances the patients were tuberculous." Dr. Watson (1862) records a remarkable case in which an enormous hemothorax had caused enlargement of the left side of the chest, effaced the intercostal spaces and pushed the heart over to the right of the sternum. The condition was caused by "scrofulous ulceration," destroying two of the ribs, and laying open one of the intercostal arteries. Recently T. B. Richardson[2] has reported a case of hemothorax, probably due to secondary carcinosis of the lungs.

The following case, I desire to record.

Patient.—H. T., aged 35, married, occupation clerk, presented himself November 13, with the following history:

History.—Previous diseases, none of importance. Family history, negative, except that one brother died at 27 of some "lung trouble." Past history, pain in left arm and shoulder and cough at intervals during past two years; loss of 23 pounds in weight; sputum examination negative. Present symptoms, same as previously, with fatigue and dyspnea and slight dyspepsia; no hemoptysis or night sweats.

Examination.—This showed impaired resonance in both supraclavicular regions and in left infraclavicular. Auscultation was negative, except that a few sibilant râles were heard at the inferior angle of left scapula during inspiration. Heart sounds were weak, but otherwise normal. Blood examination showed hemoglobin 70 per cent., leucocytes 10,000, red blood corpuscles 5,400,000. Urine was normal, except for a hyaline cast and a few red blood corpuscles. Calmette's ocular reaction gave a negative result. Tuberculin hypodermically gave a positive result.

Treatment.—The patient was placed on the open-air treatment, with weekly administration of tuberculin in the form of bacillen emulsion (B. E.), starting with 0.0000001 gm.

Subsequent History.—On January 1 the patient had a febrile attack, from which he apparently recovered completely. An examination of the lungs showed at this time a considerable extension of the lesion beyond that found at the first examination. Until January 9 the patient seemed to be improving and had gained another pound. On the morning of that day his wife called me by telephone, saying that her husband had shown a few streaks of blood in his sputum, and requesting that I come to see him. I arrived at the house at 10 a. m. and found the patient in bed, nervous and apprehensive; temperature, 98; pulse, 84. After a few moments' conversation he was reassured, and then announced his intention of getting up. He was advised, however, to remain quiet for a day or two before returning to business. His wife and I went into an adjoining room. In a few moments the patient, who had slipped on a dressing gown, joined us, remarking that he felt perfectly well. The opportunity was taken to go over his lungs again. Findings were about the same as on January 1. The examination completed, he resumed his seat in a reclining chair. In 10 or 15 minutes he complained of a sharp pain low down in the left axillary region. This soon became agonizing. He was immediately placed in bed and hot applications employed. His condition rapidly became grave; pulse, 130, weak and small; face and mucous membranes pale; expression anxious; dyspnea, restlessness, cold extremities and a moderate amount of thirst. The symptoms all pointed to shock and probable hemorrhage. There was no hemoptysis, excepting a few streaks of blood in sputum. In about two hours he had improved; pulse dropped to 120 and pain had ceased; color and breathing much better, and general appearance encouraging. It was explained to his wife that there had probably been bleeding from an artery into a cavity of the lung, but presumably this was comparatively small in amount and had ceased. I then left, promising to return in a few hours, leaving instructions that the patient must not move under any circumstances, and that I be telephoned for immediately if any unfavorable symptoms developed. I returned to the house about 5 p. m. and found the undertaker preparing the body. The patient had died an hour before. His wife had been unable to reach me at once and had called another physician. Unfortunately an autopsy under the circumstances was impossible. I felt assured, however, that there had been a hemorrhage somewhere, and with this theory in view made a careful examination of the body. Over the left of the thorax on percussion dulness was found; a large trocar was borrowed from the undertaker and plunged into the left pleural cavity in the sixth interspace, axillary line; 40 ounces of blood were evacuated.

It seems possible from this case to draw the following conclusions:

1. That on the morning of the day the patient died, there was absolutely no fluid in the chest, which simply showed the signs of a moderate tuberculous infection.

2. Although purely surmise, we may believe that a branch of the pulmonary artery, on the periphery of the diseased lung, had become involved in the tubercular infection, the walls weakened and an aneurism formed; this ruptured and the blood following the course of least resistance, tore through the weakened lung tissue and pleura into the pleural cavity, thus giving the acute pain and symptoms of shock.

3. The immediate causes of death were probably shock, loss of blood, and sudden displacement of, and interference with, the heart, by the large amount of fluid quickly filling the left pleural cavity.

Invention of Matches Credited to a French Physician.—A French exchange states that the small town of Saint-Lothian in the Jura Mountains of eastern France has recently erected a modest monument to a local physician of nearly a century ago, C. M. Sauria, who is credited with having been the first to invent matches lighting by friction alone.

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[1] A Practical Treatise on Diseases of the Lungs, 1871.

[2] Dominion Med. Monthly, 1903, xx, 193.

ABSCESS OF WHARTON'S DUCT: ACUTE RANULA.

RICHARD H. JOHNSTON, M.D.
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History.—In December, 1907, Mrs. C. M. consulted me for severe lancinating pain in the mouth and tongue. She had not been able to sleep for two nights. Speech was thick and she talked with the greatest effort. For several months she had had from time to time a swelling under the angle of the lower jaw which would cause some pain for a few days and then disappear. The present attack was the worst she had experienced.

Examination.—The mouth was opened only with the greatest difficulty and the tongue could scarcely be protruded between the lips. On raising the tongue a soft, rounded mass presented itself at the opening of Wharton's duct. The submaxillary gland was swollen and painful. There could be no doubt that the swelling was an abscess of the duct and the inference was that somewhere in the duct a stone had formed.

Treatment and Result.—After applying cocain, the abscess was opened by a deep, long incision. There was a gush of pus, followed by the ejection of a semisolid mass. Relief was almost instantaneous. The ejected mass proved to be a small stone surrounded by a soft substance having the appearance and consistency of cooked macaroni. The stone had probably formed some time before and caused the frequent swellings of the submaxillary gland by obstructing the duct. The escape of the stone was fortunate, since its removal is usually attended with some difficulty on account of its tendency to adhere to the walls of the duct.

Salivary calculi are made up of phosphate and carbonate of lime and some organic matter. They are usually spindle-shaped and vary in size. In Puzy's case the calculus was 1½x1x½ inches and the weight was 7.6 gm. When the duct is entirely obstructed a ranula forms and this may suppurate as in the above case. The patient in this case was well in a few days and has had no return of the trouble.

919 North Charles Street.

ESOPHAGEAL STENOSIS:

A NEW METHOD FOR THE DIAGNOSIS AND MANAGEMENT OF CERTAIN FORMS.

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CINCINNATI.

Some years ago I made a brief reference to a method for overcoming spasmodic stenosis of the cardia. Since then I have had opportunity of employing and demonstrating this procedure where other methods were not available. So far as I know this method has not been previously described.

After esophageal stenosis has been determined by the introduction of sounds of proper size, it depends on the aspects of each individual case what further instrumentation is permissible. The object of passing a sound through a constricted, or partly obstructed, portion of the esophagus is either to dilate the passage, or to reach the stomach, as with the stomach-tube. The passage of a sound may in itself give information as to the nature of the obstruction.

Complete and most persistent obstruction to the passage of food, and especially to the sound, may be caused by purely spasmodic contraction. This may occur at any place in the esophagus, but perhaps most frequently at the cardia. It is considered that cardiospasm may be so unyielding as to give rise to diverticula of the esophagus.

Frequently such spasmodic strictures will relax when continued, firm, even pressure is made with the sound, but this is not always true. Such procedure, on the other hand, is very likely to give rise to abrasions of the mucous membrane of the esophagus which, especially at the cardia, may in itself give rise to continued spasm.

There is also constant danger of perforating the esophagus, as in the unsuspected presence of carcinoma or an aneurism, or of opening of esophageal varices.

The following method is, probably, the safest and simplest for overcoming esophageal stenoses that may be overcome. It substitutes a water column for the solid sound. It is contraindicated in all cases where the simple introduction of a sound or stomach-tube is contraindicated.

Having located the site of the obstruction with the olive-tipped bougie, a stomach-tube of proper size is passed to the obstruction. The tube has an opening only at its lower end and no lateral fenestræ. At its middle is inserted a bulb. The tube is now filled with water, raised, and its upper end compressed with the fingers. Firm, even, continued pressure is now made on the bulb by the operator. A column of water is thus pressed against the obstructing tissue. If the obstruction is purely spasmodic, it will suddenly relax and the water is felt to pass from the tube, which follows instantly and easily.

If the obstruction is organic and incomplete, the water will gradually pass, by this method, through the obstructed portion, but the tube does not follow. A similar result will follow if the obstruction is partial from organic cause but is made complete by a spasm.

The safety of this procedure lies in that before the esophagus can be injured or ruptured in the presence of an unyielding obstruction, the water will return along the side of the tube. In compression from an unsuspected aneurism the danger of perforation will also be lessened.

22 West Seventh Street.

IODIN IN TREATMENT OF ULCERS.

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About two years ago I began using iodin for ulcers by painting the skin up to the edge of the ulcer. This produced such good results that I ventured to use it on the surface of the ulcer itself. The effect has been excellent. I have found this application of iodin a very efficient means of converting a septic ulcer into a clean, granulating wound which heals readily. I use it in a concentrated form or a saturated solution in alcohol and apply it every day or as often as is required until the slough separates, when an ordinary dusting powder and gauze may be applied. The iodin should then be discontinued, but if any unhealthy or superfluous granulations appear, it should be again applied. It quickly changes a phagedenic ulceration into a healthy condition. I have used it in many forms of mouth and throat troubles by painting it over the surface. It will arrest and cure pyorrhea alveolaris. I would suggest the free use of it in cancrum oris. The application is usually painless. It is extremely serviceable in infected wounds.

CEREBROSPINAL RHINORRHEA.

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History.—Mrs. H., aged 44, never seriously ill, was, in October, 1907, subsequent to an attack of influenza, forcibly clearing the posterior nares by inspiration through the nose when she detached a scab of the size and appearance of a vaccine crust. Immediately there was a profuse discharge of a saltish fluid from the right nostril; this has been continuous ever since. She visited me at my office Jan. 5, 1908.

Examination.—She was a large woman, fat, and of good color. Her forehead, cheeks and chin were covered with a shield-shaped eruption (eczema rubrum) due to constant use of handkerchiefs to keep the discharge from soiling her clothing. She could divert the discharge either to the nostril or pharynx at will, by inclining the head forward or backward. She had been treated by plugging the nose and the use of argonin, arsenic and sodium bromid and belladonna. The chronicity and quantity of the discharge, which escaped at the rate of three drops a minute, convinced me I was not dealing with an ordinary rhinitis.

Examination of Fluid.—The fluid was transparent and in it were two flakes of mucus, floating. On standing, there was a deposit of epithelial cells from the nares. No cells from the cerebrospinal cavity were seen. The fluid was alkaline, with a faint reaction for sodium chlorid. The application of heat and nitric acid gave no deposit. On cooling, a faint white cloud appeared, showing the presence of albumose, and it reacted with a reddish-orange deposit to Fehling's test.

According to Simon, the above reactions in a discharge coming from the nostrils indicate that it is cerebrospinal fluid. Traumatisms of the skull, spinal punctures and cerebral tumors causing a breach of the membranes enveloping the brain have made us familiar with the chemistry of this fluid.

A letter, dated February 24, says that the discharge continues. A careful examination when I last saw her failed to show any visual or muscular defects of the eye. There were no cerebral disturbances and the reflexes were normal.

Sidney I. Schwab and John Green, Jr.,[1] report one case with a summary of twenty cases of cerebrospinal rhinorrhea reported by Dr. St. Clair Thompson,[2] all the known reported cases at that time (1899). From this paper we learn that about 75 per cent. of the patients suffer from visual defects, such as optic neuritis, optic atrophy and hemiopia. The diagnosis in such cases rests on the analysis of the fluid. The prognosis as to recovery is unfavorable, though the danger from infection does not seem to be great. Patients have lived from five to ten years. There is no treatment which promises relief.

A CASE OF VINCENT'S ANGINA WITHOUT SPIROCHETES.

COMMENTS ON THE USE OF DIRECT SMEARS IN DIAGNOSING ACUTE EXUDATIVE AFFECTIONS OF THE THROAT.

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CHICAGO.

It is the belief among many physicians that acute diseases of the throat with exudate can be promptly and conclusively diagnosed from the direct smear alone, thus saving whatever time would elapse before the culture is ready for examination. Because of this I am often pressed for a decision from a direct smear, although I have certain firm convictions concerning the value of such examinations.

It has been my experience that when direct smears from an exudate show only cocci and the tendency, therefore would be to diagnose an absence of diphtheria, cultures on Loeffler serum may produce characteristic diphtheria bacilli. On the other hand, there are, from other exudates, microscopic pictures in which there are bacilli so much like diphtheria organisms that a positive diagnosis of Klebs-Loeffler infection would be made and the culture disprove this conclusion. I have, therefore, been rather dogmatic to students in this relation and insist that the absence of diphtheria can never be decided by direct smear alone, and that in isolated instances the presence of diphtheria may be reported, if there is the proper evidence. This evidence, it is taught, consists of predominance of bacilli of the size and morphology of the Klebs-Loeffler bacillus, without insisting on the presence of granules in the bacilli. Such more deeply staining structures in the bacillus assist in the diagnosis and are always to be searched for, but their absence need not necessarily negative the diagnosis. Caution, in any case, is rigidly taught, and cultural methods are always to be used for control.

With this rather trite introduction, the case to be reported is of interest. The patient had an exudate and an immediate diagnosis was requested. Nineteen direct smears were examined by as many members of a section in clinical pathology, and controlled by me. In practically every specimen there was an overwhelming predominance of slender, somewhat pointed bacilli of about the length and thickness of the Klebs-Loeffler organism. Diphtheria was diagnosed. Special note was made of the pointed extremities and the possibility of Vincent's angina was considered in the discussion of the smears, but the absence of spirochetes, except one found by the instructor in all the specimens, was believed for practical purposes to rule out that affection, although the occurrence of only the fusiform bacilli in that disease was mentioned. Knowing of the presence of spirochetes in the mouth, this single one was at the time adjudged one of that kind. The culture was absolutely negative, even after 48 hours.

So this case is adjudged Vincent's angina without spirochetes from the absence of diphtheria and other organisms in the culture, from the abundance of fusiform bacilli in the smears, and from the inability to grow them under aërobic conditions.

ADHESION OF APPENDIX TO UTERUS.

D. T. QUIGLEY, M.D.
NORTH PLATTE, NEB.

History.—The patient was a woman, 20 years of age, wife of a physician, formerly a trained nurse, family history good, and no ill health previously, except that about a year before my seeing her, during her hospital work, she had had an attack which had been diagnosed as appendicitis. This passed off in a few days and she had no more trouble, except occasional soreness in the abdomen.

At the time I saw her she had fever of two or three degrees. She had been vomiting almost incessantly for three weeks, but what gave her the most trouble was a very severe pain in the lower abdomen. The pain was continuous, and at times took on a cramping character which made it excruciating. She had been having increasing doses of morphin, hypodermically, for three weeks, and as the morphin was becoming a menace to her life, and her condition was becoming steadily worse, I advised an operation as soon as preparations could be made.

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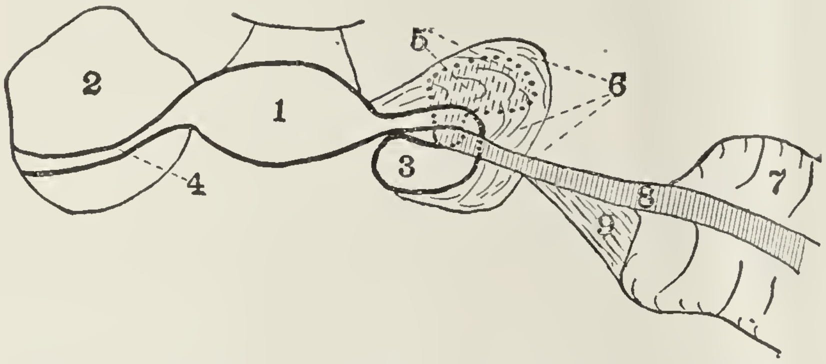
1. Am. Jour. Med. Sci., May, 1905.
2. Brit. Med. Jour., 1899.

Operation.—I operated the second day afterward, and on opening the abdomen I came at first on an ovarian cyst as large as an orange. On account of many and firm adhesions, which had to be carefully separated with the scissors, its removal was rather tedious. After removing the cyst I inspected the other side and was surprised to see the appendix in plain view, like a cord stretched across from the cecum to the body of the uterus. The swelled and bulbous tip of the appendix, containing pus, was held under the Fallopian tube by the tube being bent backward, completely encircling the body of the appendix. The mesentery of the appendix was taut, and as this contains a rich supply of sensory nerves the stretching of the mesentery probably caused the acute exacerbations of pain.

It has been shown by the investigations of Mitchell, of Washington, D. C., and Lennander of Upsala, Sweden, that the abdominal viscera are not sensitive on account of not being supplied with sensory nerves, but that the mesentery and its connective tissue is richly supplied with sensory nerves, and in the case of structures like the mesentery of the appendix and the broad ligament traction causes the most intense pain.



Adhesion of appendix to uterus: 1, fundus of uterus; 2, ovarian cyst containing mucopurulent fluid; 3, bulbous tip of Fallopian tube containing pus; 4, atrophied Fallopian tube; 5, bulbous tip of appendix containing pus and covered with (6) inflamed and thickened broad-ligament; 7, cecum; 8, appendix; 9, mesentery of appendix on stretch.

In this case the fact that the tube and the appendix were locked together gave the ideal condition for the production of pain in this way. The more the inflamed tip of the appendix swelled the more traction was exerted on the mesentery and the broad ligament. The tube being swelled tended to pull on the broad ligament and the mesentery in the same manner.

Winter Infantile Gastroenteritis.—Decherf, in the *Bulletin de la Société de pédiatrie de Paris*, No. 1, January, 1908, calls attention to a local agricultural practice that explains the prevalence of epidemics of infantile gastroenteritis in the north of France during the fall or winter months. He traced a small epidemic of six cases, one of them fatal, to the use of the milk of cows fed with fermented ensilage. Every care had been taken in having the milk duly sterilized, and infection could therefore be excluded. It is in the north of France that infant mortality is highest, and it is there that such feeding of cattle prevails. The farmer's stock of feed is usually exhausted about the middle of October and then he has recourse to the refuse from the distilleries and beet-sugar manufactories, and the leaves of the beets, and a sort of cabbage planted after the harvest, are used temporarily as the exclusive diet of the herds. The choleraic disorder is attributed by Decherf to toxins produced in the cow's organism by this diet of ensilage, which imparts a special flavor to the milk and butter. It is mentioned as a notable fact that this local form of infantile gastroenteritis is unfavorably affected by the use of buttermilk. It yields, readily, however, to a "water diet," which seems to be the treatment of choice. In other respects it can not be readily differentiated from the gastroenteritis of different origin.

Our Foreign Guests

The Chicago session of the American Medical Association—as is usually the case—will be honored by the presence of a number of distinguished foreigners who will participate in the proceedings.

A few of the men who intended to be present have been unavoidably prevented from attending. We give below brief sketches of some of those who will be present.

Charles Edward Beevor.

Charles Edward Beevor, M.D. Lond., F.R.C.P. Lond., who is to read a paper on "Associated Movements" before the Section on Nervous and Mental Diseases, was born in London in 1854. He received his medical education at University College, London, receiving the degree of doctor of medicine in 1881. He became a fellow of the Royal College of Physicians in 1888. In 1903 he was Croonian lecturer at the Royal College of Physicians, and in 1906 he was Lettsomian lecturer, Medical Society of London. He was president of the Neurologic Society in 1907. The following are some of his published works: "Diseases of the Nervous System;" "Muscular Movements and Their Representation in the Central Nervous System;" "Knee-Jerk and Conjugate Deviation of the Eyes After Epileptic Fits;" "Electric Excitation of the Cortex of the Orang-outan;" "Motor Functions of Certain Cranial and Cervical Nerves in the Monkey."

Edward Treacher Collins.

Edward Treacher Collins, F.R.C.S., L.S.A., who is to deliver an address on "Developmental Deformities of the Crystalline Lens" by special invitation before the Section on Ophthalmology, was born in London in 1862. He received his education at the University College School and Middlesex Hospital. He was house surgeon at the Royal London Ophthalmic Hospital from 1884 to 1887, and pathologist from 1887 till 1894. He was in Persia in 1894, at which time he was decorated with the Order of the Lion and the Sun. In 1893-94 he was Hunterian professor of pathology and surgery at the Royal College of Surgeons and he was Erasmus Wilson lecturer in 1889-90. He is ophthalmic surgeon at the Charing Cross Hospital and lecturer on ophthalmology at the Charing Cross Hospital Medical School and at the London School of Tropical Medicine; he is also visiting ophthalmic surgeon to the Metropolitan Asylums Board's ophthalmic schools.

August Martin.

August Martin, who will read a paper on "Genital Tuberculosis" before the Section on Obstetrics and Diseases of Women, was born in Jena, July 14, 1847. He was graduated at Berlin in 1870 and after being assistant at the Berlin gynecologic clinic for four years he was, in 1876, appointed lecturer on obstetrics and gynecology. Since 1899 he has been at the Greifswald University, at which institution he now occupies the chair of gynecology. In 1895 he founded, with Sänger, the *Monatsschrift für Geburtshilfe und Gynäkologie*. Among his writings are the following: "Manual of Obstetrics," written in conjunction with Carl Ruge; "The Urine of the New-Born;" "Text-Book on Obstetrics;" the articles on "Pregnancy," "Ovary" and "Fallopian Tube" in Eulenberg's "Real-Encyklopädie" and "Handbook on Diseases of the Adnexa." He has also made valuable contributions to the literature of extra-uterine pregnancy, tumors, abnormal implantation of the impregnated ovum and other gynecologic subjects.

Johannes Pfannenstiel.

Johannes Pfannenstiel, who was born in Berlin, June 28, 1862, will read a paper on "Abdominal Cervical Cesarean Section" before the Section on Obstetrics and Diseases of Women. He studied in Berlin and was graduated in 1885, from which time until 1887 he was assistant physician at the City Hospital in Posen. From 1887 to 1893 he was assistant physician at the Royal Gynecologic Clinic at the University of Breslau, under Fritsch. He was appointed lecturer in obstetrics and gynecology in 1890 and in 1896 received the title of professor. Since 1891 he has been secretary of the German Gynecologic Society. From 1896 to 1907 he was head of the gynecologic department of the hospital of the Elizabethan Sisters at Breslau; he is now professor of obstetrics and gynecology at Kiel. He has published, among other works, the following: "Pathology of the Ovary;" "Pseudomucin of Cystic Ovarian Tumors;" "Diseases of the Ovary and Parovarium;" "Tumors of the Uterus;" "Implantation of the Ovum and Development of the Placenta," and "Origin of the Syncytium."

Ernst Ferdinand Sauerbruch.

Ernst Ferdinand Sauerbruch, whose paper on "Negative Pressure in Surgery of the Chest" will be read before the Section on Surgery and Anatomy, was born at Barmen, July 3, 1875. He studied medicine at the universities of Marburg, Jena and Leipsic, taking his state examination at the last named institution and receiving his doctorate degree. After several years' service as assistant in the large hospitals at Cassel and Erfurt, and at the Moabit in Berlin, in 1902 he entered the surgical clinic at Breslau, which was then under the direction of Mikulicz. During his work with Mikulicz he perfected his pneumatic chamber for use in intrathoracic surgery. After the death of Mikulicz Sauerbruch went to the surgical clinic at Greifswald under professor Friedrich. Since October, 1907, he has occupied the position of chief of the surgical clinic of the University of Marburg and has charge of the surgical dispensary. A few of his many published works are the following: "Exclusion of the Injurious Action of Pneumothorax in Intrathoracic Operations;" "Operations on the Thorax by Means of the Sauerbruch Chamber;" "Bloodless Operations on the Skull under Increased Pressure with Contributions to the Knowledge of the Cerebral Pressure," and "The Applicability of the Reduced Pressure Method in the Surgery of the Heart."

Edward Albert Schäfer.

Edward Albert Schäfer, LL.D., M.R.C.S., F.R.S., who will read before the Section on Pathology and Physiology a paper on "Artificial Respiration in Its Physiologic Aspects," was born in London in 1850. He received his medical education at the University College, London. He became a member of the Royal College of Surgeons in 1874 and at that time was assistant professor of physiology in University College. He received the degree of LL.D. in 1897 from the University of Aberdeen and that of D.Sc. from the University of Dublin in 1905. He was Jodrell professor of physiology at University College, London, from 1883 to 1899, and is now professor of physiology in the University of Edinburgh. From 1870 until the present he has devoted himself to teaching physiology and to the pursuit of physiologic investigations. The following are some of his published works: "A Course of Practical Histology;" "Directions for Class Work in Practical Physiology," and a "Text-Book of Physiology for Advanced Students." He was also editor of the departments of histology and embryology in "Quain's Anatomy." Professor Schäfer now lives at North Berwick, about 25 miles east of Edinburgh.

Section Officers

From year to year The Journal has taken pleasure in presenting to its readers portraits of new Section officers. This years in addition to the photographs of those who were elected at the last annual session, we give below brief biographical sketches.

Samuel T. Armstrong.

Samuel T. Armstrong, Ph.D., M.D., New York City, secretary of the Section on Hygiene and Sanitary Science, was born Nov. 2, 1859, at St. Louis. He received his preliminary education from tutors and at the public schools of St. Louis, and later from the St. Louis University, from which institution he received his degrees in philosophy. He was graduated in medicine in 1879 by the St. Louis Medical College. He was appointed assistant surgeon U. S. Public Health and Marine-Hospital Service in 1881 and passed assistant surgeon in 1884. From 1898 till 1901 he was major and brigade surgeon in the U. S. Volunteers.

Willard Bartlett.

Willard Bartlett, A.M., M.D., St. Louis, secretary of the Section on Surgery and Anatomy, was born July 27, 1868, at Virden, Ill. He received his classical education at the Illinois College, and was graduated in medicine by the Marion-Sims College of Medicine, St. Louis, in 1895. The next three years were spent in the German universities of Berlin and Strassburg, and in 1898 he began the practice of surgery in St. Louis. For three years he taught pathology at the Marion-Sims College of Medicine, and in 1901 became instructor in surgical pathology in the Washington University Medical School. In 1906 he was made professor of experimental surgery in this institution.

Edward Augustus Bogue.

Edward Augustus Bogue, D.D.S., M.D., New York City, chairman of the Section on Stomatology, was born in 1838 at Vernon, N. Y. He received his preliminary education at Seneca Falls Academy and later was graduated by the New York College of Dental Surgery. He afterward entered Rush Medical College and was graduated by the Castleton Medical College, Vermont. For eight years he practiced dental surgery in Chicago and then moved to New York City, where he has practiced since. He lectured in Harvard University Dental School for five years and taught in the Odontotechnique of Paris two years.

Walter B. Dorsett.

Walter B. Dorsett, M.D., St. Louis, chairman of the Section on Obstetrics and Diseases of Women, was born in St. Louis County, Mo., June 13, 1852. He received his literary education at Washington University, and was graduated in medicine by the St. Louis Medical College in 1878. In 1879 he was made superintendent of the St. Louis Quarantine Hospital during the yellow-fever epidemic, and from 1879 till 1887 he was chief city (St. Louis) dispensary physician. From 1887 till 1892 he was superintendent of the St. Louis Female Hospital. Dr. Dorsett is professor of gynecology and pelvic surgery in the Medical Department of the St. Louis University and attending gynecologist at the Missouri Baptist Sanatorium and Evangelical Deaconess Home and Hospital.

M. Howard Fussell.

M. Howard Fussell, M.D., Philadelphia, chairman of the Section on Pharmacology and Therapeutics, was born Nov. 24, 1855, at Belvidere, Chester County, Pa. He received his preliminary education in the public schools of Delaware and Chester counties, Pa., and at Friend's Central School, Philadelphia. From 1875 to 1881 he taught in the public schools of Radnor, Pa. He was graduated in medicine by the University of Pennsylvania in 1884, and at once entered general practice. Dr. Fussell is assistant professor of medicine at the University of Pennsylvania, pathologist to St. Timothy's Hospital and physician to St. Timothy's and St. Mary's Hospitals, and also physician-in-chief to the Medical Dispensary of the University of Pennsylvania.

William C. Gorgas.

William C. Gorgas, A.B., M.D., Sc.D., Ancon, Panama, chairman of the Section on Hygiene and Sanitary Science, was born Oct. 3, 1854, at Mobile, Ala. His literary education was received at the University of the South, by which institution he was graduated in 1875. He received his degree of doctor of medicine from Bellevue Hospital Medical College, N. Y., in 1879, and became a member of the house staff of Bellevue Hospital in 1880. He was appointed first lieutenant medical corps, U. S. Army, in 1880; became captain in 1885, major in 1898, and was made colonel by special act of Congress in 1903 in recognition of his work at Havana in the yellow-fever campaign. Dr. Gorgas is a member of the Isthmian Canal Commission and also chief sanitary officer of the Isthmian Canal Zone.

Edwin E. Graham.

Edwin E. Graham, M.D., Philadelphia, chairman of the Section on Diseases of Children, was born in Philadelphia Feb. 28, 1864. He received his early education at the Protestant Episcopal Academy in Philadelphia, afterward being graduated by the Phillips Exeter Academy, New Hampshire. From this institution he went to Harvard, and in 1887 was graduated in medicine by the Jefferson Medical College. After completing a term as resident physician to the Philadelphia Hospital, he spent a year abroad, studying at Göttingen, Munich and Berlin. In 1891 he was appointed lecturer on children's diseases in Jefferson Medical College, and in the following year was elected to the professorship of the newly created chair of diseases of children. In 1889 Dr. Graham was elected physician to the Franklin Reformatory Home. He has served both as vice-president and president of the Philadelphia Pediatric Society, and is pediatrist on the medical staff of the Philadelphia and Jefferson Hospitals.

M. B. Hartzell.

M. B. Hartzell, A.M., M.D., Philadelphia, chairman of the Section on Cutaneous Medicine and Surgery, was born in Fayetteville, Pa., in 1854. He received his literary education at Pennsylvania College, Gettysburg, Pa., obtaining his bachelor's degree in 1874 and his master's degree three years later. He was graduated in medicine by Jefferson Medical College in 1877. Dr. Hartzell is associate in dermatology in the University of Pennsylvania and clinical professor of dermatology at the Woman's Medical College of Pennsylvania. He is also dermatologist to the Philadelphia Hospital and consulting dermatologist to the American Oncologic Hospital.

C. F. Hoover.

C. F. Hoover, A.B., M.D., Cleveland, Ohio, chairman of the Section on Practice of Medicine, was born at Miamisburg, Ohio, Aug. 2, 1865. He was graduated by Harvard University in 1887, entering Harvard Medical School the same year. In February, 1890, he went abroad and studied at Vienna and Prague until the spring of 1892, when he returned to the United States for a brief visit, taking his M.D. degree at Harvard. During the next two years he worked abroad, returning to America in the spring of 1894, at which time he located in Cleveland. Until May, 1907, he was visiting physician to the Cleveland City Hospital and St. Alexis Hospital; at this time he resigned and was appointed visiting physician to Lakeside Hospital. Since 1895 Dr. Hoover has been a member of the medical faculty of Western Reserve University, where he teaches physical diagnosis and lectures on theory and practice.

William A. Jones.

William A. Jones, M.D., Minneapolis, Minn., secretary of the Section on Nervous and Mental Diseases, was born at St. Peter, Minn., May 24, 1859. He received his preliminary education in the public elementary and high schools, and then served as pharmacist for six years. He was graduated in medicine by the Medical Department of the University, City of New York, in 1881, and until 1883 was assistant physician of St. Peter's State Hospital. At this time he moved to Minneapolis, where he began general practice. In 1886 he went to London and Berlin for postgraduate work, and since his return in 1887 has confined his practice to mental and nervous diseases. Dr. Jones has for the past fifteen years been professor of mental and nervous diseases in the College of Medicine and Surgery, University of Minnesota. For two years he was a member of the board of trustees for the Minnesota State Hospitals for the Insane. He is editor of the *Journal of the Minnesota State Medical Association and Northwestern Lancet*.

Hanau W. Loeb.

Hanau W. Loeb, A.M., M.D., St. Louis, chairman of the Section on Laryngology and Otology, was born Aug. 25, 1865, in Philadelphia. He received his literary education at the University of Missouri and his medical education at the St. Joseph Medical College and at Columbia University, New York. After practicing for two years in St. Joseph, Mo., he went to St. Louis to accept the chair of nose and throat diseases in the Marion-Sims College of Medicine, then just organized. He was made secretary of this institution in 1892, and has retained both positions to the present time, the college now being the medical department of the St. Louis University.

Rudolph Matas.

Rudolph Matas, M.D., chairman of the Section on Surgery and Anatomy, was born September, 1860, in Bonnet Carré, La. He received his early education in Barcelona, Spain, and Paris, France. From 1871 to 1873 he attended Soule's College in New Orleans, later being graduated with honors by the Literary Institute of St. John, Matamoras, Mexico. In 1879 he accompanied the Yellow Fever Commission of the National Board of Health to Havana, Cuba, as medical clerk, laboratory assistant and interpreter. In 1880 he was graduated in medicine by the Medical Department of the University of Louisiana, and served as chief of clinic in surgery and gynecology until 1886, when he was appointed demonstrator of anatomy at his alma mater. He was elected professor of surgery in 1895 at the same institution, and in 1896 was elected emeritus professor by the faculty of the New Orleans Polyclinic. Dr. Matas is also visiting surgeon of the Charity Hospital.

Samuel J. Walker.

Samuel J. Walker, A.B., M.D., Chicago, secretary of the Section on Diseases of Children, was born in Covington, Ky., in 1867. He received his preliminary education in the Chicago public schools and took his A.B. from Yale in 1888. His medical education was received at the Northwestern University Medical School, by which he was graduated in 1893. After filling the position of interne at St. Luke's Hospital, Chicago, he studied for two years in Europe. Since 1896 he has been practicing medicine in Chicago. Dr. Walker was adjunct professor of diseases of children in the College of Physicians and Surgeons, Chicago, from 1900 till 1903 and assistant professor of neurology in the Chicago Policlinic since 1900. He was president of the Chicago Pediatric Society, 1904-1905, and is now attending physician to Passavant Memorial, St. Vincent's Infant Asylum and Children's Memorial hospitals.

William Hamlin Wilder.

William Hamlin Wilder, A.B., M.D., Chicago, chairman of the Section on Ophthalmology, was born at Covington, Ky., in 1860. He received his B.A. degree from Belmont College, Cincinnati, in 1877, and was graduated in medicine by the Medical College of Ohio in 1884. For the year preceding his graduation he was resident physician at the Cincinnati General Hospital; after leaving this institution he engaged in general practice in Cincinnati until 1889. From 1889 till 1892 he took postgraduate work at Göttingen, Vienna and London. The positions held at present by Dr. Wilder are: Professor and head of the Department of Ophthalmology at Rush Medical College; professor of ophthalmology, Chicago Policlinic, and ophthalmic surgeon to the Presbyterian Hospital and the Illinois Charitable Eye and Ear Infirmary.

Milton J. Rosenau.

Milton J. Rosenau, M.D., Washington, D. C., secretary of the Section on Pathology and Physiology, was born in Philadelphia Jan. 1, 1869. He was educated in the public schools of Philadelphia and was graduated by the medical department of the University of Pennsylvania in 1889, after which he took postgraduate work in Paris, Berlin and Vienna. He is passed assistant surgeon in the U. S. Public Health and Marine-Hospital Service, and at present is director of the Hygienic Laboratory of the same service. Dr. Rosenau was professor of bacteriology at the Washington Postgraduate Medical School in 1902. He was sanitary attaché to the International Conference of American States and delegate to the Tenth International Congress of Hygiene and Demography, and also to the Thirteenth International Congress on Medicine and Surgery. He is special lecturer on tropical diseases at the Georgetown University.

FOREIGN GUESTS

SOME OF THE SECTION OFFICERS

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[*For other information see second page following reading matter.*]

SATURDAY, MAY 30, 1908.

ABSTRACTS OF THE LITERATURE OF SCIENCES RELATED TO MEDICINE.

Our dependence on German literature for information as to the progress of medical science and of the related sciences we must frankly admit to be due in large part to the superiority in both quantity and quality of German work in these branches. There is, however, another element that must be taken into consideration, and that is the influence of that peculiarly German and highly commendable institution, the *Zentralblatt.* Germany is filled with young scientists of every description, penuriously awaiting the advancement that will bring both professional and financial standing, and which in that land comes almost solely as the reward of scientific investigation; these young scientists are readily enrolled in the work of abstracting the literature of their specialties, a task which brings not only desirable familiarity with the literature, and an introduction to their fellow scientists since the abstracts are usually signed, but also a modest amount of very useful *Marks* and *Kronen.* As a consequence, it has been possible in Germany to produce numerous *Zentralblätter* which are to a considerable extent supported by the subscriptions that come from other lands.

Valuable as these *Zentralblätter* are, they are defective for our use in two ways: first, in that they are in a foreign tongue, and thus not available for an unfortunately large part of the medical profession; and secondly, in that they consider chiefly work of German origin. This last defect, while natural enough, sometimes leads to the anomalous and irritating condition that men of standing often know more about the German literature than they do of the literature of their own country; and in any event it serves to exalt German research and to obscure the research of our own and other non-Germanic countries.

The absence of American abstract journals in the sciences related to medicine has long been a source of regret to those medical men who are desirous of keeping abreast of the times in the sciences that are fundamental to medical progress. We lack publications of the scope of the *Zentralblätter für Physiologie, Bakteriologie, allgemeine Pathologie, Anatomie, Biochemie,* etc., which will give us the same information in a familiar language, and, what is more important, which will also include the results of the good work that is being done in other lands than Germany. It is, therefore, with especial satisfaction that we note the introduction by the American Chemical Society of an abstract journal which will do for the chemists what we in this Journal are trying to do for the medical profession.

This abstract journal has now passed its first year and the success of the undertaking is assured, not only as to its support by the chemists, but also as to the quality of the publication, which seems to excel the corresponding German *Zentralblatt.* It is of especial interest to the medical profession that the abstracting of the literature on biologic chemistry, which thoroughly covers everything that can be considered as medical chemistry, has been particularly exhaustive and successful, so that there is now available for the progressive physician a place where he can find all the valuable literature on the chemistry of medicine, physiology and pathology abstracted in his own tongue. Only through its large numbers and thorough organization has it been possible for the American Chemical Society to accomplish this great enterprise, and we congratulate it on its success. We wish that the time might soon come when the same thing could be done at least in physiology and in pathology, not only for the benefit of the specialists in these sciences, but also for the benefit of American science in general and American medicine in particular.

STANDARDIZATION OF TETANUS ANTITOXIN.

Reference has previously been made[1] to the necessity of uniformity in the strength of tetanus antitoxin and to the fact that an official standard for this preparation had recently been established in accordance with the law of July 1, 1902, regulating the sale of viruses, serums and toxins in interstate traffic. A bulletin has recently been issued by the U. S. Public Health and Marine-Hospital Service[2] describing the method used in preparing this standard and its advantage as compared with European standards.

The immunity unit adopted is ten times the least amount of antitetanic serum necessary to save the life of a 350 gram guinea-pig for ninety-six hours against an official test dose of standard toxin prepared and issued by the U. S. Public Health and Marine-Hospital Service, the test dose being 100 minimal lethal doses of a precipitated toxin preserved under special conditions in the Hygienic Laboratory. In order to fix an official test dose it was necessary to secure a stable toxin. It is well known that tetanus toxin in solution is not stable. A dried toxin was therefore prepared by precipitating the filtered bouillon culture with ammonium sulphate, drying the precipitate over sulphuric acid, grinding to an impalpable powder and preserving *in vacuo* under the influence of pentaphosphoric acid.

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[1] The Journal, A. M. A., May 18, 1907.
[2] Hygienic Laboratory Bulletin, No. 43.

Under these conditions this toxin maintains its strength without appreciable alteration, as is shown by the fact that the toxin has shown no change in two years.

As a means of determining the exact strength of this toxin from time to time a dried antitetanic serum is preserved under the same conditions as the standard toxin, and they are measured against each other reciprocally in order to detect changes or deterioration in either.

The standard toxin is issued to licensed manufacturers with which to standardize antitetanic serum, and its use insures serums of precisely comparable strengths. At the same time the U. S. Public Health and Marine-Hospital Service, by frequent examinations of serums purchased on the open market determines whether the results are in accord with the official standard.

In testing antitoxins a solution of the standard toxin is made, one cubic centimeter of which contains 100 minimal lethal doses. The serum to be tested is properly diluted and aliquot parts of the same are mixed with the official test dose of toxin. Due regard to details is observed in making these toxin-antitoxin mixtures, and after standing one hour in diffused light they are injected into guinea-pigs. As the amount of toxin used is constant, it is easy to determine from the animals that die and those that survive the neutralizing power of the serum under examination. In order to facilitate making the dilutions of serums to be tested, tables of reference have been prepared and are included in the bulletin.

The standardization of this product has evidently been attended by many technical difficulties, and it is a pleasure to note that through these efforts an exact dosage of tetanus antitoxin has been made available in this country.

COLD STORAGE OF MILK.

The cold-storage warehouse has been one of the most important factors in making city life tolerable, and with all its faults we look on it as serving to save us from large quantities of borates, salicylates, benzoates and formalin. As a rule, milk is not a cold-storage commodity, although it sometimes happens that storage of milk is practiced for special occasions, such as for the accumulation of cream sufficient to meet the demand for ice cream on the Fourth of July, and it is said that the commissariat departments of transatlantic liners have such confidence in cold storage that they provision the ships with milk for the entire round trip. It is, of course, possible that the practice of keeping milk in cold storage may grow, and hence there is especial importance attached to the article recently published by Dr. Mary Pennington,[1] which contains a number of interesting and, perhaps to many, surprising observations.

It is popularly supposed that at the freezing point bacterial life is quiescent, and at the very least that any considerable multiplication of bacteria is impossible; however, these studies seem to show that this supposition is not correct. Conn and Esten have also made examinations of milk kept at 1° C., and they found that after from six to eight days the number of bacteria steadily increases, although on account of the failure of the usual lactic acid organisms to multiply at this low temperature the milk does not curd. They concluded, therefore, that milk is not necessarily wholesome because it is sweet, especially if it has been kept at low temperatures; at the temperature of an ordinary ice chest milk may remain sweet for a long time and yet contain enormous numbers of bacteria, among which are species as likely to be unwholesome as those that develop at room temperature. The more elaborate studies of Pennington support this opinion and add much to our knowledge of the subject. Milk of the cleanest sort, containing when first put into the cold-storage room but a few hundred bacteria in the cubic centimeter, shows by the end of a week a pronounced growth of organisms, and after five or six weeks at from 29° to 31° F. the number reaches hundreds of millions or even over a billion to the cubic centimeter. This multiplication takes place in spite of the fact that at this temperature the milk is a semisolid mass of ice crystals, and, what is particularly important, such milk containing hundreds of millions of bacteria to the cubic centimeter may show no odor or taste to indicate this contamination. Neither does the milk curd on heating, and it is not until later, when the organisms of putrefaction are in the ascendency, that the milk is altered in such a way that the housewife would consider it unfit for use. Chemically, the changes occurring in milk kept at freezing temperature are different from those that take place in milk during ordinary souring; in souring the formation of lactic acid is the chief change, and the casein, although curded, has undergone very little disintegration, whereas in cold-storage milk there is an extensive digestion of the uncurded casein until over 50 per cent. of it may have been changed into cleavage products.

It will probably surprise those unfamiliar with bacteriology to learn that there are organisms which grow readily at the freezing point; indeed, under some conditions, growing better at 0° C. than at higher temperatures. For example, in the experiments cited above, plate cultures were made and permitted to grow at 37°, 20°, and 0° C. When the milk was first received the number of colonies developing at the two higher temperatures was always much greater than the number found on the plates kept at 0° C., but after long preservation in cold storage the bacteria growing well at low temperatures were found to have crowded out the other forms and to have taken their place, so that as a result most of the bacteria of this stored milk are of a kind growing at cold-storage temperatures and not at body or room temperature. In one experiment, to illustrate, a certain sample of ordinary milk when first received showed 380 per cent. more colonies developing in plates kept at 37° C. than in plates kept at 20° C., while the organisms developing at from —1.67° C. to —0.55° C. were but 14 per cent. of those developing at 20° C.; however, after this milk had been kept at the cold-storage temperature for five weeks, the count of organisms growing at 20° C. had risen from the initial 720,000 to the cubic centimeter to 1,000,000,000, while the organisms growing in the plates kept at below 0° C. numbered no less than 1,090,000,000!

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[1] Jour. Biol. Chem., 1908, iv, 353.

The significance of these observations is not that cold storage of milk is a proceeding that is to be altogether condemned, but that we must not expect too much of it. Milk can be kept for a number of days in cold storage without suffering serious decomposition, but the period of storage must be limited. Just what the safe length of time and conditions of storage may be should be definitely ascertained, for it is apparent that the palatability of milk and absence of souring are not to be taken as adequate evidence of its safety as a food, especially for infants.

THE RELATIONS BETWEEN ARTERIOSCLEROSIS AND MENTAL DISEASE.

The coincidence of certain forms of mental disease with sclerotic changes in the blood vessels suggests a possible relation between these two sets of conditions. Like other organs, the brain does not react identically in all individuals to the same irritation or disturbance, so that at times marked arteriosclerosis of the nervous system may be attended with few if any disorders of mental function, while at other times more or less characteristic symptoms result. It is a well-known fact that cerebrospinal arteriosclerosis may exist apart from general arteriosclerosis. The latter is characterized especially by palpable thickening of accessible blood vessels and hypertrophy of the heart, with accentuation of the second sound; the latter by headache, vertigo, dyspnea, mental irritability or depression, impaired memory and at times by visible changes in the retinal vessels. The subject is one of great interest and importance and it has received considerable attention at the hands of competent alienists.

On the basis of an extended clinical experience Dr. C. Macfie Campbell[1] concludes that, while arteriosclerosis of some degree is a commonplace finding in cases of mental disorder, especially in advanced life, there are cases in which the cardiovascular disorder seems to be the central element in the clinical and anatomic picture. In his opinion, certain cases symptomatologically described as melancholia, hypochondria, neurasthenia, etc., may be better grouped on etiologic grounds as cases of arteriosclerotic brain disorder. While the arteriosclerosis is an important factor, the factors that led to the symptomatologic grouping are not to be neglected. To this end a careful analysis of the depressions of advanced life is greatly to be desired. In certain cases of organic dementia the arteriosclerotic changes are obviously the most important element in the process and the term arteriosclerotic dementia is justifiable; but the relation of certain mental symptoms to similar ones in the presenile and senile psychoses must be kept in mind.

For the solution of this problem a critical analysis of the presenile and senile psychoses will be necessary. It is premature to correlate the entire symptomatology with the arteriosclerotic part of the anatomic findings. The neurologic picture in advanced cerebral arteriosclerosis is still ill-defined, and for the differential diagnosis of the various dementias further clinical material is required. In certain cases of epilepsy setting in late in life the convulsions and the general symptomatology are closely related to arteriosclerosis.

STATE BOARD STATISTICS FOR 1907.

We present this week for the fifth consecutive year tabulated statistics based on the examinations conducted by state medical licensing boards during the past year. These statistics appear on pages 1841 to 1863 and are worthy of careful study. The four large tables (A, B, C, D) give the results in detail, while the others have been prepared to bring out the more important deductions.

As can readily be seen, these tables throw light on several important factors relating to medical education. They render great assistance in the investigation of medical colleges, and although in an occasional instance conclusions based solely on these statistics might not give the college affected a fair rating, in most cases the ratings based thereon are surprisingly borne out by the more extended investigations of the colleges made recently by the Council on Medical Education. Again, by comparing the examination results of graduates of the last year and recent years with those of older graduates, it can be seen whether the colleges are improving in the preparation of their graduates for these examinations. That there has been an improvement in this respect is evidenced by the fact that in 1905 only 45 colleges could be listed as receiving less than 10 per cent. of failures at these examinations, while this year the list numbers 64. Again the percentage of failures for all graduates during the past year was 13.8 (Table F), as compared with 17.3 for 1906 and 18.3 for 1905.

These statistics reveal what colleges and what states are furnishing the greatest number of physicians, also the kind of training given them, at least so far as this may be judged from their successes at the license examinations. They allow of comparison between the totals and percentages of different states and different colleges; and even if conclusive deductions can not be made, the results are a stimulus to further investigations which can only be beneficial.

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[1] Am. Jour. Insanity, lxiv, 553

But possibly a more important outcome of these statistics is the light they throw on the different methods used by examining boards and on the different degrees of severity in the grading of papers. The percentages of rejections by different examining boards are even less conclusive when taken alone than the failure percentages of the colleges, owing to the different methods employed by different boards. For example, one board may have a high percentage of rejections, but on further study it is seen that they examine all candidates who present themselves, including, possibly, undergraduates. The high percentage, therefore, is only what might be expected. Another board may make a careful preliminary investigation of the credentials of all applicants, many of whom in consequence may be refused admission to the examination. This course is likely to result in a low percentage of rejections for those who are examined; so that the standard of the latter board may be fully as high as, or even higher than, that of the former.

Again, these statistics serve to call attention to the character of the state board examination, since in a few instances graduates of colleges known to be of a purely quiz-compend character have made the best showing at these examinations. That present methods are not so perfect as could be desired is recognized better by no one than by the state boards themselves; therefore, the present analysis of the results of such methods will doubtless be welcomed.

We urge a careful study of these statistics, especially by those who are interested in the problems of medical licensure and medical education.

VISIT THE ASSOCIATION BUILDING.

We hope that every physician attending the Chicago session will pay a visit to the Association building and the home of The Journal at 103 Dearborn Avenue. Since the American Medical Association last met in this city—1887—there has been marked progress, not only in the art and science of medicine but also in the growth and development of the Association itself. Physicians attending the present meeting will see this reflected in the remarkable advances that have been made in the Association's own material progress. At the time of the last Chicago session the Association had no home of its own; it possessed no printing plant, and The Journal itself, then consisting of sixty-four pages, had a circulation of but a little over 4,000. Today the Association owns valuable property and a modern printing plant fully equipped to do work of the highest grade and its journal has become a magazine of from 130 to 200 pages, with a circulation of over 52,000. To all who desire to see what has been, and is still being, done to further the interests of the profession, a cordial invitation is extended to visit the home of the Association.

DISINFECTANTS.

The importance of disinfection as a measure of public health and safety is now so well established that anything that tends to deceive with a false sense of security concerning its effective performance becomes a public menace. It is hardly surprising, therefore, to find attention drawn, in an article by Dr. S. Rideal,[1] to the fact that vast quantities of so-called disinfectants are sold that are worthless for the purpose intended, possessing merely deodorizing properties. Dr. Rideal asserts that one dealer told him that he had sold such worthless fluids in an increasing ratio from 28,000 gallons in 1905 to 66,000 gallons in 1907. There is, therefore, great need of a standard of germicidal efficacy and of an official test. It must not be forgotten that the presence of organic matter along with the germs materially interferes with the effect of germicides, especially those that act by oxidation; and that in Nature such an admixture of organic matter is practically always found. It is easy, when testing a so-called germicide in the laboratory, by bringing it into direct contact with germs to cause it to show a much more potent effect than when used under ordinary conditions, hence the most unscrupulous claims can be made by manufacturers by a *suppressio veri* without departing from strict truth in what is actually asserted. When a worthless germicide is sold it is not merely an individual wrong to the purchaser. It may become a matter of serious moment to the community by causing the unwitting exposure of others to the danger of infection under the justifiable supposition that all such danger has been removed.

A BRITISH VIEW OF AMERICAN UNIVERSITIES.

The following advertisement appeared in the Chicago Sunday *Tribune,* May 17:

> PERSONAL—
> A gentleman [unregistered] practicing dentistry in England is desirous of obtaining D.D.S. or M.D. diploma of some American state university if possible. Particulars to . . . Liverpool, Eng.

The "gentleman" who owns up so naively to breaking the laws of the country in which he lives, by practicing dentistry without being registered—presumably because he has no registrable degree—pays this country a dubious compliment. Obviously, he considers "American state universities" either venal in the matter of their degrees, so that he can purchase a D.D.S. or an M.D. degree, or at any rate so lax in their requirements of curriculum and examination that it would pay him to spend the extra money entailed in a trip to, and a sojourn in, this country, as compared with the greater expenditure—as he supposes—of time and gray matter that a British degree would exact. But even when he had obtained this D.D.S. or M.D. it would not admit him to the British register in the absence of a British diploma. The suggested alternative of an M.D. degree for one practicing dentistry, however, hints that it is the title of "doctor" that he is after, rather than a certificate of proficiency in his art. Possibly, being located in Liverpool, he hopes to catch an American *clientèle* by holding himself out as an "American dentist." There are, however, enough genuine American dentists in most of the large cities of Great Britain, who have respected the honor of their profession by complying with the requirements of the foreign country in which they reside, to make it unnecessary in the interests of American travelers to lend the prestige of an American degree—and that under false pretenses—to a foreigner for the purpose of enabling him to evade the laws of his own country with greater effect. The "gentleman" is a little late. The days of diploma mills are all but over.

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[1] Testing Disinfectants, Jour. Trop. Med. and Hyg., May 1, 1908.

Medical News

ARIZONA.

Personal.—Dr. Henry A. Hughes, Phœnix, sustained serious injuries in a runaway accident near Phœnix recently.——Dr. John W. Foss has been re-elected president of the Board of Trade of Phœnix.

Reports of Tuberculosis Cases.—The city council of Prescott has passed an ordinance declaring tuberculosis to be among the communicable diseases, and that it shall be the duty of every physician in Prescott to report to the health officer the particulars regarding every case of tuberculosis which he may see.

State Medical Society Meeting.—The seventeenth annual meeting of the Arizona Medical Association was held in Tucson, April 27-28. A surgical clinic was given by Dr. Mark A. Rogers at the Whitwell Hospital, and a banquet was given by the local profession in honor of the visiting delegates. The following officers were elected: President, Dr. Arthur W. Olcot, Tucson; vice-presidents, Drs. John W. Foss, Phœnix, Clarence E. Yount, Prescott, and Albert L. Gustetter, Nogales; secretary, Dr. John W. Flinn, Prescott; treasurer, Dr. Enoch B. Ketcherside, Yuma; and councilor, Dr. John E. Bacon, Tombstone. The next meeting will be held in Prescott in May, 1909.

ARKANSAS.

Indian Doctor Fined.—"Dr." James, an Indian, was fined $25 at Jonesboro, May 6, for violating the state statutes regarding the sale of medicine.

New Board of Health.—Drs. F. M. Scott and W. R. Owens have succeeded Drs. Robert J. Haley and Henry N. Dickson as members of the board of health of Paragould, and Dr. James G. MacKenzie has been appointed a member of the board.

Commencement.—The second annual commencement exercises of the Medical Department of the Arkansas University, Little Rock, were held May 1, when the degrees were conferred on a class of nineteen by Governor X. O. Pindall. Dr. Morgan Smith delivered the faculty valedictory, and the doctorate address on "The Ideal Physician from the Layman's Point of View" was delivered by Dr. Henry S. Hartzog, president of Ouachita College. The faculty of the Medical Department of the university gave a banquet at Hotel Marion, May 13, in honor of the alumni of the medical department.

Society Meetings.—At a meeting of the Polk County Medical Society, held in Mena, May 1, the society was reorganized under the supervision of Dr. R. H. T. Mann, Texarkana. The following officers were elected: President, Dr. William P. Parks; vice-president, Dr. John R. Davis; secretary-treasurer, Dr. Frank A. Lee; and delegate to the State Medical Society, Dr. John R. Davis, all of Mena.——At the recent meeting of the Nevada County Medical Society held in Prescott, Dr. Adam Guthrie, Prescott, was elected president; Dr. Simeon J. Hesterly, Prescott, vice-president; Dr. C. C. Purtie, Emmet, secretary; and Dr. Josiah S. Chastain, Prescott, delegate to the state society.

ILLINOIS.

Personal.—Dr. Sanford P. S. Edwards has resigned as physician in charge of the Tri-City Sanitarium, Moline.——Dr. and Mrs. Walter W. Greaves, La Salle, sailed for Europe, May 27.

Northwestern Alumni Meet.—During the meeting of the Illinois State Medical Society, Peoria, the alumni of Northwestern University Medical School met at luncheon at the Hotel Majestic, May 20, 47 being present.

Communicable Diseases.—There are reported to be 10 cases of smallpox at Mapleton.——Three cases of smallpox were reported in Joliet, May 19.——There are said to be 21 cases of smallpox in East Peoria.——Twelve cases of diphtheria have been discovered in Ferry Hall, Lake Forest. The health commissioner says the threatened epidemic is now well in hand.

State Society Election.—At the annual meeting of the Illinois State Medical Society, held in Peoria, May 19, 20 and 21, the following officers were elected: President, Dr. Joseph W. Pettit, Ottawa; vice-presidents, Drs. J. Leaming Wiggins, East St. Louis, and Elmer M. Eckard, Peoria; secretary, Dr. Edmund W. Weis, Ottawa (re-elected); treasurer, Dr. Everett J. Brown, Decatur (re-elected); delegates to the American Medical Association, Drs. Edmund W. Weis, Ottawa; Robert T. Gillmore, Chicago; James F. Percy, Galesburg; and Levin H. A. Nickerson, Quincy; and councilors, first district, Dr. Jeremiah H. Stealy, Freeport; second district, Dr. Charles C. Hunt, Dixon, and seventh district, Dr. William K. Newcomb, Champaign. The society decided to meet in Quincy, May 18 to 20, 1909.

Chicago.

Election.—At the annual meeting of the Physicians' Club, May 15, the following officers were elected: Chairman, Dr. Henry B. Favill; secretary, Dr. Edwin B. Tuteur; treasurer, Dr. Charles L. Mix; and directors, Drs. Henry B. Favill, George E. Baxter, Daniel A. K. Steele, Alfred C. Croftan and Charles E. Paddock.

Communicable Diseases.—There were 660 cases of contagious diseases reported during the week ended May 23, an increase of 107 as compared with the preceding week, distributed as follows: Measles, 353; scarlet fever, 88; diphtheria, 70; tuberculosis, 57; chicken-pox, 39; whooping cough, 23; typhoid fever, 20, and smallpox, 1.

Commencement.—The Chicago College of Medicine and Surgery (Medical Department of Valparaiso, Ind., University), held its annual commencement exercises in Valparaiso, May 19, when degrees were conferred on a class of 100 by President Brown. Addresses were made by Dr. George F. Butler, Wilmette, and Hon. Patrick H. O'Donnell, Chicago.

Low Death Rate.—During the week ended May 23, 495 deaths occurred, the lowest death rate noted since records have been kept. During the previous week there were 635 deaths and during the corresponding week of 1907 641 deaths, the respective annual death rates per 1,000 being 11.92, 15.29 and 15.80. All the important causes of death except diphtheria, measles and nephritis show a lowered mortality. Pneumonia decreased 17; measles, 16; apoplexy, 15; diarrheal diseases, 12; typhoid fever and consumption, each 9; whooping cough, 6; bronchitis, 5, and scarlet fever, 4. There were also 27 fewer deaths from violence, including 3 less suicides.

INDIANA.

Result of Merger.—The Indiana University School of Medicine is the name of the new medical school formed by the amalgamation of the Indiana Medical College and the State College of Physicians and Surgeons. The graduation exercises of both colleges were held at Bloomington May 20, when a combined class of 74 was graduated. Dr. Allison Maxwell presented the names of the graduates of the State College of Physicians and Surgeons, and Dr. Edward F. Hodges those of the Indiana Medical College.

Not the Same Coleman.—Dr. C. A. Coleman, Bloomington, calling attention to a news item in The Journal of April 11, which states that "J. H. Coleman, Bloomington, charged with practicing medicine without a license, is said to have pleaded guilty, March 20, and to have been fined $25 and costs," requests The Journal to publish the statement that he is not the individual of that name referred to; and that the Coleman arrested and indicted was a farmer and an itinerant cancer specialist, who got into trouble at Bedford.

Society Notes.—The Vigo County Medical Society has so amended its constitution as to omit all reference to exclusive systems in medicine, thus making every legally registered physician in the county eligible to membership. The annual dues of the society were raised from $2 to $5.——At the meeting of the First District Medical Society at Jeffersonville, May 2, Dr. William L. McClain, Scottsburg, was elected president, and Dr. David Cohen, Jeffersonville, secretary.——At the annual meeting of the Second District Medical Society, held in Bloomington, May 13, Dr. John E. Harris was elected president; Dr. Gallagher, vice-president; and Dr. George F. Holland, secretary-treasurer, all of Bloomington.——The Fort Wayne Academy of Medicine has elected Dr. Allan Hamilton, president; Dr. Willis W. Carey, vice-president; Dr. Herman G. Nierman, secretary; and Dr. Garrette Van Sweringen, treasurer.

KANSAS.

Verdict Against Physician.—In the case of Dr. Joseph E. Miller, Salina, who was sued for $10,000 damages by reason of alleged improper treatment, whereby a broken arm was permanently crippled, the jury on April 11 is said to have found a verdict against the physician and assessed damages at $2,500.

Society Meetings.—At the annual meeting of the Southeastern Kansas Medical Association, held in Chanute, Dr. Middleton L. Perry, Parsons, was elected president; Dr. Lewis D. Johnson, Chanute, secretary, and Dr. Millard F. Jarrett, Fort Scott, treasurer. The next meeting will be held at Independence.——The Golden Belt Medical Society, at its recent meeting in Abilene, elected Dr. Daniel E. Esterly, Topeka, president; Dr. Peter B. Witmer, Abilene, vice-president; and Dr. Sutherland, Junction City, secretary.

MARYLAND.

Personal.—Dr. Claiborne H. Mannar, Rockville, has been appointed secretary of the Montgomery County board of health and health officer for the county, vice Dr. William L. Lewis, Kensington.——Dr. Jephtha E. Pitsnogle, Hagerstown, has been appointed health officer of Washington County, vice Dr. Christian R. Scheller.——Dr. Phillip Lee Travers has been appointed health officer of Easton.

County Society Meets.—The Baltimore County Medical Society, at its annual meeting, held in Towson, May 1, elected the following officers: President, Dr. Richard F. Gundry, Catonsville; vice-president, Dr. Benjamin R. Benson, Cockeysville; recording secretary, Dr. Harry C. Hess, Govonstown; corresponding secretary, Dr. Richard C. Massenburg, Towson; treasurer, Dr. William L. Smith, Sherwood; and delegate to the Medical and Chirurgical Faculty, Dr. H. Louis Naylor, Pikesville. It was decided to publish a history of the society.

Baltimore.

Health Department Flag.—The health department has adopted as its official flag one of yellow bunting with a red cross in the center. It will hereafter be hoisted from the department headquarters in the city hall annex.

Railway Relief Work.—The relief and hospital work of the Baltimore & Ohio Railroad, for many years under the supervision of the late Dr. Isaac R. Trimble, has now been placed under the care of Drs. Page Edmunds, St. Clair Spruill and Archibald C. Harrison.

Commencement.—Baltimore Medical College held its annual commencement exercises May 21, when a class of 82 was graduated. Drs. Thomas McCall Anderson and William Reginald Marshall received the gold medal and the degree of M.D. *manga cum laude*, the highest college honor.

Tuberculosis Hospital.—The Jewish Hospital for Consumptives in the suburbs of Baltimore will be dedicated June 11. There will be a large building containing accommodation for 30 advanced cases and a smaller cottage with accommodation for 6 incipient cases. It is expected that other cottages will be built. Dr. Louis P. Hamburger is president and Dr. M. R. Smirnow has been elected resident physician.

Personal.—Drs. Harvey G. Beck, C. Urban Smith and Charles F. Blake sailed for Bremen, May 21.——Dr. Albert H. Carroll left May 19 for Brazil, where he will be in medical charge of a railway construction camp near the source of the Amazon.——Dr. Ahmed Hussein Laki sailed for Genoa, May 16.——Dr. John A. Sperry has been appointed chief of staff of the Church and Home Infirmary.——Dr. Daniel W. Cattell has been elected vice-president, Dr. Robert S. Kirk, superintendent, and Dr. John Roth, assistant superintendent of the Baltimore Eastern Dispensary.

MICHIGAN.

Medical Society Meeting.—At the annual meeting of the Dickinson-Iron Counties Medical Society, held in Crystal Falls, the following officers were elected: President, Dr. John B. Brasseur, Norway; vice-president, Dr. Abner M. Darling, Crystal Falls; and secretary, Dr. Henry A. Newkirk, Iron Mountain.

Object to Contract Work.—The physicians of Houghton County, at a meeting of Houghton County Medical Society, May 4, adopted resolutions authorizing the president of the society to name a committee of two to draw resolutions against the practice of some members of the profession of making contracts for medical examination of members of fraternal organizations.——The members of Oakland County Medical Society have signed an agreement not to make contracts with lodges for medical examinations after December 31.

MONTANA.

Physicians Win Suits.—In the suit of Dr. Christopher Turner against the city of Butte for $221.50 for damages sustained to his horse, buggy and himself by obstructions in the street, was given a verdict of $200 by the jury.——In the suit of Dr. George B. Owen, Butte, against John Ring for $100, for services rendered the sister of the defendant, it was decided in favor of the plaintiff in the lower court, and the jury in the District Court, on appeal, decided in favor of the defendant.

Society Meeting.—At the annual meeting of Silver Bow Medical Society, held recently in Anaconda, the following officers were elected: President, Dr. William L. Renick, Butte; vice-president, Dr. Thomas C. Witherspoon; secretary, Dr. Phœbe A. Ferris; treasurer, Dr. MacCormick Smetters; trustees, Drs. William L. Renick, John C. Schapps, Grace W. Cahoon, Laura Keisker, and Stokes; Drs. Matthews, Edward F. Maginn, Richard C. Monahan, Isadore D. Freund and Gideon E. Blackburn, delegates to the state medical association, and Dr. John R. E. Severs, John B. Sullivan, Frederick W. McCremon, Creswell T. Pigot and John W. Gunn, alternates.

NEW YORK.

Personal.—Dr. Carl G. Leo-Wolf, Niagara Falls, sailed for Europe last week.——Dr. Irving D. Williams, superintendent of Otisville Sanitarium, has resigned, to take effect in August.

Scarlet Fever Epidemic.—During the first two weeks of May 74 cases of scarlet fever were reported to the health board of Buffalo.——On account of scarlet fever, Caldwell school has been ordered closed.

Dispensary to Open.—The Good Samaritan Free Dispensary recently incorporated will open June 1, with Dr. Thomas B. Carpenter as president and Walter S. Goodale, secretary-treasurer of the staff.

Fined for Illegal Practice.—In the case of Charles J. Flaherty, Mount Morris, charged with the practice of medicine without registration, the defendant is said to have been fined $250 by County Judge Carter, at Geneseo, April 13.

Sale of Cocain and Eucain.—Assemblyman A. E. Smith's bill permitting the sale of cocain and eucain in wholesale lots by manufacturers to other manufacturers and wholesale dealers and druggists has been signed by Governor Hughes.

Must Not Distribute Samples.—The department of public health, Buffalo, is undertaking a vigorous enforcement of the ordinance, which requires distributors of printed matter of all kinds to take out a license. In case of medicine, the formula for the preparation must be submitted to the department as a prerequisite for a license.

College Commencement.—The commencement exercises of Albany Medical College were held May 19. Rev. George Alexander, D.D., chancellor of Union University, delivered the annual address and conferred the degrees. At the annual meeting of the trustees Dr. Andrew McFarlane was made professor of physical diagnosis and medical jurisprudence; Dr. Arthur G. Root, professor of diseases of the throat and nose; and Dr. Leo H. Neuman, professor of gastroenteric diseases and clinical professor of theory and practice of medicine. The resignation of Dr. Richard M. Pearce, professor of pathology and bacteriology, was accepted.

Society Meetings.—A permanent antituberculosis society was organized at Canandaigua, April 12, with the following medical men among its officers: Dr. Orlando J. Hallenbeck, vice-president, and Dr. Alfred W. Armstrong, secretary.——The Northwestern New York Health Officials' Association met in Watertown, April 23 and 24, and perfected its organization. Major J. H. Durham, Cape Vincent, was elected president; Dr. Stephen A. Russell, Fulton, vice-president from Oswego

County; Dr. Edward S. Willard, Watertown, from Jefferson County; Dr. Benjamin W. Severance, Gouverneur, from Lawrence County; Dr. Howard A. Bassett, Lowville, from Lewis County; and Dr. Albert L. Morgan, Dexter, secretary-treasurer.——At a meeting of the recently incorporated Rochester Health Association, held May 1, the following medical men were elected officers: Corresponding secretary and supervising director, Dr. Montgomery E. Leary; and directors, Drs. M. May Allen and Edward B. Angell.——The Woman's Medical Society of the State of New York filed certificate of incorporation with the secretary of state, May 2. The directors are Drs. Sarah R. A. Dolley, Rochester; Mary H. Cotton, New York City, Mary Innis Denton, Buffalo, and Florence A. Sherman, Watertown.

Tuberculosis Bill Signed.—Governor Hughes has signed the bill introduced by Senator Cassidy declaring tuberculosis to be an infectious and communicable disease, dangerous to the public health, and providing for the reporting of all cases to the local health authorities. It provides for the free examination of sputum by the health authorities, for the protection of the registration records from public inspection, and for the disinfection and renovation of the premises after the death of a person having tuberculosis. The occupation of premises vacated by a tuberculous person is prohibited until the directions of the health department providing for disinfection and renovation have been complied with. The bill was lengthy and some of the important sections follow:

> Section 8 makes it the duty of the physician to take all reasonable precautions for the protection of individuals occupying the same house with any one having tuberculosis. If there be no physician in charge of such patient, this section provides that this duty devolves on the health officer.
>
> Section 9 provides that the attending physician shall report to the health officer, on blanks to be furnished for this purpose by said officer, a complete statement of the procedure and precautions taken by him in a case of tuberculosis coming to his notice, and the physician shall receive for his services a fee of $1. If the physician does not desire to take these preventive measures and make this report, the duties therein stated shall devolve on the health officer, who shall receive said fee. The health officer is required to keep on hand and furnish suitable supplies and literature to physicians to aid in preventing the infection of others.
>
> Section 10 provides a penalty for the failure of physicians or others to execute the duties imposed by this act, or for making false reports, the penalty not to exceed $100, or six monhts in prison or both.
>
> Section 11 provides for the reporting by physicians of the recovery of the tuberculosis patients, and for their release thereon under the provisions of the law.
>
> Section 12 makes violation of any section of this act a misdemeanor, punishable by a fine of not less than $5 or more than $50.

New York City.

Cocain Seller Convicted.—Edward Santagata, a Mott Street druggist, is said to have been convicted May 14 of selling cocain without a physician's prescription.

Gift to Vanderbilt Clinic.—Mrs. Ray Matshak, as a memorial to her husband, has given money to equip a department for surgical mechanico-therapeutics at the Vanderbilt Clinic of the College of Physicians and Surgeons.

Bushwick Hospital Reorganized.—The board of directors of this institution has asked for the resignation of all the members of its visiting staff. The letters asking for resignations say that the scheme includes the erection of a new building and an addition to the staff.

Death Rate Decreases.—The death rate for the week ended May 16 was 17.28, as against 17.91 per 1,000 for the corresponding week of last year. Measles and scarlet fever were not so prevalent as in the preceding week. There were 31 fewer deaths from pneumonia than last year.

New Infirmary.—The annual year-book of Trinity Church notes the regret at the necessity of closing Trinity Hospital and states that it is the intention of the corporation to replace the hospital, not by another hospital, but by an infirmary on the original lines, an institution which will be of great value in the care of the poor of lower New York.

Personal.—Dr. and Mrs. Arthur Pell arrived from Europe May 17.——Dr. George Bibier Rambaud has sailed for Cherbourg.——Dr. S. Adolphus Knopf has been elected professor of phthisiotherapeutics to fill the new chair at the New York Postgraduate Medical School and Hospital.

To Aid Tuberculous Patients.—The Young Folks' League for the Home Treatment of Tuberculosis held a meeting on May 19, at which it pledged itself to supply milk, eggs, etc., to tuberculous patients in their homes. This meeting was addressed by Drs. James A. Miller of Bellevue Hospital and Sigismund S. Goldwater of Mount Sinai Hospital.

Loving-Cup to Hospital Corps.—At the annual dinner of the Medical Department of the Thirteenth Infantry, N. G. N. Y., held in Brooklyn, April 30, a loving-cup was presented to the hospital corps of the regiment by Major John B. McCook of the First Infantry, Conn. N. G. Major Henry P. De Forest received the cup on behalf of the hospital corps, and also presented to the corps a portrait of Clara Barton.

Schools Threatened by Epidemics.—More than 150 of the school children of Morris Park and Richmond Hill, Queens Borough, are ill either with measles or scarlet fever. It is admitted by the principal that one or more of the schools will probably be closed. Twenty-eight cases of scarlet fever exist among children living within a few blocks of one of the schools. The day following the above announcement 31 new cases of measles were reported.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended May 16, 1,513 cases of measles, with 35 deaths; 1,173 cases of scarlet fever, with 41 deaths; 409 cases of diphtheria, with 36 deaths; 403 cases of tuberculosis, with 158 deaths; 37 cases of whooping cough, with 4 deaths; 25 cases of typhoid fever, with 6 deaths; 13 cases of cerebrospinal meningitis, with 11 deaths; 134 cases of varicella and 1 case of smallpox, a total of 3,708 cases and 291 deaths.

Health Department Arouses Doctors.—Physicians in this city have received from the Department of Health blanks and information to facilitate the reports of diseases, births and deaths. The first paper was a circular letter beginning, "Permit me to again call your attention to the moral and legal responsibility of physicians to the registration of births." Failure to do this caused the department and parents of children much inconvenience and loss. There was also a copy of the ordinances setting forth the legal duties of physicians.

German Poliklinik Celebrates.—This institution celebrated the twenty-fifth anniversary of its founding by a dinner at the Waldorf-Astoria on May 18, at which the four surviving members of the original fifteen founders of the institution were the guests of honor. These were Drs. Samuel Kohn, Herman J. Boldt, A. H. von Ramdohr and Ludwig Weiss. A silver wreath containing the names of the founders was presented to the woman's auxiliary. The Poliklinik, in the last twenty-five years, has treated nearly 1,000,000 persons free of charge. In its first year 2,869 persons were treated and 8,700 calls were made. Last year 38,739 cases were treated and 82,683 calls were made.

Harvey Society Meeting.—At the annual meeting of the Harvey Society, held May 15, the following officers were elected: President, Dr. James Ewing; vice-president, Dr. Simon Flexner; treasurer, Dr. Edward K. Dunham; secretary, Dr. Francis C. Wood; and council, Drs. Graham Lusk, Samuel J. Meltzer and Adolph Meyer. The society adopted a resolution expressing its cordial appreciation of the great value of the services of Dr. Graham Lusk to the medical sciences of America in the foundation of the Harvey Society and in successfully administering its affairs and placing it on a substantial basis. Dr. Lusk declined re-election as president of the society.

Medicolegal Aid Society Discusses Case of Mr. Marsh.—The meeting of this body on May 20 considered the case of Mr. Marsh of Brooklyn, to whom a physician is said to have administered drugs for the purpose of destroying consciousness before his death from hydrophobia. The president, Mr. Clark Bell, cited the alleged facts of the case that he thought demanded investigation. He said: "The question of how far a doctor may, even at the request of the patient, take the power to remove life and consciousness into his own hands was most serious. If, as is held by many, the mind exerts a powerful influence over the body, what and where was the right of a physician to prevent that power being brought into action?"

OHIO.

Hospital for Crippled and Deformed Children.—A bill has been passed by the legislature establishing two state hospitals for the care of crippled and deformed children, one in the northern and the other in the southern part of the state. The selection of sites is left to a commission of three.

Midwife Convicted.—Julia Michnyak, Barberton, a midwife, charged by the State Board of Medical Registration and Examination with practicing midwifery without a license, is said to have been fined $50 and costs on each of two offenses, April 23, and in default of payment was committed to the county jail April 23.

Tuberculosis Hospital.—Contracts for erection of a commissary building and two sleeping shacks for the Franklin County Tuberculosis Hospital have been awarded at a cost of $11,115. ——The Dayton Tuberculosis Society has been offered use of a tract of land on which to erect a cottage for the use of sufferers from tuberculosis.

Sentence Deferred.—Alexander Grytza, a Polish physician of Toledo, is said to have pleaded guilty in the Probate Court, May 1, to the charge of practicing medicine without a license. Sentence was deferred in order to give the defendant opportunity to apply to the state board for a certificate.

Cincinnati.

Additional Medical Service Created.—The great number of patients applying for treatment in the medical wards of the Cincinnati Hospital, the board of trustees at a recent meeting created an additional medical service. Drs. Mark A. Brown and John E. Greiwe were appointed to alternating services of four months each.

Personal.—Dr. Robert Butler, after a year abroad in ear, nose and throat work, will, on his return, be associated with Dr. John A. Thompson.——Dr. Harry H. Hines has been appointed surgeon to the German Deaconess Hospital, vice Dr. Charles S. Evans, resigned, and Dr. Jacob Tuechter has been made pathologist of the same institution.

Alumni Meeting.—The meeting of the Alumni of Miami Medical College, June 1, will be a jubilee to Dr. William H. Taylor in celebration of the fiftieth anniversary of his entrance into the practice of medicine. Dr. Taylor was, for nearly forty years, a teacher in the college. The meeting promises to be the largest in the history of the institution.

PENNSYLVANIA.

Hospital Closes.—The Hanover General Hospital went out of existence April 17.

Contagious Diseases in Institutions.—Sixteen cases of diphtheria were reported in the Wiley Children's Home in South Bethlehem during the past week, and 13 cases of scarlet fever were found in St. Joseph's Orphan Asylum, Pittsburg, during the same period.

Fined for Not Registering Birth.—Drs. William G. Bower and Harvey D. Miller, both of Myerstown, charged respectively with two and six violations of the act requiring registration of births, are said to have pleaded guilty and to have been fined $5 for each violation of the law.

Cottage for Epileptics.—Exercises in celebration of the completion of the new children's cottage of the Pennsylvania Epileptic Hospital and Colony Farm at West Chester were held May 4. The cost of this new addition was $24,000 and the new building will accommodate 25 persons. Dr. Wharton Sinkler, president of the institution, presided, and Dr. Samuel W. Morton, secretary, was chairman of the committee of arrangements. Dr. J. Clifford Scott is superintendent of the institution.

White Haven.—Mrs. Henry Phipps, wife of the founder of the Henry Phipps Institute for the Prevention of Tuberculosis, will provide funds for the erection of a sixteen-bed cottage at the White Haven Tuberculosis Sanatorium. Work on the new cottage will be started immediately.——As a result of the work of the junior auxiliaries of the Free Hospital and White Haven Sanatorium, a new building has been added to the camp at White Haven, erected at a cost of $4,000, and to be used for the treatment of very young patients.

Personal.—Dr. Eugene C. Fetter, Altoona, has been made a member of the Altoona board of health.——Dr. James L. Heard, Northeast, is said to be seriously ill with pneumonia at the Buffalo General Hospital.——Dr. Harry J. Donaldson, Williamsport, who was recently operated on for appendicitis, is reported to be recovering.——Dr. Jonathan C. Biddle, Fountain Springs, has been re-elected superintendent and surgeon-in-chief of the Miners' Hospital, a position from which he resigned several months ago.——Dr. Daniel B. D. Beaver, Reading, returned from a trip to Europe and the Holy Land, April 18.

Philadelphia.

Publication Suspended.—The publischer of *Medical Notes and Queries* announces that its publication will be discontinued with the present issue.

Must Pay Bill.—A. E. Whiting, who was sued by Dr. John H. Gibson for $500 for an operation for appendicitis, was held by the jury to be liable for that amount, and the charge was declared to be reasonable.

Vaccination.—Following the discovery of smallpox patients in Philadelphia, nearly 1,500 of the inhabitants of the locality from which the patients were taken were vaccinated by the medical inspectors of the Isolation Hospital, April 17.

Hospital Contracts Awarded.—The contracts for the erection of six new isolation wards for the new municipal hospital to supersede the old smallpox hospital were awarded by the director of health and charities, Dr. Neff, May 23. The contract also calls for an exit building from the diphtheria ward and a steam by-pass in the boiler house. The buildings are to be constructed of brick and stone and will cost $124,980.

Personal.—Dr. William W. Keen, who is now in Europe, expects to return to Philadelphia at the end of October to resume practice.——Dr. and Mrs. James A. Irwin sail for Europe May 30.——Dr. Albert P. Brubaker sailed for Europe May 16.——The position of chief medical inspector of the Bureau of Health recently made vacant by the resignation of Dr. Andrew A. Cairns was filled by the provisional appointment of Dr. Charles A. Groff, formerly assistant medical inspector.

Women's Medical College Commencement.—The fifty-sixth annual commencement exercises of the Women's Medical College of Pennsylvania were held in the Academy of Music, May 20, when a class of 32 received diplomas from Mary E. Mumford, president of the board of corporators. The valedictory address was delivered by William Hanna Thompson, M.D., LL.D., New York City. There are at present 138 students registered in the college, including the first natives of Hayti, Porto Rico and the Philippine Islands to study medicine. Natives of Japan, India, Russia, China, England, Sweden and Germany are also represented.

Health Report.—The total number of deaths reported for the week ended May 23 aggregated 455, a decrease of 41 from the previous week and a decrease of 44 from the corresponding week of last year. The principal causes of death were: Typhoid fever, 8; measles, 15; scarlet fever, 3; whooping cough, 6; consumption, 65; cancer, 28; appendicitis, 3; nephritis, 44; premature birth, 10; congenital debility, 7; apoplexy, 13; heart disease, 45; acute respiratory disease, 44; gastritis, 5; enteritis, 17; suicide, 8; accidents, 15, and marasmus, 2. There were 173 cases of contagious diseases reported, with 13 deaths, as compared with 151 cases and 17 deaths reported in the preceding week.

Elections.—At the first annual meeting of the Association of ex-Resident Physicians of St. Joseph's Hospital, May 19, permanent organization was effected and the following officers were elected: President, Dr. George M. Marshall; vice-president, Dr. David Motlan; historian, Dr. Joseph Roberts; and secretary and treasurer, Dr. Joseph M. Spellissy.——At the annual meeting of the Alumnæ Association of the Women's Medical College of Pennsylvania, May 21, the following officers were elected: President, Dr. Margaret F. Butler; vice-presidents, Drs. Lida S. Cogill and Miriam M. Butt; recording secretary, Dr. M. Louise Diez; corresponding secretary, Dr. Mary Buchanan; treasurer, Dr. Florence H. Richards; and directors, Drs. Kate W. Baldwin, Matilda Beaver, Caroline E. Smith and Blanca Hillman. At the annual banquet, held at the Hotel Stenton on the evening of the same date, Dr. Sarah H. Lockrey presided.

SOUTH CAROLINA.

Hospital Opened.—On April 15 the new hospital building for Anderson County, at Anderson, erected by public subscription, at a cost of more than $25,000, was formally opened.

County Society Organized.—At a meeting of the physicians of Barnwell County, held recently in Barnwell, a county medical society was organized on the standard plan, and the following officers were elected: Dr. R. C. Kirkland, Barnwell, president; Dr. E. W. Ellis, Martin, vice-president; and Dr. G. F. Hogg, Barnwell, secretary-treasurer.

Personal.—Dr. C. Fred Williams, Columbia, has been appointed health officer by the State Board of Health.——Dr. Henry W. Rice has been appointed city physician of Columbia, vice Dr. C. Fred Williams, resigned.——At the annual meeting of the Alpha Kappa Kappa medical fraternity, held in Charleston, Dr. Edward F. Parker was re-elected primarius.——The office of Dr. A. Robert Able, St. Matthews, suffered serious damage by fire recently.

TEXAS.

Epidemic Diseases.—Physicians of Taylor and vicinity report an epidemic of dysentery.——Smallpox of mild type is reported in Anahuac.

Personal.—Dr. John M. Colley, Palestine, was struck by a buggy recently and fractured his arm at the wrist.——Dr. Charles S. Seafers, Port Arthur, has been appointed assistant surgeon in the P. H. and M.-H. Service and has been placed in charge of the Marine Hospital to be established at Port Arthur.

Commencement Exercises.—On April 30 the annual commencement exercises of the Medical College of Southwestern University, Dallas, were held. Dr. H. E. Bourland delivered the baccalaureate address and the diplomas were given to a class of nine by Dr. R. S. Hyer, regent of the university.——

Baylor University College of Medicine and Pharmacy, Dallas, held its eighth annual commencement exercises April 27, when a class of 11 received diplomas from the hands of President P. S. Brooks. The doctorate address was delivered by President H. H. Harrington of the Agricultural and Mechanical College of Texas.——The College of Physicians and Surgeons of Dallas held its annual commencement April 2. Dr. Arthur C. Bell delivered the address and a class of 13 was graduated.

State Association Meets.—The annual meeting of the State Medical Association of Texas was held in Corpus Christi, May 12, 13 and 14, and the following officers were elected: President, Dr. Hatch W. Cumings, Hearne; vice-presidents, Drs. James M. Inge, Denton; A. Garwood, Victoria, and William A. Wood, Hubbard City; secretary, Dr. Ira C. Chase, Fort Worth; treasurer, Dr. Charles A. Smith, Texarkana; trustee, Dr. Charles E. Cantrell, Greenville; councilors to fill vacancies—second district, Dr. Newton J. Phoenix, Colorado City; sixth district, Dr. Henry J. Hamilton, Laredo; seventh district, Dr. James C. Anderson, Granger; eighth district, Dr. William A. McCamley, Wharton; ninth district, Dr. John T. Moore, Galveston; tenth district, Dr. D. Stuart Weir, Beaumont; twelfth district, Dr. G. S. Reynolds, Temple; and alternate delegates to the American Medical Association, Drs. Russell Caffery, San Antonio, and John O. McReynolds, Dallas. Galveston was selected for the meeting place in 1909.

UTAH.

Law Case.—Dr. Elias S. Wright, Salt Lake City, charged with lack of skill in the treatment of a fractured leg, was granted his motion for a non-suit April 30.

Communicable Diseases.—An outbreak of measles and an increase in the number of smallpox cases is reported from Ogden. ——Scarlet fever is reported to be prevalent in Salt Lake City, where 39 cases were under quarantine May 16.

State Society Meeting.—At the annual meeting of the Utah State Medical Association, held in Salt Lake City, May 7 and 8, the following officers were elected: President, Dr. Ezra C. Rich, Ogden; vice-presidents, Drs. Leslie W. Snow, Salt Lake City; William W. Woodring, Mount Pleasant, and Gilbert W. States, Franklin, Idaho; secretary, Dr. W. Brown Ewing, Salt Lake City; treasurer, Dr. James N. Harrison, Salt Lake City; councilors: first district, Dr. R. S. Joyce, Ogden; second district, Dr. Philo E. Jones, Salt Lake; third district, Dr. Frederic Clift, Provo; and delegate to the American Medical Association, Dr. Samuel C. Baldwin, Salt Lake City. Ogden was selected as meeting place for 1909.

VERMONT.

Board May Seize Impure Food.—In the campaign of the Vermont Board of Health against the sale of adulterated food, an important step was taken May 14, when the board voted to instruct the state inspector of food to seize and destroy all articles of food which on analysis should be found to be below the statutory standard.

Personal.—Dr. L. P. Sprague has been appointed food inspector for Burlington, and Dr. John H. Dodds, city physician, vice Dr. George E. Latour.——Dr. Henry C. Tinkham has assumed his duties as attending surgeon and Dr. Clifford A. Pease as attending physician at Mary Fletcher Hospital, Burlington.——Dr. Charles D. Wilkins, Brattleboro, has been appointed superintendent of the City Hospital, Wilkesbarre, Pa., and assumed his duties May 1.——Dr. Charles E. Chandler, Montpelier, is said to be ill with pleurisy in Northampton, Mass.

VIRGINIA.

Communicable Diseases.—Two cases of smallpox were reported at Gate City, May 2.——There are said to be about a dozen cases of smallpox under quarantine at the Isolation Hospital, Danville.——Norfolk reports scarlet fever prevalent. During April 63 cases were reported.

Personal.—Dr. J. T. Collins, Richland, has been appointed physician of the Henrico County Almshouse, vice Dr. Armistead L. Leftwich, deceased.——Dr. Meade Ferguson, professor of bacteriology and mycology at the Virginia Polytechnic Institute, Blacksburg, has been appointed state bacteriologist and will enter on the duties of his position July 1.——Dr. Joseph A. Gale, chief surgeon of the Norfolk & Western Railroad, has returned after a year's trip abroad.

Commencement.—The faculty of the University College of Medicine, Richmond, held its annual commencement exercises May 19; Dr. Stuart McGuire, president of the faculty, delivered an address and the doctorate address was made by President J. Gray McCallister of Hampden-Sidney College. A class of 44 was graduated.——The commencement exercises of the Medical College of Virginia, Richmond, were held May 20, when a class of 38 was graduated. Capt. Joshua F. Bullitt, Big Stone Gap, delivered the doctorate address.

WASHINGTON.

Infectious Diseases.—The following infectious diseases were reported in Seattle during March: Diphtheria, 56; smallpox, 35; scarlet fever and measles, each 12; tuberculosis, 5; typhoid fever, 5, and varicella, 3.

Fined for Breaking Quarantine.—Miss Helen Hunt, who while quarantined for scarlet fever, Seattle, escaped and went to her home in North Yakima, has been brought back to Seattle and fined $10 for violation of quarantine.

Illegal Practitioners.—James Austin Larson, Seattle, is said to have been fined $100 and costs for practicing medicine without a license.——Dr. R. W. Blakesley, Georgetown, who was convicted of practicing medicine without license and sentenced to imprisonment of ninety days in the county jail and to pay a fine of $100, was released April 19 on the expiration of his sentence, the judge remitting the fine.

GENERAL.

Coming Meeting.—The eleventh annual meeting of the Medical Library Association will be held in the John Crerar Library and the Chicago Public Library, June 1, under the presidency of Dr. George Dock, Ann Arbor, Mich. In the evening the association will have its annual dinner at the Union League Club.

Pathologists Meet.—At the annual meeting of the American Association of Pathologists and Bacteriologists, held in Ann Arbor, Mich., April 17 and 18, the following officers were elected: President, Dr. Harold C. Ernst, Boston; vice-president, Dr. Philip H. Hiss, New York City; secretary, Dr. Frank B. Mallory, Boston; treasurer, Dr. Herbert W. Williams, Buffalo; and member of council, Dr. E. R. LeCount, Chicago. The council voted to hold the next meeting in the new Harvard Medical School, Boston.

American Association of Medical Milk Commissions.—The "Proceedings of the First Annual Conference of the Medical Milk Commissions of the United States" demonstrate the good work that is now being done toward the purifying of the milk supply, a matter surely of the utmost importance, in regard not only to present sanitation, but also to the upbuilding of the race. The work accomplished by the respective commissions of twelve cities of the United States is detailed in this report that it is stated that fourteen other cities have taken steps looking toward the establishment of similar organizations. The association will hold its next annual meeting at the Chicago Beach Hotel, Monday, June 1, at 10 a. m.

Fifth Pan-American Medical Congress.—This meeting will take place in Guatemala, Central America, August 5 to 10. The trip can be made from New York, New Orleans or San Francisco directly to Guatemala, returning by Mexico and Cuba to the eastern states, or by Mexico and New Orleans to the eastern states and the middle west, or by Mexico to the middle states and far west. Any physician or surgeon of good standing desiring to participate in the congress can send the title of his paper to the proper one of the following secretaries:

General Medicine—Dr. Judson Daland, Philadelphia.
General Surgery—Dr. Emmett Rixford, San Francisco.
Hygiene, Demography and Epidemiology—Dr. T. Darlington, New York.
Nervous and Mental Diseases—Dr. Chas. Hughes, St. Louis.
Tropical Medicine—Dr. John Swan, Philadelphia.
Military Sanitation—Dr. L. L. Seaman, New York.
Ophthalmology—Dr. Bert Ellis, Los Angeles.
Nose, Throat and Ear—Dr. W. S. Bryant, New York.
Pathology and Bacteriology—Dr. Walter Chase, Boston.
Gynecology, Abdominal Surgery and Obstetrics—Dr. H. P. Newman, Chicago.
Children's Diseases—Dr. C. G. Kerley, New York.

The itineraries of the trip have not been made as yet, but will be included in the next notice. Ramon Guiteras, M.D., secretary, 75 West Fifty-fifth Street, New York.

The American School Hygiene Association.—The awakening interest in the matter of the public health and the better appreciation of the responsibility of the medical profession to the public, finds its expression in a wider appreciation of the importance of providing improved school conditions for the children of the community, that is to say, in what is commonly spoken of as school hygiene. The obstacles to progress lie in the inertia and lack of information on the part of the general public and in the absence, up to a recent date, of any organized movement to keep the matter before the public. Any progress in legislation must be made independently by the various state legislatures or by the governments of the individual cities. Progress can not in any event be as rapid as in England, where a recent act of parliament provided medical school inspection for the whole of England. In this country, therefore, we are particularly dependent on the interest and education of the public which makes the laws and provides the money, and beyond the point to which the public is educated no progress will be made. The American School Hygiene Association was formed in May, 1907, for the purpose of interesting and educating the public in school hygiene, and has recently held its second annual meeting. This association, which comprises in its supporters many leading educators and physicians, now proposes to issue a small monthly magazine for the purpose of presenting to the American public the progress in school hygiene made in this and in other countries, to call attention to the fact that in America we are far behind the countries of Europe, to present abstracts of important papers on the subjects of medical inspection, school house construction, lighting, ventilation, and seating and playgrounds, and in general to serve as a sort of clearing-house for all information bearing on improved school conditions. The secretary is Dr. Thomas A. Storey, New York City.

Alienists Meet.—The sixty-fourth annual meeting of the American Medico-Psychological Association was held at Cincinnati, May 12 to 14. The large gathering assembled was addressed by the mayor, Leopold Markbreit; Dr. Charles A. L. Reed, on behalf of the American Medical Association; Dr. Charles L. Bonifield, for the Ohio State Medical Association, and W. B. Melish, for the citizens of Cincinnati. At the evening session the address was made by Judge Judson Harmon, Democratic nominee for governor of Ohio. Judge Harmon among other matters discussed the subject of expert testimony, giving a number of examples of it within his personal knowledge as a lawyer and as a judge. He declared that insanity should never be used as an excuse for crime, quoting the famous remark of the judge who said, "If a man has an uncontrollable desire to kill, the law has an uncontrollable desire to hang him." He greatly interested the large audience. On the second day the following officers were elected: President, Dr. A. F. Kilbourne; vice-president, Dr. W. F. Drury, Petersburg, Va.; secretary, Dr. Charles W. Pilgrim, Poughkeepsie, N. Y.; councilors, Drs. F. W. Langdon, Cincinnati; L. M. Perry, Parsons, Kansas; H. L. Palmer, Utica, N. Y.; Charles G. Hill, Baltimore; W. H. Hattie, Halifax, N. S.; auditor, Dr. J. M. Buchanan, Meridian, Miss.; committee on resolutions, Drs. H. M. Hurd, Baltimore; G. A. Blumer, Providence, R. I., and S. C. Smith, Richmond, Ind. A visit to Longview Asylum was made, where luncheon was served. In the evening Dr. Henry M. Hurd, superintendent of Johns Hopkins Hospital, in a paper on "Psychiatry as a Part of Preventive Medicine," severely criticised present educational methods, believing that it is wrong for subnormal and other defective children to be mixed with normal ones at school. Dr. Charles Pilgrim, Poughkeepsie, N. Y., in his paper on "The Proper Size of Hospitals for the Insane," advocated having smaller hospitals for not to exceed 1,500 patients rather than the immense ones recently built and planned. The third day's work was opened by Dr. Richard H. Hutchinson with a paper on "Tuberculosis in Hospitals for the Insane." He stated that out of 140,343 deaths from all causes 14,027, or approximately 10 per cent., are due to tuberculosis. Dr. Charles W. Hitchcock, Detroit, in a paper, "Imbecile, Criminal or Both," decried the fact that a man could escape the penalty of high crime by a plea of insanity and then come again before the bar of justice and ask for his release on the ground that he is not insane. After the morning session the members were taken to the College Hill Sanitarium, the guests of Dr. F. W. Langdon, for lunch, followed by inspection of the institution. In the evening session an address was made by Dr. A. W. Ferris on "Italian Immigration and Insanity." Contrary to the general opinion, he said the Italians stand fifth in the list and not first, as generally supposed, being preceded in a lowering ratio by the Austrians, Hungarians, Russians and Germans. The society selected Atlantic City for the next annual meeting.

FOREIGN.

Congress on Hydrology and Climatology.—The Ninth International Congress on Hydrology and Climatology was held at San Remo, Italy, April 12 to 15, under the presidency of Dr. U. Martemucci.

Increase in Number of Medical Students in Germany.—Our exchanges state that the number of medical students has increased from 6,008 in 1905 to 7,574 in 1907. The Leipsic League had 2,000 applications last year for positions from young medical men, many of whom it was impossible to place.

Practical Medicolegal Training in Accidents.—Both at Berlin and Munich there is now a special postgraduate course on the forensic aspect of industrial accidents as affecting the attending physician. Practical training in the making out of certificates is given, and the classes attend the proceedings in the courts in suits for claims for industrial indemnity.

English Hospital Work in Egypt.—According to the *British Medical Journal*, by an arrangement between the British government and the authorities of the German Deaconesses' Hospital at Alexandria, the British consular surgeon has permanent charge of twenty-five of the fifty beds which the hospital contains. To this hospital are admitted sailors and others of British nationality suffering from illness or accident.

Clinic for Occupation Affections.—Milan has inaugurated a clinic for the study and treatment of professional or occupation affections and diseases, as has already been mentioned in these columns. Prof. L. Devoto, professor of medical pathology at Pavia, has been transferred to the new clinic and chair for the pathology of industry, and G. Pieraccini has recently qualified at Florence for the post of "private docent" in this branch of medicine.

Personal.—Dr. H. R. Silvester, London, whose name is associated with a well-known method of resuscitating the apparently drowned, died recently, leaving an estate valued at $127,060.——Drs. Raikes and Wray, government medical officers at Singapore, have died of plague contracted while performing a postmortem examination on a patient who died in quarantine. Dr. L. Merveille, editor of the *Gaz. Méd. Belge*, and a pioneer in the organization of the profession in Belgium, recently was given a banquet on the twenty-fifth anniversary of his entering editorial and professional work.

The Trouble at Cologne.—The large sick benefit societies at Cologne, Germany, have recently repudiated their agreements with their medical officers and now insist on conditions which the organized profession is unwilling to accept. Backed by the Society for Promoting the Material Interests of the Profession (*Leipziger Verband*) and the good wishes of the profession, the medical officers have resigned, and now face a bitter struggle, the most important that has been waged since this society was first started a few years ago. Local medical societies throughout the country are passing resolutions endorsing their action and expressing sympathy.

The Quacks and the Movement for Sexual Enlightenment.—Our German exchanges state that a number of prominent "nature fakers" have seized the opportunity of the movement for enlightenment of the young in matters of sex to deliver illustrated lectures on such themes. One exchange regards the present condition in this respect as "an actual calamity for the country." Illustrated lectures for men only have been held at Frankfurt and elsewhere, but at Solingen, where two such lectures had been advertised in one week, with 10 cents admission, the police interfered. At Liegnitz the technical high school was addressed on this subject by a charlatan from Berlin. The subject has also been brought into the drama; one of the plays dealing with it has had a year's run at Berlin and is now said to be planning to come to this country.

Notes from Jena.—Our German exchanges state that the approaching three hundred and fiftieth anniversary of the Jena university will witness the dedication of the new university buildings erected by public and private subscriptions, including a gift from the Carl Zeiss microscope works. The "nature healers" have petitioned to have a chair organized at the university for "nature healing," that is, for their system of dietetic and physical therapy. The petition had 2,000 signatures, including the sick benefit societies, whose officers gave as their reason for endorsing the petition that this method is "cheaper than regular medicine" for their policy holders. The committee to whom the petition was referred in the legislature invited the members of the legislature to visit the medical clinic at Jena, and showed them there the innumerable scientific appliances and arrangements for physical and dietetic measures. The petition was tabled.

Silver Jubilee of the French Ophthalmological Society.—The *Société Française d'Ophthalmologie* celebrated on May 3, the twenty-fifth anniversary of its foundation and reviewed its history. Hess of Würzburg brought greetings from the German sister society, on which the French society was modeled; Berry, from the Great Britain society; van Duyse, from Holland; Verderau, from Spain and Spanish America; Angelucci, from Italy; Briend, from Egypt, and Beauvois, from Mexico. A number of delegates from societies representing other specialties were also present. The festivities continued with a reception at the Saint-Germain museum, where A. Terson delivered an address on the instruments used by the oculists of

Gaul and ancient Rome. A banquet followed, and a souvenir medal was presented to each member. The twenty-fifth annual congress opened the next day, the main topic for discussion being "Treatment of Wounds of the Eyes." More than sixty communications were presented, including one on the value of pyocyanase in ophthalmology.

Organization of the Profession in Denmark.—The municipal authorities at Copenhagen have had some difficulties with the younger physicians connected with the hospitals, the latter demanding better remuneration and certain privileges which the authorities refused to grant, having recently voted to reduce the remuneration below that in the provinces. The local society took up the matter and all its members, including the university professors, signed an agreement not to accept the subordinate medical positions in the hospitals until a satisfactory arrangement was made with the younger set. The municipal authorities yielded at once, so that a satisfactory agreement was concluded not only at Copenhagen, but in the other large towns, which promptly followed the example of the capital. Meyer writes to the *Münch. med Wchnschr.* that it is impossible to overestimate the moral effect of this victory, encouraging organization and establishing a precedent for future dealings with sick benefit societies, etc. The Copenhagen medical society (Aerzteverein) has since bought the *Ugeskrift for Læger* which is henceforth to be its weekly official organ.

LONDON LETTER.

(From Our Regular Correspondent.)

London, May 9, 1908.

Action Against a Local Authority for Contamination of a Well with Typhoid Sewage.

In a previous letter (The Journal, February 29, page 701), the successful action of Dr. Ferguson, proprietor of a hydropathic establishment at Malvern, against the district council for allowing the well from which he obtained water to become contaminated with typhoid sewage was reported. An outbreak of typhoid fever occurred in his establishment and, having guaranteed in his prospectus the perfection of his sanitary arrangements, he was mulcted in damages by various persons to the extent of $35,000. He recovered damages from the council to the amount of $37,500. On appeal this verdict has been quashed. Sir Gorell Barnes in giving judgment said that the jury had found that the water was not the plaintiff's but the defendants'; that the plaintiff had no license from the defendants to take the water. By so doing he had placed himself in the position of a trespasser. There could be no negligence on the part of the defendants, for there was no duty on them to see that the water which flowed from the well into a pond was free from sewage. On these findings of fact by the jury the plaintiff's case wholly failed.

The Prevention of Sleeping Sickness in Uganda.

The governor of Uganda has promulgated a very drastic ordinance to prevent sleeping sickness. The vast territory under his rule is placed under the conditions of an infected area. The mainland within a distance of two miles of the great lake, Victoria Nyanza, and all the islands are under severe restrictions. Within two miles of the shore fishing is prohibited, and the purchase of fish caught within that area is made an offense. No person is allowed to ply on the lake and traffic is permitted between the islands and the mainland only under certain conditions, which include the use of assigned landing places.

Protection Against the X-Rays.

At the London Hospital elaborate precautions are now taken to prevent injury to operators from the x-rays. All the necessary apparatus for controlling the machines which produce the x-rays are enclosed within a chamber built of wood, armored with thick lead and provided with windows with lead glass impervious to the x-rays. At some distance is the x-ray tube which, with the exception of an orifice which limits the emission of the x-rays to this area, is surrounded with a lead-glass shield. The shield is only partially impervious to the x-rays, allowing a weak x-ray discharge, which is accompanied by an electrical discharge. The latter is intercepted by the lead lining of the chamber and conducted to earth. The operators are also equipped with aprons, spectacles, and gloves made from material impervious to the x-rays.

Infant Mortality.

As has been shown in previous letters, the prevention of infant mortality has recently attracted considerable attention both from the profession and the public. The rate for the past year shows a satisfactory decline. The deaths of infants under one year per 1,000 births amounted to only 118, which is much lower than any recorded since the inauguration of civil registration in 1837. This is the climax of a reduction which has been going on for some years. In the decade 1891-1901 the mean annual rate was 154, whereas in the first seven years of the present century it was only 134.

Observations on the Tsetse Fly.

Prof. E. A. Minchin, who occupies the recently established chair of parasitology and protozoology in the University of London, has made some important observations on the trypanosomes of the tsetse flies and other diptera. In 1905 he went to Uganda for the purpose of studying the life cycle of the *Trypanosoma gambiense* in relation to the tsetse fly, but without any results of importance. Incidentally, however, he made observations on another species of trypanosome occurring in the tsetse fly which may be useful to future investigators. He found swarms of trypanosomes in the alimentary canal of the tsetse fly of a species distinct from the *Trypanosoma gambiense*, which is the cause of sleeping sickness. The mode of infection with the *Trypanosoma gambiense* appears to be different from that with the malarial parasite. In malaria the mosquito is a true host in which the parasite goes through a complicated developmental cycle after which, and only then, is it able to infect man. In infection with the *Trypanosoma gambiense*, on the other hand, the protozoon is simply inoculated mechanically by the proboscis of the fly and this is possible only for a period of forty-eight hours.

VIENNA LETTER.

(From Our Regular Correspondent.)

Vienna, May 10, 1908.

First International Congress on Laryngology and Rhinology.

The First International Congress on Rhino-Laryngology, together with the Türck-Czermak jubilee, was held at Vienna, April 21 to 25. There were nearly 500 physicians in attendance, twenty-eight of whom were from the United States and thirty-three from Great Britain and Ireland. Each member received as a souvenir of the jubilee a medal having on it a portrait of the men in whose honor it was held. The social side of the congress was as well provided for as was the scientific. The members were given a reception by the governor of Lower Austria and a banquet by the mayor of Vienna.

The sudden death of the honorary president, Prof. Leopold von Schrötter, only twelve hours after his brilliant historical address, cast a gloom over the proceedings, and the congress had the sad duty of selecting a committee to do the last honors to its chief officer.

The convention was opened by the reading of several reports by men of international fame. "Teaching of Laryngology, Rhinology and General Medicine" was the subject of a paper by Professor Fränkel (Berlin), and Professor Lermoyez (Paris); others were "General Treatment of Local Disease of the Upper Air Passages" by Sir Felix Semon (London); "International Congresses on Laryngology and Rhinology" by Professor Jurasz (Heidelberg), and "Treatment of Tuberculosis of the Upper Air Passages" by Dr. Joseph W. Gleitsman (New York City). In deference to the visiting members, the Vienna physicians postponed their papers until the last day of the convention. Professor Glück (Berlin) spoke of his method of dealing with cancer of the larynx, advocating total extirpation; the correlation between disease of the posterior accessory nasal sinuses and ocular disease was discussed by Professor Onodi (Budapest), and Professor Kuhnt (Königsberg), and some remarkably fine anatomic specimens were shown. The treatment of laryngeal tuberculosis was freely discussed and several papers read on the subject. The value of x-rays in the diagnosis of diseases of the nose and throat was dealt with in papers by Professors Gradenigo (Turin), Burger (Amsterdam) and Killian (Freiburg). The use of transillumination in diseases of the sinuses was discussed by Professor Vohsen (Frankfurt), and a series of papers was read on disturbances in the motility of the vocal cords in neurotic and tabetic laryngeal crises. Professor Denker (Erlangen) described his method in surgery of the nose by way of the mouth, claiming for it results that can be accomplished in no other way.

A committee was appointed to determine the time and place of meeting of the next congress. During the meeting a very interesting exhibit was held at the university; unlike so many of these exhibits, it was not in any sense a commercial one, but was of scientific and historical interest only. There were shown the first laryngoscope, the original clinical pictures by Türck and Czermak which formed the basis for their well-known atlas, and there were numerous rare pathologic specimens from the laryngologic clinic at Vienna and a collection of instruments for bronchoscopy and intranasal work.

Pharmacology

THE BROADER AIMS OF THE COUNCIL ON PHARMACY AND CHEMISTRY.

TORALD SOLLMANN, M.D.
Member of the Council, Professor of Pharmacology and Materia Medica at the Medical Department of Western Reserve University.
CLEVELAND, OHIO.

X. TESTIMONIAL WRITERS.

(Continued from page 1706.)

The psychology of advertising—what a theme for an essayist! The "catchy" phrase, word, or name; the plausible argument; the aggressive statement; the persistent reiteration—who is so sapient that he has not at one time or another succumbed to them? A clever advertisement is as insidious as a drug-habit; once tampered with, it requires a distinct effort of the will, a firm resolution to resist, and human resolutions are fragile.

Honest advertising is a necessary feature of civilization—at least it is not an unmitigated evil. Fraudulent advertisements are one of the curses of civilization. A "concealed" advertisement is always dishonest; dishonest because it travels under false pretenses; dishonest because it tries to avoid the natural caution of the reader; and, usually, dishonest also in its statements. It is, however, one of the favorite forms of proprietary advertising. Advertising in the journals, advertisements in the form of "literature" (much abused word), even calendars, blotters and visiting lists are relatively unobjectionable. But what of the "reading notice"? What of the inspired "original scientific article"? And what of the "original package," which, with all its untold possibilities, goes to the confiding patient neatly wrapped in the respectability of the prescribing physician?

TESTIMONIALS AND THEIR WRITERS.

Proprietary advertising has two specialities—frank, legitimate advertising, as in any other business; and testimonials. I use the word "testimonial" in its broadest sense, to include the "original" write-ups. The guild of testimonial-writers contains some honest enthusiasts; some who find this an easy means to get their names into print; some who do the hack-work; and not a few who have achieved greatness of a kind.

There is Dr. Blank, quoted in The Journal, Dec. 9, 1905, whose first tuberculosis patient happened to improve under Bioplasm, and who feels that he owes it to humanity to report his marvelous success. A year later, the patient reposes peacefully under the sod; but the testimonial lives on. The doctor wishes that he had waited the outcome.

There are the testimonials of the Lambert Pharmacal Company, the Eusoma Chemical Company, the Bioplasm Company, the Abbott Alkaloidal Company, and countless others, to furnish examples of blind enthusiasm run riot. Every imaginable disease is cured by Listerine or Eusoma, or Bioplasm, or Calcidin. It is quite unnecessary to know anything of medicine or surgery to practice, if only you use these and similar great boons freely—this may explain their popularity with the writers.

Have these testimonials been paid for? For the credit of the medical profession, I hope that most of them have not; I prefer to believe that the large proportion of our profession who write testimonials have been blind and thoughtless dupes, rather than knaves. "The large proportion" is not an exaggeration. Within the last few years, I have had occasion to examine much of this proprietary "literature," and I have always been impressed by the extent of this testimonial evil; but I must confess that I had a very inadequate idea of its actual magnitude, until I saw the cold figures. There is a most interesting exhibit at the Association headquarters—a card index of the testimonial writers and of the testimonials for proprietary medicines, written by and for physicians. This index was only started two and a half years ago, and of course, makes no claims to completeness. Nevertheless, in this collection there are registered eight thousand testimonials. Eight thousand! Most of these are evidently the work of amateurs, and hence presumably not paid for; some 90 per cent. of the physicians there recorded are only credited with testimonials for one product—but the index is evidently incomplete. There are others who appear to have the "habit" very badly. There is a list of about twelve men who each average over a dozen different products.

THE CHAMPION TESTIMONIAL WRITER.

The championship appears to belong to a Dr. W. R. D. Blackwood of Philadelphia, who heads the list with twenty-eight different products to his discredit. His taste seems to be rather catholic. A Dr. J. R. Hayes of Washington, D. C., specializes mainly on Thialion, but he finds time for a few others, and achieves the unique distinction of condensing endorsements for thirteen proprietary articles into a single paper, modestly entitled "Preventive Medicines and Measures." This is an "original communication" to the *New England Medical Monthly*—a publication which I understand is owned by the same parties who manufacture Thialion!

REMUNERATION FOR TESTIMONIAL WRITING.

Of course, the multiple endorsements are not in themselves legal proof of improper motives. Even when the testimonials of a physician are confined to the indiscriminate endorsement of all the products of one firm, the evidence is merely circumstantial—if that is any salve to the self-respect (?) of the writers. In fact, I have the impression that this industry is very often unpaid, and at least generally underpaid, when one considers the fees received by other professional advertisement writers. Statistics are difficult to obtain. Through a happy accident we know the tariff of the Lehn & Fink Company, who have recently obtained so much notoriety anent Purgen,[1] and "Rheumatism and Gout."[2]

But we have no evidence that this tariff of ten dollars a printed page is the general one; or, indeed, that it is uniform with this firm—I rather suspect that it is not.

Should not the guild of testimonial writers combine and stand out for better pay and a union scale? I had the impression that a certain pseudo-scientific "society"—founded a couple of years ago and readily identified by the fact that it quoted as its members people who had never given their consent—had for its main object the "organization" of the business; but I have no idea that a uniform scale of pay was any part of the program of its founders.

The fact is, however, the *specialists* of this business have no need for organization or for better pay. They must already have reduced the business of testimonial-writing to a fine system, to spare the time for this commercial work from their extensive literary, clinical and pedagogic activities; I have evidence that they are quite able to take care of the financial side of the business. They do not need our sympathy; and they are impervious to all appeals that could be made to honorable men. They should be made to feel, however, what the profession thinks of those who do not hesitate to exchange for commercial gain, not only their own paltry honor, but also the loyalty and confidence of their pupils and followers; and even the interests of science itself.

THE PATHOS OF IT.

A much sadder spectacle is presented by the "professor of pharmacology" of a medical college of good standing, located in the middle West, when he writes a bald two-page advertisement, such as I have before me, of a "Pill of Life," a typical lost-manhood cure—saw palmetto, phosphorus, strychnin, iron—signed with the full name and title of its writer. This is a sad prostitution of what should be an honored position to a disreputable purpose—that of lending respectability to the advertisement of such a remedy. It has, however, at least one merit: there are no false pretenses. "Goods paid for and delivered" can be read plainly in every line, and the blush of the writer seems to suffuse the page. One can only hope that this is the first and last offense.

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[1] The Journal, Nov. 2, 1907, 1544.
[2] Ibid., Feb. 29, 1908, 704.

There is another, and even more pathetic tale, of a true scientist who had earned the everlasting gratitude of the medical profession, but who was forced by financial straits to risk his dearly earned reputation in testimonial writing. The lapse was but temporary, and into one of the most legitimate forms of the business, but one can easily imagine what it must have cost him. Are these pangs of conscience, this loss of self-respect, not to speak of the respect of others—are these ever worth the meager price? That is a question which each man must decide for himself. But to those honest enthusiasts who think that they are benefiting humanity by writing testimonials—to these I would say: Await results before you commit yourself. When you have written a testimonial, lay it aside for a year—the world can afford to wait that long—and then see whether you are still as enthusiastic. Remember that most testimonials outlive the enthusiasm of their writers; that a testimonial which has left your hands is out of your control—you can not effectively stop the abuses to which the business interests of the manufacturer may put your well-meant endorsement.

(*To be continued.*)

Correspondence

Use of Alcohol in Medicine.

Homer, N. Y., May 18, 1908.

To the Editor:—The department of medical temperance of the Woman's Christian Temperance Union has for some years been endeavoring to instruct women regarding the danger of the use of alcoholic liquors and other powerful drugs as family remedies. This work has been done by the circulation of leaflets and pamphlets embodying the teachings of leading medical men, who make little or no use of alcoholic drinks in the treatment of disease, and who warn against the self-prescription of habit-forming drugs.

As superintendent of this work for the National Woman's Christian Temperance Union, I have received much help from physicians; indeed, without such assistance it would have been presumptuous for me to undertake such a task. It is my wish to secure, so far as possible, the cooperation of physicians all over the country. I should be very grateful for copies of pamphlets bearing on the alcohol question, or on the nostrum evil, or the drug habit. I should also like to receive for publication brief opinions of the medical use of alcoholic liquors from physicians who are in sympathy, to some extent, with the views of the late Nathan S. Davis, and of such men as Sir Frederick Treves and Sir Victor Horsley. I should like especially to receive such opinions from professors of medicine and from physicians having large hospital experience. The publication of such medical opinions as I have been able to gather from kind replies to my personal inquiries, and from medical journals, has been an important factor in the anti-saloon fight in the southern states.

May I ask that physicians who are in sympathy with this medical temperance movement will send me at least their names and addresses? Anyone who would be willing to give public addresses in his own city or town, under the auspices of women's organizations, on alcohol or on the nostrum evil, or on public health generally, I should be very glad to list for reference.

It may interest physicians to know that I have sent out about 10,000 copies of the "Great American Fraud" during the last three months, and I hope to use many more. As I was the originator of the public agitation against "patent" medicines I am naturally delighted to have this pamphlet to circulate.

Mrs. Martha M. Allen.

A New Cure Alleged for Syphilis.

Chicago, May 16, 1908.

To the Editor:—In these days of progress, scientific and commercial, it is indeed a startling discovery that will shock us out of our self-satisfied contentment with the wonderful century in which we live. The other evening, however, I sat up and took notice. I had picked up, in an idle moment, a recent number of a little magazine called *Eternal Progress*, devoted to the development of the individual by autosuggestion. I was in search of the ludicrous, which I had often found on its most seriously written pages, when my attention was caught by the following query from a disciple:

> Some years ago I contracted syphilis, and as I am about to marry, would like to find a remedy. Would dieting for thirty days produce a cure? R.

Then I read, to my surprise and delight, what ought to make the proud discoverer famous as the greatest benefactor of the human race since Jenner. I quote *verbatim:*

> The best remedy for any venereal or blood disease is fasting. A fourteen day fast will cure most cases. Mild cases could be cured in a fast of eight or ten days. The proper way to fast is to take no food whatever; but to drink an abundance of cool water. The mind should be calm, and should deeply feel that no food will be required during the fast.
>
> Give no thought to food; but think only of your object in view, and fully expect to secure the desired results.
>
> Try to prevent all ills by right living and right thinking; but should ailments come, combine metaphysical methods of cure with fasting, and you will soon be well. Ordinary ills can be cured by fasting three or four days, and in less time if metaphysical methods are employed. The same results may be obtained by living wholly on a limited amount of raw fruit, perfectly ripe; but thirty, sixty or ninety days would be required.

What a noble mind is this! With what easy grace all human ailments are disposed of! What can equal the audacity of pretentious ignorance! For ignorance we, in charity, must assume it to be. But stay. Perhaps in our haste we have misjudged. In view of the approaching marriage of the correspondent, his evident neglect of treatment (or how could he ask such a fool question?) and his conscientious desire to protect the partner of his joys, perhaps it would be sufficient to emphasize the editor's treatment, and prescribe an absolute fast of sixty days. Better still, quicker and requiring less mental effort to "give no thought to food; but think only of your object in view," let him hold his breath for a short time, say sixty-seven minutes, and he need never fear a recurrence of his dread disease.

But seriously, should not the editor be compelled to limit his advice to "explaining fully the nature of cosmic consciousness," as he does on the opposite page with great lack of clarity? When the apostle of the oversoul begins to treat syphilis by a two-weeks fast isn't it time to put the brakes on *Eternal Progress* and find out what the results will be?

A. W. Stillians.

"Milk and Tuberculosis."

Chicago, May 16, 1908.

To the Editor:—I have read with great interest the article on this subject by Dr. Gorton in The Journal, May 16, 1908. As the doctor was kind enough to quote remarks I made at the meeting of the New York State Medical Society, please publish these corrections. The institution was not the Infant Asylum, but the New York City Children's Hospital. Twenty-nine cows and one bull were tested. Twenty-six cows reacted. Seventeen of them are marked on the veterinarian's postmortem report as having many tuberculous foci in the lungs. One only had a diseased udder, and she had no lung involvement, though the retropharyngeal glands were also involved. Twenty-two were generalized, eleven having involved posterior mediastinal glands and five diseased pleura. Dr. W. H. Park had samples of milk and feces taken from each cow and injected into guinea-pigs. After six weeks they were killed and none showed tuberculosis.

The children were given Calmette's test and the von Pirquet inoculation. Nine-tenths of those who reacted had obvious cause for it, but in one-tenth tuberculosis was unsuspected or had been previously cured. These facts prove little but show that a badly infected herd does not necessarily give virulent milk as shown intentionally in the guinea-pig inoculations and unintentionally in the case of the children.

William L. Stowell.

Association News

OUR FOREIGN GUESTS.

The information necessary for the following biographic sketch of Dr. Jansen was not forthcoming until the form containing the other biographies (page 1792) was on the press.

Albert Jansen.

Albert Jansen was born in 1859 at Hildesheim, Prussia; he studied medicine at Tübingen, Göttingen and Munich, graduating at the latter place in 1884. He was assistant to Bernhard Bardenheuer at Cologne from 1884 till 1887 and to Johann Lucae at Berlin from 1887 till 1897. He has been privat docent at the University of Berlin since 1895 and is the author of many publications dealing with suppuration of the nose and ear. Dr. Jansen will open the discussion on the symposium on the "Technic of Cranial Surgery" at the joint meeting of the Sections on Surgery and Anatomy and Laryngology and Otology.

VISIT THE A. M. A. BUILDING.

Members Should Inspect the Association's Plant and Equipment.

The American Medical Association holds its session this year in the city of its headquarters. All members are cordially invited to visit the Association building at 103 Dearborn Avenue. It may be reached from the business center by taking a North State Street car to Indiana Street, and then walking west to Dearborn Avenue. If one is in the vicinity of the First Regiment Armory, one may take a Wabash Avenue or State Street car and transfer down town to one of the cars first mentioned, or one may walk four blocks west from the Armory to Clark Street and take a north-bound "Route 22" car which goes straight through the business district to the North Side. One may leave this car at Indiana Street as first described.

REGISTER EARLY.

Importance of Early Registration on Monday to Avoid Congestion.

Members are earnestly requested to register as early as possible. It will be a great advantage if those who are in Chicago on Monday will register on that day. Those who arrive early Tuesday morning should register, if possible, before the General Meeting which takes place at 10:30; they will be ready to attend the section meetings which commence at 2 o'clock in the afternoon. The place of registration is the First Regiment Armory, corner of Sixteenth Street and Michigan Avenue.

BRING YOUR POCKET CARD.

Members are urged to bring with them their pocket cards of membership. This will save them not only time and annoyance, but will facilitate registration of others.

More Railroad Rates.

The Eastern Canadian Passenger Association has made a rate of one and one-half fares, good going and returning over the same route only. Tickets will be on sale from Kingston, Sharbot Lake, Renfrew and west on May 28, 29, 30 and June 1; east of these points on May 27, 28, 29 and 30.

The Chicago, Rock Island & Pacific Railroad and the Chicago & Alton Railroad have made a rate of one and one-half fare.

The above announcements have been received since the last statement in The Journal concerning railroad rates. In the issue of May 16, page 1623, we recorded the fact that the New England Passenger Association, the Trunk Line Association and the Central Passenger Association had granted a rate of one and one-half fare.

Alumni Meetings.

An especial feature of the Chicago session will be "Alumni Night." Tuesday evening will be given up to the banquets and other entertainments given by the various Sections of the Association, and to the reunions of the various colleges. A long list of these reunions and entertainments was given in The Journal, May 16, indicating that "Alumni Night" will be a gala occasion. The general alumni headquarters will be on the second floor of the Auditorium Hotel, Congress St. and Michigan Ave. Members are requested to register there as early as possible.

The following additional announcements have been received:

Columbia: The alumni of the College of Physicians and Surgeons in the City of New York (Columbia University) are to attend the Majestic Theater on the evening of June 2, after which there will be a lunch and smoker at Tom Jones' Restaurant.

Harvard: The local alumni of Harvard Medical School plan to entertain visiting Harvard medical men during the session of the American Medical Association, June 2-5. Headquarters will be at the General Alumni Headquarters in the Auditorium, where a register of Harvard men will be kept and where any information may be obtained concerning the session and Association affairs. An informal dinner (each cover $2) will be given at the Great Northern Hotel, June 2, at 6 p. m., at which every man holding any degree from the university will be welcome. The committee requests that acceptances be mailed at once to Dr. Henry F. Lewis, Room 1404, 42 Madison Street, Chicago.

Northwestern (1892): The class of 1892 of the Northwestern University Medical School have a reunion and dinner at the Chicago Athletic Club on the evening of Friday, June 5.

Will Entertain Visiting Mystic Shriners.

Medinah Temple A. A. O. N. M. S. will hold a special meeting in honor of visiting Nobles in attendance on the Chicago session of the American Medical Association Friday evening, June 5, at Walton Place and Dearborn Avenue.

Miscellany

Damages for Fraudulent Testimonial Used by Pinkham Company.

A case in law, revealing a shameless practice, was that which Miss Frances Wynne brought on May 12 last against the Lydia E. Pinkham Medicine Company. The plaintiff, a comely and healthy young woman of 22 years, had been a salesgirl in a New York department store. Her photograph had at one time taken a prize in a newspaper "beauty contest." One morning thereafter she found the young women with whom she had been working vastly amused over a newspaper containing her portrait, in "low cut dress," and with the following testimonial accompanying it:

"Miss Elizabeth Wynn, of 205 Eighth Avenue, New York City, writes: 'For months I suffered with dreadful headaches, pain in the back and severe hemorrhages, was weak and out of sorts all the time. Lydia E. Pinkham's vegetable compound helped me when all other medicines had failed. It seemed to be just what I needed and quickly restored my health.'"

The advertisement appeared also in other New York newspapers. This had not been the plaintiff's address, and the spelling of her name had been slightly changed. The portrait was certainly hers. How had it come into the hands of the

Lydia E. Pinkham Company; and in what way had the testimonial been procured?

Some time before the circumstances here stated one Margaret Tierney, a co-employé of the plaintiff, had told her that a Miss White, a customer of the store, had known of her success in the beauty contest, admired her greatly and desired that she go to a designated photographer and sit for him, at Miss White's expense. For this favor she was to receive all but one of a dozen copies, the remaining one to be exhibited in the photographer's show-window. The plaintiff complied. She testified on the stand that she had never signed her name to anything; except as stated, she had had no idea whatever of the purpose for which her photograph was ultimately to be used. She had suffered none of the things stated in the testimonial; she had not taken anybody's vegetable or any other kind of compound. The Tierney girl admitted having signed the plaintiff's name to the testimonial, which had been given her for this purpose by Miss White. She insisted, however, that she had received the plaintiff's permission to write down her name, while admitting, however, that the latter had never seen the document. When asked why she had used the name Elizabeth instead of Frances she averred she had presumed that to be the plaintiff's proper name, inasmuch as the young women in the store had been in the habit of calling the latter Bessie. She further stated that she had told the plaintiff there might be a lot of mail coming to her after the pictures had been taken; and that if she didn't want such letters to come to her they might be forwarded to an address where an aunt of the Tierney girl lived. This was the address given in the testimonial. The Tierney girl had during five years been helping Miss White to get similar pictures, but had never received any pay for it.

Clara A. White testified that she was engaged by James T. Wetherell, an advertising agent of No. 221 Columbus Avenue, Boston, to get testimonials from women for the Lydia E. Pinkham Company. (Samuel Hopkins Adams informs us,[1] by the way, that Lydia E. has herself long ago passed beyond the help of her own or any other remedy.) Deponent stated her occupation to be literary work; she writes testimonials which she gets other people to sign. She had never seen the plaintiff, whom she had presumed had consented to pose as one of the healed. Miss Tierney had told her that the plaintiff was willing to accept some photos in the usual way, and that she supposed the plaintiff had seen and approved the testimonial which she (Miss White) had prepared. Wetherell admitted on the stand that he was under contract with the Pinkham Medicine Company to handle their advertising; and that he had employed Miss White to procure his testimonials.

The plaintiff's counsel declared that her position had been made unbearable by the constant jibes and derision of her fellow work-women, "how was her poor back getting on, etc." In consequence of these things she had to give up her situation. It was held in her behalf—and quite justly, we think—that her opportunities of a good marriage were seriously jeopardized by the disgusting and mortifying statements which were made concerning her health in the testimonial.

The jury's verdict was rendered for the plaintiff on the basis of a law of 1903 of New York State, which forbids the use of any portrait for trade purposes without the written consent of the original. And damages to the amount of $6,000 were accorded her. For the public it is well that by means of this case there has been exposed the revolting business of farming out on a contract basis, at so much per, pictures of, and testimonials from, the alleged healed, which are oftentimes—as is here evident—fraudulently obtained.

Atheroma and Diet.—M. Loeper (*Arch. des Maladies du Coeur*, etc., January, 1908) goes over the list of alimentary poisons that have been experimentally found to cause atheromatous vascular degeneration. Certain substances contained in meat seem toxic; phosphoric acid, for example, and lactic or sarcolactic acid, which in the hands of Fischer, of Boveri, and of himself have been shown to produce well marked lesions of the vessels. It is probable also that the alkaloids normally present in certain flesh foods, such as in game killed after severe exertion in the chase, and that of certain fishes and crustacea, may be vasomotor poisons. Some vegetables are very rich in oxalic acid, which in minute doses is a vascular irritant. Poisonous fungi are sometimes eaten, while other species, considered generally innocent, contain undeniably toxic principles, such as the helvellic acid in the morel. In fruits the malates, tartrates, and their salts can not be held entirely harmless, nor can vinegar and many spices like mustard, pepper and capsicum. Next to adrenalin, capsicum is one of the most powerful agents for experimental production of atheroma. Tea, coffee and chocolate in excess are vascular poisons. Even the common mineral salts of lime, soda, magnesium, etc., when too freely taken, may have bad effects; Loeper and Boveri have found that excessive calcareous alimentation aggravates the lesions of experimental atheroma. Food should be taken fresh, as when putrid it contains acids, alkaloids, ptomains and leucomains, some of which act directly on the vessels as well as on the nervous system. The ergot of certain grains produces very striking atheromatous experimental lesions of the vessels. Foods also give rise to toxic waste products that cause atheromatous degeneration of the vessels. Uric acid has been observed by Sicard and Et. Brissaud notably to aggravate the atheroma due to small doses of adrenalin. In this connection, Loeper says that in all the experiments on which his paper is based, the results of inflammation of the vessels were excluded; in none of these was sclerosis of the vessels produced. The mechanism of atheroma seems to him to be by direct irritation of the vascular walls. The hypothesis of an excitation of the trophic nerves seems hardly well supported; the hypertension theory is even less probable as many of the agents are tension lowering, and finally it is difficult to invoke a hyperfunctioning of the suprarenals, which he found hypertrophied in only one instance. In discussing the practical bearings of these facts, Loeper says that while we should avoid a diet of falsified and toxic products, and for certain patients a very restricted range should be allowed, the absolutely atoxic diet is impracticable. The living organism is constantly producing its own poisons, by the mere fact of its living, and we can not conquer atheroma. What we want to do is to prevent its overcoming us.

Acute Paraplegia After Preventive Treatment of Hydrophobia.—E. Müller reports in the *Deutsche Ztschr. für Nervenhk.*, April 30, 1908, a case which resembles twenty-four in the literature in which acute paraplegia followed Pasteur treatment. It began a week or two after the first preventive inoculation, and the complete paralysis of the legs was accompanied by severe functional disturbances in the bladder and rectum. In these cases there may also be stiffness in the muscles and in the joints, with or without rheumatic, lancinating and neuralgic pains. The paralysis may extend to the arms and threatening bulbar symptoms may be observed. Notwithstanding the tempestuous development of the severe paralysis, the prognosis is remarkably favorable. There are no spasms in swallowing or dyspnea as in true hydrophobia, and after a few days or weeks all the symptoms rapidly subside to complete recovery, as a rule, although two out of the twenty-five cases known terminated fatally. Treatment should be limited to interruption of the Pasteur treatment and solicitous general care. His patient was a man of 36, a veterinary surgeon, and the paralysis lasted two weeks. When the patient seemed lost beyond relief the symptoms began gradually to abate, and in three months the patient was able to walk. In three months more the last traces of the nervous trouble had vanished. He cut his finger while incising the abdomen of a rabid dog; the wound was duly cauterized and dressed at once, and preventive Pasteur treatment commenced the third day.

To Promote Rapid Healing of Abscesses.—S. Gucciardello of Rome makes an incision not more than 1 cm. long and squeezes out the contents of the abscess by pressure on and around it, protecting the skin with cotton from contact with the pus. When the abscess has thus been evacuated and pure blood follows the squeezing, he appplies a small pad of cotton wrung out of a bichlorid solution. Over this he applies a disc cut from a sheet of gelatin, moistening it in a bichlorid solution to soften it, and then patting it down over the abscess and cotton until it adheres to the skin around. No further protection is necessary. The next day the gelatin disc is removed; the incision is found closed. It is opened again and the contents of the abscess are expressed, after which a fresh pad of cotton and a fresh disc of gelatin are applied as before. By this means, he says, the abscess heals remarkably promptly, with the minimum disfigurement. His communication on the subject was published March 1 in the *Wiener klinische Rundschau.*

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[1] The Great American Fraud, p. 63.

Non-secrecy in Medicine.—I see no reason why what are called "patent medicines" should not be required to have the formula by which they are compounded attached to their labels. . . . I suppose it will be said that if you required the "patent-medicine" man to disclose his formula there would be an end of the "patent-medicine" business. Well, I do not know that anybody but the "patent-medicine" man need regret that.—Henry Labouchere, M.P., in *Truth.*

Paralysis from Use of Creosote.—The *Siglo Medico* states that at a meeting of the Madrid Academy of Medicine, February 29, Mariani reported that paraplegia developed in a patient, a nun, a month after a systematic course of creosote phosphate had been instituted in treatment of pulmonary tuberculosis. Other members stated in the discussion that they had encountered about a dozen cases of paralysis following the administration of creosote phosphate.

Queries and Minor Notes

Anonymous Communications will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

LENHARTZ DIET IN GASTRIC ULCER.

Jackson, Mich., May 25, 1908.

To the Editor:—Please inform me as to what constitutes the Lenhartz diet in gastric ulcer. W. H. Enders, M.D.

Answer.—The Lenhartz diet was described in The Journal, Jan. 26, 1907. It consists of a somewhat abundant diet, chiefly of proteids, given on the principle that the excess of acid is thereby neutralized and the healing of the ulcer facilitated. The patient is put to bed and absolute rest enjoined, so that the first two weeks following hematemesis the feces and urine are passed in a bedpan. Mental quietude is also enjoined, especially freedom from any form of excitement. Confinement to bed is continued for at least four weeks. An ice bag is laid over the region of the stomach to promote the contraction of that organ, lessen the exposed surface of the ulcer and relieve pain. On the first day, even after hematemesis, the patient receives in teaspoonful doses about half a pint of iced milk and one, two or three fresh beaten eggs during the first twenty-four hours. The eggs are beaten up entire with a little sugar and the cup containing them placed in a dish filled with ice, so that they remain cold. In addition two or three times a day or oftener, bismuth subnitrate in, at most, 30-grain doses, is given, suspended in water, and these doses are repeated, as needed, for the first ten days, two or three times a day. The amount of milk is increased daily by about 100 c.c. (3½ ounces) and daily one egg is added until at the end of the first week about 800 c.c. (26 ounces) of milk and six to eight eggs are taken daily. After six days scraped beef can be given in quantities increased from the beginning dose of 31 gm. (one ounce) to 70 gm. (2⅓ ounces) the second day, and so on, the beef being stirred into the egg. Gruel, softened zwieback, etc., may be added to the diet after two weeks, and at the end of four weeks an abundant mixed diet, avoiding coarse vegetables and other irritating substances, can be given. The bowels are kept open by enemata.

The method is described by M. Wagner (*Muench. med. Wochschr.,* Jan. 5, 1904) and also by J. V. Haberman (*Medical Record,* June 16, 1906). This method was tested by E. Wirsing (*Archiv. f. Verdauungskrankheiten,* xi, 3), in comparison with the method of Leube, and he reaches the conclusion that it is better than the older method for patients who have had recent hemorrhages or who are much debilitated, but that the method of Leube should be given the preference in ordinary cases. His article was reviewed in The Journal, 1905, xlv, page 1122.

This form of treatment has been tested by Lambert in eight cases of a severe type (*Amer. Jour. Med. Sci.,* January, 1908, abstracted in The Journal, Feb. 8, 1908, p. 480), and he comes to the conclusion that the claims of Lenhartz are correct: that the cure is equally efficient with the older method, is more rapid and more certain, vomiting and pain stopping more quickly and relapse occurring less frequently than in the Leube method; that pain ceases more promptly, a sufficient food supply is afforded, anemia can be treated earlier, and a return to full diet allowed sooner than in the older method.

THE PREPARED BREAKFAST FOOD QUESTION.

Fort Clark, Texas, May 19, 1908.

To the Editor:—Will you kindly express an opinion as to the advisability of allowing the so-called breakfast foods to be eaten regularly by those who look to the physician for advice on such matters? My usual advice is that oatmeal, corn-grits and all "whole grain," preparations are certainly not harmful; but that "Force," "Grape Nuts" and "Elija's Manna" are unknown quantities which may or may not be harmful. Will you elucidate the question and include in your answer a statement as to whether or not "Postum" is advisable as a substitute for coffee? P

Answer.—The results of analyses of the various "breakfast foods" agree in showing that they are composed of wholesome grains or their more valuable constituents. There is no evidence that they are diluted with bran, corn cob, corn stalk, etc., as has been claimed, or that they contain any injurious substances. As a rule, they are nutritious and digestible foodstuffs, and on these grounds nothing can be said against them. They represent a relatively expensive form of food, however, in proportion to their nutritive value. Oatmeal and other of the cereals that have long been on the market, and which can be bought in bulk without paying for the enormous expenditures in advertising and promotion carried by the advertised "breakfast foods," are many times as cheap, and for most persons every bit as good. The preparation of the breakfast foods converts part of their insoluble starches into soluble dextrins, but well-cooked cereals prepared in the ordinary manner contain a larger proportion of soluble materials than the "ready without cooking" breakfast foods. If a person likes the taste of the fantastically named breakfast foods on the market, and wishes to pay the price for them, there is no objection to their use; and the advantage to the labor-saving housewife of not having to cook breakfast may also be worth considering. There is another point, however: The form in which the prepared breakfast foods are offered for use and recommended to be eaten greatly favors mastication. Perhaps the greatest benefit securable from their use is due to this fact. The mushy cereals, rendered still more fluid by the addition of cream or milk, may be gulped down by the dyspeptic without any chewing whatever. It is almost impossible to omit the first step in digestion, however, in many of the dried breakfast foods—unless one soaks them for some time. In these days of hasty eating the value of this feature is considerable.

Postum is a "hot brown drink," and in so far is a substitute for coffee. It is probably harmless.

LOUSY FISH OF ALASKA.

Chittabalbie, Korea, Asia, March 26, 1908.

To the Editor:—Along the coast of Alaska the fish near shore have a scabby eruption and are known to the miners as "lousy fish." These fish are not eaten by white men, but the Siwash Indians eat them freely. These Indians have an eruptive disease of the skin called by miners and travelers "fish leprosy," which they assert is caused by eating these shallow water "lousy fish." It is also asserted by men who have lived there that beneath each scab on the fish there is to be found an organism which is visible to the naked eye, which they call a "fish louse," and that the eruption on the fish is identical with that on the natives who feed on them. I would be pleased to know what this disease in the Siwash Indians is and what relation it bears to the fish they eat and, if no relation exists, the particular organism which produces this disease in the fish. Why should this disease be confined to shallow-water fish? If there exist no recorded observations on this subject, it seems that it would be an interesting field for investigation. I am fully aware of the fish theory for the production of leprosy. If this disease in the natives of Alaska is leprosy and it is identical with the disease found in the fish they eat it appears that the deductions to be made are important. J. W. Nolan, M.D.

Answer.—The above letter was referred to the Bureau of Fisheries of the Department of Commerce and Labor, Washington, D. C., and the following reply was received: "This bureau does not understand that the so-called 'leprosy fish' are so common or frequent on the Alaska coast as Dr. Nolan's letter would seem to indicate. The probabilities are that this story is simply an exaggeration of statements or observations made on the various species of salmon at or near their spawning time. As the spawning time of the Pacific salmon approaches, their bodies become more or less distorted, the back becomes humped, the jaws become hooked, the scales become embedded, and the flesh becomes spongy and relatively devoid of oil. Sooner or later, chiefly on account of abrasions received from rubbing against the gravel and sand of the spawning beds, but partly as the result of fighting, sores develop on the bodies of both males and females. These abraded areas and other woudns furnish points of attack by *Saprolegnia* and sooner or later the fish appear very repulsive. They are, of course, unfit for canning and are not used by the whites as food. The Indians, however, have not been so particular and often utilize them. It is also true that the west coast species of salmon and steel-head trout are infested with various species of Lernean crustaceans as parasites. These, however, are chiefly on the gills, but sometimes elsewhere. It is not known that they do any particular damage. It may be that some species of *Argulidæ* also attack the west coast salmon. The statement that these 'lousy' fish are found only in salt water is probably based on lack of full information."

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending May 23, 1908:

Cole, C. L., first lieut., M. C., ordered from Ft. Thomas, Ky., to Ft. Benjamin Harrison, Ind., for duty.

Lynch, Charles, major, M. C., granted leave of absence to June 30, 1908.

Ebert, R. G., major, M. C., arrived at San Francisco, from tour of Philippine service.

Ireland, M. W., major, M. C., detailed to represent the Medical Department of the Army at meeting of American Medical Association, at Chicago, June 2 to 5, 1908.

Dutcher, B. H., major, M. C., relieved from duty in Philippines Division in time to sail for United States about July 15; granted two months' leave of absence.

Suggs, Frank, contract surgeon, left Madison Barracks, New York, for his proper station, Ft. Niagara, N. Y.

George, W. R. S., contract surgeon, granted an extension of ten days to his leave of absence.

Slater, E. F., contract surgeon, arrived at Madison Barracks, New York, from leave of absence.

Anderson, E. A., contract surgeon, left Ft. Wingate, New Mexico, on leave of absence for two months.

Ames, J. R., dental surgeon, arrived at Jefferson Barracks, Missouri, for duty.

Waddell, R. W., dental surgeon, arrived at San Francisco, from tour of Philippine service. for two months' leave of absence.

Hammond, W. G., dental surgeon, left Ft. Wingate, N. M., for duty at Ft. Apache, Arizona.

Tuttle, A. D., contract surgeon, granted leave of absence for seven days.

Tignor, E. P., dental surgeon, ordered to maneuver camp, Pine Plains, N. Y., to arrive June 13, for temporary duty.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending May 23, 1908:

Farenholt, A., surgeon, detached from the *Independence* and ordered to the *Maryland*.

Kennedy, J. T., surgeon, detached from the Naval Recruiting Station, Dallas, Texas, and ordered to the *Independence*.

Shipp, E. M., surgeon, detached from the *Illinois* and ordered to the *Pennsylvania*.

Urie, J. F., surgeon, detached from the *Pennsylvania* and ordered to the *Illinois*.

Mayers, G. M., P. A. surgeon, ordered to the Navy Yard, Mare Island, Cal.

Shiffert, H. O., P. A. surgeon, ordered to the *Lancaster*.

Baker, M. W., P. A. surgeon, detached from the *Colorado* and ordered to the *Nabraska*.

Dunn, H. A., P. A. surgeon, detached from the *Nebraska* and ordered to the *Colorado*.

Cather, D. C., asst.-surgeon, detached from the *Lancaster* and ordered to the Naval Recruiting Station, Kansas City, Mo.

Garrison, H. A., asst.-surgeon, detached from the Naval Hospital, Philadelphia, June 20, and ordered to the Naval Station, Guam, L. I., sailing from San Francisco about July 5.

Moran, C. L., asst.-surgeon, detached from the Naval Hospital, Norfolk, Va., and ordered to the Naval Recruiting Station, Dallas, Texas.

Baker, M. C., asst.-surgeon, detached from the Navy Yard, Mare Island, Cal., June 1, and ordered to the *Ohio*.

U. S. Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended May 20, 1908:

Carrington, P. M., surgeon, granted leave of absence for 5 days, from May 19, 1908, under Paragraph 189, Service Regulations.

Young, G. B., surgeon, detailed to represent the service at the meeting of the American Medical Association, Chicago, June 2-6, 1908.

Vogel, C. W., passed asst.-surgeon, relieved from special temporary duty at San Francisco and directed to proceed to San Juan and other quarantine stations in the Island of Porto Rico, and also to certain places in Venezuela, for special temporary duty.

Burkhalter, J. T., passed asst.-surgeon, granted leave of absence for one month, from June 3, 1908.

Warren, B. S., passed asst.-surgeon, granted leave of absence for two months, from June 5, 1908.

Ashford, F. A., asst.-surgeon, granted leave of absence for 4 days, from April 12, 1908, on account of sickness.

Frost, W. H., asst.-surgeon, granted leave of absence for 2 days, May 2 and 3, 1908, under Paragraph 210, Service Regulations.

Lanza, A. J., asst.-surgeon, relieved from duty on the revenue-cutter *Manning* and directed to proceed to Port Townsend, Washington, reporting to the commanding officer of the revenue-cutter *Rush* for duty.

Bowie, R. L., sanitary inspector, granted leave of absence for 30 days, from July 1, 1908, and extension of leave without pay for 14 days, from Aug. 1, 1908.

Mason, W. C., acting asst.-surgeon, granted leave of absence for 2 days, from May 26, 1908.

McLarty, A. A., acting asst.-surgeon, granted leave of absence for 14 days, from May 15, 1908.

Rosello, M. M., acting asst.-surgeon, granted leave of absence for 4 days, from April 25, 1908.

BOARDS CONVENED.

A board of medical officers was convened to meet in New Orleans for the purpose of making a physical eexamination of Passed Asst.-Surgeon T. D. Berry, in accordance with Paragraph 50 of the Service Regulations. Detail for the board: Surgeon J. H. White, chairman; Passed Asst.-Surgeon H. W. Wickes, Asst.-Surgeon C. M. Fauntleroy, recorder.

A board of medical officers was convened to meet in Chicago, May 22, 1908, for the purpose of examining applicants for the position of cadetship in the Revenue-Cutter Service. Detail for the board: Surgeon G. B. Young, chairman; Asst.-Surgeon C. E. Wood, recorder.

A board of medical officers was convened to meet in St. Louis, Mo., May 23, 1908, for the purpose of examining an applicant for the position of cadetship in the Revenue-Cutter Service. Detail for the board: Passed Asst.-Surgeon B. S. Warren, chairman; Acting Asst.-Surgeon H. C. Wakefield, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended May 22, 1908:

SMALLPOX—UNITED STATES.

Alabama: Mobile, May 9-15, 6 cases.

California: Los Angeles, April 25-May 2, 3 cases; San Diego and vicinity, May 1-8, 7 cases; San Francisco, April 25-May 2, 5 cases.

District of Columbia: Washington, May 2-9, 5 cases.

Illinois: Chicago, May 2-9, 4 cases; Danville, May 3-10, 2 cases; Jacksonville, May 2-9, 1 case; Springfield, April 30-May 7, 3 cases.

Indiana: Fort Wayne, May 2-9, 4 cases; Indianapolis, May 3-10, 8 cases; La Fayette, May 5-11, 2 cases.

Iowa: Albion, Jan. 1-31, 10 cases; Ottumwa, May 2-9, 5 cases.

Kansas: Kansas City, May 2-9, 5 cases; Topeka, 9 cases.

Kentucky: Covington, May 2-9, 1 case.

Louisiana: New Orleans, May 2-9, 5 cases, 3 cases imported.

Michigan: Grand Rapids: May 2-9, 1 case; Kalamazoo, 2 cases; Saginaw, 4 cases.

Missouri: St. Joseph, March 21-May 9, 195 cases, 1 death; St. Louis, May 2-9, 1 case, 1 death.

Nebraska: South Omaha, May 2-9, 2 cases.

North Carolina: Charlotte, May 1-8, 1 case.

Ohio: Cincinnati, May 1-8, 8 cases; Toledo, April 25-May 2, 3 cases.

Tennessee: Nashville, May 2-9, 1 case.

Texas: Galveston, May 1-8, 2 cases; San Antonio, May 2-9, 6 cases.

Washington: Spokane, April 25-May 2, 9 cases; Tacoma, May 2-9, 2 cases.

Wisconsin: La Crosse, April 25-May 9, 12 cases, 1 death.

SMALLPOX—INSULAR.

Philippine Islands: Manila, March 21-28, 7 cases, 3 deaths.

SMALLPOX—FOREIGN.

Austria: Trieste, April 18-25, 1 case.

Belgium: Ghent, April 18-25, 1 case, 1 death.

Brazil: Rio de Janeiro, March 30-April 12, 240 cases, 104 deaths.

China: Amoy, Feb. 15-April 4, present; Hongkong, March 14-28, 31 cases, 42 deaths; Shanghai, April 4-12, 1 case, 9 deaths.

Egypt: Cairo, April 8-22, 8 cases, 7 deaths.

France: Paris, April 18-25, 2 cases.

India: Bombay, April 7-14, 54 deaths; Calcutta, March 28-April 4, 35 deaths; Rangoon, March 30-April 4, 1 death.

Italy: General, April 16-30, 63 cases; Catania, April 23-30, 1 death.

Japan: Kobe, April 4-11, 6 cases, 3 deaths; Osaka, March 28-April 4, 145 cases, 126 deaths.

Mexico: Aguas Calientes, April 26-May 3, 2 deaths.

Russia: Odessa, April 23-30, 1 case, 1 death; St. Petersburg, April 4-18, 53 cases, 6 deaths.

Spain: Denia, April 11-25, 15 cases, 4 deaths; Valencia, April 12-26, 46 cases, 2 deaths.

Straits Settlements: Singapore, March 21-28, 1 death.

Transvaal: Pretoria, March 28-April 4, 1 death.

Turkey in Asia: Bagdad, March 28-April 11, 65 cases, 6 deaths; Constantinople, April 12-26, 7 deaths.

YELLOW FEVER.

Barbados: Bridgetown and vicinity, April 14, 1 case, 1 death.

Costa Rica: Punta Arenas, May 7, 1 case.

Cuba: Santiago, May 18, 1 case.

CHOLERA—INSULAR.

Philippine Islands: Las Pinas, March 21-28, present; Pangasinan Province, present.

CHOLERA.

Ceylon: Colombo, March 18-April 4, 1 death.

China: Hongkong, Nov. 24-28, 6 cases, 4 deaths.

India: Bombay, April 7-14, 1 death; Calcutta, March 28-April 4, 210 deaths; Madras, April 4-10, 3 deaths; Rangoon, March 28-April 4, 6 deaths.

PLAGUE.

Australia: Brisbane, Feb. 29-March 14, 3 cases, 1 death; Kempsey, May 2-9, 1 case.

Brazil: Rio de Janeiro, Mar 31-April 12, 1 case, 1 death.

China: Hongkong, March 14-28, 8 cases, 7 deaths.

India: Bombay, April 7-14, 393 deaths; Calcutta, March 28-April 4, 151 deaths; Rangoon, 32 deaths.

Straits Settlements: Singapore, March 21-28, 2 deaths.

Therapeutics

[It is the purpose of this department to outline an up-to-date management of disease, to suggest scientific treatment for diseased conditions, and to present prescriptions that are simple, useful and palatable. Prescriptions are written in both the metric and apothecaries' systems, but the amounts of the ingredients are NOT exact translations of one system into the other, but quantities convenient for pharmacist and physician. It should be understood that solids are weighed in grams or fractions of grams, while liquids are measured in cubic centimeters; that a teaspoon holds five cubic centimeters, i. e., more than a fluid dram, hence a 100 cubic centimeter preparation will contain twenty doses.]

The Administration of Water in Childhood.

Dr. Max Barbour, Philadelphia, in the *New York Medical Journal*, Feb. 8, 1908, calls attention to the fact that ordinarily not enough water is given to babies and young children. While a young child can not ask for water, and does not often know what it wants, according to Holt and Jacobi, it requires approximately to its weight, from six to eight times as much water as the adult. Hence, the physiologic reasons for giving children very diluted food, as large amounts of water are needed for the child's metabolism.

Barbour says that he has frequently allayed vomiting in children with no other medicament than the administration of a few teaspoonfuls of water, and he thinks a glass of water during the twenty-four hours is not too much for an infant several months old. Of course, this amount should vary according to the season and the condition of the child, the child naturally requiring more in hot weather and during any feverish process. He characterizes as pernicious the habit of offering a child the breast or food whenever it cries. What it really needs is water. It is often thirsty, not hungry.

He emphasizes the fact, often forgotten, that when there is diarrhea with watery stools, the child needs water, and many times plenty of water will prevent the development of serious symptoms.

If the urine is scanty and high colored, it should also quickly be noted and the child should receive more water. When the child cries when it urinates, due to concentrated, irritating urine; also when it is hoarse or has a cough, it should receive plenty of water, in the first instance to dilute the urine and in the second instance to render the mucous secretion more liquid.

Barbour believes that if babies received more water they would require less medicine.

Sulphur.

Sulphur is an element and is found as such in volcanic districts, and elsewhere in combination (sulphids and sulphates).

If it remains long in contact with the skin, or is rubbed into the skin either in a suspension or in an ointment, it is stimulant and later irritant to the skin, and may even produce an inflammation, a dermatitis. Its stimulant action is often utilized to increase the exfoliation of the epidermis. It is mildly antiseptic and is a parasiticide. It probably has little action, other than mechanical, in the stomach; i, e., at first, in the dry powder, it would be slightly irritant, but if the stomach contains food and liquid, it is practically inert. In the alkaline contents of the intestine a small amount is absorbed, but most of it is converted into sulphids and sulphates with the formation of hydrogen sulphid gas. This gas is readily taken up by the circulation, and is excreted by the lungs and skin, imparting its characteristic, disagreeable odor to the breath, and the emanations from the skin may tarnish silver articles worn by the patient. During its excretion by the skin sulphur is slightly stimulant, a fact which has caused it to be used internally in certain chronic skin diseases.

It has been thought that this hydrogen sulphid gas eliminated by the lungs would be antiseptic and inhibit the growth of germs in the lungs, such as the tubercle bacilli. Such a desirable action has not been proved.

It has also been asserted that its presence in the blood would tend to inhibit the development of boils, carbuncles and acne. Any success from the administration of sulphur in these conditions is probably due not to specific action of the sulphur, but to its action, perhaps, as a bowel antiseptic. preventing the absorption of toxins from the intestines. For such slight systemic action it is not necessary for the dose of sulphur to be large.

When sulphur is administered in considerable amounts, it increases peristalsis without causing pain, and by hastening the contents of the bowels toward the rectum causes the stools to be soft, and acts as a mild laxative. It is also probable that by its slight irritation it increases the secretion of the intestines.

It is excreted normally with the feces, but somewhat by the skin and by the lungs, and also appears in small amount in the urine and milk.

Sulphur is not now much used as a laxative, largely on account of the amount that it is necessary to take, and the disagreeableness of taking it, also because it imparts a sulphurous odor to the breath, and sometimes the odor of sulphur to the perspiration. However, when there are hemorrhoids or a fissure at the anus, it is valuable, as the feces are softened by it and at the same time it does not make large watery stools as do some other laxatives. In these same conditions a sulphur suppository may be used at night and the stool in the morning is generally soft. This is the pleasantest way of using sulphur for this purpose.

The older clinicians attribute an alterative action to sulphur and believe that it is of advantage in causing excretion of products of metabolism that might be retained in the body to the detriment of the patient. With such an object sulphur has been much used in chronic rheumatisms, muscular pains or localized myalgias, neuralgias and in gout. It has also been used in intestinal indigestions. For these purposes the dose may be small and repeated three times a day, or a larger dose once a day may be given for its combined alterative and laxative action. Although there has been a large psychical element in the advantages derived from the internal administration of sulphur, there seems to be no doubt that it does prevent sluggishness of the bowels, and, therefore, prevents the production of toxins which, being absorbed, may cause pains in various parts of the body. Many drugs act similarly and better, but sulphur should, perhaps, be used more frequently than it now is for disturbances which are due to intestinal fermentation.

Its use has been advised, on account of its germicidal action, in amebic dysentery and typhoid fever.

Sulphur is a specific in the treatment of scabies, and is also used in various other parasitic skin diseases, as tenia versicolor and sycosis. It also is used in acne and psoriasis, as it causes rapid exfoliation of the epidermis. In scabies it is often combined with the balsam of Peru, but many times balsam of Peru is used in its stead.

The official preparations of sulphur are:

Sulphur Sublimatum, sublime sulphur, or flowers of sulphur, or brimstone. This is a fine yellow powder, of sulphurous odor and a faintly acid taste, and is insoluble in water. This preparation of sulphur should not be used internally, as it may contain arsenic.

Sulphur Lotum, washed sulphur. This is prepared from the sublimed sulphur and is a fine yellow powder, but without odor or taste, and is also insoluble in water. This preparation is the best for internal use, and the laxative dose is 4 grams (60 grains).

Sulphur Precipitatum, milk of sulphur. This is also a fine, pale yellow powder, odorless and tasteless, and insoluble in water. This form of sulphur is especially vauable for external use when it is advisable to incorporate sulphur into an ointment. If the milk of sulphur is used internally, the dose is the same as the washed sulphur, viz., 4 grams (60 grains).

PULVIS GLYCYRRHIZÆ COMPOSITUS, compound licorice powder. This much used laxative contains 8 per cent. of washed sulphur, 18 per cent. of senna, glycyrrhiza, oil of fennel and sugar. The dose of this as a laxative is enough, viz., a teaspoonful or more.

UNGUENTUM SULPHURIS. This official sulphur ointment contains 15 per cent. of washed sulphur in benzoinated lard. It is used in the treatment of scabies and other skin diseases, but should generally be diluted with lard or petroleum, as it may produce considerable irritation of the skin.

Sulphur may be administered as follows:

R.	gm.		
Sulphuris loti		or	
Magnesii oxidi ....āā	10		āā, ʒiiss

M. et fac konseal. 20.

Sig.: One wafer, three times a day, after meals.

Or:

R.	gm.		
Sulphuris loti	15	or	℥ss

Fac chartulas 5.

Sig.: One powder at bedtime.

[This may be administered, according to the old-fashioned method, in syrup or molasses, if desired.]

For scabies:

R.	gm.		
Unguenti sulphuris		or	
Petrolati .... āā	25		āā, ℥i

M. et Sig.: Use externally, as directed.

Or:

R.	gm.		
Balsami peruviani	20	or	ʒv
Unguenti sulphuris	80		℥iiss

M. et Sig.: Use externally, as directed.

These preparations should be thoroughly rubbed into the affected parts of the body, and after an hour the patient should take a bath. This treatment should be repeated on several days, and clean underclothing put on after each bath. It is well to repeat this treatment once a week for two or three weeks.

Antiseptic Gargles and Mouth Washes.

This is a subject of constant interest. It is not only necessary to use proper gargles in infections of the throat, as diphtheria, follicular tonsillitis and scarlatina, but it is also necessary in all inflammations of the mouth and throat, and very necessary in all acute illnesses and fever conditions, be the cause what it may. It is also now recognized that many digestive disturbances, and perhaps serious blood diseases, may be caused or perpetuated by a foul condition of the teeth and gums. In other words, physicians prescribe more and more frequently alkaline, and more or less antiseptic solutions, or tablets or powders for solution, to promote cleanliness of the mouth and throat.

The proprietary preparations for these purposes are legion, and the price is in many instances out of all proportion to the cheap drugs used in the preparation of these powders or solutions. Still, in some instances bottles of these solutions, approximately containing a pint, are offered by some proprietary firms at a reasonable price. But the prices for which they must be sold over the prescription counter allow only a very small profit to the druggist handling them. Consequently, it seems only fair to the profession of pharmacy, and also more ethical, to order the preparations of the Pharmacopeia and National Formulary that contain practically the same ingredients as these proprietary mouth washes. In other words, the Liquor Antisepticus of the Pharmacopeia and the Liquor Antisepticus Alkalinus of the National Formulary represent preparations which, when diluted with one or two parts of warm water, make most perfect alkaline and mildly antiseptic mouth washes and gargles. However, while aiming to aid the profession of pharmacy, the physician finds that if he orders 200 c.c. or 6 ounces of one of these preparations, the patient is required by many druggists to pay as much as or more than that for which he could obtain a pint bottle of a proprietary preparation. The patient must pay an extortionate price, viz., from 50 to 65 cents, for less than half a pint of a solution the ingredients of which, per pint, costs about 10 cents. Allowing for the preparation, the bottle and the labeling, 25 cents for a bottle containing from six to eight ounces of one of these preparations would yield a handsome profit.

This is not written as a criticism, but as a regret that in the aim of the medical men to prescribe official preparations we find ourselves often defeated by the above condition.

As it has been shown (Wadsworth, *Journal of Infectious Diseases*, 1906, iii, 774), that a diluted alcohol is one of the best antiseptics for use in the mouth in infectious diseases, especially pneumonia, the following makes a cleansing solution for the mouth in acute diseases:

R.	gm. or c.c.			
Sodii chloridi	2			ʒss
Sodii bicarbonatis		50		gr. x
Glycerini	15		or	fl℥ss
Olei gaultheriæ		10		gtt. iii
Alcoholis	100			fl℥iii
Aquæ destillatæ ....ad	200			ad fl℥vi

M. et Sig.: Dilute with an equal part of warm water and use as a mouth wash.

Dandruff and Incipient Baldness.

The following local treatment is quoted from the *Therapeutic Gazette* of June 15, 1907:

R.	gm. or c.c.		
Resorcini	4		ʒi
Betanaphtholis	2		ʒss
Chlorali hydrati	8		ʒii
Tincturæ cantharidis	15	or	flʒiv
Tincturæ capsici			
Olei ricini ....āā	5		flʒi
Spiritus odorati	100		fl℥iv
Spiritus myrciæ ....ad	500		ad Oi

M. et Sig.: Rub into scalp daily.

Shake before using.

Society Proceedings

COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, CHICAGO, JUNE 2-5.

American Academy of Medicine, Chicago, May 30-June 1.
American Association of Medical Examiners, Chicago, June 1-2.
American Gastro-Enterological Association, Chicago, June 1-2.
American Proctologic Society, Chicago, June 1.
American Urological Association, Chicago, June 1.
Nat. Confed. of State Med. Exam., etc., Boards, Chicago, June 1.
American Orthopedic Association, Chicago, June 4-6.
Massachusetts Medical Society, Boston, June 9-10.
American Climatological Association, Boston, June 9-11.
Maine Medical Association, Bangor, June 10-11.
Indiana State Medical Association, French Lick, June 18-19.
Medical Society of New Jersey, Cape May, June 18-20.
Medical Society of State of North Carolina, Winston, June 16-19.
Michigan State Medical Society, Manistee, June 24-25.
State Medical Society of Wisconsin, Milwaukee, June 24-26.

ASSOCIATION OF AMERICAN PHYSICIANS.

Twenty-third Annual Meeting, held in Washington, D. C., May 12-13, 1908.

The President, DR. JAMES TYSON, Philadelphia, in the Chair.

Officers Elected.

The association elected the following officers for the ensuing year: President, Victor C. Vaughan, Ann Arbor; vice-president, Henry Hun, Albany, N. Y.; secretary, George M. Kober, Washington, D. C.; recorder, S. Solis-Cohen, Philadelphia;

treasurer, J. P. Crozer Griffith, Philadelphia; councilor, S. J. Meltzer, New York; representative on the executive committee of Congress of American Physicians and Surgeons, F. H. Williams; alternate, W. S. Thayer, Baltimore.

Résumé of History of the Association.

Dr. **James Tyson**, Philadelphia, in the annual presidential address, recalled the first meeting of the association in the old Armory building, and other early meetings held in the Surgeon-General's Laboratory. In Washington twenty-three years ago there had been delivered to the association by the profession the talents which it was expected it would return with interest. The first president, Dr. Delafield, then said: "We all know why we are assembled here to-day; because we want an association in which there will be no politics; in which no one will care who are the officers; in which no one will care from what part of the country a man comes, but will simply ask if he has done good work and if he will do more; we want members who will contribute something real and of value to a discriminating audience; we want a society in which we can learn something." How, asked Dr. Tyson, had these talents been used? For answer he asked the members to look at the twenty-two volumes of "Transactions of the Association" which he had arranged on the desk, and which included, he said, 10,456 pages and 746 titles. They included much of the best work of the past twenty-two years in the laboratories and clinics of the United States and Canada. Death had dealt gently with the association during the past year, only two of the members having died, Dr. Folsom and Dr. Carroll, to the memories of both of whom he paid tribute.

Non-Fatal Coma in Diabetes.

Dr. **C. N. B. Camac**, New York, reported a case of diabetes in an adult, observed for three and one-half months, after which there was onset of coma with marked urinary changes; coma (not Kussmaul type) fully developed. Alkaline treatment was instituted; small doses only were required to alkalize the urine. Duration of symptoms was one week. There was recovery from the coma; urine-findings were the same as before coma. Hemiplegia (without coma) occurred four months after; death. The quantity of urine remained about the same as before coma; diacetic acid lasted three days and then disappeared; when patient began to come out of coma there was very definite increase of ammonia. The blood-pressure chart never reached 200 during the early stage, but at final stage went definitely up and remained up during the time of hemiplegia. It is rare to find a case of non-fatal diabetic coma followed later by death and autopsy. In view of the subdivisions of acid intoxication Dr. Camac considered the findings in this case of interest. During the comatose condition the patient never had more than a trace of albumin.

DISCUSSION.

Dr. **S. Solis-Cohen**, Philadelphia, reported similar experiences. One patient, a woman, had had diabetes several years before consulting him. She died twenty years later after having entirely recovered from diabetic coma. Sugar disappeared from the urine five or six years before her death, being replaced by albumin. A second patient was one of two sisters who were under his care for diabetes. She had had symptoms of diabetes for a short time before coming under his care; sugar disappeared from the urine under treatment. She became careless about diet, diabetic coma developed and she died. In the other sister sugar never disappeared from the urine. Both women were gouty.

Dr. **James Ewing**, New York, thinks that there might be some question as to whether the doctor was dealing with a case of true diabetes; that if we could conceive of coma in diabetes robbed of the acid element it would be such a case.

Dr. **Theodore Janeway**, New York, took issue with Dr. Ewing; the patient had been under his care for a while and her case impressed him as one in which it was somewhat difficult to judge whether he was dealing with coma due to diabetes—which she undoubtedly had—or coma due to cerebral disease. She had slight hemiplegia when he first saw her and she had a well-marked chronic nephritis.

Dr. **C. N. B. Camac**, New York, said in regard to nephritis, that that question was carefully weighed and asked if we are in a position to differentiate uremia in the course of diabetes or acidosis from the forms that occur in other conditions. He does not see that it would help any to say that this was a case of uremic coma. We are without any definite evidence with which to differentiate.

The Auriculoventricular Bundle, with Report of a Case and Presentation of Specimens Showing Acute Ulcer on the Interventricular Septum.

Dr. **Walter B. James**, New York, presented a specimen showing an ulcer on the interventricular septum completely cutting across the auriculoventricular bundle, with complete dissociation of auricles and ventricles. The patient, a little over 60, had had chronic mitral disease for several years and came to him with malignant endocarditis. There was evident complete dissociation between auricles and ventricles. There was at no time the Stokes-Adams syndrome; there was absolute heart block without this syndrome. He suggested a more definite definition and limitation of the term and discussed a number of cases simulating and often wrongly diagnosed as heart block and suggested possible auriculoventricular delay as early evidence of acute myocarditis. He thinks that there are at least three forms of Stokes-Adams syndrome depending on entirely different physiologic origins.

Heart Sounds Heard in Early Diastole.

Dr. **W. S. Thayer**, Baltimore, said that having noticed this sound in dogs, in one of which a slight tic at the beginning of the diastole could even be seen, visible whenever the third sound could be heard, it was thought of interest to go back over human patients and study this condition. This was done over four months, taking the cases that came to the consulting room and over thirty normal individuals were found in whom the early diastolic sound was audible. It is a very slight sound distinctly audible, associated with slight shock to be felt and in some cases was visible; more marked in the recumbent position and with the patient on the left side. It is impossible to measure accurately the relation of the sound to the other sounds, but it was studied in relation to the normal cardiogram and it was observed in all that the early diastolic elevation was distinctly exaggerated. The plethysmogram showed that the ventricular diastole was a rapid and not a gradual process. The sound was similar to that in mitral stenosis. The hypothesis that seemed best was that with the first onrush of blood through the mitral and tricuspid valves the valve is brought into such contraction as to cause sudden tension of the valve. He concluded that it is not uncommon to find in the normal heart a slight sound occurring in early diastole shortly after the second sound but too late to be due to closure of the valve. It occurs between 0.1 and 0.2 second after the second sound.

DISCUSSION.

Dr. **A. A. Eshner**, Philadelphia, said it has always seemed to him that the physical condition present in the passage of the blood from the auricle to the ventricle is such as to be particularly calculated to develop a sound during this period; on one side a cavity of considerable caliber and on the other a cavity still larger, separated by an orifice.

Dr. **W. S. Thayer** said that one of the conditions in which an analogous sound is heard is that of aortic insufficiency; at the apex of the heart one hears the dull first sound, then a second sound without diastolic murmur, and then a third one.

Preliminary Report on the Results of Ligation of the Coronary Arteries in Dogs.

Drs. **Joseph L. Miller** and **A. S. Matthews**, Chicago, referred to the clinical bearing of the subject and previous experimental work on dogs which dated back many years, but concerning which the literature had not been extensive, one of the best pieces of work on the subject being that of Porter of America some years ago. More recent work is that of Spalteholz, who attempted to prove that the coronary arteries are end arteries. After ligating the descending branch of the left coronary and killing the dogs at the end of from two to four weeks it had been found that the area of necrosis in the ventricle was very small compared to the area supplied by the ligated vessel, the conclusion being drawn that the arteries were not end arteries. It had been attempted also to produce lesions similar to those that occurred in man in an attack of angina pectoris. The authors attempted to prevent stoppage of the heart by means of vasodilators of the digitalis group. It was found that one animal suffered intense dyspnea and after death there was enormous dilatation of the left ventricle; in the other animals the results were similar. Nitroglycerin, adrenalin and morphin were also employed. Nitroglycerin failed to do any particular good.

DISCUSSION.

Dr. W. H. Welch, Baltimore, asked if the investigations shed any light on the question of whether the intramuscular branches are terminal. In closure of the intramuscular branches he thought necrosis practically constant.

Dr. S. Solis-Cohen, Philadelphia, thinks that Dr. Miller properly exercised a judicious reserve in employing the results of these experiments in the treatment of angina for it is by no means sure that the results found postmortem are the same as those when the disease is first manifested. A great difference between these experiments and the paroxysm of angina is that here a permanent disturbance of the circulation is established, whereas in the paroxysm of angina there is a temporary and not a permanent disturbance. Results with nitroglycerin could not of course be expected when there was permanent occlusion of the artery. He thinks that nothing is better established than that the nitrates exert a beneficial effect in arresting the paroxysms of angina.

Dr. R. H. Babcock, Chicago, suggested that perhaps the state of the blood pressure would have much to do with the question of whether nitrates would relieve or not.

Dr. Alexander McPhedran, Toronto, reported the case of a patient with blood pressure of 270 in whom large doses of nitroglycerin produced slight toxic symptoms without reducing blood pressure more than about 20 mm., and without giving any relief.

Dr. Joseph L. Miller, Chicago, said that it might be of interest to know that the left ventricle stopped first in all the animals. Referring to Dr. Solis-Cohen's remarks, he said that the fact that in angina pectoris we are dealing with a transitory attack does not necessarily mean that we are not dealing with permanent occlusion. Most of the work was done before the use of the instruments for recording blood pressure. What actually occurred was an incomplete systole; what was needed was to make the heart muscle work better rather than to relieve pressure.

Lesions of Experimental Nephritis.

Dr. H. A. Christian, Boston, demonstrated three lesions produced in experimental nephritis in animals, a glomeruli lesion consisting in the appearance of fine droplets; they occurred in the walls of the capillary tufts and were well shown in the photographs which he passed around. This lesion occurred in eleven of thirteen successive animals which had received uranium nitrate; two failed to show the lesion. Of twelve other animals, four were given potassium bichromate; two of them showed none of these granules; two showed slight lesions. Others received potassium bichromate and mercuric chlorid; they did not show the lesion. Another group received trypan red; two showed lesions in a very mild degree. So far as the urine was concerned, it was apparently as toxic as those that did show the lesions. Another lesion somewhat similar in structure occurred within the tubular epithelium—small hyaline droplets; this occurred in a considerable number of the animals. A third lesion was a thickening of the hyaline layer; the tubule lined by a hyaline material, loss of nuclei and granules.

Review of Opsonotherapy.

Dr. Edwin R. Baldwin, Saranac Lake, N. Y., said that the original conception of opsonic activity as due to a distinct substance with independent functions has been modified by recent studies. Normal sera has been shown independently by Dean and Cowie and Chapin to exhibit a close parallel between opsonic functions and the reactions of normal amboceptor and complement to heat and absorption by bacteria. If not identical, they are indistinguishable except in function. The phenomenon of phagocytosis is a physiochemic one. Immune opsonic activity is also closely related to immune amboceptors of bacteriolytic or cytolytic sera. Lack of correspondence in some particulars is not necessary proof that opsonins form a distinct substance. Opsonic properties are also allied to agglutinative powers of sera, but are weakened more by loss of complement. Weight of evidence is in favor of opsonins as amboceptor-complement in Nature. Opsonic function as a measure of specific resistance is subject to limitations, but applicable to mild infections. He referred to the recognition of specific opsonins in diagnosis of tuberculosis as practiced by C. P. Ritchie. Studies on the technic for the estimation of the index during the past year has not increased confidence in its accuracy. Work at the Saranac Laboratory with inoculations of immune-serum opsonized tubercle bacilli has been continued and the results recorded last year on rabbits confirmed. Protective inoculations of weak-virulent opsonized bacilli in guinea-pigs were considered.

Classification of Acidoses.

Dr. James Ewing, New York, said that acid intoxication, or acidosis, occurs in diabetes, starvation, phosphorus poison, toxemia of pregnancy, cyclic vomiting of children, delayed chloroform poisoning and many other diseases, in each of which the abstraction of fixed alkalies or the direct toxic action of salts of the acid compounds are supposed to contribute to or dominate the symptoms. Study of pathologic anatomy and the chemistry of these diseases shows that there are two distinct classes of acidoses following two experimental prototypes: (1) Type:—Hydrochloric acid poisoning. Clinical forms:—Diabetes, starvation. Chemistry:—Acetone compounds. Pathologic anatomy:—No lesions. (2) Type:—Extirpation of the liver, or Eck fistula. Clinical forms:—Phosphorus poisoning, toxemia of pregnancy, cyclic vomiting, chloroform poisoning. Chemistry:—Lactic acid prominent; ammonia in excess of any acetone compounds present. Pathologic anatomy:—Extensive fatty degeneration. He reviewed evidence showing that these two types of acidosis are antagonistic in symptoms, origin and pathogenesis, although combined forms exist. The urinary ammonia is accepted as the measure of acidosis, but there is reason to believe that its significance is different in the two conditions.

DISCUSSION.

Dr. L. F. Barker, Baltimore, asked if Dr. Ewing had observed any case in which there was high organic acidity of the urine without acetone bodies or lactic acid. He said that it is conceivable that further analysis might lead to a greater differentiation in the acidoses.

Dr. J. P. C. Griffith, Philadelphia, reported two years ago two fatal cases of this kind. He called attention to the fact that French observers have described an acetonemic vomiting, but he has not confirmed this.

Dr. D. L. Edsall, Philadelphia, agreed that there are at least two types of acidosis. He thinks it hardly possible, however, to attempt as yet to indicate that one of these types is associated directly with lactic acid or any other particular acid. In the recurrent vomiting of children he thinks that we can say nothing more definite than that an acid intoxication is associated with it as part of the general disturbance. Sometimes the correction of the acid intoxication has no effect on the condition; in others it entirely overcomes it.

Dr. S. Solis-Cohen, Philadelphia, asked what basis there is for estimating the amount or degree of acid or alkaline intoxication by the urine alone. He thinks that there might just as easily be an acid intoxication resulting from excessive neutralization of alkali as an original acid or alkaline intoxication.

Dr. James Ewing, New York, in reply to Dr. Barker's inquiry, said that he had not been able to find such a case type as he referred to in which acids are present without the existence of acetone compounds. He places considerable importance on the presence of lactic acid. In eclampsia there are cases in which the ammonia is high, lactic acid moderate, and acetone compounds absent. He agreed with Dr. Griffith as to acetone vomiting. He also agreed with Dr. Edsall as to the uncertainty of the progress made in the work, but thinks the pathologic work has not thrown much light on the subject and that in the minds of physiologic chemists there is also much doubt. The clinical and pathologic indications are so clear, however, that he considers the classification justified. In reply to Dr. Solis-Cohen, he stated that the degree of intoxication is measured by the amount of ammonia in the urine; by the amount of ammonia taken to neutralize the acids—so that it must be admitted that it is an unreliable method.

Experiments with Ash-Free Diet.

DRS. ELLIOTT P. JOSLIN and HARRY W. GOODALL, Boston, reported that two healthy men were fed on Taylor's ash-free diet (whites of 18 eggs, 200 gm. crystallized sugar, 120 gm. olive oil—freed from salts) until the daily excretion of chlorin was less than 0.3 gm. No symptoms of acid intoxication appeared, and at no time was acetone detected in the breath or urine. Marked loss of weight occurred, which was regained in the first experiment within four days after a return to an ordinary diet. In the second experiment the weight was nearly all recovered in three days, with the individual remaining on the ash-free diet, plus 12 gm. of salt daily. The assimilation of food was excellent. Marked diuresis—4,090 c.c. urine—occurred in the first case four days after a return to a regular diet. A third observation was made on a patient with diabetes with a minus carbohydrate balance of over 50 gm. The chlorin in the urine gradually fell to less than 0.3 gm. in twenty-four hours, but the change in acidosis was insignificant, and the condition of the patient was better than for some days. They concluded that the withdrawal of salts from the body does cause removal of the accessory salts which are present therein; but they give no support to the idea of the acetone form of acid intoxication being caused by the withdrawal of salts, and clinical experience did not support that opinion.

DISCUSSION.

DR. D. L. EDSALL, Philadelphia, stated his conviction that Dr. Taylor's intentions concerning his experiment had been misunderstood. Dr. Edsall thinks that Dr. Taylor did not mean to have it considered as having any bearing on the diabetic condition; but considered it as indicative merely of the fact that there are at least two types of acidosis, due to two different causes.

DR. JAMES EWING, New York, has drawn the same conclusions from Dr. Taylor's observation that Dr. Joslin has. He thinks it does have a distinct bearing on the acidosis of diabetes, and that he has thrown new light on the subject by the withdrawal of alkalies from the food. He asked Dr. Joslin to go more into detail as to symptoms.

DR. E. P. JOSLIN, Boston said that the symptoms were not striking; there was considerable nausea in one case. As soon as the salt was given the gastric symptoms disappeared, but the patient knew that as soon as he received the salt the experiment would be at an end in three days, which may have had some bearing. He agreed with Dr. Ewing that Dr. Taylor meant the experiment to further this theory, but that is not the point of the matter. Dr. Taylor inaugurated a new form of diet that has led to interesting results and in that has contributed a great deal to medicine.

Parathyroids and Calcium Metabolism—Nature of Tetany.

DRS. W. P. MACCALLUM and CARL VOEGTLIN, Baltimore, read this paper, which was published in the *Bulletin of Johns Hopkins Hospital*, March, and abstracted in THE JOURNAL, May 9, 1908, p. 1561.

DISCUSSION.

DR. JOHN H. MUSSER, Philadelphia, said the case referred to by Dr. MacCallum was one of adenocarcinoma involving the thyroid and lymphatic glands and other structures of the neck, and operation was required in order to relieve strangulation. The parathyroids were removed, and five days after operation tetany set in and pursued a course very like that which Dr. MacCallum found in the experimental cases. The patient was given large doses of calcium lactate and the symptoms were relieved; they were compelled to give morphia for a time also. The calcium was withdrawn, and at the end of forty-eight hours symptoms returned, when the calcium was again administered with relief.

DR. S. J. MELTZER, New York, referred to a case of tetany following operation in which the symptoms were not so striking, but in which calcium lactate was given. In a day or two all the symptoms subsided. It was then omitted, and in two days the symptoms returned, when on administration of the drug again the symptoms disappeared. Calcium is in some way capable of controlling the condition. He called attention to the fact that with magnesium we can cause paralysis, and then by the administration of calcium the animal will in a short time get up and walk around. It is one of the four substances that keep up the equilibrium of the inorganic metabolism.

DR. D. L. EDSALL, Philadelphia, said in myasthenia gravis there is often considerable excess of calcium in the urine; he has also observed it in other conditions, such as acromegaly. Because of these disturbances calcium was given with improvement; whether due to the calcium or not it is not sure.

DR. W. G. MACCALLUM, Baltimore, said they have also observed that the administration of calcium cuts short the tetany and it reappears after a short time and has to be recombated by other doses, but the effect of the calcium in stopping the condition is very definite. He thinks that there may be some relation between the condition and acidosis because of increase in the ammonia content in the blood.

Paroxysmal Syndrome, Probably Allied to Recurrent Vomiting, with a Study of Nitrogen Metabolism.

DRS. THEODORE JANEWAY and H. O. MOSENTHAL, New York, reported the case of a school girl of 16, with no neurotic inheritance, who had been subject to recurring attacks of a peculiar nature since infancy. These attacks formerly came at intervals of from one to four months, but for a year increased to one a week for three months with absolute periodicity. Description of previous attacks tallied absolutely with those observed. Attacks began with epigastric discomfort, increasing to real pain in from four to six hours, and severe abdominal pain with pain in shoulders, hips, etc., in from eight to twelve hours. Loss of appetite and salivation were present from onset. In from six to twelve hours temperature began to rise and pulse to become rapid, reaching their maximum in about four hours. As much as 104 F. and 140 pulse had been noticed. Nausea, retching and usually vomiting once or twice occurred at height of attack. Tongue was thickly coated and breath heavy, but not sweet. Abdomen was rigid and tender, most to right of umbilicus. The whole febrile period was from eighteen to twenty-four hours, and, as a rule, in less than thirty-six hours the girl felt well and ravenously hungry. Marked polymorphonuclear leucocytosis accompanied each paroxysm observed with subsequent leukopenia for a few days. Weight was rapidly regained after attacks. Saliva was always acid. Vomitus contained abundant hydrochloric acid. Stomach contents between attacks showed somewhat excessive hydrochloric acid. Urine usually showed a trace of acetone, unrelated to the attacks; otherwise nothing. Metabolism study on a purin free diet showed little deviation from normal, but uric acid was markedly decreased and ammonia somewhat increased with two attacks. Purgation, lavage of stomach, diet, all were without influence on attacks. Marked decrease in number and severity of attacks was noticed after a period of observation with use of alkalies, but the severity was renewed later. The condition seemed most probably a toxemia allied to the recurent vomiting of children.

DR. E. P. JOSLIN, Boston, had a complete analogue of this case under his care within the last six weeks; a servant, who had had these attacks for some years, was operated on for kidney trouble, which did not stop the attacks. She had fever, pain and leucocytosis of 18,000; she is still under observation.

DR. D. L. EDSALL, Philadelphia, had under observation a patient of this kind, a trained nurse, who has had attacks similar to these for the past ten years, with increased severity. He eliminated fats from her diet, with the effect of temporarily at least stopping the attacks.

Dr. Theodore Janeway, New York, stated that he understood from Dr. Edsall that his patient had had an exploratory laparotomy, and he thought that an important point, as the occurrence of these attacks with marked leucocytosis and abdominal tenderness in the hands of many surgeons would lead to laparotomy.

Recurrent Syndrome of Heat Exposure.

Dr. D. L. Edsall, Philadelphia, reported some cases having a type of peculiar disturbance, consisting almost entirely of severe cramps affecting the extremities chiefly and also the abdomen after being subjected to excessive heat; some to intense atmospheric heat; others to artificial heat, as firemen and iron workers. Several were firemen of stationary engines. He found that the condition is common among firemen and others exposed to intense degrees of heat. In the Navy it is a common trouble among the recruits in the firing room. Deaths have occurred within an hour or two hours after the onset of the symptoms. He thinks from observations made on the blood pressure and examinations of the urine that the condition is probably toxic. It may be due to direct nervous irritation from intense heat or to some vascular change. He referred to one case in which the man had intense left-sided headache and pain in the left arm, who had been subjected to intense heat on the left side, and with change of occupation his symptoms disappeared, only to return again when he took up the same occupation. He thinks this subject of heat is of greater interest than has ordinarily been supposed.

(*To be continued.*)

MISSISSIPPI STATE MEDICAL ASSOCIATION.

Annual Meeting, held at Natchez, April 14, 1908.
(*Continued from page 1725.*)

Preparatory and After-Treatment of Abdominal Section, with Report of Cases.

Dr. H. R. Shands, Jackson, read a paper on this subject, which was discussed as follows:

Dr. B. Burnes, Memphis, said that one error altogether too common, even in hospitals, is the absence of sterilizers for utensils. All operating rooms should be provided with these devices.

Dr. J. Crisler, Jackson, declared that physicians themselves should superintend the boiling of water for sterilizing purposes and personally see that no possible danger of contact with foreign matter attends its preparation.

Dr. R. L. Johnson, Yazoo City, said that the least done to disturb the comfort of the patient the better. If he finds the vital organs normal he does not carry the patient through a prolonged and anxious series of preliminaries in dieting, etc. Such a process tends to render the patient's anxiety all the more acute.

Dr. J. S. Ullman, Natchez, said that in operations for gallstones he has found the use of the stomach tube an excellent method of preliminary preparation. The use of salol for several days prior to the operation has been found advantageous in some cases. Drainage has worked wonders in surgery, but we should always remember the danger of hernia from a wound that has been left open for drainage. The peritoneum is able to care for a vast amount of septic material, and one will often find it useful to remember: "When in doubt (as to the advisabilityof drainage), don't drain."

Puerperal Eclampsia; Causes and Treatment.

Dr. W. R. Pope, Ethel, read this paper, which was discussed at length as follows:

Dr. B. F. Turner, Memphis, said that the literature of eclampsia is singularly limited. The practitioner is thrown largely on his own reseources, and there is no condition which taxes more severely the resources of the obstetrician.

Dr. H. Christmas, Tchoula, said that if the pulse of the patient can be reduced to 75 or 80 by veratrum no further convulsions are likely to follow.

Dr. M. J. Alexander, Tunica, stated that his experience has been satisfactory with veratrum in doses of 20 drops repeated as often as three times at intervals of an hour. He has not seen any depressing effects resulting from its use.

Dr. Dansler, Jones, has invariably used veratrum in cases of this character, giving 10 drops hypodermatically until the pulse is reduced. He has often repeated the dose at intervals of thirty minutes without any disturbing effects.

Dr. Adams, Shaw, has given as much as a dram at a dose without bad results.

Dr. E. F. Turner, Leland, said that in his first case of eclampsia he resorted to the old specific of bleeding with good results, and he sometimes makes use of it now. He never got much satisfaction from the use of chloral or potassium bromid. Since using veratrum he has had good results.

Dr. Thomas B. Holloman, Ittabena, has only treated two cases of eclampsia. In one case, the patient had several convulsions, and he used veratrum, chloral and chloroform.

Dr. Rowan has never used veratrum. He does not regard it as any better than a number of other agencies. He believes that chloroform and morphin are the ideal drugs in emergencies.

Dr. Weinster, Nettleton, said that puerperal eclampsia is a preventable disease and should be so classified. A physician who has been retained in cases of expected labor has no excuse for this condition arising. If he watches the secretions of kidneys and liver and applies remedial agents every woman would be saved from this trying ordeal.

Dr. A. G. Payne, Greenville, advocated the use of veratrum in this condition. He has given as much as 20 drops hypodermatically, repeating with 10 drops at intervals, and has never seen a woman have a convulsion when the pulse was under 60. When necessary, croton oil to open the bowels quickly may be administered.

Dr. E. Robertson, Sunflower, said that he also regards eclampsia as a preventable disease if the physician is given time, but a country doctor in nine out of ten cases has not been retained, and the first he knows of the case is when he is called in a hurry to attend the woman. Dr. Robertson has used veratrum and chloroform and reduced the pulse as low as 54, and yet has seen continued convulsions.

Dr. M. C. Ellis, Senatobia, said that the condition is brought about by constipation and improper circulation. In his opinion the best remedy is the old-fashioned one of bleeding the patient.

Dr. Balling, Comanche, has never seen a patient die between the interlude of convulsions and eclampsia. He is a believer in veratrum.

Dr. A. C. Paul, Norwood, stated that as far back as 1877 the value of veratrum in puerperal eclampsia was discussed in this association.

Conservation in the Management of the Third Stage of Labor.

Dr. J. M. Guthrie, Quitman, read a paper on this subject, which was discussed as follows:

Dr. G. H. McNeill, Newton, said that he is a great believer in the use of forceps. He knows of no serious results following the early expulsion of the placenta.

Dr. Rosa Wiss, Meridian, said that after the placenta has been delivered if the physician will have the nurse place her hand on the uterus, pressing it gently for a time, the pain will be greatly diminished.

Dr. S. E. Eason, New Albany, said that the main thing in removing the placenta is to diminish the hemorrhage.

The Proper Management of Patients During and After Parturition to Prevent Pelvic Inflammation.

Dr. A. C. Kennedy, Magee, read this paper, which was discussed by Drs. Martin and Donald.

Dr. E. H. Martin, Hot Springs, Ark., endorsed Dr. Kennedy's methods in managing these cases. He said that it is agreed that there is no harm in the forceps when properly used; then why, he asked, should there be delay in the delivery when it may be hastened by the use of the forceps?

Dr. J. D. Donald, Hattiesburg, said that in preparing for the operation he always used two tablets of bichlorid of mercury in a quart of hot water. He carries his own soap and brush in order that there may be no possible septic germs.

Prophylactic Treatment of Pregnancy.

Dr. T. B. Holloman, Ittabena, read this paper, which was discussed as follows:

Dr. B. F. Holder, Memphis, Tenn., called attention to the fact that a little fissure on the nipple due to carelessness may in after years develop into a cancer.

Dr. E. J. Johnson, Yazoo City, recalled a case in which pregnancy was complicated with fibroid tumor and in which Cesarean section had to be performed.

An Unusual Case of Postpartum Hemorrhage.

Dr. F. B. Linder, Oxford, reported this case, which was discussed by Drs. Sutherland and Butler.

Dr. H. L. Sutherland, Rosedale, said that if after the termination of labor there is a good contraction we are apt to think that the danger is over. In the case in question, he thinks that the contraction was not complete. After the termination of labor he advises giving from 25 to 30 grains of quinin sulphate, and if this does not have the desired effect from 15 to 20 drops of ergot.

Dr. J. T. Butler, Liberty, said that since he began to use strychnin in advance of labor he has not had a single case of postpartum hemorrhage.

The Home Treatment of Tuberculosis.

Dr. John B. Elliott, New Orleans, laid stress on the physical and financial unpreparedness of the large majority of patients going to another climate for this condition. He maintains that in a majority of cases treated at home, when taught how to live hygienically—how to eat, sleep and rest—far more good is done when they are banished from home, friends and every interest in life. He encloses a porch with mosquito wire and requires his patients to spend the entire time in bed on this porch. When possible, awnings within the wire protect the patients from rain. He submitted a dietary for forced feeding. He does not allow his patients to take exercise until after the afternoon temperature has remained at 99 F. for at least one week; then a rolling chair should be used for one week, gradually giving way to moderate exercise. In some cases he has seen benefit from the use of tuberculin in small doses, as has been recommended by Trudeau and Brown. Tuberculin should not be used until there has been a marked arrest in the tuberculous process. He is not in favor of the use of cod-liver oil, creosote and the fat emulsions, believing that the same results may be obtained by the use of rare meats, eggs and milk. Every general practitioner is, or should be, a teacher as well as a treater of his patients, and on the subject of tuberculosis especially should there be a thorough understanding between the physician and his patient.

DISCUSSION.

Dr. E. F. Howard, Vicksburg, said that in his opinion too much stress can not be laid on the value of eggs and milk, and that excellent results can be obtained at the patient's home by open-air arrangements which give perfect ventilation. Dr. Howard reported two cases.

Dr. H. L. Sutherland thinks it a great mistake for a patient to be allowed to incur the sacrifice of changing climate unless he is plentifully supplied with money. If his means are limited to the bare cost of transportation he certainly can not profit by the change, for exposure and hardships are certain to follow.

Dr. J. M. Alford, Ellisville, said that the profession recognizes that tuberculosis is a curable disease. In his practice fully 50 per cent. of the fatalities are in the negro race. What to do with the tuberculous negro is a problem which confronts the southern practitioner. He is a constant menace, a source of infection, and he can not afford to seek another climate.

Dr. J. W. Gray, Clarksdale, has been able to accomplish much with his negro patients afflicted with tuberculosis by having them sleep with their heads in the open air, on a board extending out of the window, and eating raw eggs.

Dr. Max Henning, Memphis, thinks that physicians should emphasize the importance of the sputum cup in infected homes.

Dr. J. Waldauer, Vicksburg, has observed that unless the patient is deeply impressed with the idea that he will make his own case worse by the indiscriminate distribution of sputum, he is indifferent to the interests of others.

Dr. McElroy, Memphis, said that whatever will contribute to the nutrition of the patient, if persisted in, will result ultimately in a cure.

Dr. Stevens, Hattiesburg, said that the duty of the physician does not end with writing a prescription for the patient. He must assume the management of the patient, overcome his resistance and advise him on every step. Drugs are of little avail.

Dr. J. B. Elliott said that it is impossible to overestimate the importance of absolute obedience to instructions in the matters of diet and ventilation.

Radioactive Baths in Treatment of Malaria.

Dr. E. H. Martin, Hot Springs, Ark., read this paper, which was discussed as follows:

Dr. H. L. Sutherland said that Dr. Martin has done more for Hot Springs than any other man who ever lived there. They ought to erect a monument to him, and ought not to wait until he is dead to do it. Though Dr. Sutherland has seen excellent results from the Hot Springs treatment of malaria, still he regards quinin as the great specific. It must be admitted that there are many cases that quinin fails to reach, and in such cases Hot Springs is invariably beneficial.

Dr. Frank Jones, Memphis, said that in his opinion other conditions at Hot Springs beside the waters contribute to the excellent results.

Dr. E. F. Howard said that whether the waters of Hot Springs actually accomplish cures in malaria or not, it is certain that they contribute much toward building up the patient's system.

Dr. Martin, in closing the discussion, said that in all cases which he has observed, in which the malady had been determined as malaria, the results had been beneficial. He has made a careful study of many patients and is prepared to uphold the Hot Springs treatment as a specific.

Influenza.

Dr. L. L. Minor, of Hollywood, read this paper, which was discussed as follows:

Dr. H. L. Sutherland laid great stress on the difference between grip and ordinary colds. In 1900 grip swept over the delta like a devastating plague. There were hundreds of fatalities and spinal meningitis often accompanied the disease.

Dr. J. Waldauer regards influenza as one of the most fatal diseases with which practitioners come in contact. He knows of no other disease which has so many sequences and thinks that all cases of grip should be isolated and the apartments disinfected.

Dr. J. B. Elliott, New Orleans believes quinin to be the great specific for grip; it is fatal to the germs. He has used it successfully in his practice.

Dr. J. D. Donald, Hattiesburg, has observed that the nervous symptoms accompanying grip are out of all proportion to other symptoms.

Dr. McNeill, Tchula, has used sodium salicylate and Dover's powders successfully. He has practically discontinued the use of quinin and invariably excludes it in cases of children suffering with grip.

Neuritis.

Dr. M. J. Alexander, Tunica, read this paper, which was discussed by Drs. Hummel and Sutherland.

Dr. Hummel, New Orleans, described the various phases and symptoms of neuritis. He said that he has found absolute rest in bed, with the free use of electricity, the most beneficial treatment of the commoner forms of neuritis.

Dr. Sutherland gave the history of several cases which he has treated successfully.

Prophylaxis and Treatment of Malaria.

Dr. A. G. Payne, Greenville, read a paper on this subject, which was discussed as follows:

Dr. J. C. Hall, Anguilla, said that undoubtedly science has discovered and identified the malarial parasite, and it is equally true that this parasite is transmitted by the mosquito, but there is still the question as to where the mosquito obtains the parasite. There has been much speculation in this direction, and the subject calls for still greater research.

Dr. J. A. Crisler declared that in his opinion people are not sufficiently informed as to the why and the how of malarial infection.

Dr. B. F. Turner, Memphis, said that the time has come when more attention should be paid by the physician to the accurate diagnosis of malaria. Physicians are too prone to ascribe all fevers with vague symptoms to malaria. When microscopic diagnosis is available it should be employed. He believes that malarial patients should be screened and isolated in the interest of public health.

Dr. J. L. Andrews, Memphis, said that he learned long ago that the physicians of the Mississippi Delta constitute the most reliable sources of information touching malaria.

Dr. A. G. Payne, in closing the discussion, stated his regret that no arrangements are made in the state for the compilation of these vital statistics.

Gonorrhea in Girl Babies.

Dr. E. Rosamond, Memphis, read this paper, which was discussed as follows:

Dr. Sutherland has seen many cases of this character and marvels that so many children escaped. The prevalence of gonorrhea among negro women is one reason for the decreasing fecundity of the race. The decreasing fecundity and increasing mortality looks like the doom of the race.

Dr. Shannon thinks gonorrhea is an evil so prevalent as to call for a crusade no less vigorous than that which the profession is now waging against tuberculosis.

Dr. E. Rosamond, in closing the discussion, said that physicians must begin a campaign of education if they would eradicate the evil. The daily press will not print matter of a character calculated to promote this work, and physicians must turn to the mothers and make them see the necessity of cleanliness and the examination of their servants.

Infantile Scurvy.

Dr. P. Beekman, Natchez, read this paper, which was discussed by Dr. E. Rosamond.

Dr. E. Rosamond, Memphis, said that God intended that babies should be raised on the mother's milk. When this is not possible, the milk of a clean animal may be substituted. The diet in disease of infants demanded the closest study. Scurvy is a disease very common in infants, easy of diagnosis and treatment. He laid stress on Dr. Beekman's practice in the elimination of proprietary foods and the substitution of fresh milk and orange juice.

Appendicitis in Children.

Dr. M. D. Shivers, Greenville, read this paper, which was discussed as follows:

Dr. J. W. Barksdale agreed with Dr. Shivers' estimate of the dangers of the disease in children. The diagnosis is more difficult, because more liable to be confused with diseases common to children and having similar symptoms.

Dr. J. Waldauer, Warren, described several cases that he has treated, and took the position that serious consequences are often averted by early operation.

Another Phase of the Race Problem.

Dr. H. L. Sutherland, Rosedale, read this paper, which was discussed as follows:

Dr. A. G. Payne said that in his town there are six negro physicians. Their ignorance is simply appalling. How they passed the examination is more than he can understand. They do not know smallpox from tuberculosis.

Dr. M. J. Alexander, Tunica, said that the opportunities for diagnosis in the negro is very limited. What is to be done with the negro depends on the white race. A sick negro is useless to the planter, but the planter can be taught to isolate the case. This will take time, but it can be done.

Dr. Rehfeldt, Moss Point, said that a town should be provided with tuberculosis quarters. He spoke of inability to induce aldermanic boards to comply with recommendations.

Dr. Sutherland, in closing the discussion, said that this is a question of grave importance, and physicians are just beginning to take hold of the problem. He believes that all states will ultimately quarantine against tuberculosis patients unless patients can show that they have means of taking care of themselves.

The General Practitioner's Need of Bacteriology.

Dr. J. B. Bullitt, University, was the author of this paper, which was discussed as follows:

Dr. P. W. Rowland said that he is glad to see that in every reputable medical college in the country bacteriology is being taught.

Dr. C. J. Miller said that it is only when the microscope is used in conjunction with clinical symptoms that its true value appears. He thinks that many have come to rely too much on it.

Dr. E. J. Johnson, Yazoo City, heartily endorsed all that Dr. Bullitt contended for. He recognized the value of the microscope, and has his young partner make a specialty of it. Since then he has been surprised that he had ever been able to get along without it.

Dr. J. W. Barksdale said that the theory is not altogether practical. He does not believe that every physician could become a capable bacteriologist, nor could he afford an outfit calculated to give the best results. He thinks it safer for the ordinary practitioner to rely on the common methods of diagnosis.

Dr. T. M. Jones, Hernando, said that many men are gifted with the microscopic eye. He thinks that the practitioner's eye should be well trained.

Dr. Bullitt, in closing the discussion, said that many physicians who called on bacteriologists for analysis are disposed to rely too much on the reports in their own ignorance of bacteriology and allow the reports to outweigh all the clinical symptoms.

Other Papers Read.

The following papers were also read:

"Tinkering Versus Conservative Gynecology," Dr. J. A. Crisler, Memphis; "The Calomel and Podophyllin Habit," Dr. Rice, Summit; "Aneurism of the Femoral Vein Mistaken for Hernia." Dr. R. L. Turner, Meridian; "Surgical Treatment of Stomach Disorders," Dr. John Darrington, Yazoo City; "Report of Case of Imperforate Anus in a Baby; Operation," Dr. E. F. Turner, Leland; "Early Diagnosis and Its Importance in the Management of Pulmonary Tuberculosis," Dr. G. H. McNeill, Newton; "The Field of the *X*-Ray as a Diagnostic and as a Therapeutic Agent," Dr. S. W. Lawrence, Memphis; "Pellegra," Dr. W. R. Card, Meridian; "Operative Treatment of Colitis, with Report of Cases," Dr. Max Henning, Memphis, Tenn.; "Puerperal Sepsis: What Has Serum Therapy to Offer?" Dr. B. L. Crawford, Hattiesburg.

AMERICAN SURGICAL ASSOCIATION.

Meeting held at Richmond, Va., May 4-6, 1908.

(Continued from page 1720.)

Late Results (Two Years or More) After Operations for Benign Diseases of the Stomach and Duodenum.

Mr. B. G. A. Moynihan, Leeds, England, in estimating the value of surgery in non-malignant diseases of the stomach, reviewed the records of his operations to the end of 1905. They are 281 in number and are classified as follows: 1. Perforating ulcer of the stomach or duodenum. 2. Cases for which hemorrhage has been the immediate cause of urgent interference. 3. Cases of chronic ulcer, etc. 4. Cases of hourglass stomach. Of the 281 patients recent information is at hand in reference to 265. In Class 1, in 27 cases of perforating ulcer operated on 18 patients recovered. In Class 2, 27 patients submitted to operation for acute hemorrhage, 23 of whom recovered. In Class 3, among 205 patients there were 2 fatal cases and 214 operations. In Class 4 there were 22 cases, made up of 7 males and 15 females. The total mortality in this group is 3.

A summary of the number of cases in all the groups gives the following results:

	Total number.	Recovered.	Died.	Since Dead.	Cured.
Group 1	27	18	9	0	16
Group 2	27	18	9	0	16
Group 3	205	203	2	15	159
Group 4	22	19	3	1	17
	281	263	18	16	211

The present condition of all the patients now alive is as follows: 211 patients are cured; 9 are improved; 12 are no better; 9 are doubtful; 6 are not recently reported. Thirty-four patients are dead; 18 as a result of the operation, 7 of carcinoma of the stomach, 9 from other causes unconnected with the disease of the stomach, or the operation performed for its relief. Among the lessons to be drawn from the history the following points are submitted: The operative treatment of stomach disorders should be confined exclusively to cases in which an organic lesion is present. In acute perforating ulcer, the perforation should be closed or the ulcer excised. When a non-malignant lesion is discovered the treatment depends on its position in the stomach. If the ulcer be prepyloric, pyloric or duodenal, gastroenterostomy should be performed. It is desirable also to infold an ulcer whenever possible. The most satisfactory method of gastroenterostomy is the posterior no-loop operation, with the almost vertical application of the bowel to the stomach. Regurgitant vomiting occurs as a result of the "loop" operation, whether anterior or posterior; it is relieved almost certainly by an enteroanastomosis. In hour-glass stomach the surgical treatment presents special difficulties on account of the frequency of a dual lesion; one in the body of the stomach, one at the pylorus, and consequently double operations have to be performed.

Study of Gastric and Duodenal Ulcers, with Especial Reference to Their Surgical Cure.

Dr. William J. Mayo, Rochester, Minn., discussed gastric and duodenal ulcers. In the series reported the average duration of the symptoms was over twelve years and medical treatment had failed to effect permanent cure. Only cases failing to yield to reasonable medical treatment, he said, should be considered surgically. The opinion as to cure is based on the condition of the patient two years or more after the operation. All the patients with ulcer and kindred diseases of the stomach and duodenum operated on by Drs. C. H. and W. J. Mayo since 1893 to April 20, 1908, are classified. Total number of operations was 824; the total number of patients operated on, 765. Of 543 cases of ulcer operated on 27 were acute perforations. All the patients of acute perforation treated by simple suture, with one exception, recovered and remained well. Twice in chronic cases the base of the ulcer had been cut out producing an effect similar to acute perforation. The defect was closed, good results following. In more than 300 posterior no-loop gastrojejunostomies with the intestine sutured to the stomach in its normal position downward and to the left performed for ulcer of the stomach and duodenum there is reported a mortality of less than 1 per cent., and but three patients have required secondary operation on the stomach for any cause. In all loop operations, anterior or posterior, the intestine is applied to the stomach downward and to the right, but in the no-loop method this sometimes caused angulation, turning the jejunum at the duodenojejunal angle rather sharply from its normal position, and occasionally caused chronic bile regurgitation. Excision, the Finney operation, and the operation of Rodman, he remarked, each has a field of usefulness in suitable cases. Three hundred and seventy-nine patients with ulcer of the stomach and duodenum were operated on previous to June 1, 1906, covering a period of from two to fifteen years since operation, have been traced. In 318 actually demonstrated ulcers, 80.7 per cent. of the patients were cured, 9 per cent. were improved and 4.2 per cent. were unimproved; 6 per cent. died in the years following operation from various causes, only two of which were connected with the stomach. After operation for ulcer patients require medical supervision until cure is established.

End Results Following Operation for Benign Diseases of the Stomach and Duodenum.

Dr. John B. Deaver, Philadelphia, asserted that reliance on direct experience and observation rather than on theory must be condemned in the scientific surgery of to-day. He has traced 66 of the patients on whom he has performed stomach operations for benign disease. Of this number 44 are free from all gastric sysmptoms, 9 are greatly improved, 5 are unimproved and 8 have died. These figures give a percentage of cures of 66.6; of patients greatly improved, 80.3. A division of the patients is made from the operative viewpoint and the percentages of cures and improvements given. An analysis of the various diseases of the stomach and duodenum for which operations were performed, and a list of the cases traced, in more or less detail, are included in the paper. Dr. Deaver concludes: The operation of choice should always be performed when feasible; when not feasible, the operation of necessity. All cases of stenosis of the pylorus, whether due to a neoplasm, cicatricial contraction, hyperplasia, pyloroplasm, or what not, should be treated by operative interference, preferably by posterior gastrojejunostomy. All ulcers of the stomach which do not respond to medical treatment promptly, and the various sequelæ of this disease, should be treated by operation. All ulcers of the duodenum, which do not respond promptly to medical treatment, should be treated by operation. His preference in performing gastroenterostomy is by the posterior gastrojejunostomy, no-loop, clamp route.

How Frequently Do Gastric Ulcers Become Carcinomata?

Dr. William L. Rodman, Philadelphia, believes gastric carcinomata due in at least 50 per cent. of the cases to a previous ulcer. Though statistics vary concerning the frequency of the occurrence, the latest studies give the highest percentage. Within two years he has had nine cases of cancer in which there was an unmistakable history of ulcer. In some cases the classical symptoms of chronic ulcer are so marked that there is no suspicion of carcinoma, and even when the abdomen is opened mistakes have been made by those most experienced in gastric diseases. In other cases, after two or more years the symptoms change so that malignant degeneration is suspected. Little is to be learned from gastric analysis, as the chemical characteristics may be the same as in simple ulcer. Rapid and regular diminution or disappearance of hyperacidity at intervals is the most important sign. This phenomenon probably indicates that cancer is developing. The difficulty of diagnosis is the strongest plea that can be made for early exploratory operation in all gastric cases of doubtful nature failing to yield to medical treatment within a reasonable time. Dr. Rodman advocates removal of all suspicious lesions, by simple excision, pylorectomy, or partial gastrectomy, according to the conditions in the individual case.

Gastric and Duodenal Ulcers Secondary to Wounds of the Urinary Bladder.

Dr. John B. Roberts, Philadelphia, mentioned a death from perforating gastric ulcer after suprapubic lithotomy which he had reported in 1887. A few years ago he lost a patient from hemorrhage due to ulcer of the duodenum occurring in a man who had suffered extraperitoneal rupture of the urinary bladder and other injuries. He referred to the probability of gastric and duodenal ulcerations being pathologic sequences of the bladder lesion. Dr. Roberts collected from literature and his own experience 16 instances of gastrointestinal bleeding subsequent to operative or other lesions of the urinary organs. The result was death in 14 cases, recovery in 2. There were operations for: Cystotomy, 5; litholapaxy, 1; nephrotomy, 3; extravasation of urine, 2; nephrorrhaphy, 2. There were of non-operative cases: Pericystic abscess, etc., 1; preinephritic abscess, etc., 1; perineal abscess, etc., 1; making a total of 16. In 7 of the 10 fatal cases ulceration was found at autopsy. In several of the remaining cases no necropsy was made, and the question of the presence of ulcer of the stomach or intestines, therefore, remains undetermined. He mentioned the fact that Curling in his classic paper, published 64 years ago on duodenal ulcers secondary to burns, stated that he had seen similar ulcers in other surgical conditions than burns. Dr. Roberts quoted from papers published recently to show that a connection between abdominal and pelvic operations and postoperative hematemesis and intestinal bleeding occur often enough to suggest a pathologic connection. He mentioned cases of such hemorrhage and ulceration occurring after operative procedures on regions distant from the abdomen and pelvis. Cases reported apparently prove that the postoperative bleeding and ulceration of the gastrointestinal tract are caused by some more general pathologic influence than local interference with the abdominal and pelvic circulation alone. Experimental and clinical evidence give credence to the theory that changes in the gastric and intestinal mucosa leading to fatal issue may be the result of several local influences or of a widespread pathologic alteration in the cells and fluids of the body. Although such lesions are probably more apt to occur after interference with the pelvic and abdominal organs, enough cases are on record to lead to the belief that a general condition, such as uremic intoxication, atheroma of the vessels, toxemia and infection are instrumental in rendering the patient liable to the serious complication discussed. Investigations have been made on the production of gastric and duodenal ulcers by interference with the nervous connections of the gastrointestinal tract. He emphasized the serious prognosis in postoperative hematemesis or bloody stools, and made various suggestions as to treatment.

Infantile Hypertrophic Stenosis of Pylorus.

Dr. Frank E. Bunts, Cleveland, reported an operation for pyloric stenosis in an infant four and one-half weeks old. The pylorus was found thickened and hard and, deeming it impossible to perform a pyloroplasty, an anterior gastroenterostomy was made. The child recovered and is living, eleven months from date of operation. Of 89 operative cases collected by Dr. Thompson in 1906, and 25 collected by Dr. Bunts, 53 patients recovered and 61 died, a mortality of 55.5 per cent., distributed as follows:

Disease.	Cases.	Recovered.	Died.	Mortality Per Cent.
Divulsion	27	13	14	51.8
Gastroenterostomy	69	32	37	53.6
Pyloroplasty	17	8	9	53
Pylorectomy	1	0	1	100

No improvement, but rather a higher mortality, was shown in the last 25 cases. Dr. Bunts concludes that congenital and infantile stenosis are of decidedly different clinical significance. Congenital pyloric stenosis calls for early operative interference. Infantile pyloric stenosis develops after birth and is often amenable to medical treatment, but in the absence of improvement an early operation offers good prospect of recovery. In selected cases pyloroplasty offers results superior to those of gastroenterostomy. The one great determining cause of death in practically all cases is delay, and it is obvious that until this obstacle is removed by the medical attendant, little or no improvement on the present statistics can be expected.

Discussion on Gastric Surgery.

Dr. Willy Meyer, New York, spoke of the complications following operations for stenosis of the pylorus and of the possibility of overcoming these. A patient under his care on the third day of convalescence passed into a deep coma, passing the stools and urine in the bed. Temperature and pulse showed no reason for the condition. The patient was given a hypodermocylsis of salines every eight hours. On the fifteenth day he regained consciousness and went on to proper convalescence. In the secondary operation he prefers gastroenterostomy plus enterostomy to the short loop.

Dr. John H. Gibbon asked the experience of the members of the association as to the occurrence of peptic ulcer of the jejunum as a sequel to gastroenterostomy. In the absence of its mention in a report of over a thousand cases it would seem to be unusual.

Dr. George W. Crile, Cleveland, referred to an unsurgical case rendered surgical by direct transfusion of blood at the time of operation. Although the hemolytic test of cancer is still in the tentative stage, of 66 cases 80 per cent. gave positive reaction to the test. This was confirmed by autopsy or by operation.

Dr. J. M. T. Finney, Baltimore, has employed pyloroplasty for pyloric obstruction 48 times since 1903. Of these cases 4 patients have died. Autopsy showed the cause of death to be other than the operation. From the observations concerning gastroenterostomy it would seem unreasonable to anticipate untoward results that have not yet manifested themselves. He regards the personal equation a determining factor in the choice of operations. He gets better results with pyloroplasty. Except in a few nervous cases, his results have been satisfactory. He endorses Dr. Rodman's dictum of resection in doubtful cases of ulcer. In inflammatory pyloric stenosis he believes pyloroplasty definitely contraindicated, and that gastroenterostomy should be employed.

Dr. John C. Munro, Boston, said that an analysis made some years ago of hospital cases showed that less than 20 per cent. of gastric ulcers operated on had been failures. All the cases were grouped under the long loop, double loop and short loop. Some of the results could be definitely traced to the difference in technic. Since that time the Finney operation has been employed almost exclusively.

Dr. Charles L. Gibson, New York, asked whether the operations reduced the total acidity of the stomach contents.

Dr. John C. Oliver, Cincinnati, has seen within the past two years four patients with congenital stenosis operated on by gastroenterostomy. Two were his own patients; two those of his colleagues. In one of the cases (a female infant) the symptoms appeared at two weeks of age. There was a family history of stomach trouble for three generations. The mother of this child, during her pregnancy, developed tuberculosis of the glands at the back of the neck. The mesenteric gland of the child showed an early stage of tuberculosis.

Dr. Francis J. Shepard, Montreal, did a pyloroplasty on a child three weeks old; the child is now eighteen months old and is in perfect health.

Dr. Leonard Freeman, Denver, spoke of his satisfactory employment of linen thread for the hemostatic suture in from 50 to 55 gastroenterostomies and related and experience emphasizing the necessity of from time to time examining the character of the catgut employed.

Dr. Willy Meyer, New York, warned against making a loop too long.

Dr. John E. Summers, Jr., Omaha, inclines to the belief that trauma is the cause of postoperative gastric and intestinal hemorrhage.

Mr. B. G. A. Moynihan, Leeds, does the posterior, no-loop operation, making the anastomosis as close as possible to the beginning of the jejunum. He regards the point of importance to be not so much the direction of the jejunum as its application to the stomach in such a way that it lies easily. With mimicry so close that it is difficult to distinguish between ulcer and carcinoma, the ulcer should be excised. He appreciates the difficulty of its excision when it lies up on the lesser curvature. He attributes postoperative regurgitant vomiting of bile to a mechanical defect at operation. He has had one case of peptic ulcer subsequent to posterior gastroenterostomy. He has collected and will publish a report of 60 cases of peptic jejunal ulcer following gastroenterostomy.

Dr. W. J. Mayo, Rochester, Minn., referred to the fact brought out that there could be secured not less than 80 per cent. of permanent recoveries in gastric ulcers in which medical treatment had failed and that in something less than 10 per cent. more there will be improvement. The real difficulty in cases reported to be worse because of gastroenterostomies, he thinks, lies in the fact that the medical diagnosis has not been confirmed at the operating table; and, because the operation has been done in cases in which it should not have been done, the internist assumes the position that the cases are worse as the result of the operation. Rather than ask the medical man to turn over to him early cases of gastric ulcer, the surgeon should ask that he turn over cases of tumor the character of which he is waiting to determine. In these cases the surgeon can do better than the medical man if they are not malignant. If they are malignant it will put into the surgeon's hands a considerable number of malignant cases in time to effect a cure.

Dr. William L. Rodman, Philadelphia, dissents from the belief of Dr. Summers that postoperative hematemesis is due to trauma. His belief is based on observations made on dogs and inquiries of colleagues. He thinks the most rational explanation is Dr. Roberts' suggestion that it is due to sepsis. He has used Pagenstecher's suture for the inner stitch, but following a gastroenterostomy, in one case there was furious hemorrhage. Copious vomiting occurred and in one large vomited clot there was the Pagenstecher suture. He questions, therefore, whether it is well to use a Pagenstecher suture or well-chromicized gut. He appreciates the possibility that the suture might have taken a downward course and caused trouble with the bowel.

Stone, Tuberculosis of the Kidney and Perinephric Abscess.

Dr. George Tully Vaughn, Washington, D. C., states the causes of stone to be heredity, loss of balance between ingestion and assimilation, sudden chilling of the body, leading to deposit of urinary salts which are held together by pus, blood or mucus. He described the symptoms. Tuberculosis of the kidney in the majority of cases, he said, is secondary to tuberculous foci in other parts of the body, and enumerated the symptoms, urinary, vesical, renal and general. Stone in the kidney should be removed at once; impacted stone in the ureter as soon as it is evident that it will not pass. A calculous kidney should not be removed so long as there is a chance of saving it. Tuberculosis limited to one kidney should be treated by nephrectomy. If both are affected, nephrostomy and drainage are advised. He cited a few cases illustrative of the diseases discussed: 1. Patent urachus; stones in both kidneys; four operations required. The patient now is apparently in perfect health. 2. A woman, aged 33 years, in whose case a stone in the ureter was removed which measured 2¾ inches in length, 4½ inches in circumference, and weighed 915 grains. 3. A man, aged 26, who had had pain, vesical tenderness, frequent micturition and pyuria ever since an attack of gonorrhea four years previous. The symptoms pointed to the left side chiefly. At operation the left kidney, which was found to be a pus sac, was removed with the ureter as far as the brim of the pelvis. Improvement followed, but eighteen months later nephrostomy and drainage of the remaining kidney was done for six weeks. The patient regained his normal weight and returned to work after two years in the hospital, but there is still pyuria.

The Diagnosis and Treatment of Kidney Stone.

Dr. Arthur Dean Bevan, Chicago, said that diagnosis is determined by a process of exclusion and is confirmed by the *x*-ray. When the diagnosis is definite the treatment should be surgical removal except in cases of small stones, which may be passed, or in patients of extreme age, or in the presence of organic lesions which strongly contraindicate operation. In single stone in the pelvis of a comparatively sound kidney the operation of pyelotomy with closure is the operation of choice. In cases with large stones, and especially multiple stones in both pelvis and calices, and in cases with considerable infection, nephrolithotomy with or without drainage, should be resorted to. In cases in which stones are found in a kidney which is so altered as to be of little value to the patient, and when kidney sufficiency has been demonstrated, and the other kidney is not involved, primary nephrectomy should be done. In primary stones involving but one kidney, pyelotomy and nephrolithotomy are comparatively safe procedures, carrying with them but little risk. When both kidneys contain calculi the dangers of the pathologic condition and the operation for its relief naturally increase. When, because of infection and destructive process nephrectomy is required, the dangers of the operation will depend on the integrity of the other kidney and its functional capacity and the dangers resultant on the surgical removal of the diseased organ. In Dr. Bevan's series of 52 operations done for kidney stone there was but one death from nephrolithotomy and two deaths from secondary nephrectomies. Both operations were difficult because of the necessity of digging the kidney remnant out of dense scar tissue due to long-standing perinephritic inflammation.

Case of a Large Kidney Stone.

Dr. David Barrow, Lexington, Ky., exhibited a kidney stone weighing 1 pound and 2 drams. The stone was removed from a man of 48, whose first symptoms appeared when he was 8 years of age. During boyhood he averaged three or four attacks of pain a year. At the age of 20 urinary symptoms appeared; at the age of 30 an enlargement was noticed about the size of an orange in the left abdominal cavity. For four years he was practically invalided. In December, 1905, he was operated on in St. Joseph's Hospital. In the region of the left kidney was a tumor about the size of a cocoanut. The tumor was enucleated and consisted of the kidney with a stone in its pelvis. The pedicle was transfixed and doubly ligated with silk, the ureter was traced for about three inches and ligated with chromic catgut. Convalescence was satisfactory and at the present time, more than two years, he seems perfectly well and works every day on the farm.

Results of Operation on the Kidney for Calculus and Tuberculosis.

Dr. Andrew J. McCosh, New York, presented this paper, the object of which was to trace first the future life history of patients from whom in past years a tuberculous kidney had been removed. He has performed 54 nephrectomies, 19 having been done for tuberculosis. There were no fatalities due to shock; 2 patients died within a few weeks after operation; 8 patients died at periods of from one to three years after operation; 5 patients have made perfect recoveries and are in good health at periods varying from six to nineteen years. In 330 cases of nephrectomy which he has collected there were about 20 per cent. of permanent cures. He has performed 45 operations for renal calculi; 15 nephrolithotomies have been performed by him; 12 of these patients are perfectly well at the present time. In this paper the septic kidneys or those in a condition of pyonephrosis were excluded from consideration. Dr. McCosh favors the method of extraction of the stone through the kidney rather than by an incision in its pelvis.

Discussion on Kidney Operations.

Dr. Leonard Freeman, Denver, in operating for stone in the kidney prefers to cut through the parenchyma. He finds that bleeding is easily controlled by grasping the vessels with gastroenterostomy forceps with the flexible blades covered with rubber. He exhibited an *x*-ray picture showing shadows resembling calculi in the ureter, which were spoken of by Dr. Bevan as probably calcifications of the ligaments of the pelvis. Dr. Freeman thinks they might also be classified as calcified lymphatic glands, or phleboliths. Another *x*-ray picture revealed a cured tuberculosis of the bladder.

Dr. George E. Brewer, New York, said that as a matter of fact there are no symptoms absolutely pathognomonic of stone in the kidney. Of all the signs and helps he agrees with Dr. Bevan that the *x*-ray is the most important. An absolutely good plate, however, must be insisted on. One source of error is found in the small points shown over the ureter. The majority of these shadows mistaken for stone, he thinks, are confined bodies. Another source of error was illustrated in a case of a man with history of renal trouble in which the *x*-ray showed a shadow perfectly distinct over the region of the kidney almost as large as an English walnut and with well-defined edges. This proved to be a kidney destroyed by tuberculosis.

Dr. Nathan Jacobson, Syracuse, spoke of the value of confirmatory test of the *x*-ray in cases of renal stone and presented a number of plates showing oxalate of lime, phosphatic and uric acid stones. He related a rare case in which treatment had been given by a colleague for cystitis. Dr. Jacobson operated and on doing a perineal section a complete incrustation of the bladder wall was discovered. The child did well until anuria developed and death followed. Autopsy showed both kidneys absolutely filled with stone.

Dr. C. B. G. Nancrede, Ann Arbor, warned against making a diagnosis of stone in the ureter or kidney by the *x*-ray alone and described a case in which diagnosis based on the *x*-ray was totally wrong. He asked Dr. Bevan whether in the small percentage of failures to find the stone in the kidney or ureter by the *x*-ray the composition of the stone was determined. He recently removed from the bladder quite a large stone which was entirely uric acid. He has never seen such a one in the kidney or ureter. Several *x*-ray examinations showed not the slightest trace of the uric acid stone removed from the bladder.

Dr. Ellsworth Eliot, Jr., New York, confirmed the statements concerning the probability of osseous development in the ligaments of the pelvis which are mistaken for calculi. He emphasized what had been said of the atypical character of the clinical features in cases of stone.

Dr. Joseph Ransohoff, Cincinnati, uses the *x*-ray only to confirm a diagnosis based on a thorough clinical study. One symptom which he believes to be absolutely characteristic of stone in the kidney is persistent, continuous microscopic hematuria. An interesting point he mentioned was that ureteral calculi sometimes produce no obstruction. Dr. Ransohoff once showed a ureteral stone which was guttered, the groove allowing the urine to pass without difficulty. He has no difficulty in controlling hemorrhage in nephrectomy with the fingers and dislikes the clamp because it prevents examination of the ureter. Whether or not the *x*-ray shows stone, he never regards an operation on the kidney complete without the passage of a catheter or probe along the whole length of the ureter.

Dr. Maurice H. Richardson, Boston, has had encouraging results in his operations for stone in the kidney, yet differing in experience from Dr. Ransohoff, hemorrhage causes him anxiety in the approach to the pelvis of the kidney through the kidney tissue. The question of diagnosis is to him the most interesting thing in surgery. Many times he has "taken the field" against a diagnosis of renal stone, and has been right. He has seen calcification of mesentery tumors twice or three times, which he thinks could easily cause a mistaken diagnosis. He has known of the continuance of pain after removal of stone from the kidney, and has seen stone in the kidney fatal twenty-two years after removal of stone from the bladder, with no sign of pain during those years.

Dr. Willy Meyer, New York, believes that after exhausting laboratory research the *x*-ray should be employed in diagnosis of stone. Cystoscopy and catheterization should then be employed. The carmine test is of value unless obstruction is caused by the stone.

Dr. George W. Crile, Cleveland, spoke of the value of direct transfusion of blood in a case of nephrectomy in which there had been hemorrhage. He also referred to a large curved clamp devised by a colleague, which is useful in the control of hemorrhage and is made on the principle of the clamp used for temporarily closing the carotid artery.

Dr. J. M. T. Finney, Baltimore, agreed with Dr. Richardson on the importance of diagnosis. Every unnecessary surgical operation is a reproach to surgery. In the words of a former member of the association, "Nine men out of ten know what to do, but the tenth man knows what not to do."

Dr. M. L. Harris, Chicago, has operated three times in bilateral tuberculosis of the kidneys with successful results.

Dr. Francis J. Shepherd, Montreal, does not agree that hemorrhage is easily controlled. In a recent case the hemorrhage was so severe that it was necessary to remove the kidney.

Dr. John C. Oliver, Cincinnati, presented an oxalic acid stone which he had supposed was the largest one ever removed. That Dr. Barrow had removed a larger one was not surprising, however, for no matter what is done in Ohio, it is usual to find that it is done a little better in Kentucky.

Dr. Lewis L. McArthur, Chicago, thinks it a tribute to the foresight of Dr. Senn in that when the first exhibition of the *x*-ray was made in Chicago and he, as the nestor of the profession there, was called on to express his opinion of it, said: "I see the advent of this wonder with chagrin and anxiety, lest the student, finding a short route to diagnosis, will rely entirely on this means, and forget or neglect the means which already are at hand." Dr. McArthur referred to a case in which clinical and laboratory evidence pointed to stone in the kidney but in which the *x*-ray failed to give the shadow. Operation was thus delayed for six months until the patient was insistent, and at operation twenty stones were found in one kidney.

Diagnosis and Prognosis of Tuberculosis and Septic Conditions of the Kidney.

Dr. G. E. Armstrong, Montreal, stated that surgeons are interested only in unilateral and primary renal tuberculosis, that the infection is hematogenous and almost invariably descending. It is probable that the infection of the second kidney even in the presence of tuberculous cystitis is descending and not hematogenous. Nephrectomy is the safe and conservative method of treatment. Partial nephrectomy is unsatisfactory and disappointing. Nephrotomy should be preserved as a palliative measure in selected cases when no secreting renal tissue can be spared. Recovery from operation is satisfactory. Complete relief, however, depends largely on the condition of the bladder at the time of operation, and the patient's recuperative power. He gave figures to show that the results obtained in renal tuberculosis are improving.

Acute Unilateral Hematogenous Infections of the Kidney.

Dr. George Emerson Brewer, New York, called attention to the early stage of this disease, stating that the condition is not as a rule recognized. He referred to nine cases admitted to the Roosevelt Hospital during the past four years, of which only one came in with the correct diagnosis. He mentioned a number of instances in which patients presented almost typical symptoms of appendicitis or cholecystitis, and under this mistaken diagnosis were subjected to operation exposing the gall bladder or appendix. He divided the cases into three groups. In the first or severest type of the disease the symptoms are often ushered in by a chill. Mild surgical measures are of no avail. In the second or intermediary group the patients present symptoms often quite as severe as those of the first group, but the evidences of grave and progressive toxemia are wanting. In these cases decapsulation of the kidney with the opening and drainage of visible areas of necrosis or suppuration, often leads to recovery, although a chronic nephritis may persist. He reported six cases of this type treated in this manner with satisfactory recoveries. The third group comprises the mildest type of the disease. This requires no operation and is of surgical interest only because it accounts for cases in which after a fairly characteristic history of a subacute attack of appendicitis or cholecystitis, operation reveals no lesion or sign of recent inflammation. The one pathognomonic sign present in all cases is a marked unilateral costovertebral tenderness.

(*To be continued.*)

CALIFORNIA ACADEMY OF MEDICINE.

Regular Meeting, held March 24, 1908.

Dr. Howard Morrow in the Chair.

Bothriocephalus Latus.

Dr. Allen demonstrated a *Bothriocephalus latus* tape worm, which is rather unusual in this country. The specimen was obtained from a Finn, who during the course of treatment for nephritis, was given croton oil, which caused him to expel fifty feet of the worm. The infection was not suspected before that. This worm is very common in the region of the Baltic, Switzerland, Italy, Japan and southern Africa, but only thirty cases, mostly in immigrants, have been reported in this country. The patient was infected before he came to this country. The larval stage of the bothriocephalus is found in the muscles of certain fresh-water fish, and man is infected by eating uncooked or insufficiently cooked fish. The bothriocephalus worm may grow to 30 or 40 feet in length. The segments differ from those of the ordinary tenia, in that the uterus is smaller, more or less round in shape and has a central uterine opening. The ova are large and oval, and differ markedly from ordinary tape-worm eggs. They resemble the ova of uncinaria, especially the *Unciniaria americana*. The eggs are laid in segmentation so that you see the individual cells within them. The cell membrane is thin and transparent. At the lower pole is the lid, or operculum, which forms the distinguishing feature of this ovum. The treatment is that of an ordinary infection with tenia. In some instances there have been as many as fifty or seventy-five in a single individual; more commonly only two or three. A point of interest in connection with bothriocephalus is the occurrence in some infected individuals of a marked anemia indistinguishable clinically or microscopically from severe pernicious anemia. This occurs independently of the number of worms present, and is presumably due to some toxic substance from the worm.

Lipolysis and Fertilization of the Egg.

PROF. JACQUES LOEB said that the first effect of the entrance of the spermatozoon into the egg is the formation of the membrane of fertilization, at least in a number of forms. He has shown that this membrane formation can be caused by various agencies, all of which seem to have one peculiarity in common, namely, that they are solvents for lipoids. These agencies are: 1. Hydrocarbons, e. g., benzol, amylene, etc. 2. Hydroxyl ions. 3. Monobasic fatty acids. Recently he found that saponin, solanin, the salts of the bile, cause also the process of membrane formation in the unfertilized egg. Last year he found that the blood of certain worms, e. g., dendrostoma, causes the artificial membrane formation in the unfertilized egg of the sea urchin. Recently he obtained the same result by treating the unfertilized eggs of the sea urchin with the blood serum of the rabbit. The question arises, How can foreign blood serum act like saponin and other fat solvents. He suggests, as a preliminary answer, that foreign blood has a slight cytolytic effect and that this cytolytic effect is due to a lipolytic action of such serum. All these observations support the idea formerly expressed by him that the first step in the fertilization of the egg consists in the alteration, probably liquefaction, of a lipoid in the periphery of the egg, possibly lecithin.

Tumor of Base of Brain.

DR. W. F. CHENEY reported the case of an Italian, aged 23, who two months ago had begun to have severe pains through the temples, and later at the base of the brain; also diplopia. He staggered as though he were drunk. Symptoms varied, patient being out and well one day and bedridden the next, and losing weight from 210 to 194 pounds. Vomiting of food. No other symptoms. On examination nothing characteristic, except pulse rate of 42. Double optic neuritis, worse on right; also paralysis of left abducens accounting for diplopia. No loss of mobility, no anesthesia or loss of reflexes or special senses. No loss of co-ordination when lying down, but complete inco-ordination on standing. No history of lues. Diagnosis, probable cerebellar tumor. As patient was rapidly growing worse, operation was decided on, but as there were no localizing signs it was decided to explore the left lobe of the cerebellum, which was done in two steps by Dr. Stillman. When the bone was opened there was enormous bulging, and complete relief of all symptoms followed. No tumor was discovered, but it was not considered justifiable to go into the right cerebellum. The patient lived for a month, spells of coma increasing. At autopsy was found a cystic glioma in back of right optic chiasm pressing on both optic nerves, nearly spherical, about 3 cm. in diameter, extending into the ventricle and occluding the aqueduct of Sylvius. Marked hydrocephalus of both lateral ventricles.

Tuberculosis of Kidney.

DR. W. F. CHENEY reported the case of a girl of 25, who, in 1906, slid down, striking heavily at base of spine. Two months later she was seized with pain in right lumbar region, running toward bladder and genitalia. These attacks were repeated at intervals, were very severe, with frequent urination, no fever, and lasting about two hours. She was well in intervals. Attacks followed by mucopus in urine. Examination showed prolapse of right kidney. A guinea-pig inoculated with pus from the urine became tuberculous. On ureteral catheterization urine from right kidney contained pus and tubercle bacilli; that from left little pus and no bacilli. An ulcerated patch, probably tuberculous, at opening of right ureter. On operation by Dr. Stillman the right kidney was found tuberculous and removed, the ureter being thickened and also probably tuberculous. Patient recovered. The question is, what will become of the patch at opening of ureter and of the ureter itself?

Cholelithiasis Simulating Gastric Ulcer.

DR. W. F. CHENEY reported this case. A woman of 46, very obese, weighing 218 pounds, with thick abdominal walls, rendering palpation impossible. History of severe attacks of stomach trouble of four or five years' standing. Vomiting brought relief. Pain and vomiting had recently been increasing. When stomach was empty vomitus consisted of sour and irritating colorless fluid. Three hemorrhages of about a teaspoonful of bright blood from stomach. Great tenderness in epigastrium and in back opposite tenth dorsal vertebra on right side; also at a point in right hypochondrium; also intense rigidity of right rectus. Stomach pump was not used because of hemorrhage. Diagnosis by several physicians of gastric ulcer. Cholecystitis and gallstone were thought of, but could not be substantiated. Attacks had always begun in epigastrium and pain had never radiated. At operation, for relief of gastric ulcer, occlusion of cystic duct was found with large gall bladder and a number of free stones with much mucopus. No gastric ulcer.

DISCUSSION.

DR. STILLMAN said that a differential diagnosis in the brain case could not be made before operation between cerebellar tumor and hydrocephalus. At operation nothing indicated any cause for the hydrocephalus, the cerebellum being normal, the ventricular lining smooth, no tuberculosis. The tumor, which was about size of a hazel nut, was not found until the brain was turned over, when it was found just behind the optic commissure on the floor of the third ventricle. The operation was done in two steps because there was a good deal of hemorrhage and the patient's condition was not such as to stand prolonged manipulation of brain. As to the gall-bladder case, Dr. Stillman said from experience that such trouble in a patient with a belly wall 6 inches thick, would generally be found to be due to the gall bladder and not to gastric ulcer. In the kidney case, the tuberculous patch about the ureter was not ulcerated. The kidney trouble was entirely in the cortex, and Dr. Stillman did not think it a case of ascending infection. The question of removing the ureter was considered, and it may yet have to be done, but often after removal of the kidney the ureteral and vesical trouble rapidly subsides.

DR. SPENCER was reminded by Dr. Cheney's gall-bladder case of a patient, aged 67, who complained principally of an ascending pyelonephritis. A marked feature was that her stomach was rebellious to almost any kind of food. She could not take the same things at different times, and most of the time was on starvation diet. Drugs failed to relieve her; lavage had no effect, and he was at the limit of his resources. She subsequently succumbed to the pyelonephritis. At autopsy the stomach showed practically no gross change, but the gall bladder contained about 40 or 50 small calculi. He explained the functional condition of the stomach as being entirely reflex and due to calculi in the gall bladder.

DR. KENNEDY said that in connection with the gastric ulcer and gall-bladder case, Dr. Cheney had eliminated gastric ulcer on the removal of the gall bladder. No evidence of gastric ulcer was noted. This called to mind a couple of cases seen by the speaker that had the classical signs and symptoms of gastric ulcer. There were gastric hemorrhage and hyperacidity, and he found at operation no evidence of gastric ulcer in either case. In both cases he did a gastroenterostomy.

In one the symptoms were entirely relieved and in the other the operation did no good at all. He would like to know whether Dr. Cheney was sure that there was no gastric ulcer in this case.

Dr. Cheney said that so far as the elimination of gastric ulcer was concerned, he could not determine the presence of ulcer. He did not know how to explain the hemorrhages. He had read recently reports of a series of cases operated on for hyperchlorhydria and relieved, where there was no ulcer at all.

Delhi Boils.

Dr. Howard Morrow presented a patient with an eruption of Delhi boils. While working in Costa Rica last June he was bitten in three places on the face by mosquitoes. The present lesions developed from these bites. The patient states that a papule formed, which became crusted, and the crust separated, exposing a punched-out ulcer. When Dr. Morrow saw him a month ago, the ulcers had all filled in with deep granulations, and the surface of each was papillary and horny. Microscopic examination showed a dense, cellular infiltration in the corium, mostly of plasma cells. Under *x*-ray treatment the lesions have become smooth and the infiltration has disappeared. The borders are pigmented, and this pigmentation is spreading toward the centers. Three lesions on his thighs were autoinoculated and ran a course similar to the lesions on his face. No Donovan bodies have been found, and animal inoculation by Professor Flexner has given negative results.

KANSAS STATE MEDICAL SOCIETY.

Annual Meeting, held at Iola, May 5-8, 1908.

The President, Dr. J. E. Sawtell, in the Chair.

Reports of Officers.

The reports of the secretary and treasurer showed the society to be in a good condition financially. Reports were received from the councilors from the various districts, showing that in most of the districts good county organizations are being maintained, much interest being manifested in the scientific work.

Out of a total membership of 1,500 on the books of the society, 973 had paid their dues for 1908. The total number of county and multiple county societies is 69. Out of 105 counties in the state, 99 are now in the organization.

While the attendance at this meeting was not so large as some meetings in the past, the scientific work and careful preparation of the papers showed a better standard of work than at any prior meeting.

Election of Officers.

The following officers were elected for the ensuing year: President, Dr. C. C. Goddard, Leavenworth; vice-presidents, Drs. E. J. Liggett, Oswego; G. W. Goss, Sedan, and B. M. Barnett, Rosedale; secretary, Dr. Charles S. Huffman, Columbus; treasurer, Dr. L. H. Munn, Topeka; librarian, Dr. S. J. Stewart, Topeka; delegates to American Medical Association, Drs. J. E. Sawtell, Kansas City; G. W. Tooley, Washington; councilors, Drs. Charles W. Reynolds, Holton; O. J. Furst, Peabody, and J. A. Dillon, Larned. Emporia was selected as the next place of meeting.

The Kansas Medical Society, Its Mission, Its Needs and Its Purposes.

Dr. J. E. Sawtell, Kansas City, in this, his presidential address, gave a history of the society from the time of its organization, and named the objects it expects to accomplish. He also pointed out some needed legislation which had been enacted, especially that pertaining to sanitation and the pure food law, and stated that it was accomplished by the united support of the medical profession of the state. He also dwelt on the fact that one of the purposes of the society is to elevate the standard of medical education, and stated that it has received much benefit since the organization plan was adopted several years ago.

Sociologic Aspect of Gonorrhea.

Dr. S. C. Emley, Lawrence, contended that the present social evils are due to economic conditions, such as poverty and desire for finery.

Acute Rheumatism.

Dr. C. C. Nesselrode, Kansas City, declared that acute rheumatism is an infection, and the most common point of infection is the tonsils.

Indications Calling for and Points in the Technic of Modern Mastoid Operations.

Dr. T. R. Edwards, Chanute, dwelt on the importance of operative procedure for mastoiditis. He stated that anyone suffering from suppurative otorrhea is living over a powder magazine, so far as the danger was concerned.

Work of the State Board of Health.

Dr. S. J. Crumbine, secretary of the State Board of Health, read an exhaustive paper on the work accomplished by the board. First, under the geenral health law; second, under the department of food and drugs; third, the work of the board under the water and sewage law; fourth, the work of the bacteriologic department.

After the presentation of his paper, a resolution was endorsed to adopt it unanimously, pledging the State Board of Health the hearty support of the society in the work being done, and commending the board for what it has accomplished.

Prostatic Hypertrophy.

Dr. L. H. Munn, Topeka, stated that operative procedure is the only means of relief for troubles of this kind.

Infiltration Anesthesia.

Dr. M. F. Sudler, Lawrence, recited the histories of a number of hernia operations with this anesthesia, a solution of beta-eucain with adrenalin in normal salt solution.

The Physician's Relation to Mental Healing, System and Methods.

Rev. S. S. Hilcher, Iola, read a paper along advanced lines of thought on this subject, which received a general discussion.

Resolutions Endorse Reed for Senator.

The following resolutions were unanimously adopted and sent to Dr. Charles A. L. Reed, Cincinnati:

> The Kansas Medical Society, in annual session assembled, unanimously expresses its appropriation of your candidacy as United States Senator from Ohio.
>
> The great interest you have displayed in the matters of public health as president of the American Medical Association, and as chairman of the Committee on Medical Legislation of that great body, together with the personal sacrifice of your lucrative practice, should commend you to the people of your state for political preferment regardless of party.

Recommend State Tuberculosis Hospital.

The following resolutions were unanimously adopted:

> 1. To the end of alleviating suffering and protecting the healthy from danger of contagion, the Kansas Medical Society, now assembled, recommends and urges the next legislature of Kansas to build and equip a sanitarium for the care and treatment of the indigent tubercular citizens of the state.

Approve National Health Bureau.

> 2. The establishment of a sound rational physique is of more importance to our nation than the establishment of a sound national finance; when the people commence to decay physically it marks the beginning of the downfall of our nation.
>
> Believing those principles to be true, we endorse the efforts of our Committee on Medical Legislation and recommend that steps be taken in every possible way to secure the enactment of a bill whereby all matters relating to the preservation and improvement of public health and sanitation be placed under the control of a single national health department into which shall be merged all existing national public health agencies vested with adequate power and ample financial support so as to give the strongest possible federal control over all national public health interest.

Urge Education of Public.

> 3. Whereas, Physical wellbeing is the foundation of civil virtue;
>
> Whereas, Publicity and accurate knowledge is necessary for the exercise of good government;
>
> Whereas, Kansas is about to adopt a uniform system of municipal accounts through its tax commissioners, and
>
> Whereas, Vital statistics are invaluable for the municipality as well as the State; therefore, be it
>
> *Resolved*, That the legislative committee use every effort to have incorporated in this system, means for ascertaining accurately, recording, disseminating, and making public such information for the education of the people in those measures that concern the public health.

Medicolegal

Physician May Refresh Memory from Clinical Record.

The Supreme Judicial Court of Massachusetts says that in the personal injury case of Lindenbaum vs. New York, New Haven and Hartford Railroad Co. it appeared that the plaintiff had been taken to the relief station of the City Hospital. Her clinical record was kept on a white card. A physician testified that all the writing on the card was his except the first two lines, which contained the name and address of the patient. But he further testified that he did not know the plaintiff or whether he ever treated her. On the plaintiff's offering to prove that there was no other person of the same name in the relief station that day, the judge allowed the physician to refresh his recollection by the card and testify about treating the person named in the card, stating that it was for the jury to say whether the person named was the plaintiff or not. The ruling was plainly right. There could be no question of the witness' right to refresh his recollection by a memorandum made by him at the time from his personal knowledge. All that the witness was allowed to testify to was that the person named on that card had traumatic hysteria. There was ample evidence warranting the jury in finding that that person was the plaintiff. All patients came into the accident room of the relief station with such a white card. The only remaining question was: Was the person who came into the treatment room tagged as "Sadie Lintonbume" the plaintiff? The court is of the opinion that she was. There was evidence that the plaintiff was brought to the relief station that day, and that no other person of a like name was admitted to the relief station on that day. That would have been enough.

Advertising by "Dermatological" Corporation Violation of Medical Practice Act.

Justice Deuel of the Court of Special Sessions of the First Division of the City of New York, says, in the case of People vs. John H. Woodbury Dermatological Institute and Robert Buggeln, that according to Section 1, subdivision 7, of Chapter 344 of the laws of 1907, "a person practices medicine within the meaning of this act, except as hereinafter stated, who holds himself out as being able to diagnose, treat, operate or prescribe for any human disease, pain, injury, deformity or physical condition, and who shall either offer or undertake by any means or method to diagnose, treat, operate or prescribe for any human disease, pain, injury, deformity or physical condition." By Section 15 "any person not a registered physician who shall advertise to practice medicine shall be guilty of a misdemeanor." The defendant corporation was on trial for advertising "to practice medicine" within the foregoing definition, and the defendant Buggeln was charged with aiding and abetting that crime. The motion to acquit, made at the close of the People's case, turned on the construction of the word "person" as used in the last-quoted provision.

The defendant corporation had inserted, or caused to be inserted, in a newspaper an article addressed: "To the many afflicted with pittings from smallpox," wherein was advertised its ability to remove such pittings, "so that no trace of their former existence remains." And under a subhead, "We perfect," included a list of physical conditions conceded to be imperfections and commonly known as deformities. On the same day, in another paper, appeared an article wherein such corporation advertised its ability to restore "Unshapely noses . . . to correct unpleasing lines."

In another exhibit, to be otherwise circulated, appeared the words: "We have adopted a system by which all diseases of the skin and scalp may be successfully treated by our patients at their homes. To these we will, on request, forward a question blank that, if carefully filled out and returned, will enable us to accurately diagnose each case and prescribe a personal treatment that will bring about quickly the desired results." The potential "we" and "us" able to "diagnose," "prescribe," "correct," "restore" in all these cases of deformity or disease, as appeared in such advertisements, was the corporation defendant.

We do not need the statutory definition to determine that this is advertising "to practice medicine" by a non-registered physician. But the defendants demanded acquittal on the contention that the strict construction required of all penal statutes would not here permit the extension of "person" to include a corporation, and counsel supported this contention with arguments and citations which, but for the New York Statutory Construction Act, seemingly ought to be convincing. This act provides that "the term person includes a corporation" in "every statute, unless its general object, or the context of the language construed, or other provisions of the law indicate" differently.

The general object of the medical law, instead of supporting, seemingly negatives the contention of the defendants. There is no escape from the conclusion that the legislature intended to confine the practice of medicine to registered physicians, and as an incident to such practice, similarly confined its advertising. It is the individual alone, in his own name, who has legally qualified and secured registration, that may practice or advertise to practice medicine. Even if registered he may not hide his identity by assuming some other name. Possibly the defendant Buggeln was a registered physician—there was no evidence thereof—and was seeking for some ulterior purpose to conceal his identity through this species of advertising. If so, he offended the statute other than as charged, but that did not excuse the legal entity, which existed purely by statute, for offending a plain provision of law.

Undoubtedly, on the subject of advertising the legislature had in view the common knowledge that any medical advertising beyond the simplest disclosure of name, location, office hours and school of medicine, contravenes, and long has contravened, time-honored ethics of the medical profession. It is quite probable from this knowledge it was assumed that all display advertising on the subject emanated from questionable or empirical sources. And as a protection against quacks and charlatans, it was deemed prudent to confine all advertisement to those who could and did present qualifications entitling them publicly to register as physicians, believing that any invasion of professional ethics would invite suitable professional penalties, leaving all others to the ordinary penalties of the law. The statute, therefore, does not forbid medical advertising, whether modest or bombastic, if done by a registered physician, but any and all advertising emanating from other sources is clearly forbidden.

The statute simply forbids all advertising unless it shall be in the name of some individual who shall be able to obtain public registration as a physician. This conclusively appears to have been the object the legislature had in view, and being both within the letter and the spirit of act, it is the duty of the court to enforce it.

The doctrine of vested rights was not well taken. The powers secured by incorporation were those of "manufacturing chemical preparations and printing, publishing and selling books and pamphlets relating to the same." Not a single exhibit before the court pertained to these chartered rights; each was wholly outside and within a sphere of doubtful incorporate purposes.

The constitutional argument, in view of previous legislation and adjudications, was not convincing. If the legislature has constitutional competence to restrict medical practice to persons of ascertained qualifications, it may limit all individual matters, such as advertising, to the same class.

The effect a decision adverse to the defendants might have on incorporated hospitals, sanitariums and medical institutes need not be discussed. If they are offending the present law these defendants could not claim it as an excuse. As to such enterprises, however, it may be added that they come under other provisions of law, and the court is not informed that any advertise as did the defendant corporation. So far as this court is concerned, these other corporations carry on businesses which furnish accommodations for registered physicians to prosecute their professions with better results than at the home of the patient, and free accommodations for the unfortunate poor, who thus get medical care and wholesome attention which otherwise might be denied. As to them, the court knows of no alluring bait openly trailed to catch the dollars of those able and willing to pay for the promised conversion of plainness, or even ugliness, into beauty.

Every motion should be denied, and each defendant should be convicted on the count of the information which was selected by the prosecution for this trial.

Wife Liable for Physicians' Services After Death of Husband and Failure to Make Claim Against His Estate.

The Supreme Court of Iowa says that the defendant in the case of Vest et al vs. Kramer, was a widow, whose husband, Charles H. Kramer, died after a sickness that extended over a period of a year or more. During that period, the plaintiffs, who were physicians, attended him professionally at the defendant's request. The husband was in comfortable financial circumstances, and the wife then owned no property in her own right. The plaintiffs charged their services to the account of Charles H. Kramer. Soon after the death of the latter, administration was granted on his estate. The plaintiffs filed no claim against the estate on said account, and in due course of procedure the administrator made final report, showing distribution of the assets, and was discharged.

Thereafter, and within less than five years from the death of Charles H. Kramer, this action was begun. The defendant resisted payment, and sought a reversal of a judgment rendered against her on the theory that her liability, if any, on said account, was that of surety only, and that the plaintiffs having released the husband's estate by failing to present and prove their claims in due season, she was also discharged. The point was also made that the plaintiffs having failed to file their claim against the estate of Charles H. Kramer within the time allowed by law, their right of action thereon as against said estate became barred by the statute of limitations, and, being barred as against the estate of the deceased, it was thereby also barred as against his surviving widow.

But in the opinion of the Supreme Court, which affirms the judgment of the court below, the liability of the defendant was not that of mere surety for her husband. The Iowa statute makes the property of both equally liable for the payment of such family expenses. As between them and the creditor both are liable as principals, and the discharge of one does not necessarily work the discharge of the other. While both are liable for the same debt, and payment by one operates as a discharge to that extent of the other, they are not joint debtors. There is no joint promise or joint contract. The liability of one is contractual, while the liability of the other is purely statutory. In the present case the right to enforce the claim against the husband's estate was lost by failure to duly present the same for allowance, but, in the court's judgment, the statutory liability of the wife remained unaffected, and might be enforced against her by ordinary action begun within five years. Under this rule the action was instituted in proper time.

Sufficiency of Evidence of Death from Alleged Negligence in Anesthesia.

The Supreme Court of New Hampshire says that the defendant in the case of Boucher vs. Larochelle was employed to set a broken bone in the arm of the plaintiff's child, aged 17 months. He administered chloroform, and before the operation was completed the child died. The plaintiff offered evidence tending to show that death may result from the negligent administration of chloroform, and of the defendant's lack of care in administering it likely to produce this result. While the evidence was not without contradiction, and was not entirely clear and convincing, it could not be said there was not some evidence tending to establish each of these propositions. It was for the jury to determine what amount or weight of competent evidence was sufficient or insufficient to convince their minds and warrant them in determining the matter of fact in dispute. From these facts, in the absence of other sufficient cause for the child's death, the jury could infer that the death resulted from the defendant's lack of care. There would be a direct and visible connection between the negligence charged and the injury complained of.

But the defendant contended that, conceding that there was some evidence of the character stated, the conclusion that the death resulted from the negligence proved would be a mere surmise or conjecture, because it appeared from the evidence that the mere administration of chloroform to persons in a certain rare and obscure pathologic condition is sufficient to cause death, and that the fracture of a bone may cause a fatal embolism. The claim was that the death of the child might have been due to its condition, or might have been the direct result of the fracture, and that, therefore, the plaintiff failed to prove that the defendant's negligence was the cause of death. Using the word "proof" in the sense of demonstration to an absolute certainty, the defendant's contention could probably be sustained. Questions capable of exact demonstration are rarely the subject of litigation. No such burden rested on the plaintiff. He was not bound to exclude all possible causes of death. He was required only to make it more probable than otherwise that the fact was as he claimed it. The rule that the jury can not be permitted to determine by guess or conjecture between two equally probable causes of the injury, for one only of which the defendant is responsible, has no application, unless the existence of a sufficient cause or causes for the injury, aside from the negligence charged, is conceded or conclusively proved.

Whether the child's condition was such that the mere administration of chloroform was a sufficient cause of the fatal result, or whether an embolism resulting from the fracture was the cause of the injury, were questions of fact on which the case disclosed little, if any, evidence. If there was evidence tending to establish either cause, it must be assumed in the present posture of the case that the jury were properly instructed as to the legal effect, in the decision of the controversy submitted to them, if they found either contention sustained. It is common knowledge that death does not ordinarily follow the proper administration of an anesthetic, or immediately result from a fractured humerus. The defendant's motion for non-suit could not be sustained on the ground suggested, except on the assumption that one or the other of these claims was conclusively proved by evidence which went little farther than to suggest the possibility of their existence. The case was not one of a choice between two or more probable causes conceded to exist, but involved merely the power of the jury to determine as matter of fact the non-existence of the causes which the defendant claimed, if existent, would render the cause of death doubtful.

Where the evidence discloses no connection between the injury and the negligence charged, except a bare possibility that the former resulted from the latter, there is nothing for the jury, where it is also possible the injury may be due to other causes. But where the injury is a natural and probable result of the negligence charged, a wrongdoer can not set up as an answer to the action the bare possibility of a loss if his wrongful act had never been done.

It was for the jury to determine what inference should be drawn from the fact that neither party secured or asked for an autopsy.

Disposition of Malpractice Case—Attending Physician Can Not Substitute Another Physician.

The Kansas City Court of Appeals says that it appeared in the malpractice case of Ghere vs. Zey that the plaintiff was driving when his horse became frightened at an automobile, and he was thrown from his vehicle, his leg being broken from the fall. The defendant was called, and the charge was that he so negligently and unskilfully performed the service required in and about the broken leg as to cause it to be "impossible to get a perfect union and to get the leg properly extended, as a result of which said leg has been materially shortened, and plaintiff rendered a cripple for life."

It appeared that the defendant was contemplating a trip to Europe and that he would leave another physician in charge of the plaintiff. The plaintiff refused the offer, and employed others. The jury were told that under the defendant's employment he had no right to substitute any other person to take his place in treating the plaintiff without the latter's consent. The court thinks that it was proper to give the instruction, there being evidence in the case on which it was based.

A judgment in favor of the plaintiff was affirmed.

Marriages

Francis Tobias Dowd, M.D., to Miss Annett Grote, both of Indianapolis, May 12.

Carl Ranseen, M.D., Rockford, Ill., to Miss Hilda Bergland of Elgin, Ill., May 27.

G. Merrill Hawkins, M.D., to Miss Mabel Copeland, both of Seattle, Wash., May 23.

Harry Scheuerman, M.D., Baltimore, to Miss Catherine Heinz at Baltimore, May 6.

William O. Burbank, M.D., Pavilion, N. Y., to Miss Ella Lattin of Albion, N. Y., May 5.

Samuel J. Snodgrass, M.D., Burket, Ind., to Miss Delia Cox of Mentone, Ind., April 29.

Abraham Sachs, M.D., San Antonio, Texas, to Miss Nellie Hamburger of Chicago, recently.

Charles L. Browning, M.D., Chico, Cal., to Miss Leslie Tannehill of Fresno, Cal., May 7.

William Edward Dolan, M.D., to Miss Elizabeth Mary Doyle, both of Worcester, Mass., April 27.

Lachlan Macmillan, M.D., Vancouver, B. C., to Miss Hattie Nicholas of Victoria, B. C., May 13.

Howard Addison Sharpe, M.D., Mount Vernon, Wis., to Miss Agnes E. Hanna of Chicago, April 15.

Henry Forrest Quackenbos, M.D., New York City, to Miss Renee L. Walters of Newark, N. J., May 12.

Deaths

William B. Hedges, M.D. Medical College of Ohio, Medical Department University of Cincinnati, 1863; a member of the American Medical Association; charter member and once vice-president of the Ohio State Medical Association; assistant surgeon of the Eighty-sixth and Eighty-second Ohio Volunteer Infantry from 1863 to 1865; U. S. pension examining surgeon; one of the leading practitioners of Delaware Co., Ohio; died at his home in Delaware, May 14, from pneumonia, after an illness of six days, aged 72. At a special meeting of the Delaware County Medical Society, May 14, resolutions deploring the death of Dr. Hedges and setting forth his excellences, civic and professional, were unanimously adopted.

John Dutton Steele, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1893; a member of the American Medical Association, and Philadelphia Pathological Society, and a fellow of the Philadelphia College of Physicians and Surgeons; visiting physician to the Presbyterian and University hospitals, and associate in medicine in the University of Pennsylvania, Department of Medicine; an authority on diseases of the stomach; died in Philadelphia, May 17, from complications resulting from influenza, after an illness of four months, aged 39.

John W. C. Cuddy, M.D. University of Maryland School of Medicine, Baltimore, 1863; acting assistant surgeon U. S. Army from 1863 to 1865; for many years a practitioner of Baltimore; professor of materia medica from 1888 to 1895, and of theory and practice of medicine and dermatology, from 1895 to 1907, in Baltimore University School of Medicine; medical director of the G. A. R. for Maryland; died at a sanitarium in Baltimore, May 14, from heart disease, aged 68.

Edward Hadley Tweedy, M.D. University of Buffalo, (N. Y.) Medical Department, 1888; a member of the medical societies of the State of New York and County of Erie; a specialist on diseases of the eye, ear, nose and throat, and formerly postmortem examiner for Erie County; died at his home in Buffalo, May 13, from septicemia due to an operation wound, after an illness of about a month, aged 43.

Alfred Hunter Voorhies, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1860; a member of the American Medical Association, formerly of Memphis, Tenn.; a surgeon in the Confederate service during the Civil War, and a specialist on diseases of the eye; died at his home in San Francisco, May 5, from cerebral hemorrhage, after an illness of four days, aged 70.

Louis Ferdinand Heintz, M.D. Memphis Hospital Medical College, Medical Department, Baptist Southwestern University, Memphis, 1889; at one time sheriff of Crittenden County; for several years a practitioner of Marion, Ark.; and president of a bank in that place; who lately opened an office in Memphis; died in Marion, Ark., May 9, after a long illness, aged 39.

Thomas Conrad, M.D. Columbus (Ohio) Medical College; American Medical College Eclectic, St. Louis, 1881; an employé of the San Francisco Board of Health; died in the University of California Hospital, San Francisco, May 10, from fracture of the skull, supposed to have been due to an automobile accident four days before, aged 52.

John Wesley Stewart, M.D. New Orleans School of Medicine, of Linville, N. C.; formerly of Knoxville, Tenn.; president of the local board of U. S. pension examining surgeons and assistant surgeon of the First Alabama Cavalry Volunteers during the Civil War; died suddenly in Knoxville, March 31, from heart disease, aged 73.

John Leigh Goldie McCarthy, M.D. Toronto University Medical Faculty, 1865; for about thirty-five years surgeon of the Thirty-fifth regiment and a highly respected practitioner of Simcoe County, Ont.; died at his home in Barrie, May 11, from cancer of the stomach, after an illness of a year, aged 63.

Andrew E. Field, M.D. Dartmouth Medical School, Hanover, N. H., 1846; said to have been the oldest practitioner of Barre, Vt.; a member of the board of U. S. pension examining surgeons; died at the home of his daughter in that city, May 9, from paralysis, after an illness of one year, aged 87.

Thomas Francis Stanton, M.D. College of Physicians and Surgeons, Baltimore, 1896; a member of the American Medical Association, and an esteemed practitioner of Bridgeport, Conn., died in the Galen Private Hospital in that city, May 8, four days after an operation for appendicitis, aged 42.

Otis Sylvanus Hutchins, M.D. Rush Medical College, Chicago, 1896; a member of the Minnesota State Medical Association and Yellow Medicine County Medical Society; died at his home in Canby, Minn., May 8, from septicemia, due to an operation wound after an illness of ten days, aged 37.

Samuel W. Willis, M.D. Jefferson Medical College, Philadelphia, 1864; a member of the American Medical Association, and an esteemed practitioner of Clark County, Ky.; died at his home in Winchester, May 17, from cerebral hemorrhage, after an illness of one week, aged 69.

Wilson H. Davis, M.D. Eclectic Medical Institute, Cincinnati, 1865; Rush Medical College, Chicago, 1895; professor of therapeutics in Illinois Medical College; a member of the Illinois State and Chicago Medical societies, died at his home in Chicago, May 19, aged 65.

Charles A. Foster, M.D. Louisville (Ky.) Medical College, 1878; a member of the medical staff of the Manhattan State Hospital for the Insane, Ward's Island, New York City; died suddenly May 19, 1907, from nephritis and fatty heart, aged 58.

Cepha C. Hall, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1879; one of the first woman practitioners of Council Bluffs, Iowa, died at her home in that city, July 29, 1907, from senile debility, aged 84.

Frank B. Brewer, M.D. Bennett College of Eclectic Medicine and Surgery, Chicago, 1872; of Evanston, Ill., died at the home of his son in Fort Atkinson, Wis., May 12, from abscess of the liver, after an illness of one week, aged 76.

James W. Russell, M.D. Washington University Medical Department, St. Louis, 1887; a member of the American Medical Association; died at his home in Bird's Point, Mo., May 11, after a long illness, aged 42.

C. R. Cobb, M.D. Bennett College of Eclectic Medicine and Surgery, Chicago, 1884; formerly of Franklin, Pa., but more lately a resident of Sharpsville, Pa., died at Linesville, Pa., May 13, after a prolonged illness.

Frederick William Range, M.D. Eclectic Medical Institute, Cincinnati, 1896; formerly of Roseville, Ill.; died at his home in Monmouth, Ill., May 14, from cerebral hemorrhage, after a short illness, aged 36.

Colin Gillespie Strong, M.D. Indiana Medical College, La Porte, 1850; surgeon for three years during the Civil War; formerly a resident of San Francisco; died in Los Angeles, Cal., May 7, aged 80.

Charles B. Warrington, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1860; once a prominent practitioner of Stewartsville, N. J.; died at Morris Plains, N. J., May 5, aged 74.

Elbern Taylor Bowers, M.D. Tufts College Medical School, Boston, 1902; died recently at his home in Boston after an illness of several months, aged 35.

Andrew J. Applegate, M.D. Kentucky School of Medicine, Louisville, 1853; died at his home in Eagletown, Ind., May 15, aged 57.

Edmund Tabor Tripp, M.D. Cleveland Homeopathic Medical College, 1901; was found dead in his office in Lawrenceburg, Pa., May 4; it is believed from the effects of chloroform, self-administered, aged 28.

Eli F. Brown, M.D. Medical College of Indiana, Indianapolis, 1879; a widely known educator of Indianapolis; died at his home in Los Angeles, Cal., May 8, from cerebral hemorrhage, after a long illness.

John R. Minton, M.D. Missouri Medical College, St. Louis, 1894; of Fortescue, Mo.; died in St. Joseph's Hospital, St. Joseph, Mo., May 3, five weeks after an operation for appendicitis, aged 48.

George A. Miller, M.D. Northwestern University Medical School, Chicago, 1906; died at his home in Ilo, Idaho, May 9, from pneumonia, after an illness of less than one week, aged 32.

Mary P. Havens, M.D. Michigan Homeopathic Medical College, Lansing, 1873; died at her home in St. Johns, Mich., May 12, after an operation for gallstone disease, aged 70.

Ebenezer G. Hubbard, M.D. Hahnemann Medical College, Philadelphia, 1905; died at his home in Larksville, Pa., May 14, after a short illness, from angina pectoris, aged 29.

Stephen Culrain York, M.D. for many years a practitioner of the Big Sandy Valley, Ky., died suddenly at his home in Summit, April 17, from hemorrhage of the lungs, aged 59.

Ellwood E. Hopkins, M.D. Jefferson Medical College, Philadelphia, 1870; a dental surgeon of Philadelphia; died at his home May 12, after an illness of one week, aged 68.

Bruce T. Harmon (License, Nebraska, 1891); coroner of Dixon Co., Neb., died suddenly from heart disease, near his home in Wakefield, Neb., May 12, aged 45.

George P. Dillard, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1854; died at his home near Figsboro, Va., May 13, aged 78.

Edward A. Hepburn, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1870; died at his home in Fargo, N. D., Sept. 6, 1907.

Matthew Mason, M.D. Miami Medical College, Cincinnati, 1898; of Corning, Cal., was accidentally drowned at Fairbanks, Alaska, May 8.

Abner G. Channel, (Years of Practice, Kansas) died suddenly at his home near Havensville, Kan., April 25, from heart disease, aged 81.

James Benjamin McGinley, M.D. Rush Medical College, Chicago, 1885; died at his home in Chicago, May 19, after a long illness, aged 47.

Louis M. Tippett, M.D. College of Physicians and Surgeons, Baltimore, 1892; of Ridge, St. Mary's County, Md.; died suddenly, May 8.

Deaths Abroad.

C. E. Chamberland, M.D., professor of physio-chemical science at the Sorbonne, Paris; chief of the laboratories at the Pasteur Institute and inventor of the porcelain filter that bears his name; died at Paris, May 2, aged 57.

G. A. Guldberg, M.D. professor of anatomy at Christiania, died April 23 of heart disease, aged 54. His works on comparative anatomy, especially on whales and other cetaceæ, were important.

A. Martina, M.D., assistant to Payr in the university surgical clinic at Greifswald, died April 25 from sepsis resulting from a furuncle on the back of the neck, aged 30.

G. von Hüfner, M.D., professor of applied and physiologic chemistry at the University of Tübingen, died March 14, aged 68.

F. von Leydig, M.D., formerly professor of comparative anatomy at the University at Bonn, died at Würzburg, April 29, aged 87.

E. Herter, M.D., privat docent of chemical medicine at the University of Berlin, died April 10, aged 57.

Hygiene of Closing Weeks of School.—A German exchange quotes with approval an article in a daily urging that children should not be kept in suspense after the school examinations, but the parents should be notified by mail at once when a child has failed to pass. The suspense of a week or so, and then the first announcement at the closing exercises of the names of those who have failed to pass—these are all needless nervous strains that should be avoided for nervous children.

Book Notices

The Diagnosis and Treatment of Pulmonary Tuberculosis. By Francis M. Pottenger, A.M., M.D., Professor of Clinical Medicine, Medical Department, University of Southern California. Pp. xiv-377. Price $3 50. New York: William Wood & Co., 1908.

The importance of early diagnosis in what is sometimes called the prebacillary stage of tuberculosis is most strongly emphasized in this work. On this subject the author writes: "If medical men in general would expend in learning to diagnose tuberculosis early but a fraction of the energy that a few scientists are expending in endeavoring to discover a 'cure,' we would be able to say that the cure for tuberculosis is already at hand." "Early diagnosis must be made independent of the microscope." Chapters III and IV, devoted to general rules for examination and details in the diagnosis of early tuberculosis, are worthy of careful study. That early diagnosis is of the greatest importance none will deny and we are almost if not quite prepared to take the author's position that late diagnosis is proof of professional carelessness or incapacity.

The subjects of prophylaxis, diet and treatment are thoroughly marked out with, apparently, no important detail omitted. In the matter of diet the author stands opposed to some of the systems which are still popular and warns against over-feeding. He states that a rational diet is the one which suits the particular patient in question, and he pleads for the least amount of food consistent with satisfactory gain in weight. The specific treatment of tuberculosis, concerning which more or less doubt prevails, receives extended consideration in the course of which the experience of those who have made trial of the various tuberculin preparations at home and abroad is reviewed and the author's conclusions stated. He believes that tuberculin and allied products are of value in treatment and relatively of greater value in advanced cases. He states that while a large proportion of early cases can be cured by hygienic measures alone, in advanced cases such measures are often inadequate. If the carefully guarded administration of tuberculin is added to proper hygienic measures, advanced cases have a much better opportunity of cure. The specialization of the author is here and there apparent, and it is evident that he is familiar with some refinements in diagnosis and management which will rarely be used by the general practitioner. His point of view is that of the sanitarium with its laboratory equipment and corp's of trained assistants.

The Bacteriology of Diphtheria. By F. Loeffler, M.D., LL.D., Arthur Newsholme, M.D., F.R.C.P., F. B. Mallory, M.A., M.D., G. S. Graham-Smith, M.A., M.D., D.P.H., George Dean, M.D., William H. Park, M.D., Charles F. Bolduan, M.D. Edited by G. H. F. Nuttall, M.D., Ph.D., Sc.D., F.R.S., Quick Professor of Biology in the University of Cambridge, and G. S. Graham-Smith, M.A., M.D., University Lecturer in Hygiene, Cambridge. Cloth. Pp. 718. Price, $7.50. New York: G. P. Putnam's Sons, 1908.

The purpose of this volume is to give a full account of the bacteriology of diphtheria, "the disease in which bacteriological methods are most commonly used, not only in diagnosis but also in prevention and treatment." The general scope of the book may be outlined as follows: The history of diphtheria, by F. Loeffler; the epidemiology, by A. Newsholme; the pathology, by F. B. Mallory; the bacteriology, the diphtheria bacillus and the organisms that resemble it and their distribution in man and animals, the occurrence of diphtheria and diseases resembling it, modes of infection and methods of prevention, by G. S. Graham-Smith; immunity, toxin and antitoxin, by G. Dean; mortality and serum sickness, by W. H. Park and C. F. Bolduan. We see at once that the authors have given special attention to the subjects discussed by them in their respective sections. It is gratifying as one looks over the pages to be reminded of the numerous and valuable American contributions to the study of diphtheria and closely allied subjects.

At the end of the volume there is given a very satisfactory and scholarly arranged bibliography throughout which references are freely quoted for the statements that are made, especially in those cases where differences of opinion exist. The illustrations are wisely selected. The work meets the practical needs of the bacteriologist, the health officer and the physician to whom the ordinary sources of information, such as text-books, must often be insufficient and to whom the finding and consultation of original articles may be a difficult task for numerous reasons. The work represents a reliable and exceedingly useful summary of the knowledge of the subjects of which it treats. A pleasing innovation is the insertion of the portraits with brief biographic notes of Bretonneau, who distinguished diphtheria as a separate disease and named it; of Loeffler, who discovered the bacillus; of von Behring, who discovered antitoxin, and of Roux, who applied antitoxin to the cure of the disease in man. We are told in the preface that the Cambridge University Press contemplates the publication of similar volumes dealing with the chief infective diseases if this work meets with approval. In the event that other volumes should be published, and we are sure that the present work will meet with a cordial reception, we respectfully submit that better binding be used. That of the present volume is flimsy.

CLIMATE. By Robert DeCourcy Ward, Assistant Professor of Climatology in Harvard University. Cloth. Pp. 372, with illustrations. Price, $2.00. New York: G. P. Putnam's Sons, 1908.

This book contains a clear and systematic presentation of the subject from a general point of view with a fair amount of space given to the relations of climate to disease. The work is adapted to the general reader, but appears to be rather too little detailed in its statements to be of great value to the physician. The interesting question of changes in climate is discussed in the last chapter. The inconclusiveness of much of the evidence which is supposed to show that the climate of a country is liable to change is clearly set forth. The author seems inclined to deny the influence which it is generally agreed that deforestation has over the climatic conditions. He says: "Finally, it is clear that man, whether by reforestation or deforestation, by flooding a desert or draining a swamp, can produce no important or extended modifications of natural climate. This is governed by factors beyond human control." We fail to find any discussion of the relation of the intensity of light to health, a subject which would seem to be of sufficient importance for consideration even in a general work of this kind. A very conservative view of the prophylactic influence of climate is presented, good hygiene being regarded as of more importance than the mere state of the weather. Insanitary conditions are often, however, the outcome of the climate so that the indirect influence of the climate must be recognized as a real although generally avoidable factor in the production of disease.

REPORT OF THE NEW YORK STATE COMMISSION TO INVESTIGATE THE CONDITION OF THE BLIND. Cloth. Pp. 586, with illustrations. Albany: J. B. Lyon Co., State Printers, 1907.

This report gives the results of an extensive inquiry into the condition of the blind, the causes of blindness, the methods used in various states for its amelioration and prevention. The latter sections will be of interest to the medical profession. Blindness entails peculiar mental conditions which are apt to have their physical effects and should claim the attention of both the medical profession and the laity. Much of the relief work suggested has for its object the bringing of more comfort and intellectual pleasure into the lives of these afflicted ones by education and provision for occupation, such as reading, light work, etc. It should be realized that at best only a small proportion of the blind can become self-supporting and that the state must provide more or less charitable aid for the rest. The investigation covers the causation of blindness by mechanical accidental injury, the communication of infection in school, and more especially the blindness resulting from ophthalmia neonatorum which results, in the majority of cases, from the carelessness of physicians or the ignorance and carelessness of midwives. It is urged that physicians and midwives should be held to stricter responsibility for the proper care of the eyes of infants born under their care; that boards of health should take measures for the education of the public regarding this disease; that proper solutions of silver nitrate should be furnished to the physician or midwife free of charge and the use thereof required in every case where not especially contraindicated; and that physicians should report every such case occurring in their practice.

GYMNASTIQUE RESPIRATOIRE PENDANT LES MOUVEMENTS. By Fr. Guermonprez. Cloth. Pp. 470, with 220 illustrations. Paris: J. Rousset, 1, rue Casimir-Delavigne, 1907.

In this book the author lays especial stress on the exercises that develop the respiratory organs in a healthful way as well as harmoniously build up the general muscular system, and also discusses their therapeutic usage. It is not the acrobatic gymnastics that is treated of, but the scientifically ordered exercise that symmetrically develops the organism and which can be employed as a valuable part of the treatment of various diseases and deformities, including some not exclusively those of the respiratory organs although these are naturally the first considered. The book is very fully illustrated and liberal in its references to French, Swedish and other continental authorities on the subject.

LABORATORY STUDIES IN TROPICAL MEDICINE. By C. W. Daniels, M.B., Camb., M.R.C.S., Eng., Director of the London School of Tropical Medicine, and A. T. Stanton, M.D., Tor., M.R.C.S., Eng., D. T. M. and H., Camb., Demonstrator London School of Tropical Medicine. Cloth. Pp. 491, with illustrations. Price $4.00. Philadelphia: P. Blakiston's Son & Co., 1907.

The chief modifications in the second edition are due to the advances made in the knowledge of tropical medicine. Since the first edition was published, information as to ticks, biting flies, and fleas as carriers of disease has been added, the chapters have been subdivided, and tables are included, giving a systematic classification which shows the zoologic relationship of parasites and their carriers.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Dr. McCormack in Pennsylvania.

The work being done by Dr. McCormack is meeting with a degree of success much greater than was anticipated. The people are beginning to realize the significance and importance of this work and in every state to which he goes the reception accorded him and the effect produced by his addresses are more marked.

The work done in March and April in the states of Mississippi and Louisiana was noteworthy, but the results produced in Pennsylvania during the present month, so far as can be judged from newspaper comments, are even greater.

Dr. McCormack began his Pennsylvania itinerary on May 4, and has since spoken at the following places: Washington, May 4; Beaver, May 5; Pittsburg, May 6; Johnstown, May 7; Lewistown, May 8; Chambersburg, May 9; Carlisle, May 9; Philadelphia, May 11; West Chester, May 12; Chester, May 12; Norristown, May 13; Allentown, May 14; Pottsville, May 15; Wilkes-Barre, May 16; Scranton, May 18; Bloomsburg, May 19; Sunbury, May 19; Harrisburg, May 20; Williamsport, May 21; DuBois, May 22; Erie, May 23; Warren, May 25; Meadville, May 26; Oil City, May 27; Franklin, May 27; Butler, May 28, and New Castle, May 29.

The newspaper comments are extensive and it is only possible to quote from a few of them.

The Pittsburg papers were particularly outspoken. *The Leader*, speaking editorially on the day following the meeting, said:

> The world owes the doctor more than it will ever pay him. His is the noblest and least selfish of all the work of man. Imagine the American Bar Association engaged in a campaign against needless and preventable litigation, spending money contributed by its members to carry on educational work among the people that they may be taught to avoid lawsuits. . . . Or even take those supposed public servants whose sworn duty it is to act in office for the common good and think of them subscribing to a fund to put lecturers in the field to teach the people to abolish useless offices and to bring about true economy, to open their eyes to the wrong committed in the name of the government and to lead them to a better and happier condition. You would then have an idea of the work that is now

> being done in this country under the direction and at the expense of the American Medical Association, aided and assisted by all the state and county societies. . . . Those who attended the meeting at Carnegie Hall last night came away with a deeper knowledge of their own welfare as a self-governing people. They knew before and now they know better than ever that they and their neighbors have been neglecting the most vital function of government, namely, the protection of the lives and the promotion of the happiness of the people.

The Pittsburg *Dispatch* said:

> No orator ever spoke more effectively and impressively to his audience than did Dr. J. N. McCormack . . . when he pleaded for the cooperation of the people in the effort of the medical profession to lessen disease. The audience was intensely interested. It filled the great hall with the exception of the gallery and remained throughout the address, increasing in enthusiastic applause as the time passed.

Editorially, the *Dispatch* said:

> Much good should flow from the meeting of last night. . . . The doctor's address was a message of friendly instruction from 80,000 physicians and a treatise on how to prevent one-third of the illness of the community and how to postpone one-third of the deaths. Surely this is a subject that touches every citizen in his daily life. It is one worthy of consideration or the message would not come from so eminent a body. . . . We accept unreservedly the assurance of Dr. McCormack that he and his colleagues have none but an altruistic interest in this movement. . . . The public should hail with joy the offer of guidance in the preservation of health, the greatest of mundane blessings.

The Pittsburg *Post* said:

> In a forceful plea for a more sympathetic attitude on the part of the laity toward the medical profession, Dr. J. N. McCormack last night inaugurated a movement which will mean much for bettering the health of Pittsburg.

The Pittsburg *Times* said:

> With representative clergymen, educators, scientists and medical men of the city on the platform; with an address by a representative of the American Medical Association, attended by more than 1,000 laymen, members of women's clubs and physicians, one of the most remarkable public movements for the improvement of civic conditions in Pittsburg was started last night at Carnegie Institute. . . . Dr. J. N. McCormack made the principal address of the evening. At the close of his address the entire audience rose to its feet and applauded him loud and long. Following him, Bishop Canevin spoke, also Chancellor McCormack, Superintendent Hamilton and Dr. Brashear. All the speakers endorsed the suggestions made by Dr. McCormack and pledged their support.

At Johnstown a large meeting presided over by Lieutenant Governor R. S. Murphy was held. Following Dr. McCormack's address, a committee was appointed to consider ways and means of carrying out the suggestions made by the speaker in improving local health conditions. This committee included lawyers, ministers, teachers and physicians. A local health organization was effected and plans made for public instruction on health matters, medical inspection of school children and improved sanitary measures. The following Sunday the pastor of the First Presbyterian Church of Johnstown delivered a sermon on public health, taking as his general subject the address given by Dr. McCormack. In the course of his sermon the minister said:

> We must eat pure food, drink pure water, keep good hours and put away the dopes and narcotics and patent medicines and alcoholic liquors against which physicians have warned us. God will not dig sewers for us nor preserve our streams from contamination if we keep on polluting them. We must raise our voices in the city government and let it be known that we want a clean city and a healthful city. . . . In a movement such as this, churches and Christian people should lead the way.

The Lewistown *Sentinel* said:

> A great message was given to the people of Juniata Valley and particularly of Mifflin County and Lewistown by Dr. J. N. McCormack on Friday evening. . . . An audience of fully 1,000 people filled the church. It was a thoroughly representative assembly. . . . The lecture of the evening was of a most practical and valuable nature. It was not technical . . . but was couched in simple and plain language that could be readily understood and put into daily practice. It was a message that should be brought to everyone in this county and state.

The Franklin Repository of Chambersburg says editorially:

> In his lecture, Dr. McCormack presented some facts that were startling in the extreme. . . . A great responsibility rests on the medical profession and on the public in general. . . . If the visit of Dr. McCormack to our town has done nothing else, it has certainly set our people to thinking how derelict we have all been. We hope it will not stop with simply a thought, but that from this time on such arrangements may be made as will better conditions and will give to our community such sanitary regulations as will prevent the spread of contagion and preserve the health of our citizens.

In Philadelphia, the meetings held were particularly noteworthy. The *Ledger* said:

> Startled by an assertion that one-third of the deaths in Pennsylvania last year were due to preventable diseases, a large audience last night vigorously applauded every feature of the proposed broad campaign of education in the interest of the public health. Mayor Reyburn presided, and while suggesting that it might not be possible to realize the ideal, endorsed the campaign so far as it affected sanitary, hygienic and health betterment. With the mayor sat distinguished men of various faiths, professions and political beliefs, all united in a common cause.

Editorially, the *Ledger* said:

> Dr. McCormack . . . represents a deliberate movement fostered by the American Medical Association to organize not only professional but public action for the furtherance of public hygienic and preventive medicine. This is an effort in which physicians necessarily must lead, but in which their work can be of little avail except through support by an educated public opinion and by the cooperation of legislators, lawyers, teachers and intelligent citizens generally. If all the various professional, scientific and philanthropic associations can be brought to work together to a common end their concentrated influence might accomplish incalculable results for the prevention of disease and for the health and comfort of our people.

The Chester *Republican* said:

> It has been seldom that such a representative audience has assembled in Chester as the one which gathered last evening to hear Dr. J. N. McCormack. Scattered throughout the audience were physicians from every part of Chester and Delaware County. . . . Ministers of the gospel were eager listeners and it was noticeable that a large number of public school teachers paid strict attention to everything that was said.

The Norristown *Times* said, editorially:

> Last night's gathering . . . ought to be and we believe will be prolific of far-reaching benefit. . . . The large audience present . . . spoke volumes for the intelligent interest of Norristowners and their desire to better understand the situation. . . . It is a great pity that every man, woman and child in Norristown could not have heard the address.

At Pottsville, an editorial accompanied the account of the meeting in the local paper, emphasizing the necessity of cooperation between the profession and the public for the control of tuberculosis.

The Wilkes-Barre *Times Leader* said, editorially:

> The lecture was one of the most entertaining and instructive ever heard in the city. The association is to be congratulated on having such a representative to show the American people what can be done in the nature of relieving sickness and suffering and preventing death. Millions are spent each year to protect our property, a few should be expended in protecting and saving lives.

The Williamsport *News* said editorially:

> Dr. McCormack's lecture was one of the most interesting and instructive ever listened to in this city. Those who were present last night were highly edified and those who were unable to attend missed an opportunity to hear discussed questions of great importance to the public. . . . The *News* prints Dr. McCormack's address in full and urges its readers to give it a careful persual that the truths enunciated may sink deep into the public mind.

The Harrisburg *Star-Independent* said editorially:

> A question which every community must decide for itself and decide rightly is this: Is it cheaper and more desirable

to pay immense sums for sickness and death than to pay for the prevention of diseases and deaths due to preventable diseases? This is the question which Harrisburg must answer for itself, a question brought home to it by Dr. McCormack in his address in the Board of Trade last evening. . . . It is better to pay a comparatively small sum for health than a large sum for sickness and death. The preservation of health and life is the supreme test of civilization and there is plenty of room for progress in Pennsylvania.

The Harrisburg *Telegraph* said:

> Last evening the Board of Trade auditorium was filled to the doors.

In an editorial commenting on the meeting the *Telegraph* says:

> When the people awake to the real menace which confronts this nation in the indifference of the men, women and children to the perils that surround them through their disregard of ordinary health precautions, they will cooperate more earnestly and intelligently with the physicians of the country who are now laboring to arouse public sentiment. . . . These problems must be solved and solved courageously in every community. We congratulate the Dauphin County Medical Society on its advanced position.

The DuBois *Courier*, beside devoting nearly a page to an account and abstract of the meeting, says editorially:

> This community certainly owes a vote of thanks to the local physicians and medical societies. . . . The meetings were really a part of a splendid stupendous campaign as wide as the nation for the enlightenment of the people. . . . This campaign has been inaugurated by the medical profession. It is purely philanthropic and what the medical men ask is cooperation on the part of the people. They are entitled to all the assistance that can be given to them. Let us see that they get it.

From these extracts, only a few among those received, it can be seen how profound an impression Dr. McCormack's work has made on the citizens of the state. It is becoming more and more evident that the public is ready for far-reaching reforms and needs only to be instructed as to how and where to go to work. The past year has seen greater interest on the part of the people in public health problems than ever before. The work which Dr. McCormack has done in arousing interest in the states which he has been able to visit should be utilized by county and state organizations. The enthusiasm should be maintained and increased by further public meetings, lectures and general education. The desire for better sanitary conditions should take the form of effective laws or of amendments to existing laws, carefully drawn with a view to the public good.

A Bill to Regulate Expert Testimony.

The Medical Society of the State of New York and the New York State Bar Association are considering legislation for the regulation of medical expert testimony, in order to do away with some of the absurdities along this line which have recently occurred. A special committee appointed by the Medical Society of the State of New York has drawn up a tentative bill.

Dr. John A. Wyeth, president of the New York Academy of Medicine, who is a member of the committee, presided at a public meeting held at the academy building recently, at which Judge Rufus B. Cowing, for twenty-eight years a judge in the General Sessions Court, discussed the question of medical expert testimony. Dr. Wyeth read the following bill which, it appears, has been approved by the physicians' committee.

> At any time in the pendency of any civil proceeding in any court in which any medical or surgical question is likely to be material the court or any justice thereof may, or at the request of either party shall, appoint from the list made up as hereinafter provided one or more persons learned in the science of medicine and surgery, and of not less than seven years' actual practice, as official experts, who shall investigate the facts of the case and give their opinion on any such question arising in such proceeding, and make written report thereof to the court.
>
> Section 2. On such appointment by the court, or if the parties file an agreement designating an expert for the case, the court shall issue an order for the person so appointed or agreed on to be served in the manner provided by law for the service of subpenas. As soon as may be after service thereof the expert shall make such examination of the case as in his judgment may be necessary and practicable, and shall file his report as above provided.
>
> Section 3. Such report shall be filed in the case, and shall thereupon be open to the inspection of either party, and such report may be read in evidence, and such expert may be called as a witness by either party at the trial .
>
> Section 4. The New York Academy of Medicine, for New York City, and the Medical Society of the State of New York, acting for the state outside of New York City, shall, through committees appointed by these organizations, furnish to the court or courts in various counties, a list of names of members of the medical profession of good standing and of not less than seven years' actual practice, recommended by them as competent and expert in medicine and surgery, from which list the court may select such expert or experts as in its judgment may be required.
>
> Such official expert shall be paid out of the treasury of the county a minimum fee of $50 for the examination of, and report on, any case in question, $50 additional for the first day's attendance in court on the case, and $100 a day thereafter while attendance is required by the court.
>
> The expert witnesses so listed may be called by any court of the state, and if called from the county of their residence the fee shall be increased to the extent of the extra expense incurred, to which shall be added a reasonable compensation for such extraordinary service and loss of time.
>
> Section 5. Either party at the trial may call other expert witnesses than those appointed or agreed on, but at his own expense.

The evils connected with the present method of eliciting expert evidence on medical and surgical subjects have long been recognized. Regulation through joint action by the authorized representatives of the two professions involved would appear to be the logical method of solution. The outcome of this effort at regulation in New York will be awaited with much interest.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES.

DR. JOHN H. BLACKBURN, DIRECTOR.
Bowling Green, Kentucky.

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Ninth Month.

Second Weekly Meeting.

Acute Gastritis.

Pathology: (a) Catarrhal gastritis. Incidence. Changes in mucous membrane, location, microscopic changes.

(b) Follicular gastritis. Rarity, incidence. Gross and microscopic changes.

(c) Membranous gastritis. Association, gross and microscopic changes.

(d) Corrosive gastritis. Toxic, caustic agents usually found. Variations in lesions found. Results.

Symptoms: Usual onset. Persistence of symptoms. Physical examination. Follicular form marked by hemorrhage. Corrosive gastritis. Mouth and pharynx, pain, vomiting, collapse, intestinal symptoms. Prognosis.

Treatment: Gastric lavage. Medicinal treatment. Special indications in corrosive gastritis. Avoid lavage, use antidotes, bland drinks, opium.

Chronic Gastric Indigestion.

Symptoms.—In infants: Examination of stomach contents; mucus, reaction, rennet, pepsin, hydrochloric acid, fatty acids, motor function. Vomiting constant symptom; time, vomitus. Bowels. General symptoms. Course of disease.

In Older Children: Gastric and intestinal symptoms. General symptoms.

Treatment: Hygienic. Stomach washing; technic, results accomplished. Dietetic; wet nurse, modified milk, diet of older children.

Acute Intestinal Indigestion.

Symptoms: In infants and older children. Pain, tympanites, diarrhea, constitutional symptoms. Stools; number, changes in color and character, reaction, bacteria. Course of disease.

Treatment: (a) Elimination. Therapeutic action of calomel, castor oil. (b) Rest. Dover's powder. (c) Dietetic.

Medical Education and State Boards of Registration

COMING EXAMINATIONS.

Minnesota State Board of Medical Examiners, Old Capitol, St. Paul, June 10-12. Secretary, Dr. W. S. Fullerton, 217 American National Bank Bldg., St. Paul.

Iowa State Board of Medical Examiners, Capital Building, Des Moines, June 4-6. Secretary, Dr. Louis A. Thomas, Capital Bldg., Des Moines.

Ohio State Board of Medical Registration and Examination, Columbus, June 8-10. Secretary, Dr. George H. Matson, State House, Columbus.

Michigan State Board of Registration in Medicine, University Bldg., Ann Arbor, June 9. Secretary, Dr. B. D. Harison, 504 Washington Arcade, Detroit.

South Carolina Homeopathic Medical Examining Board, Columbia, June 9. Secretary, Dr. J. A. Whitman, Beaufort.

Kansas State Board of Medical Registration and Examination, Kansas City, June 9. Secretary, Dr. D. P. Cook, Clay Center.

South Carolina State Board of Medical Examiners, Columbia, June 9-11. Secretary, Dr. W. M. Lester, Columbia

Wyoming Board of Medical Examiners, State Capitol, Cheyenne, June 10-12. Secretary, Dr. S. B. Miller, Laramie, Wyo.

Oklahoma State Board of Health, Oklahoma City, June 16-18. Secretary, Dr. J. C. Mahr, Shawnee.

Texas State Board of Medical Examiners, Waco, June 16. Secretary, Dr. G. B. Foscue, Waco.

Maryland Homeopathic Board of Medical Examiners, Baltimore, June 16. Secretary, Dr. Joseph S. Garrison, 848 W. North Ave., Baltimore.

New Jersey State Board of Medical Examiners, State House, Trenton, June 16-17. Secretary, Dr. J. W. Bennett, Long Branch.

Delaware State Medical Examining Board, Dover, June 16-18, and by the Homeopathic Board at Wilmington on same date. Secretary of the Medical Council, Dr. P. W. Tomlinson, Wilmington.

Maryland Board of Medical Examiners, Lehman's Hall, Baltimore, June 16-19. Secretary, Dr. J. McP. Scott, Hagerstown, Md.

Virginia State Medical Examining Board, Richmond, June 23-26. Secretary, Dr. R. S. Martin, Stuart.

Pennsylvania State Medical Examining Boards, June 23-26. The Regular Board meets at Philadelphia and Pittsburg; the Homeopathic at Philadelphia, and the Eclectic at Harrisburg. All applications must be filed with Dr. N. C. Schaeffer, Secretary of Medical Council, Harrisburg.

New York State Board of Medical Examiners, Albany, June 23-26. Chief of Examinations Division, Charles F. Wheelock, Albany.

COUNCIL ON MEDICAL EDUCATION OF THE AMERICAN MEDICAL ASSOCIATION.

Fourth Annual Conference, held at Chicago, April 13, 1908.

(Continued from page 1731.)

Discussion on Preliminary Education and the Suggested Standard Medical College.

In the discussion of preliminary education and a standard medical college, President Eliot spoke of the experiences of Harvard University in establishing higher preliminary requirements. The requirement of an examination for admission was tried and abandoned. Later, the requirement of a baccalaureate degree for admission was adopted. This seriously cut down the number of students, but it attracted the attention of wealthy men to the needs of higher medical education for endowment. In regard to endowments, President Eliot said: "From the time we introduced the three-year course in 1871 we began to be endowed. Since we demanded a degree for admission we have had an additional endowment of $4,000,000. Gentlemen, the way to get endowments for medicine is to improve medical education." President Eliot considered as a serious matter the practice of allowing two years of work to be counted both toward the baccalaureate and medical degrees, and felt that in shortening the period of college residence, the amount of work done in the college should not be diminished. He was in favor of reducing the college period to three years and said that, as a rule, those who finished the work in three years were better men than the four-year men. They worked harder and as a consequence were better equipped to begin medical study. The shortening of the course in liberal arts seemed necessary, however, since the course in medicine must be prolonged to provide for "the multitude of knowledges and skills that a physician and surgeon needs to acquire."

Dr. Charles S. Sheldon, Madison, Wis., called attention to the great need of a better preliminary training for those beginning the study of medicine and stated that, if possible, the complete college course, or at least two years of liberal arts work, should be required. This was necessary to produce broader, stronger and more intelligent physicians. It was necessary to develop the scientific spirit and the taste for science and for investigation. Dr. Sheldon argued that the requirement would not be unreasonable since the opportunities for attendance on liberal arts colleges were never as numerous as at the present time. That the trend of popular opinion would soon demand a higher grade of medical men was shown by the enormous increase in attendance at colleges of liberal arts. In the establishing of a fair minimum standard of medical education Dr. Sheldon called attention to the necessity of so economizing the student's time that he could begin the practice of medicine at about the age of 26.

Dr. J. W. Holland, Philadelphia, said that the need of the country for competent and efficient doctors should not be lost sight of, and that too much haste should not be made in demanding higher preliminary requirements. Although a doctor seldom knew too much, the country needed practical physicians rather than philosophers. Rather than know a great many things ill, it was better to know a few things well. He feared that higher requirements would bring the student into his medical work so late that the best grasp of the medical subjects might be prevented. The young doctor, he advocated, should be engaged in his life work at 24.

Dr. Frederick H. Gerrish, Portland, Maine, spoke of the difficulties of the colleges of arts in arranging to give one year of work in physics, chemistry and biology. Secondly, he did not believe in crowding into the medical curriculum botany or zoology or any other non-medical subjects. He said botany was "the path of easiest, most delightful and most useful entrance to the domain of natural science." A knowledge of botany was of much value because of the discipline it gives in the methods of scientific diagnosis, and botany ranked almost with analytic chemistry in the training for diagnosis by exclusion. After reference to the work of the Council in inspecting medical colleges, he said that twenty-one years ago he found that fully one-half of the medical schools did not live up to the statements made in their annual announcements.

Dr. Murray Galt Motter, Washington, D. C., said that in the education of the physician, chief attention should be given to providing the intellectual capacity which, after the student has learned "What is the matter?" and "What to do?" would enable him to apply the means to the conditions. Otherwise he would not be best prepared successfully to follow the practice of medicine.

Prof. A. H. F. Barbour of the University of Edinburgh, Scotland, spoke of the great progress in medical education since his first visit to this country thirty-one years ago. He was inclined to disfavor unnecessary examinations, and showed how in Scotland three separate examining boards were induced to combine. It resulted in establishing a single license examination in Scotland which has brought about a higher standard of teaching. He said the chief good of an examination is the reflex it has on the teachers. Regarding his experiences in the work of inspecting the various examining bodies for the purpose of establishing better and fairer methods, he said that it was astonishing what you can get people to do if you keep at them from the inside instead of forcing them from the outside.

Dr. Victor C. Vaughan, Ann Arbor, Mich., in answering some queries regarding the standard medical school, said that the committee did not include an enumeration of the apparatus necessary for teaching, since that was a matter left to the inspectors. Regarding the 75 counts of high-school work, he said that on the old basis of figuring a unit as four recitation periods a week only 60 counts resulted, but it was later agreed that the unit should represent five recitation periods per week. The fifteen units of high-school work would, of course, then amount to 75 counts. In regard to preliminary college work, Dr. Vaughan advocated either the shortening of the college course or of giving the students more work to do.

The Chairman: The next in order is the report of the Committee on "The Essentials of a Model Medical Practice

Act." Dr. Beverly D. Harison of Detroit will make the first report, which will be supplemented by the report of one of the members of the committee, Dr. F. Dudley Tait of San Francisco.

Dr. **Beverly D. Harison**, of Michigan, then reported the complete text of a medical practice act containing ten sections as follows:

Section 1 suggests a single board of ten members to be appointed by the Governor from nominations made by the state medical societies.

Section 2 governs the election of officers of the board and suggests that the secretary be not a member of the board. The advantage of that arrangement would be that a suitable man could be retained in office and not be subject to the uncertainties of political appointment.

Section 3 provides for the educational qualifications of applicants and gives two methods for qualifying for licenses; viz., on passing an examination and on presentation of a license from another state. The latter is the provision for reciprocity, which is liberal and exact. If the applicant shows proof of graduation from a reputable medical college and proof of receiving a satisfactory license, this license can be endorsed regardless as to whether the other board reciprocates or not.

Provision in this section is made for the division of the examination into a primary, including the subjects of the first two years, and a final, including the subjects of the last two years of the medical course. The board is authorized to draw up rules governing examinations which may be wholly written, or partly written and partly oral or by both those methods. Clinical and laboratory examinations are also provided for. The board is given authority to allow a percentage for years of reputable practice.

The examination and classification of medical colleges by the board, is provided for, and the standard of preliminary and medical education is fixed with which colleges must conform in order to secure recognition. Provision is also made after notice of one year to add the year in physics, chemistry and biology to be taken in a literary college, in addition to the regular standard high school diploma as a requirement for matriculation.

This section also provides for the punishment of fraud in obtaining or attempting to obtain certificates and also for the refusal or revocation of certificates for grossly unprofessional or dishonest conduct.

Section 4 provides for the usual recording of the certificates in the county where the physician intends to reside.

Sections 5 and 6 refer to the finances of the board and to the salary of the secretary.

Section 7 provides for the penalties for violation of the act.

Section 8 provides for the exemption of medical officers in the United States services in the performance of their official duties, of physicians called into consultation from other states and for medical services in cases of emergency.

Section 9 gives the following definition: If any person who shall append the letters "M.D." or "M.B." or other letters in a medical sense, or shall prefix the title of "Doctor" or its abbreviation, or any sign or appellation in a medical sense, to his or her name, it shall be prima facie evidence of practicing medicine within the meaning of this act. In this act, unless otherwise provided, the term "practice of medicine" shall mean the actual diagnosing, curing, or relieving in any degree, or the professing or attempt to diagnose, cure or relieve any human disease, ailment, defect or complaint, whether of physical or mental origin, by attendance or by advice, or by prescribing or furnishing any drug, medicine, appliance, manipulation or method, or by any therapeutic agent whatsoever: Provided, that this interpretation of the "practice of medicine" shall not apply to persons who confine their ministration to the sick or afflicted or disabled to prayer and without the addition of material remedies. The burden of proof shall be on the defendant.

Section 10. This last section provides for annual reports from the assessors to the secretary of the board of all physicians residing in their districts.

Dr. **F. Dudley Tait**, of California, then submitted a report in which he said that doctors as a rule were the poorest and most prejudiced of law makers and that, in order to frame a truly medical practice act a conference should be called of the attorneys of the various state boards. He said the legal side of the question was far more important than the academic side and that what is constitutional in one state is often unconstitutional in others. He did not believe a single remedy could control the multiple and heterogeneous conditions confronting the profession in the United States. His suggestions for the practice act were as follows:

1. The appointment of the board of medical examiners should be delegated to the state medical societies. In states where the appointing power is vested in the governor, the state societies should make up the list from which the governor *must* select. Under such a plan the board would be closer to the profession, as well as the people, and politics, municipal, state, and worst of all, college politics, would be vastly restricted. No one connected with a medical school should be eligible to membership on examining boards.

2. Unless the standard of requirements is embodied in the statute, the power of determining it should be delegated to some national body. In the latter cases the constitution of the national body should be so worded as to avoid conflicts with the statutes of the various states. That such conflicts may negative all attempts to raise the standard of medical education, and even cause a grave retrograde movement, I have absolute proof. National associations can not delegate to examining boards powers which the statutes do not confer on said boards.

3. Graduates of all schools must be admitted to examinations for licensure. Properly administered, our present laws are perhaps adequate to control the output of medical colleges, but while medical men and learned societies have been discussing entrance requirements and college curriculum the fraudulent extra mural elements—osteopaths, naturopaths, chiropractics, etc.—have gained recognition in twenty-seven states. In some states the matriculants of a single osteopathic institution greatly outnumber those of all the medical schools of the state. In the face of such facts one is justified in asking if the organized medical profession of this country can have been true to either itself or the people. The remedy, in fact, the only radical remedy, if we may judge from the experience of Colorado, California and New York, is the establishment of a single composite board, the details of which have already been outlined by Dr. Harison.

4. The applicant's affidavit should contain a reference to the regularity of the course of study and examination, thus permitting the board to check the migration of plucked students from high-grade colleges to inferior and less honest institutions, a most demoralizing factor in medical education. During the past four years the California board has rejected a score of diplomas secured under these irregular conditions.

The law should make it perjury to swear falsely to matters pertaining to the board.

Every application should be most rigidly investigated in all its details by the committee on credentials, three or four weeks being allowed for such investigations prior to the examinations.

5. If we exact of all applicants—medical, osteopathic and other graduates—the same standard of preliminary education and the same duration of college course, we must necessarily grant to all the same certificate of qualification. If, on the contrary, the standard exacted of medical graduates be higher than that demanded of other graduates, several forms of certificates should be issued. Such is the case in California where we issue three forms of certificates: one for the practice of medicine and surgery, one for the practice of osteopathy and one for the practice of God knows what.

6. In order to eliminate the dangerous and ever-present personal factor, the applicant should be known and designated by number only, and the name attached to the number should be kept secret until the board has finally voted on the markings. The inspection of preliminary educational credentials and the issuance of students' matriculation certificates should

be a function of the board. The law should enumerate the subjects of examinations, and materia medica and therapeutics should not be included. A general average of 75 per cent. and a minimum of 60 per cent. in all subjects is less than colleges require for graduation, and should seem a reasonable standard for examining boards. In justice to older graduates, a credit of 5 per cent. on the general average may be granted for every ten years of reputable practice.

7. The board should be empowered to investigate medical colleges and to compel them to file an annual sworn report, as well as to issue suopoenas and to compel the attendance of witnesses. It should be the duty of the board to prosecute illegal practitioners, to employ and to fix salary of an attorney to be paid by the state. The collected fines should be paid to the state treasurer and deposited in a special fund for the prosecution of illegal practitioners of medicine.

The form of complaint should charge the defendant with practicing without a state certificate, without stating the facts. The stated fine should be a stiff one, the law should give jurisdiction to courts of record and thereby nullify the questionable methods of certain police courts, and a section should provide for enjoining the defendant from further practicing until he has obtained a certificate. Special privileges to Army or Navy surgeons and to makers of instruments savor of class legislation, and only serve to weaken the statute.

8. The section relative to the revocation of certificates for unprofessional conduct should also include all advertising of medical business which is intended or has a tendency to deceive the public or impose on credulous or ignorant persons, and so be harmful or injurious to public morals or safety. It should also include practicing under another's name or with an advertising medical company.

An annual report of the board's complete proceedings should be compiled by the secretary, copies of which should be filed with the governor and all state examining boards. It should then be published to the profession. Nothing should be left to the discretion of the board, unless it be the question of reciprocity, but even this harassing problem will be of only historical interest when state medical laws and their enforcement are made uniform.

The Chairman.—We will now hear from the other member of this committee, Dr. William Warren Potter, president of the State Board of Medical Examiners of New York.

Dr. W. W. Potter, New York.—This is a subject which requires much study. It can not be expected that an ideal condition can be obtained at once. Different political divisions of this country are often times diverse in their interests, and it would be necessary to formulate a so-called medical practice act very carefully so as to eliminate any clause that might irritate legislatures in such a manner as to prevent a passage of the bill. It needs study, and the distribution of copies of this so-called medical practice act among the educators of the country will be very beneficial. I agree with the essentials of the proposed act, and for that reason I hope it will receive a large circulation when printed.

DISCUSSION.

Dr. Alexander R. Craig, of Pennsylvania, said that the object of medical laws is to protect the public from incompetent practitioners of medicine and these laws should not be used merely to force an upward trend of medical education. These laws should provide the minimum of qualifications necessary for the protection of the public, and in the securing of such laws we are concerned only for the protection of the citizens of the commonwealth. Examining boards should establish a fair standard of preliminary qualifications which would not only enable the applicant to obtain medical knowledge but would insure that he has the ability to use it.

The idea of protecting the public should also be kept in mind in establishing reciprocity. If a man can show that he is a safe practitioner in one state he will doubtless be a safe practitioner in any other state, and should be registered whether the state issuing the original license returns the favor or not.

Provision should be made for revocation of licenses since a man may be a perfectly honest practitioner one year but may fall to the lowest depths the next and so become a menace to the community.

Dr. R. H. Grube, of Ohio, said the examining board should have original jurisdiction in the revoking of licenses for abortion or other cause. If the board had the power to try the cases it could use much testimony that could not be introduced in court and thereby could revoke a license where the court could not convict. He agrees that these cases should be brought in courts of record since, according to the experience in Ohio, convictions can not be secured in the lower courts.

Dr. Louis A. Thomas, of Iowa, said that any model practice act should be as short and concise as possible, and that it should place responsibility on the board of medical examiners, giving them authority to do certain things without going into unnecessary details. Otherwise, he suggested, the average legislature will never adopt it.

Dr. S. D. Van Meter, of Colorado, spoke in favor of the simplest kind of a law and of a non-sectarian board. He said that in Colorado, osteopaths were not permitted to use the title of "doctor" or "M.D.," nor to represent themselves as physicians. This absolutely prevents them from practicing. They are placed, therefore, on the same level with the masseur.

Dr. A. Ravogli, of Ohio, said that although osteopaths, in order to be allowed to practice, claim they do not use drugs but limit their practice to kneading and tapping the body, in reality they practice the same as other physicians and that in Ohio they are required to present the same evidences of training as physicians.

(To be continued.)

The Public Press and Medical Standards.

The public press has begun to take a fairly active part in the movement for better educated physicians, and during the past year editorials like the one here presented are being seen more often than before. The following is from the San José (Cal.) *Mercury*, April 21, 1908:

> A systematic campaign against medical quackery is being waged both East and West, according to a report from the recent annual conference of the American Medical Association. Leaders in the profession say that the campaign will be kept up until the medical schools of this country equal any in the world. This is good news to the average mortal, for whether he believes in him or not the medical man is the first he runs to when the physical machine gets out of whack.
>
> It is encouraging, then, to learn that the percentage of know-nothings in the profession is growing less from day to day. American methods, which have been severely criticised abroad, and deservedly so, have in the past paved the way to short-route degree-getting to such an extent that any "Tom, Dick or Harry" ambitious to make an easy living had simply to answer a few questions furnished him by some so-called school, pay the price, get his diploma and begin the practice of what he proudly calls "my profession." And the extraordinary thing about it is that this ordinarily thick-skulled youth, suddenly launched in practice, soon finds patients galore. Indeed, because of his glib tongue and smooth front, he not infrequently out-distances the man of real education and training. This, of course, is the fault of the people, who, as Barnum said long ago, like to be humbugged.
>
> But it does not follow that simply because every city, town and village in this country has its quota of abominable quacks or that because we have 48 per cent. of the medical schools of the world, we have no institutions of merit. Compared with the schools of Europe, our chief defect lies in the lack of thorough pre-medical study and in the time spent in working toward a degree. If your physician is following an industrial or mechanical calling to-day it is inconceivable that four or five months hence he can be a properly qualified medical doctor.
>
> It is not enough to say there are as many quack lawyers as doctors, for while this is true, the possibilities of the former for doing damage to a client are infinitely less than in the case of the quack physician, who not only takes his patient's money, but his health as well.
>
> There is no reason why the uncouth medical practitioner, who knows nothing of the mysteries of anatomy and who scarcely knows the meaning of the word physiology, should be flourishing with his cheek of adamant, while the conservative

man of culture should be languishing for want of business. The people are to blame, and until they cooperate with the medical association in the effort to weed out the brass-fronted pretenders there can be little hope of permanent reform.

"Universities" and Higher Education.

In a "Report on Higher Education" to the Board of Regents, Dr. Howard J. Rogers, the First Assistant Commissioner of Education of New York, calls special attention to the misuse by some institutions of the names "college" and "university." One of these "universities" has recently been referred to in a prominent American educational publication along with Harvard, Columbia, Chicago and other high-grade universities, and was shown, according to the number of students in attendance, to be second only to Harvard. Regarding this institution Dr. Rogers says: "In one of the largest of these so-called colleges less than 2 per cent. of the several thousand enumerated can be claimed as college students in the ordinary usage of that word in the United States. So many of these are of high-school rank as to warrant the statement that not 1 per cent. of them would be ranked as college students by an eastern college." Meanwhile, this institution and another mentioned in the report, have medical departments. Dr. Rogers calls attention to the necessity of concerted legislative action in the various states which shall define the terms "college" and "university" in order to prevent their use for misleading purposes. New York has already solved the problem so far as that state is concerned by placing the chartering of all educational institutions in the hands of the Board of Regents.

Medical Education and the Florida Practice Act.

In his report to the Florida Medical Association, April 15, 1908, Dr. Edward N. Liell, chairman of the State Committee on Medical Education, called attention to the intimate association of the science of medicine with questions relating to life and death which demands higher qualifications of medical men than of those of any other profession. In no other profession, he said, could "inadequate training work such dire results," and no compulsion rests on any community to permit untrained men to practice medicine solely as a means of livelihood. He then reviewed the conditions regarding medical education as they exist to-day; he spoke of the efforts to secure better conditions and called special attention to the important part which state licensing boards have in the demanding of better trained physicians. He called attention to the defects of the Florida medical practice act in not providing for preliminary education and in not giving the board authority to refuse recognition to low grade medical colleges.

Finally he urged that the Florida Medical Association use its influence toward the securing of amendments to the Florida law providing that the minimum requirement of preliminary education be a diploma from an approved four-year high school or an equivalent education, and that the Board of Medical Examiners be given authority to refuse recognition to all colleges not doing satisfactory work.

Correction of the Oregon January Report.

A letter from Dr. Byron E. Miller, secretary of the Board of Medical Examiners of Oregon, states that in the Oregon January report published in The Journal, March 14, 1908, page 908, the candidate who failed and who was said to be a graduate of the University of Nashville, in 1895, should have been given as a graduate of the University of Tennessee, Medical Department.

Wisconsin April Reciprocity Report.

Dr. J. V. Stevens, secretary of the Wisconsin State Board of Medical Examiners, sends us a report of the reciprocal licenses issued at the meeting held by that board April 14, 1908. The following colleges were represented:

LICENSED THROUGH RECIPROCITY.

College.	Year Grad.	Reciprocity with.
College of P. and S. Chicago, (3, 1906); (1907); Ill.;	(1907)	Maine
Rush Med Coll..............(1875) Michigan;	(1900)	Iowa
Chicago Coll. of Med. and Surg.	(1907)	Illinois
Northwestern Univ. Med. School	(3, 1907)	Illinois
Medical School of Maine	(1895)	Maine
University of Michigan...(1897) Iowa; (1890)	(1904)	Michigan
Hamline University	(1903)	Minnesota
Homeopathic Med. Coll. of Missouri	(1907)	Missouri

Medical College of Ohio	(1906)	Ohio
Eclectic Med. Institute, Cincinnati	(1903)	W. Virginia
University of Vermont	(1886)	Illinois
McGill University, Quebec......(1904) Illinois;	(1906)	Minnesota
University of Christiania,, Norway	(1902)	Iowa

Washington January Report.

Dr. C. W. Sharples, secretary of the Washington State Medical Examining Board, reports the written examination held at Spokane, Jan. 7-9, 1908. The number of subjects examined in was 17; total number of questions asked, 100; percentage required to pass, 75, and 70 for those having had ten years' practice. The total number of candidates examined was 105, of whom 84 passed and 21 failed. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
University of California	(1902)	81.0
Gross Medical College	(1902)	76.6
Denver and Gross Coll. of Med., (1904) 84	(1906)	82.0
Colorado School of Med.	(1901)	79.0
George Washington University	(1907)	87.3
Columbian University, Washington	(1893)	76.7
Medical Coll. of Georgia	(1890)	86.0
Chicago Homeopathic Med. Coll.	(1891)	79.3
College of P. and S., Chicago, (1898) 83	(1904)	78, 84.0
Rush Med. Coll. (1882) 76; (1895) 90; (1905) 83, 91;	(1906)	89.4
Northwestern Univ. Med. School. ....(1906) 85;	(1907)	82.0
Hahnemann Med. Coll., Chicago	(1904)	75.2
American Coll. of Med. and Surg.	(1905)	78.0
College of P. and S., Chicago, ...(1899) 83;	(1903)	83, 86
Illinois Med. Coll.	(1905)	79.0
University of Iowa	(1903)	82.2
Sioux City Coll. of Med.	(1907)	77.6
Indiana University	(1907)	78.0
Indiana Med. Coll.	(1890)	86.0
Kentucky School of Med.	(1892)	83.0
Baltimore Med. Coll..................(1897) 75;	(1905)	84.0
Johns Hopkins Med. School..........(1901) 91;	(1906)	89.0
College of P. and S., Baltimore	(1907)	75, 79.7, 83.0
Tufts Coll. Med. School	(1898)	77.0
Harvard Med. School.................(1887) 76;	(1904)	76.0
University of Michigan........(1906) 82, 86.7;	(1907)	79.7, 84.8
Saginaw Valley Med. Coll.	(1899)	79.0
University of Minnesota (1901) 83; (1905) 87; (1906) 77.4; (1907) 78; 90.4.		
St. Louis University	(1905)	83.0
College of P. and S., Kansas City	(1898)	78.0
University of Buffalo	(1898)	79.0
College of P. and S., New York	(1904)	89.0
Cleveland Homeopathic Med. Coll.	(1896)	82.0
Miami Med. Coll.	(1903)	84.0
Medical College of Ohio	(1905)	79.0
Pulte Med. Coll.	(1890)	75.0
Eclectic Med. Inst., Cincinnati	(1903)	75.0
University of Oregon..............(1899) 78.7;	(1906)	83.3
Willamette University	(1904)	75.0
Hahnemann Med. Coll., Philadelphia	(1907)	83.0
University of Pennsylvania.........(1893) 83;	(1906)	86.0
Medico-Chirurgical College of Philadelphia (1903) 80.3; 82.4	(1906)	77.8
Jefferson Med. Coll...............(1901) 84.7;	(1905)	76.9
Vanderbilt University	(1906)	78.0
University of Vermont.............(1905) 84.3;	(1907)	78.0
Milwaukee Med. Coll.	(1905)	77.0
Trinity Med. Coll.	(1904)	75.4
University of Toronto, (1905) 82; (1903) 86; (1907) 83.4; 86.3, 86.9.		
University of Paris, France	(1906)	80.0
University of Dorpat, Russia	(1889)	
Kongelige Frederiks Universitet, Christiania	(1906)	84.0
University of Freiburg, Germany	(1900)	79.6

FAILED.

College.	Year Grad.	Per Cent.
College of P. and S., San Francisco	(2,1907)*	
Rush. Med. Coll.	(1891)	60.3
American Med. Miss. Coll.	(1901)	69.4
Chicago Homeopathic Med. Coll.	(1889)	60.0
Hospital Coll. of Med., Louisville	(1907)	74.0
Maryland Med. Coll.	(1904)	65.3
University of Maryland	(1905)	73.0
University of Michigan, Homeo. Dept	(1883)	62.0
University of Minnesota	(1907)	73.0
St. Louis University	(1905)	74.2
Kansas City Med. Coll.	(1898)	71.1
Barnes Med. Coll.	(1898)	34.5
College of P. and S., St. Louis........(1893) 48;	(1895)	58.6
Creighton Med. Coll.	(1901)	70.0
Miami Med. Coll.	(1882)	64.3
Pulte Med. Coll.	(1882)	68.8
Jefferson Med Coll.	(1907)	70.6
Medico-Chirurgical College, Philadelphia	(1899)	73.4
Tennessee Med. Coll.	(1902)	68.0

* No percentage assigned.

Iowa March Report.

Dr. Louis A. Thomas, secretary of the Iowa State Board of Medical Examiners, reports the written examination held at Des Moines, March 10-12, 1908. The number of subjects examined in was 8; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 10, of whom 5 passed and 5 failed. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
Hahnemann Medical College, Chicago	(1906)	94.6.
Drake University	(1907)	76.6
Keokuk Med. Coll. of P. and S.	(1907)	81.2
Sioux City Coll. of Med.	(1907)	86.8
Kentucky School of Med.	(1907)	78.2

FAILED.

College.	Year Grad.	Per Cent.
Illinois Medical College	(1907)	71.2
Keokuk Med. Coll., Coll. of P. and S.	(1904)	73.8
College of P. and S., Kansas City	(1901)	65.3
Creighton Med. Coll.	(1907)	61.3
Meharry Med. Coll.	(1895)	53.5

Minnesota April Report.

Dr. W. S. Fullerton, secretary of the Minnesota State Board of Medical Examiners, reports the written examination held in St. Paul, April 7, 1908. The number of subjects examined in was 11; total number of questions asked, 120; percentage required to pass, 75. The total number of candidates examined was 17, of whom 15 passed and 2 failed. Twenty reciprocal licenses were issued at this examination. The following colleges were represented:

PASSED.

College.	Year of Graduation.	Medicine.	Surgery.	Obst. and Gynecology.	Materia Med. & Tox.	Anat. & Hist.	Physiology.	Chem., Bact. & Urin.	Pathology, Eye & Ear.	Pre. Med. & Med. Juris.	Pediatries.	General Average.
Hahne. Med. Coll., Chi.	1878	83	75	75	75	75	70	75	72	75	75	75
Rush Med. Coll.	1906	83	91	81	64	82	77	75	81	77	76	78.7
Ft. Wayne Coll. of Med.	1905	81	77	81	70	75	84	62	70	75	75	75
Baltimore Med. Coll.	1907	77	82	75	70	76	75	75	73	74	76	75.3
University of Minnesota.	1907	79	84	64	76	78	85	64	73	80	76	75.9
University of Minnesota.	1907	88	94	60	82	79	92	80	89	79	84	82.7
University of Minnesota.	1907	90	80	79	83	84	95	81	88	82	77	83.9
University of Minnesota.	1907	84	82	80	92	83	90	78	61	79	70	79.9
University of Minnesota.	1906	75	78	72	75	76	91	78	89	77	72	78.3
Hamline University	1907	79	89	70	75	73	79	71	69	77	70	75.2
Hamline University	1907	77	84	75	83	62	75	75	76	77	76	76
Hamline University	1906	77	84	75	75	70	75	75	70	76	76	75.3
Toronto Univ., Ontario	1902	83	87	75	70	76	82	75	75	78	77	77.8
Queen's Univ., Ontario	1906	83	77	75	64	83	83	73	78	77	78	77.1
Queen's Univ., Ontario	1905	94	90	82	76	82	91	72	86	77	85	83.5

FAILED.

College.	Year of Graduation.	Medicine.	Surgery.	Obst. and Gynecology.	Materia Med. & Tox.	Anat. & Hist.	Physiology.	Chem., Bact. & Urin.	Pathology, Eye & Ear.	Pre. Med. & Med. Juris.	Pediatries.	General Average.
Univ. of Minnesota	1906	71	78	61	55	56	63	55	61	76	72	64.8
Miami Med. Coll.	1902	74	76	64	49	54	50	35	33	75	70	58

LICENSED THROUGH RECIPROCITY.

College.	Year Grad.	Reciprocity with.
Hahnemann Med. Coll., Chicago (1881) Iowa; (1889) Utah	(1902)	Wisconsin
Northwestern Univ. Med. School (1903)	(1905)	Illinois
Bennett Coll. of Ecl. Med. and Surg.	(1906)	Illinois
Rush Med. Coll. (1886) Iowa;	(1906)	Illinois
College of P. and S., Chicago	(1905)	Illinois
University of Iowa (1900) (1905)	(1907)	Iowa
Sioux City Coll. of Med.	(1904)	Iowa
Keokuk Med. Coll.	(1905)	Iowa
Kansas Med. Coll.	(1900)	Kansas
Harvard Med. School	(1901)	Maine
Detroit College of Med.	(1906)	Michigan
College of P. and S., New York	(1892)	Nevada
Cleveland Homeo. Med. Coll.	(1906)	Ohio
Jefferson Med. Coll.	(1899)	Wisconsin

North Dakota April Report.

Dr. H. M. Wheeler, secretary of the North Dakota State Board of Medical Examiners, reports the written examination held at Grand Forks, April 7-9, 1908. The number of subjects examined in was 14; percentage required to pass, 75. The total number of candidates examined was 22, of whom 16 passed and 6 failed. Two reciprocal licenses were issued at this examination. The following colleges were represented:

PASSED.

College.	Year. Grad.	Per Cent.
Chicago Homeo. Med. Coll.	(1895)	85
Coll. of P. and S., Chicago..(1905) 79; (1906) 78, 91;	(1907)	85
Rush Med. Coll.	(1907)	77
American Coll. of Med. and Surg.	(1905)	81
National Med. Univ., Chicago	(1905)	80
Northwestern Univ. Med. School	(1904)	78
Keokuk Med. Coll., Coll. of P. and S.	(1907)	78
University of Iowa	(1907)	92
University of Minnesota	(1896)	75
Hamline University	(1906)	83
St. Louis University	(1906)	85
Pulte Med. Coll.	(1897)	85
Queen's University, Ontario	(1907)	87

FAILED.

College.	Year Grad.	Per Cent.
Bennett Coll. of Ecl. Med. and Surg.	(1907)	*
Dearborn Med. Coll.	(1906)	*
Keokuk Med. Coll., Coll. of P. and S.	(1904)	*
Hamline University	(1906)	*
Wisconsin Coll. of P. and S.	(1907)	*
Trinity Med. Coll., Ontario	(1905)	*

*Percentage not given.

LICENSED THROUGH RECIPROCITY.

College.	Year grad.	Reciprocity with.
Kentucky School of Medicine	(1904)	Michigan
Laval University, Quebec	(1904)	Maine

The following questions were asked:

ANATOMY.

1. Describe the portal system of veins. 2. Describe the lungs. 3. Name the branches of the external carotid artery. 4. Describe the structure of the spinal cord. 5. Give the nerve supply of the stomach. 6. Describe the liver. 7. Give the branches of the radial artery. 8. Give the contents of the pelvis. 9. Outline the heart on the chest wall. 10. Bound and give contents of popliteal space.

PHYSIOLOGY.

Answer any five questions.

1. Describe the different kinds of blood corpuscles. 2. What are the functions of the thyroid gland? 3. Name some of the principal foods containing nitrogenous bodies. 4. Give the physical properties and chemical composition of normal urine. 5. How is the temperature of the body regulated? 6. What are the functions of the spleen? 7. Describe the portal circulation. 8. How are cells reproduced? 9. What is the function of the sympathetic nervous system? 10. What is the function of the liver?

HISTOLOGY.

Answer any five questions.

1. Give the minute anatomy of the tongue. 2. Give the histology of muscular tissue and the characteristics of each type. 3. Give the histology of a medullated nerve. 4. Give the minute anatomy of the gray matter of the cerebrum. 5. Give the histology of the testicle. 6. Give the minute anatomy of the retina. 7. Give the histology of the thyroid gland.

CHEMISTRY AND TOXICOLOGY.

1. Give yeast test for sugar in the urine. 2. What are alkaloids? Name five and state from what they are derived. 3. Differentiate between a case of opium poisoning and one of uremic coma. 4. Give test for albumin in the urine. 5. Give antidotes for the following: (1) Strychnin, (2) belladonna, (3) corrosive sublimate, (4) carbolic acid.

PATHOLOGY.

Answer any five questions.

1. Give the pathologic distinction between burns inflicted on body before death and those inflicted after death. 2. What are the degenerative changes of arteries? 3. Differentiate fatty infiltration and fatty degeneration. 4. Give the morbid anatomy of acute lobar pneumonia. 5. Differentiate between tuberculous and typhoid ulcer of the small intestine. 6. What changes characterize inflammation of the bone? 7. Give the lesions of typhoid fever. 8. Illustrate and define hypostatic inflammation. 9. How are the secretions affected in anemia. 10. Give the pathology of cirrhosis of the liver.

PREVENTIVE MEDICINE.

1. What means should be adopted to check the spread of tuberculosis? 2. What steps should be taken to arrest an epidemic of typhoid? 3. Mention sources of drinking water, advantages and dangers in each. 4. Give your method of disinfection, for the house, the patient, the clothing and the excreta in the case of an infectious or contagious disease. 5. How dispose of garbage in a small village?

PRACTICE OF MEDICINE.

1. Give the characteristic differences between diabetes insipidus and diabetes mellitus. 2. Differentiate between cerebral vomiting and gastric vomiting. 3. What are the causes of endocarditis? 4. Give the etiology, symptoms and treatment of cirrhosis of the liver. 5. Give the treatment and prognosis of erysipelas. 6. What is prognosis as to the cure of epilepsy? Give the treatment of epilepsy. 7. What are the complications and sequelæ of whooping-cough? 8. What are the complications and sequelæ of scarlet fever? 9. What causes cerebrospinal meningitis and how should it be treated? 10. How should endocarditis be treated?

SURGERY.

Answer all questions.

1. Give causes, symptoms and treatment of spina bifida. 2 (a) Define hydrocele, giving varieties, symptoms and treatment; (b) differentiate it from varicocele and hernia. 3. Describe, and give causes, symptoms and treatment of a case of simple erysipelas. 4. Give causes, symptoms and treatment of a case of talipes valgus. 5. Describe the different forms of dislocation of the humerus, and give the methods of reduction of a subcoracoid luxation. 6. How would you treat a fracture of the upper third of the femur? 7. Give causes, symptoms and treatment of a case of acute gonorrhea.

OBSTETRICS.

1. State how the liquor amnii is formed during pregnancy. What is its use before and during labor? 2. Give the indications for artificial dilatation of the cervix. What is the best method of doing it: (a) During the first half of pregnancy? (b) During second half of pregnancy? 3. Give the management of a delivery in a case of head presentation with hand prolapsing. 4. Are the Fallopian tubes permeable to intrauterine fluids? How is the danger prevented? 5. What diseases of the fetus interfere with or delay labor? 6. Give the early symptoms of cancer of the uterus. The history and duration. 7. What condition of the mother would indicate the use of instruments in a normal labor? 8. Give (a) the symptoms; (b) the prognosis; (c) the treatment, of puerperal eclampsia. 9. Give method of treatment in a case of

sepsis, where a three months' fetus had been curetted from the uterus four days before. 10. Give technic of internal podalic version in head presentation. Name three conditions of the mother demanding the operation.

Eye and Ear.

1. What is conjunctivitis? Give varieties, symptoms and treatment. 2. What is cataract? How recognized? 3. Give a description of phlyctenular keratitis, causes and treatment. 4. What is blepharitis marginalis? Give causes, symptoms and treatment. 5. Define pterygium, myopia, glaucoma, hordeolum and chalazion. 6 Fully describe your method of removing insects and other foreign bodies from the ear. 7. Give the symptoms and treatment of nonsuppurative catarrh of middle ear. 8. What is mastoiditis? Give treatment. 9. Define furnuncle and myringitis. 10. What is your treatment for acute suppuration of the middle ear?

Medical Jurisprudence.

1. (a) After receiving a license to practice medicine, surgery and obstetrics in the state of North Dakota, what must the recipient do with same before he can legally embark on the practice of his profession? (b) What is the penalty for practicing medicine, surgery or obstetrics in this state, without complying with the law? (c) Is a duly licensed physician exempt from jury duty in the courts of justice in this state? (d) When a physician has knowledge of a contagious, epidemic or infectious disease within the jurisdiction of a local board of health. what does the law of this state require him to do? (e) In case of the death of a patient, what does the law of this state require of all practicing physicians concerning report of same? 2. (a) Give six commonly known signs of death. (b) Is it possible to determine to an absolute certainty without postmortem, whether or not death has in fact occurred? If so, how? 3. Give the usual motives which, in a general way, underly malingering, and state what general observations would assist you in differentiating between the feigned and the real condition of a suspect. 4. (a) What is medical expert testimony? (b) On what is it based? (c) Who is qualified to give it? (d) Distinguish between medical expert testimony and positive testimony. 5. (a) Define malpractice. (b) What is the statutory limitation for the commencement of a civil action against a physician in this state to recover damages for alleged malpractice? (c) Is a physician by law authorized to perform an abortion under any circumstances? (d) Is a successful abortion, performed with criminal intent, but with great skill and for compensation, in a case where the parties interested desire such an operation, in law malpractice?

Materia Medica.

1. Name and give dosage of three preparations of belladonna and give the therapeutic properties of the drug. 2. Mention three preparations of mercury, giving dosage and therapeutic properties. 3. What effect has pilocarpin on (a) the heart, (b) the skin, (c) the salivary glands? 4. Name the preparations that you prefer to use, and give the dosage of the following: (1) Aconite; (2) belladonna; (3) digitalis; (4) nux vomica. 5. What is a narcotic, hypnotic, anodyne, and name those most commonly used?

Women and Children.

1. Give diagnosis and treatment of cystocele. 2. What are the indications for curetting the uterus? Describe your procedure in this operation. 3. What is dysmenorrhea? Give causes and treatment. 4. Give causes, diagnosis and treatment of prolapse of the uterus. 5. Give causes, diagnosis and treatment of acute salpingitis. 6. How do you treat constipation in infants? 7. Give diagnosis and treatment of scarlet fever. 8. Give your method of feeding infants deprived of mother's milk. 9. How would you treat a case of dysentery in children? 10. What is stomatitis? Give varieties and treatment.

Nervous Diseases.

1. Give the general causes and reflex cause of neuralgia. 2. Differentiate between: (a) Neuralgia and the headache of anemia; (b) neuralgia and osteocopic pains; (c) neuralgia and clavus hystericus. 3. What effect has idleness on epileptics? Does labor aggravate the trouble? State your advice as to marriage to those who become epileptic at puberty. What treatment is effective? 4. What is chorea? Give its etiology, pathology, diagnosis, prognosis treatment. 5. What are the causes of paralysis and how many kinds are there? What is the origin of hemiplegia? Paralysis follows what infectious diseases?

STATE BOARD STATISTICS FOR 1907.

The Annual Presentation of the Results of State Board Examinations with Analyses and Deductions.

On pages 1848 to 1863 will be found four tables, A, B, C and D, giving in detail the results of the various state medical license examinations held during 1907. The reports from Oklahoma, where the recent transition into statehood has caused a temporary confusion in medical matters, did not contain sufficient data to permit of their use in these tables, otherwise our returns are complete.

These tables have been arranged so that reading from left to right gives the results by colleges, showing how many graduates appeared for examination in each state and whether they passed or failed, as well as the total number examined during the year, the number who passed, the number who failed, the percentage of failures and the number of states in which graduates of each school appeared for examination. Reading from above downward gives the results by states, showing the number registered and rejected from each college, the total number examined, the total number registered, the total number rejected and the percentage of rejections. The fact that the majority of graduates take the license examination in the state where the college is located is shown by the dark diagonal zone passing from the left upper to the right lower corner of each table, made by the grouping of figures. These tables are worthy of much careful study and many important deductions are possible.

Graduates of All Years Examined in 1907.

Table A shows the results for all candidates who took examinations during the year regardless as to the years in which they graduated. This shows that altogether 7,271 were examined last year, as compared with 8,035 in 1906 and 7,170 in 1905. Of those examined, 21.3 per cent. failed, as compared with 20.7 per cent. in 1906, 20.8 per cent. in 1905 and 19.3 per cent. in 1904. There were 146 of the medical colleges in the United States which had graduates examined. Foreign graduates were examined in 27 states, the total being 155. The largest number examined in any state was 73 in New York, doubtless because that state has the leading port of immigration. Graduates of Canadian schools were examined in 28 states, more appearing naturally in the border line states. Nongraduates were examined in nine states, the largest number, 182, appearing in Mississippi, Tennessee coming second with 140. Another line in the table shows results for graduates of miscellaneous colleges which are no longer in existence.

Graduates of 1907 Examined During 1907.

Table B gives the results for the graduates of 1907 who were examined during the year by state boards and shows that 4,121 or 56.7 per cent. of all candidates examined during the year graduated in 1907. Educational statistics show that the medical colleges of the United States graduated 4,980 students last year, therefore about 80.7 per cent. of all 1907 graduates took examinations for license during the year. In some of the states graduates in medicine are allowed to serve their hospital interneships without first becoming licensed practitioners, which doubtless accounts for some of the remaining 20 per cent. Of those examined 461 or 11.2 per cent. failed. An analysis of this table shows that of all the 1907 graduates examined 2,492 or 65.9 per cent. were examined in the states wherein the colleges from which they graduated were located. This shows that states which contain low grade colleges are not only responsible for the illy prepared output of such colleges, but are the recipients of the greater portion of such graduates.

Recent Graduates Examined During 1907.

Table C gives the results for graduates of 1902 to 1907 inclusive which were examined during 1907. It includes, therefore, the figures given in Table B. This table is particularly important since it deals with recent graduates and is, therefore, the fairest basis for comparisons between colleges. Any classifications of medical colleges from the standpoint of failures at state board examinations should be based on this table. Of all candidates examined in 1907, 5,922 or 81.4 per cent. were recent graduates, and of this number 15.1 per cent. failed as compared with 21.3 per cent. for all candidates.

Old Practitioners Examined in 1907.

Table D is interesting because it shows the results for candidates who graduated in 1901 or previously. The total number examined was 675 or 9.3 per cent. of all candidates examined, as compared with 793 in 1906 and 690 in 1905. This year, of those examined, 187 or 27.7 per cent. failed, as compared with 15.1 per cent. of failures for recent graduates. This total should decrease each year as advances are made in reciprocity. As a rule, the states examining the largest numbers are those which do not reciprocate with other states. A comparison with Table N will be of interest in this connection.

Comparison with Previous Years.

A study of the totals and percentages as compared with previous years is of interest. The totals of those examined show a decrease from last year, while the percentage of failures is somewhat higher.

COMPARISON WITH PREVIOUS YEARS (TABLES A, C AND D).

Year.	Total Examined.	Examined—Passed.	Examined—Failed.	Percentage Failed.	Recent Grads. Examined.	Percentage Failed.	Older Pract. Examined.	Percentage Failed.	Non-Grads. Examined.	Percentage Failed.	Regist'd Without Written Examination.	Total. Registered.
1904	7035	5672	1363	19.3	4773	14.1	579	29.7	515	52.6	999	6671
1905	7170	5680	1490	20.8	6054	16.2	690	37.7	472	61.9	394	6074
1906	8035	6368	1667	20.7	6520	16.4	793	27.1	703	51.3	1497	7865
1907	7271	5723	1548	21.3	5922	15.1	675	27.7	674	69.6	1425	7149

Other deductions from the large tables have been made and are presented in Tables E to N which are worthy of careful study.

STUDY OF COLLEGES BY STATE GROUPS.

Table E is based on the first four large tables and gives data regarding the group of colleges located in each state. It shows what states are furnishing the largest numbers of physicians and the failure percentages show what kind of training these colleges are furnishing, so far as may be judged from the failures of their graduates before state boards. By comparing the percentages of the first column with the other columns it can be seen whether there has been any reduction in failures in recent years. Of the 33 states having medical colleges, 1 furnished 100 or more candidates examined. Of these 1 groups of colleges, 12 had failure percentages above 10 pe cent. and six had over 20 per cent. of failures. The highes failure percentage was obtained by the Mississippi group. O the states having 100 or more examined, however, the highes failure percentage was obtained by the Tennessee group. Othe deductions are given with the table.

TABLE E.—COLLEGES GROUPED BY STATES.
Showing Number Examined and Percentage of Failures.

Colleges of	Graduates. Of 1907. Number Examined.	Of 1907. Per cent. Failed.	Of 1902 to 1907. Number Examined.	Of 1902 to 1907. Per cent. Failed.	Of 1901 and previous. Number Examined.	Of 1901 and previous. Per cent. Failed.	Of all years. Number Examined.	Of all years. Per cent. Failed.	Rank according to number examined.	Rank according to success at examinations.
Alabama	40	12.5	48	12.5	3	0.	51	11.8	23	15
Arkansas	1	0.	2	0.	1	0.	3	0.	29	1
California	76	18.4	103	25.0	9	22.2	117	24.8	16	26
Colorado	38	2.6	51	3.9	6	0.	57	3.5	22	2
Connecticut	17	0.	39	0.	.....	.....	39	0.	25	1
Dist. of Columbia	81	19.7	160	23.1	9	22.2	169	23.1	11	24
Georgia	102	5.9	114	8.8	2	0.	116	8.6	17	11
Illinois	487	7.4	675	10.8	77	26.0	752	12.4	1	16
Indiana	106	3.8	118	8.5	2	50.0	120	9.2	15	12
Iowa	116	7.8	129	10.1	19	47.4	148	14.9	12	20
Kansas	43	2.3	45	2.2	2	50.0	47	4.3	24	4
Kentucky	149	16.1	226	21.7	26	34.6	252	23.0	7	23
Louisiana	105	8.6	120	12.5	5	20.0	125	12.8	14	17
Maine	16	0.	20	0.	5	20.0	25	4.0	28	3
Maryland	304	23.7	486	25.5	39	18.0	525	25.0	4	27
Massachusetts	121	8.3	218	9.6	20	15.0	238	10.1	8	13
Michigan	140	2.1	171	4.1	20	35.0	191	7.3	10	8
Minnesota	53	17.0	101	18.8	8	12.5	109	18.3	17	21
Mississippi	31	45.2	31	45.2	.....	.....	31	45.2	26	31
Missouri	340	14.4	448	22.8	40	40.0	488	24.2	6	25
Nebraska	76	18.4	92	19.6	2	0.	94	19.1	18	22
New Hampshire	9	0.	23	4.4	8	12.5	31	6.5	26	6
New York	376	2.9	559	2.7	45	26.7	604	4.5	3	5
North Carolina	55	23.6	88	30.7	2	0.	90	30.0	19	29
Ohio	163	2.5	201	6.5	32	18.7	233	8.2	9	10
Oregon	41	46.3	57	45.6	1	0.	58	44.8	21	30
Pennsylvania	421	5.0	577	5.9	64	18.7	641	7.2	2	7
South Carolina	19	15.8	25	16.0	4	0.	29	13.8	27	18
Tennessee	313	23.3	461	28.0	40	32.5	501	28.3	5	28
Texas	49	8.2	64	14.1	.....	.....	64	14.1	20	19
Vermont	30	13.3	58	13.8	6	16.7	64	14.1	20	19
Virginia	101	6.9	137	10.2	7	14.3	144	10.4	13	14
Wisconsin	44	6.8	51	7.8	.....	.....	51	7.8	23	9
Totals	4063	11.2	5703	14.6	504	25.0	6207	15.4	....	....

This table gives data relating to the group of colleges in each state. For example, it shows that of all the medical schools in New York 604 graduates of various years were examined by state boards during 1907, of which number 4.5 per cent. failed. Of the 559 who graduated in recent years, however (1902 to 1907 inclusive), only 2.7 per cent. failed, while of the 45 who graduated previous to 1902, 26.7 per cent. failed.

The fifth column gives the rank of each state group of colleges according to the number of applicants. The Illinois group of colleges leads, having 752 graduates examined by state boards during 1907, followed by Pennsylvania with 642, New York with 604, Maryland with 525, and Tennessee with 501.

The sixth column gives the rank of each state group of colleges according to the success of the graduates at state board examinations. It is interesting to compare the figures of these two last columns. While the Illinois group ranks first according to the number examined it ranks sixteenth in the success of its graduates at examinations. While Pennsylvania ranks second as to the number examined, it ranks seventh as to the success of the graduates.

CAUTIONS IN FORMING CONCLUSIONS.

In making comparisons on the basis of these statistics sev eral factors should be carefully considered. The number ex amined is important since, if all other conditions are equa the larger number of graduates examined gives the more ac curate finding. But other conditions are seldom equal. Th number of different states in which a school's graduates hav been examined is important. The larger this number, the mor accurate will be the conclusions. Again, the character of th boards making the examination and the methods employed b them are important factors to be considered since some board mark severely, while others, which is especially true of par tisan boards, may be most lenient. Finally in this connectio it should be stated that the character of the license examinatio as usually conducted at the present time is such that graduate of colleges operated largely on quiz-class methods may be mos successful in passing them. Therefore, the statistics herewit presented should be taken only as a part of an investigation o medical schools although it is an important part.

STUDY OF LARGER COLLEGES.

Table F is also based upon the first four tables and give the results of state board examinations as they affect the 4 largest medical colleges. Although these schools represent les than one-third of all medical colleges in the United States, the furnished about 60 per cent. of the candidates for license. O these colleges, even with the graduates of 1907, many sho extremely high failure percentages. Of the 12 colleges havin 100 or more examined, three stand out prominently because o high failure percentages. On the whole, however, the failure were less for these larger schools than in previous years, bein 13.9 per cent. last year, as compared with 17.3 per cent. i 1906 and 18.3 per cent. in 1905.

Deducting the total for the larger schools from the total o all graduates examined, leaves 2,003 candidates for the re maining 98 smaller colleges. Here this year a remarkable de crease in failures is seen, the percentage being 13.6 per cent as compared with 21.3 per cent. in 1906 and 28.9 per cent. i 1905.

COMPARISON WITH PREVIOUS YEARS (FROM TABLE F).

Year.	Schools Having Candidates.	Total Candidates.	Percentage Failed.	Schools, 100 or more candidates.	Total Candidates.	Percentage Failed.	Schools, 50 or more candidates.	Total Candidates.	Percentage Failed.	Schools less than 50 candidates.	Total Candidates.	Percentage Failed.	Foreign and Undergrad. Candidates.	Percentage Failed
1904	149	6241	16.4	14	2271	11.7	42	4088	14.0	107	2153	21.0	794	43.
1905	153	6411	18.3	14	2350	12.4	51	4893	15.1	102	1518	28.9	759	41.
1906	146	6938	17.3	16	2504	14.5	50	4885	15.7	96	2043	21.3	1097	42.
1907	146	6207	13.8	12	1626	12.7	48	4204	13.9	98	2003	13.6	1064	55.

Besides the graduates of the medical colleges of the Unite States, 1,064 candidates were examined, made up of foreig college graduates, graduates of miscellaneous colleges and non graduates.

RESULTS IN HOME STATES AND ELSEWHERE.

Table G is of much interest because it shows what portio of the candidates from each college took their examinations i the state where the college was located and what portion wen elsewhere. Of the 5,703 recent graduates examined by stat boards in 1907, 3,307 or 58 per cent. took their license examina tions in the home state. Of this number, 10.6 per cent. failed while of those who went to other states 20 per cent. failed The table allows a similar comparison of percentages to b made for each college as well as for each state group of colleges, the latter being shown in heavy faced type. A further description appears with the table.

TOTAL RESULTS FOR FIVE YEARS.

Table H shows, so far as reports were obtainable, the number registered and the number rejected in each state for each of the past five years. It shows what would be expected that the states having the largest numbers of medical graduates examine the largest number of physicians. In 1903 several states registered all or the great majority of their applicants on the presentation of satisfactory credentials without written examination. Even in 1907, in one or two states the laws requiring examination of all applicants did not become effective until the middle of the year. This table shows only those registered by examination. Another table (M) shows the total registration by all methods.

CLASSIFICATION OF COLLEGES.

Tables I, J, K and L give a classification of the medical colleges of the United States on the basis of the failures of their graduates at state board examinations during the past year. This classification is based upon the examination of *recent graduates* as shown in Table C. In forming definite conclusions, the cautions already given should be observed, of noting the number examined, the number of states in which representatives appeared and the character of the boards making the examination. To form a more exact judgment one should compare the percentage of failures received by any college this year with those received in the classifications published in previous years.

Table I gives a list of 64 colleges which obtained failure percentages below 10 per cent., 19 of which had no failures whatsoever and 39 had only 5 per cent. or less. The failure percentage for the entire group was 4.5. Table J shows 27 colleges whose failure percentages were between 10 and 20 per cent., of which number 14 had percentages below that for the group which was 14.4. Table K includes the 39 colleges having failure percentages of 20 per cent. and above, of which number 25 had above 30 per cent., 12 had above 40 per cent. and nine had percentages of 50 per cent. or above. The three highest percentages of failures was 86.4, 80.0 and 70.4. The percentage

TABLE F.—COLLEGES HAVING 50 OR MORE EXAMINED.

TABLE SHOWS TOTAL NUMBER EXAMINED, PERCENTAGE OF FAILURES AND NUMBER OF STATES IN WHICH EACH COLLEGE HAD REPRESENTATIVES

Name of College.	Graduates all Years.			Graduates. 1902-1907.			Graduates 1901 and Prev.			Graduates of 1907.			Marginal Number.
	No. Examined.	Per cent. Failed.	No. States.	No. Examined.	Per cent. Failed.	No. States.	No. Examined.	Per cent. Failed.	No. States.	No. Examined.	Per cent. Failed.	No. States.	
College of Physicians and Surgeons, Chicago	176	9.1	24	166	9.0	24	10	10.0	7	123	4.1	16	27
Northwestern University, Chicago	175	2.9	21	159	1.9	19	16	12.5	11	125	1.6	13	32
University of Pennsylvania	169	3.0	23	149	0.7	22	20	20.0	12	102	0.	11	117
Jefferson Medical College	163	9.5	30	151	7.3	27	17	29.4	12	103	7.8	15	119
Baltimore Medical College	144	37.5	22	134	37.1	22	10	40.0	5	88	35.2	19	56
College of Physicians and Surgeons, New York	139	2.9	21	127	1.6	16	12	16.7	9	58	1.7	6	93
Rush Medical College	131	5.3	20	104	1.9	17	27	18.5	14	55	0.	8	33
Medico-Chirurgical College, Philadelphia	111	7.2	15	107	6.5	14	4	25.0	4	79	2.5	6	121
Meharry Medical College	106	42.5	20	103	43.7	19	3	0.	2	57	31.6	12	129
Tulane University	103	4.9	8	98	4.1	6	5	20.0	4	90	3.3	5	54
Harvard University	102	4.9	18	91	3.3	15	11	18.1	8	48	4.2	8	66
Barnes Medical College	102	35.3	18	93	35.5	15	9	33.3	8	65	21.5	8	80
Johns Hopkins Medical School	95	2.1	22	91	2.2	19	4	0.	4	49	4.1	11	59
Memphis Hospital Medical College	95	24.2	10	85	25.9	9	10	10.0	4	50	22.0	6	130
University of Maryland	94	20.2	22	88	20.5	19	6	16.7	6	56	19.6	11	61
University and Bellevue Hospital Medical College	94	5.3	13	79	2.5	9	15	20.0	9	54	1.9	4	99
University of Louisville	93	16.1	22	88	14.8	21	5	40.0	5	61	8.2	15	52
Long Island College Hospital	93	8.6	10	88	6.8	7	5	40.0	5	64	7.8	4	96
College of Physicians and Surgeons, Baltimore	90	10.0	20	80	11.2	17	10	0.	8	55	9.1	11	58
George Washington University	85	24.7	15	83	25.3	15	2	0.	2	45	24.4	8	16
University of Michigan, College of Medicine	83	4.8	21	71	1.4	19	12	25.0	7	52	0.	5	70
University Medical College, Kansas City	85	27.1	16	76	25.0	12	9	44.4	7	60	21.7	4	76
Indiana Medical College	81	9.9	7	80	8.7	7	1	100.0	1	70	2.9	4	36
Cornell University Medical College	81	0.	10	80	0.	10	1	0.	1	60	0.	8	94
Detroit College of Medicine	80	10.0	8	76	7.9	6	4	50.0	3	67	4.5	2	68
Washington University, St. Louis	78	10.3	13	74	9.5	11	4	25.0	4	59	6.8	4	85
Hahnemann Medical College, Philadelphia	77	6.5	14	63	4.8	11	14	14.3	9	54	3.7	8	118
Tufts College Medical School	76	10.5	11	72	9.7	10	4	25.0	4	48	6.3	3	67
St. Louis University	75	9.3	14	75	9.3	14	......	......	......	59	3.4	9	81
University of Minnesota, College of Medicine	74	12.2	8	68	11.8	5	6	16.7	4	37	10.8	2	72
University of Nashville	71	18.3	13	68	17.6	13	3	33.3	3	51	13.7	11	126
St. Louis College of Physicians and Surgeons	67	37.3	15	56	37.5	11	11	36.3	8	41	26.9	7	82
State University of Iowa, College of Medicine	66	7.6	8	62	4.8	8	4	50.0	3	59	5.1	6	43
Western Pennsylvania Medical College	66	15.2	10	61	16.4	5	5	0.	5	51	13.7	3	122
University of Buffalo	65	4.6	7	60	0.	4	5	60.0	4	44	0.	3	101
Hahnemann Medical College, Chicago	64	20.3	18	51	15.7	14	13	38.4	9	36	8.3	7	28
University of Vermont	64	14.1	13	58	13.8	10	6	16.7	8	30	13.3	5	141
Atlanta College of Physicians and Surgeons	56	7.1	8	54	7.4	7	2	0.	2	49	6.1	6	19
Howard University, Washington	55	23.6	18	51	41.2	16	4	25.0	4	28	17.9	11	18
University of Virginia	55	16.4	19	54	16.7	19	1	0.	1	30	16.7	10	144
Kentucky School of Medicine	54	29.6	15	45	31.1	13	9	22.2	6	31	29.0	8	48
Starling-Ohio Medical College	54	11.1	9	51	9.8	8	3	33.3	3	40	0.	3	112
Hospital College of Medicine, Louisville	53	26.4	16	48	25.0	13	5	40.0	5	31	16.1	9	47
Chicago College of Medicine and Surgery	52	17.3	11	52	17.3	11	......	......	......	43	14.0	8	35
University of Tennessee	52	23.1	9	44	15.9	8	8	62.5	4	36	11.1	6	128
Chattanooga Medical College	52	32.7	12	47	29.8	12	5	60.0	3	30	26.7	8	133
University College of Medicine, Richmond	51	7.8	11	46	6.5	9	5	20.0	4	44	4.5	7	143
Bennett College of Eclectic Medicine and Surgery	50	26.0	15	47	23.4	14	3	66.7	3	39	12.8	9	25
Total Examined, Percentage and Averages	4204	13.9	15	3854	12.9	13	350	25.4	5	2706	9.5	7	

This table is especially interesting since it gives data relating to the 48 larger medical colleges arranged according to the number of graduates examined. This allows of comparisons between colleges having classes of nearly equal size.

Of the 12 colleges having 100 or more examined, 9 have failure percentages of only 9.5 or less, while the other 3 stand out prominently with the large failure percentages of 35.3, 37.5 and 42.5. This marked difference holds even in respect to graduates of 1907.

Of the 36 colleges having between 50 and 100 graduates examined, 12 had failure percentages less than 10; 12 had failure percentages between 10 and 20, and 12 had failure percentages above 20, the highest reaching 37.3.

The average percentages of failures for these larger colleges, for graduates of 1901 and previous years, was 25.4; for graduates of 1902 to 1907, inclusive (recent graduates), 12.9; for graduates of 1907, 9.5; and for graduates of all years, 13.9. Of the 48 colleges, 27 obtained failure percentages below the average. Of the 6,207 college graduates examined by state boards in 1907, these larger schools furnished 4,204, or 67.7 per cent.

TABLE G.—Comparison of Results in Home States and Elsewhere. Based on Table C.

College.	Total Examined.	Results in Home State.			Results in Other States.		
		Passed.	Failed.	Per cent. Failed.	Passed.	Failed.	Per cent. Failed.
ALABAMA + 15.0	**48**	**36**	**4**	**10.0**	**6**	**2**	**25.0**
Birmingham Medical College	14	10	2	16.7	2	0	0.
Medical College of Alabama	34	26	2	7.1	4	2	50.0
ARKANSAS —	**2**	**1**	**0**	**0.**	**1**	**0**	**0.**
University of Arkansas	2	1	0	0.	1	0	0.
CALIFORNIA — 5.8	**108**	**69**	**24**	**25.8**	**12**	**3**	**20.0**
Cooper Medical College	27	19	7	26.9	1	0	0.
University of California	20	17	1	5.6	1	1	50.0
California Medical College	5	1	1	50.0	1	2	66.7
Hahnemann Medical College	2	2	0	0.	....	....	....
Coll. of P. and S., San Fran.	14	6	7	53.8	1	0	0.
Oakland Coll. of M. and S.	2	2	0	0.	....	....	....
Univ. of Southern California	35	21	7	25.0	7	0	0.
Coll. of P. and S., Los Angeles	3	1	1	50.0	1	0	0.
COLORADO + 11.8	**51**	**34**	**0**	**0.**	**15**	**2**	**11.8**
Denver and Gross	27	15	0	0.	10	2	16.7
Westminster Univ. Med. Coll.	5	5	0	0.	....	....	....
University of Colorado	19	14	0	0.	5	0	0.
CONNECTICUT —	**39**	**23**	**0**	**0.**	**16**	**0**	**0.**
Yale Medical College	39	23	0	0.	16	0	0.
DIST. OF COLUMBIA — 14.2	**160**	**48**	**27**	**36.0**	**75**	**10**	**11.8**
George Washington Univ.	83	31	16	34.0	31	5	14.3
Georgetown University	26	10	4	28.6	12	0	0.
Howard University	51	7	7	50.0	32	5	13.5
GEORGIA + 10.1	**114**	**78**	**5**	**6.0**	**26**	**5**	**16.1**
College of P. and S., Atlanta	54	29	3	9.4	21	1	4.5
Georgia Eclectic Med. Coll.	12	11	1	8.3	....	....	....
University of Georgia	27	21	0	0.	3	3	50.0
Atlanta School of Medicine	20	16	1	5.9	2	1	33.3
Internat. Med. Miss. Coll.	1	1	0	0.	....	....	....
ILLINOIS + 9.8	**675**	**391**	**30**	**7.1**	**211**	**43**	**16.9**
American Medical Miss. Coll.	12	3	0	0.	8	1	11.1
Bennett Medical College	47	25	3	10.7	11	8	42.1
College of Med. and Surgery	2	1	1	50.0	....	....	....
Coll. of P. and S., Chicago	166	96	3	3.0	55	12	17.9
Hahnemann Med. C., Chicago	51	25	5	16.7	18	3	14.3
Hering Medical College	9	5	3	37.5	1	0	0.
Illinois Medical College	25	12	1	7.7	9	3	25.0
Jenner Medical College	25	16	6	27.3	2	1	33.3
Northwestern University	159	105	0	0.	51	3	5.6
Rush Medical College	104	59	0	0.	43	2	4.4
National Medical University	23	13	4	23.5	1	5	83.3
Chicago Coll. of M. and S.	52	31	4	11.4	12	5	29.4
INDIANA + 20.8	**118**	**100**	**7**	**6.5**	**8**	**3**	**27.3**
Indiana Medical College	80	67	5	6.9	6	2	25.0
Physio-Med. of Indiana	8	6	0	0.	1	1	50.0
Eclectic Medical Coll. of Ind.	5	3	2	40.0	....	....	....
Indiana University	25	24	0	0.	1	0	0.
IOWA + 17.7	**129**	**101**	**8**	**7.3**	**15**	**5**	**25.0**
Drake University	16	14	1	6.7	1	0	0.
Keokuk Med. C. of P. and S.	36	28	3	9.7	5	0	0.
Sioux City Coll. of Medicine	11	5	3	37.5	0	3	100.0
University of Iowa (H)	4	3	0	0.	1	0	0.
University of Iowa (R)	62	51	1	1.9	8	2	20.0
KANSAS + 5.9	**45**	**28**	**0**	**0.**	**16**	**1**	**5.9**
Kansas Medical College	14	14	0	0.	....	....	....
University of Kansas	31	14	0	0.	16	1	5.9
KENTUCKY —0.7	**226**	**35**	**10**	**22.2**	**142**	**39**	**21.5**
Hospital Coll. of Medicine	48	13	4	23.5	23	8	25.8
Kentucky School of Medicine	45	4	3	42.9	27	11	28.9
Louisville Medical College	41	8	1	11.1	26	6	18.7
Louisville National Med. Coll.	2	0	1	100.0	0	1	100.0
Southern Homeo. Med. Coll.	2	....	....	....	1	1	50.0
University of Louisville	88	10	1	9.1	65	12	15.6
LOUISIANA +34.7	**120**	**80**	**1**	**1.2**	**25**	**14**	**35.9**
Flint Medical College	22	11	1	8.3	0	10	100.0
Tulane University	98	69	0	0.	25	4	13.8
MAINE —	**20**	**16**	**0**	**0.**	**4**	**0**	**0.**
Medical School of Maine	20	16	0	0.	4	0	0.
MARYLAND + 4.5	**486**	**98**	**28**	**22.2**	**264**	**96**	**26.7**
Baltimore Medical College	134	9	7	43.8	75	43	36.4
Baltimore University	22	0	3	100.0	3	16	84.2
College of P. & S., Baltimore	80	10	1	9.1	61	8	11.6
Johns Hopkins Med. School	91	31	1	3.1	58	1	1.7
Atlantic Med. Coll.	12	10	0	0.	2	0	0.
University of Maryland	88	32	7	18.0	38	11	22.4
Woman's Medical College	11	6	1	14.3	4	0	0.
Maryland Medical College	48	0	8	100.0	23	17	42.5
MASSACHUSETTS —0.7	**218**	**118**	**13**	**9.9**	**79**	**8**	**9.2**
Boston University	24	11	1	8.3	12	0	0.
College of P. and S., Boston	31	9	7	43.8	12	3	20.0
Harvard University	91	50	1	2.0	38	2	5.0
Tufts Medical College	72	48	4	7.7	17	3	15.0
MICHIGAN + 9.6	**171**	**134**	**3**	**2.2**	**30**	**4**	**11.8**
Detroit College of Medicine	76	67	3	4.3	3	3	50.0
Detroit Homeo. Med. College	9	9	0	0.	....	....	....
University of Michigan (R)	71	48	0	0.	22	1	4.4
University of Michigan (H)	15	10	0	0.	5	0	0.
MINNESOTA — 18.9	**101**	**51**	**17**	**25.0**	**31**	**2**	**6.1**
University of Minnesota (R)	68	37	7	15.9	23	1	4.2
Hamline University	33	14	10	41.7	8	1	11.1
MISSISSIPPI + 5.2	**31**	**16**	**13**	**44.8**	**1**	**1**	**50.0**
Mississippi Med. Coll.	31	16	13	44.8	1	1	50.0
MISSOURI — 9.5	**448**	**134**	**53**	**28.3**	**212**	**49**	**18.8**
Univ. M. C., Kansas City	76	29	9	23.7	28	10	26.3
Kansas City Hahne. M. C.	10	1	0	0.	8	1	11.1
Eclectic Medical University	10	1	0	0.	8	1	11.1
Ensworth Central Med. Coll.	31	5	2	28.6	21	3	12.5
Barnes Medical College	93	24	14	36.8	36	19	34.5
St. Louis University	75	26	5	16.1	42	2	4.5
Coll. of P. and S., St. Louis	56	8	12	60.0	27	9	25.0
American Medical College	11	4	5	55.6	0	2	100.0
Homeo. College of Missouri	9	3	1	25.0	5	0	0.
Washington University	74	32	5	13.5	35	2	5.4
University of Missouri	3	1	0	0.	2	0	0.
NEBRASKA + 7.2	**92**	**49**	**10**	**17.0**	**25**	**8**	**24.2**
University of Nebraska	24	20	0	0.	4	0	0.
Creighton Medical College	45	19	5	20.8	14	7	33.3
Lincoln Medical College	19	8	4	33.3	6	1	14.3
Nebraska Coll. of Med.	4	2	1	33.3	1	0	0.
NEW HAMPSHIRE — 14.3	**23**	**6**	**1**	**14.3**	**16**	**0**	**0.**
Dartmouth Medical College	23	6	1	14.3	16	0	0.
NEW YORK + 3.7	**559**	**480**	**11**	**2.2**	**64**	**4**	**5.9**
Albany Medical College	43	39	2	4.9	2	0	0.
Coll. of P. and S., New York	127	106	1	0.9	19	1	5.0
Cornell University	80	68	0	0.	12	0	0.
Eclectic Med. Coll., New York	11	11	0	0.	....	....	....
Long Island College Hospital	88	76	5	6.2	6	1	14.3
New York Homeo. Med. Coll.	37	28	1	3.4	7	1	12.5
N. Y. Woman's Med. Coll.	5	5	0	0.	....	....	....
University and Bellevue M. C.	79	67	1	1.5	10	1	9.1
Syracuse University	29	26	1	3.7	2	0	0.
University of Buffalo	60	54	0	0.	6	0	0.
NORTH CAROLINA + 28.7	**88**	**34**	**6**	**15.0**	**27**	**21**	**43.7**
Leonard Medical College	49	11	1	8.3	21	16	43.2
North Carolina Med. College	25	13	4	23.5	3	5	62.5
University of North Carolina	14	10	1	9.1	3	0	0.
OHIO + 8.4	**201**	**139**	**6**	**4.1**	**49**	**7**	**12.5**
Western Reserve University	11	10	0	0.	1	0	0.
Cleveland Coll. of P. and S.	16	13	1	7.2	2	0	0.
Cleveland Homeo. Med. Coll.	13	5	1	16.7	7	0	0.
Eclectic Medical Institute	33	13	1	7.2	16	3	15.8
Medical College of Ohio	38	29	0	0.	8	1	11.1
Pulte Medical College	6	5	0	0.	1	0	0.
Miami Medical College	25	17	0	0.	7	1	12.5
Starling-Ohio Medical College	51	39	3	7.1	7	2	22.2
Toledo Medical College	8	8	0	0.	....	....	....
OREGON — 47.3	**57**	**20**	**25**	**55.6**	**11**	**1**	**8.3**
University of Oregon	30	14	7	33.3	9	0	0.
Willamette University	27	6	18	75.0	2	1	33.3
PENNSYLVANIA + 1.6	**577**	**341**	**19**	**5.3**	**202**	**15**	**6.9**
Temple College	6	5	0	0.	1	0	0.
University of Pennsylvania	149	85	0	0.	63	1	6.2
Hahn. M. C. of Philadelphia	63	41	1	2.4	19	2	9.5
Jefferson Medical College	151	71	6	7.8	69	5	6.8
Woman's M. C. Pennsylvania	40	14	0	0.	24	2	7.7.
Medico-Chirurgical Coll., Pa.	107	79	3	3.7	21	4	16.0
Western Pennsylvania M. C.	61	46	9	16.4	5	1	16.7
SOUTH CAROLINA +5.0	**25**	**17**	**3**	**15.0**	**4**	**1**	**20.0**
Med. Coll. of South Carolina	25	17	3	15.0	4	1	20.0
TENNESSEE + 24.6	**461**	**99**	**10**	**9.2**	**233**	**119**	**33.8**
Tennessee Medical College	19	12	4	25.0	1	2	66.7
Knoxville Medical College	5	0	1	100.0	1	3	75.0
University of Nashville	68	11	0	0.	45	12	21.1
Vanderbilt University	32	18	0	0.	14	0	0.
University of Tennessee	44	25	0	0.	12	7	36.8
Meharry Medical College	103	12	3	20.0	46	42	47.7
Memphis Hosp. Med. Coll.	85	9	0	0.	54	22	28.9
College of P. and S., Memphis	14	4	0	0.	5	5	50.0
University of South	41	2	0	0.	28	11	28.3
Chattanooga Medical College	47	6	2	25.0	27	12	30.8
University of West Tennessee	3	....	....	....	0	3	100.0
TEXAS + 25.1	**64**	**45**	**4**	**8.2**	**10**	**5**	**33.3**
Fort Worth University	9	8	1	11.1	....	....	....
University of Texas	20	20	0	0.	....	....	....
Baylor University	13	8	2	20.0	3	0	0.
Gate City Medical College	9	0	1	100.0	4	4	50.0
Southwestern University	10	9	0	0.	1	0	0.
Coll. of P. and S., Dallas	3	....	....	....	2	1	33.3
VERMONT + 1.0	**53**	**26**	**4**	**13.3**	**24**	**4**	**14.3**
University of Vermont	58	26	4	13.3	24	4	14.3
VIRGINIA + 2.0	**137**	**68**	**7**	**9.3**	**55**	**7**	**11.3**
Medical College of Virginia	37	24	0	0.	11	2	15.4
Univ. College of Medicine	46	24	1	4.0	19	2	9.5
University of Virginia	54	20	6	23.1	25	3	10.7
WISCONSIN + 5.5	**51**	**40**	**3**	**7.0**	**7**	**1**	**12.5**
Milwaukee Medical College	27	22	1	4.4	3	1	25.0
Coll. of P. and S., Wisconsin	24	18	2	10.0	4	0	0.
Totals **+ 9.4**	**5703**	**2955**	**352**	**10.6**	**1916**	**480**	**20.0**

In this table the number of graduates examined in the state in which the college is located are grouped in one column, while graduates of that college examined in other states are in another column. This shows what is evidently a fact, that, as a rule, the graduates of a certain school have a much better chance of passing the examination in the state in which the school is located than they have elsewhere. This should always be considered in making comparisons between colleges. A college having an exceedingly low standard, by having its graduates all locate in the home state, may thus show a lower percentage of failures than a college of much higher grade which has graduates examined by several states.

The heavy-faced figures give the results by states. The first column of heavy-faced figures shows the differences between the percentages of home colleges and of colleges of other states. The plus sign indicates that colleges of other states have the larger percentage of rejections; the minus sign indicates that the home colleges have had the greater percentage rejected.

for all candidates from this group of colleges was 33.8. In Table L have been placed a number of colleges in regard to which data was insufficient to allow of fair comparsion. This list numbers 16, to which should be added two existing colleges, the Homeopathic Department of the University of Minnesota and the Physio-Medical College of Texas, for which no recent graduates were examined.

Comparison with Previous Years.

	Less than 10 Per cent.	10 to 20 Per cent.	Above 20. Per cent.	Unclassified.	Total.
1904.........	47	27	38	37	149
1905.........	45	22	40	46	153
1906.........	62	24	43	20	149
1907.........	64	27	39	18	148

A comparison of the totals of the classification of this year with those of former years shows a decided improvement. The first table contains 64 this year, as compared with 62 in 1906 and 45 in 1905.

TABLE H.—Physicians Examined by State Boards, 1903 to 1907—Inclusive.

State.	1903		1904		1905		1906		1907					
	Registered.	Rejected.	Registered.	Rejected.	Registered.	Rejected.	Registered.	Rejected.	Registered.	Rejected.	Total Examined.	Registered.	Rejected.	Percentage Rejected.
Alabama*	...	...	118	20	131	22	133	22	142	38	631	529	102	16.2
Arizona	...	...	28	7	35	7	35	4	29	2	147	127	20	13.6
Arkansas*	18	0	115	37	88	58	152	73	72	106	719	445	274	38.1
California	152	74	216	80	144	127	190	44	118	84	1,229	820	409	33.3
Colorado*	...	...	3	10	283	54	...	...	50	6	406	336	70	17.2
Connecticut	128	23	67	26	66	17	84	28	64	17	520	409	111	21.3
Delaware	7	4	10	1	20	8	11	1	4	2	68	52	16	23.5
Dist. of Col......	46	13	78	14	67	23	63	34	59	37	434	313	121	27.9
Florida	...	...	...	...	24	3	66	7	72	8	180	162	18	10.0
Georgia	73	12	110	4	...	...	164	5	139	22	529	486	43	8.1
Idaho	31	14	23	16	46	15	42	12	33	7	244	180	64	26.2
Illinois	559	35	728	34	759	36	748	69	580	52	3,600	3,374	226	6.3
Indiana	41	16	150	24	249	63	228	12	172	17	1,072	940	132	12.3
Iowa	273	40	238	52	205	30	166	29	146	26	1,205	1,028	177	14.7
Kansas	43	5	64	13	163	29	180	27	125	14	663	575	88	13.3
Kentucky	...	...	4	6	33	4	52	13	48	19	134	142	42	22.8
Louisiana	132	24	120	20	105	15	133	14	153	7	723	643	80	11.1
Maine	73	0	66	8	68	3	80	8	74	4	384	361	23	6.0
Maryland	102	40	121	66	120	75	112	44	139	41	860	594	266	30.9
Massachusetts* .	263	43	320	77	274	63	270	120	226	118	1,774	1,353	421	23.7
Michigan	19	2	52	1	82	5	162	6	150	8	487	465	22	4.5
Minnesota	163	43	134	27	124	39	104	31	80	35	780	605	175	22.4
Mississippi*	17	8	119	130	113	138	156	144	157	191	1,17[illegible]	562	611	52.1
Missouri*........	...	...	...	...	...	...	249	193	186	86	714	435	279	39.1
Montana	...	...	21	10	31	17	24	25	34	14	176	110	66	37.5
Nebraska........	...	...	93	7	87	29	58	25	68	14	331	306	75	19.7
Nevada	...	...	2	0	...	...	2	0	10	1	15	14	1	6.7
New Hamp......	29	4	33	9	15	5	34	17	19	11	176	130	46	26.1
New Jersey......	...	...	76	20	55	17	80	13	73	15	349	284	65	18.6
New Mexico......	...	...	9	2	...	...	...	...	5	3	19	14	5	26.3
New York	633	55	667	62	705	51	629	56	691	54	3,603	3,325	278	7.7
North Carolina..	77	26	74	19	92	40	87	41	111	20	537	441	146	24.9
North Dakota...	60	14	54	13	72	7	60	10	49	4	343	295	48	14.0
Ohio	98	6	236	13	213	8	222	16	179	9	1,000	948	52	5.2
Oklahoma	19	19	30	36	53	28	95	28	...	...	308	197	111	36.0
Oregon*	32	3	70	6	68	66	65	56	62	56	484	297	187	38.6
Pennsylvania ...	337	51	460	121	540	93	519	73	465	54	2,718	2,321	397	10.9
Rhode Island* ..	52	15	52	5	47	19	54	30	36	23	333	241	92	27.6
South Carolina..	47	4	49	6	44	22	39	13	41	17	282	220	62	22.0
South Dakota...	17	3	36	12	41	11	26	11	23	5	185	143	42	22.7
Tennessee*	78	6	166	107	86	35	150	96	133	140	997	613	384	38.5
Texas*	116	21	96	87	117	73	159	53	187	64	973	675	298	30.6
Utah	30	3	31	7	32	8	37	7	26	0	181	156	25	13.8
Vermont	42	4	54	1	43	1	35	0	40	7	227	214	13	5.7
Virginia	134	39	121	54	140	50	123	35	124	33	853	642	211	24.7
Washington	115	23	135	46	141	34	137	45	163	38	877	691	186	21.2
West Virginia...	102	16	163	40	109	95	84	72	92	9	782	550	232	29.7
Wisconsin	54	7	60	7	95	5	52	2	62	5	349	323	26	7.4
Wyoming	...	...	...	...	12	1	12	3	7	5	40	31	9	22.5
Totals	5,027		7,035		7,596		8,035		7,271		34,964	......	......	....
Registered ..	4,312		5,672		6,042		6,368		5,723		......	28,117	......	....
Rejected	715		1,363		1,554		1,667		1,548		......	......	6,847	...
Percent. Reg.	14.2		19.4		20.5		20.7		21.3		......	....	.....	19.6

This table gives the number of candidates registered by examination by each state during each of the last five years as well as the number rejected. The last four columns give the totals for the five years and the percentage rejected by each state.

Five states registered by examination over one thousand candidates, these being Illinois, New York, Pennsylvania, Massachusetts and Iowa. Missouri would doubtless be included in this list if reports could have been obtained for 1903 to 1905 inclusive.

The highest percentage of rejections was 52.1 in Mississippi, followed by Missouri, Tennessee and Arkansas. The states marked with an asterisk (*) included non-graduates among those examined, and for that reason would be expected to have higher percentages rejected.

The lowest failure percentages were in Michigan, 4.5; Ohio, 5.2; Vermont, 5.7; Maine, 6.0; Illinois, 6.3, and Nevada, 6.7.

Total Registration in 1907.

The tables thus far described have referred to candidates registered by examination only. Table M, however, shows the

TABLE I.—Colleges Having Less Than 10 Per Cent. of Failures Before State Boards in 1907. Based on Table C.

College.	Total. Examined.	Number Passed.	Number Failed.	Per cent. Failed.	No. of States.
COLORADO.					
Denver and Gross College of Med......	27	25	2	7.5	12
Colorado School of Medicine...........	19	19	0	0.	5
CONNECTICUT.					
Yale Medical School..................	39	39	0	0.	8
GEORGIA.					
Atlanta College of Phys. and Surg.....	54	50	4	7.4	7
Georgia Coll. of Eclec. Med. and Surg.	12	11	1	8.3	1
ILLINOIS.					
American Medical Missionary College..	12	11	1	8.3	8
College of Phys. and Surg., Chicago..	166	151	15	9.0	24
Northwestern Univ. Med. School........	159	156	3	1.9	19
Rush Medical College..................	104	102	2	1.9	17
INDIANA.					
Indiana Medical College...............	80	73	7	8.7	7
Indiana University School of Med......	25	25	0	0.	2
IOWA.					
Drake University Coll. of Med..........	16	15	1	6.3	2
Keokuk Med. Coll., Coll. of P. and S..	36	33	3	8.3	6
State University of Iowa, Coll. of Med.	62	59	3	4.8	8
KANSAS.					
Kansas Medical College................	14	14	0	0.	1
University of Kansas, School of Med...	31	30	1	3.2	4
LOUISIANA.					
Tulane University, Medical Dept........	98	94	4	4.1	6
MAINE.					
Medical School of Maine................	20	20	0	0.	4
MARYLAND.					
Johns Hopkins Medical School..........	91	89	2	2.2	19
Atlantic Medical College................	12	12	0	0.	3
Woman's Medical College...............	11	10	1	9.1	4
MASSACHUSETTS.					
Boston University School of Med......	24	23	1	4.0	8
Harvard University Medical School....	91	88	3	3.3	15
Tufts College Medical School............	72	65	7	9.7	10
MICHIGAN.					
Detroit College of Medicine.............	76	70	6	7.9	6
Detroit Homeopathic Medical College..	9	9	0	0.	1
University of Michigan, Coll. of Med..	71	70	1	1.4	19
Univ. of Michigan, Homeopathic Dept.	15	15	0	0.	5
MISSOURI.					
St. Louis University......................	75	68	7	9.3	14
Washington University	74	67	7	9.5	11
NEBRASKA.					
University of Nebraska Coll. of Med..	24	24	0	0.	4
NEW HAMPSHIRE.					
Dartmouth Medical College.............	23	22	1	4.4	6
NEW YORK.					
Albany Medical College..................	43	41	2	4.7	3
College of Physicians and Surgeons....	127	125	2	1.6	16
Cornell University Medical College......	80	80	0	0.	10
Eclectic Medical College of New York..	11	11	0	0.	1
Long Island College Hospital...........	88	82	6	6.8	7
New York Homeopathic Medical Coll..	37	35	2	5.4	7
N. Y. Med. Coll. and Hosp. for Women	5	5	0	0.	1
Univ. and Bellevue Hosp. Med. Coll...	79	77	2	2.5	9
Syracuse University College of Med...	29	28	1	3.4	3
University of Buffalo, Med. Dept.......	60	60	0	0.	4
NORTH CAROLINA.					
Univ. of North Carolina, Med. Dept...	14	13	1	7.2	4
OHIO.					
Western Reserve Univ., Med. Dept....	11	11	0	0.	2
Cleveland College of Phys. and Surg...	16	15	1	6.3	3
Cleveland Homeopathic Medical Coll...	13	12	1	7.7	4
Medical College of Ohio..................	38	37	1	2.6	7
Pulte Medical College....................	6	6	0	0.	2
Miami Medical College....................	25	24	1	4.0	8
Starling-Ohio Medical College...........	51	46	5	9.8	8
Toledo Medical College..................	8	8	0	0.	1
PENNSYLVANIA.					
Temple College of Medicine.............	6	6	0	0.	2
Univ. of Pennsylvania, Med. Dept....	149	148	1	0.7	22
Hahnemann Med. Coll. of Philadelphia.	63	60	3	4.8	11
Jefferson Medical College................	151	140	11	7.3	27
Woman's Med. Coll. of Pennsylvania...	40	38	2	5.0	9
Medico-Chirurgical College of Phila....	107	100	7	6.5	14
TENNESSEE.					
Vanderbilt University, Med. Dept......	32	32	0	0.	9
TEXAS.					
University of Texas, Medical Dept....	20	20	0	0.	1
Southwestern University Med. Coll.....	10	10	0	0.	2
VIRGINIA.					
Medical College of Virginia.............	37	35	2	5.4	5
University College of Medicine..........	46	43	3	6.5	9
WISCONSIN.					
Milwaukee Medical College..............	27	25	2	7.5	4
Wisconsin College of Phys. and Surg...	24	22	2	8.3	3
Totals	3095	2954	141	4.5	

total number registered in each state, including those registered by examination, by reciprocity and under various exemption clauses. Above 100 were registered in 29 different states, above 200 in 12 and above 400 in three, the largest numbers being registered in New York with 760, in Illinois with 615 and in Pennsylvania with 465. Nongraduates were registered in seven different states, the largest numbers being 81 in Mississippi, 42 in Tennessee and 33 in Arkansas.

Table N gives those registered without examination on presentation of satisfactory credentials which included a license issued by some other state. This is usually described by the term "reciprocity," which conveys the idea that the state which accepts the license of another must be granted the same courtesy by the state issuing the original license. The term does not well describe this method of registration, however, since several states will accept such credentials, if satisfactory, whether the state issuing the original license returns the favor or not. A further description appears beneath the table. Without the provision for reciprocity 989 physicians would have been compelled to undergo a second trying examination.

In Conclusion.

Our endeavor in the publication of these statistics has been to give an absolutely fair presentation of facts as they exist. A knowledge of such facts is always beneficial and we trust this exposition of the results of the examination of applicants for license to practice medicine in the United States will help in the advancement of medical education in this country. We wish to acknowledge our indebtedness to the state licensing boards whose ready cooperation and complete reports have made the publication of these data possible.

TABLE J.—Colleges Having Between 10 and 20 Per Cent. of Failures Before State Boards in 1907. Based on Table C.

College.	Total. Examined.	Number Passed.	Number Failed.	Per cent. Failed.	No. of States.
ALABAMA.					
Birmingham Medical College	14	12	2	14.3	3
Medical College of Alabama	34	30	4	11.8	4
CALIFORNIA.					
University of California, Med. Dept	20	18	2	10.0	3
DISTRICT OF COLUMBIA.					
Georgetown Univ. School of Medicine	26	22	4	15.4	7
GEORGIA.					
Atlanta School of Medicine	20	18	2	10.0	3
Medical College of Georgia	27	24	3	11.1	4
ILLINOIS.					
Hahnemann Medical College, Chicago	51	43	8	15.7	14
Illinois Medical College	25	21	4	16.0	9
Chicago Coll. of Medicine and Surgery	52	43	9	17.3	11
INDIANA.					
Physio-Medical College of Indiana	8	7	1	12.5	2
KENTUCKY.					
Louisville Medical College	41	34	7	17.1	14
University of Louisville, Med. Dept	88	75	·13	14.8	21
MARYLAND.					
College of P. and S., Baltimore	80	71	9	11.2	17
MINNESOTA.					
University of Minnesota, Coll. of Med	68	60	8	11.8	5
MISSOURI.					
Kansas City Hahnemann Med. Coll	10	9	1	10.0	5
Eclectic Medical University	10	9	1	10.0	3
Ensworth-Central Medical College	31	26	5	16.1	6
Homeopathic Medical Coll. of Missouri	9	8	1	11.1	3
OHIO.					
Eclectic Medical Institute, Cincinnati	33	29	4	12.1	10
PENNSYLVANIA.					
Western Pennsylvania Medical College	61	51	10	16.4	5
SOUTH CAROLINA.					
Medical College of South Carolina	25	21	4	16.0	5
TENNESSEE.					
University of Nashville, Med. Dept	68	56	12	17.6	13
University of Tennessee, Med. Dept	44	37	7	15.9	8
TEXAS.					
Fort Worth University, Med. Dept	9	8	1	11.1	1
Baylor University, College of Medicine	13	11	2	15.4	3
VERMONT.					
University of Vermont, Coll. of Med	58	50	8	13.8	10
VIRGINIA.					
University of Virginia, Med. Dept	54	45	9	16.7	19
Totals	979	838	141	14.4	

TABLE K.—Colleges Having Over 20 Per Cent. of Failures Before State Boards in 1907. Based on Table C.

College.	Total. Examined.	Number Passed.	Number Failed.	Per cent. Failed.	No. of States.
CALIFORNIA.					
Cooper Medical College	27	20	7	25.9	2
College of P. and S., San Francisco	14	7	7	50.0	2
Univ. of Southern California C. of M.	35	28	7	20.0	5
DISTRICT OF COLUMBIA.					
George Washington Univ., Med. Dept	83	62	21	25.3	15
Howard University, Med. Dept	51	39	12	41.2	16
ILLINOIS.					
Bennett Coll. of Eclectic M. and S.	47	36	11	23.4	14
Hering Medical College	9	6	3	33.3	2
Jenner Medical College	25	18	7	28.0	3
National Medical University	23	14	9	39.1	6
IOWA.					
Sioux City College of Medicine	11	5	6	54.5	4
KENTUCKY.					
Hospital College of Medicine	48	36	12	25.0	13
Kentucky School of Medicine	45	31	14	31.1	13
LOUISIANA.					
Flint Medical College	22	11	11	50.0	3
MARYLAND.					
Baltimore Medical College	134	84	50	37.1	22
Baltimore University School of Med	22	3	19	86.4	9
Univ. of Maryland, School of Med	88	70	18	20.5	19
Maryland Medical College	48	23	25	52.1	15
MASSACHUSETTS.					
College of Phys. and Surg., Boston	31	21	10	32.3	9
MINNESOTA.					
Hamline University, Med. Dept	33	22	11	33.3	5
MISSISSIPPI.					
Mississippi Medical College	31	17	14	45.2	3
MISSOURI.					
University Med. Coll., Kansas City	76	57	19	25.0	12
Barnes Medical College	93	60	33	35.5	15
St. Louis College of Phys. and Surg	56	35	21	37.5	11
American Medical College, Eclectic	11	4	7	63.6	3
NEBRASKA.					
Creighton Medical College	45	33	12	26.7	7
Lincoln Medical College	19	14	5	26.3	7
NORTH CAROLINA.					
Leonard Medical School	49	32	17	34.7	11
North Carolina Medical College	25	16	9	36.0	3
OREGON.					
University of Oregon, Med. Dept	30	23	7	23.3	2
Willamette University, Med. Dept	27	8	19	70.4	2
TENNESSEE.					
Tennessee Medical College	19	13	6	31.6	3
Knoxville Medical College	5	1	4	80.0	4
Meharry Medical College	103	58	45	43.7	19
Memphis Hospital Medical College	85	63	22	25.9	9
College of Phys. and Surg., Memphis	14	9	5	35.7	6
University of the South, Med. Dept	41	30	11	26.9	15
Chattanooga Medical College	47	33	14	29.8	12
TEXAS.					
Gate City Medical College	9	4	5	55.6	6
College of Phys. and Surg., Dallas	3	2	1	33.3	2
Totals	1584	1048	536	33.8	

TABLE L.—Unclassified Colleges.

College.	Total. Examined.	Number Passed.	Number Failed.	Per cent. Failed.	No. of States.
ARKANSAS.					
Arkansas University, Medical Dept	2	2	0	0.	2
CALIFORNIA.					
California Medical College	5	2	3	60.0	2
Coll. of Phys. and Surg., Los Angeles.	3	2	1	33.3	2
Hahnemann Med. Coll. of the Pacific	2	2	0	0.	1
Oakland Coll. of Medicine and Surgery.	2	2	0	0.	1
COLORADO.					
Westminster University Coll. of Med	5	5	0	0.	1
GEORGIA.					
International Medical Missionary Coll.	1	1	0	0.	1
ILLINOIS.					
College of Medicine and Surgery, Ph.M.	2	1	1	50.0	1
INDIANA.					
Eclectic Medical College of Indiana	5	3	2	40.0	1
IOWA.					
University of Iowa, Homeopathic Dept.	4	4	0	0.	2
KENTUCKY.					
Louisville National Medical College	2	0	2	100.0	2
Southwestern Homeopathic Med. Coll	2	1	1	50.0	2
MISSOURI.					
University of Missouri	3	3	0	0.	3
NEBRASKA.					
Nebraska College of Medicine	4	3	1	25.0	2
TENNESSEE.					
University of West Tennessee	3	0	3	100.0	1
TEXAS.					
College of Physicians and Surgeons	3	2	1	33.3	2
Totals	48	33	15	31.2	

TABLE M.—Registrations by State Boards During 1907.

States.	By Examination.			By Reciprocity.	Without written exam. or under exemptions.	Totals.
	1902-1907.	1901 and previous.	Non-graduates.			
Alabama	123	7	12			142
Arizona	15	14				29
Arkansas	24	15	33		23	95
California	93	25				118
Colorado	46	4		154		204
Connecticut	55	9		1		65
Delaware	4			3		7
District of Columbia	55	4				59
Florida	55	17				72
Georgia	133	6		12	2	153
Idaho	26	12				38
Illinois	555	25		35		615
Indiana	161	11		18		190
Iowa	145	1		58		204
Kansas	118	7		111		236
Kentucky	48			3	193	244
Louisiana	143	10				153
Maine	66	8		12		86
Maryland	136	3		13	5	157
Massachusetts	206	13	7			226
Michigan	146	4		75	17	242
Minnesota	75	5		31		111
Mississippi	69	7	81			157
Missouri	156	11	19	22		208
Montana	28	6				34
Nebraska	63	5		48	1	117
Nevada	7	3		23	76	109
New Hampshire	16	3				19
New Jersey	64	9		76		149
New Mexico	5				75	80
New York	625	66		29	40	760
North Carolina	100	11		1		112
North Dakota	39	10		17		66
Ohio	173	6		48	1	228
Oregon	41	21				62
Pennsylvania	454	11				465
Rhode Island	29	7				36
South Carolina	41			3		44
South Dakota	18	5		35		58
Tennessee	111	11	11	6		139
Texas	128	17	42	17		204
Utah	20	6		3		29
Vermont	37	3		1		41
Virginia	109	15		16		140
Washington	118	45				163
West Virginia	92			9		101
Wisconsin	57	5		87	4	153
Wyoming	2	5		22		29
Totals	5030	488	205	939	437	7149

This table shows the total number registered during 1907 in each state by the various methods. The first column shows the recent graduates registered, the second column, the old practitioners (graduates of 1901 and previous years), the third column the non-graduates, and the fourth column shows the number licensed through reciprocity. It is interesting to note that states which have registered large numbers through reciprocity have examined very few "old practitioners." The chief exception is New York, which has arranged reciprocal relations with only four other states. The fifth column shows those registered without written examination under various exemption clauses. The last column shows the total number of physicians registered in each state during the year.

TABLE N.—Physicians Registered Through Reciprocity by State Examining Boards During 1907.

State Board of	Total reg. through reciprocity by each state.	Alabama.	Arkansas.	Colorado.	California.	Delaware.	Dist. of Columbia.	Georgia.	Illinois.	Indiana.	Iowa.	Kansas.	Kentucky.	Louisiana.	Maine.	Maryland.	Massachusetts.	Michigan.	Minnesota.	Mississippi.	Missouri.	Nebraska.	Nevada.	New Hampshire.	New Jersey.	New York.	North Carolina.	North Dakota.	Ohio.	Oklahoma.	Pennsylvania.	South Carolina.	South Dakota.	Tennessee.	Texas.	Utah.	Vermont.	Virginia.	West Virginia.	Wisconsin.	Wyoming.
Connecticut	1								1																																
Colorado	154	1	1		1		1		36	5	15	4	3	1	1		5	9	5	1	22	4			1	7	1	1	8		10		2	1	3		2		1	2	
Delaware	3														1	1																		1							
Georgia	12									2	2		3					1					1											1	1					1	
Illinois	35										13	5				4		4	2						2												1			4	
Indiana	18						1				3		2					1	1		1								8								1				
Iowa	58								32	1		3				2		1	2		7	5							1											4	
Kansas	111	1		2			1		25	3	12		1	1	1	1	1	3	1		35	13			1	1			2	3				1	2						
Kentucky	3			1																	1													1							
Maine	12			1			1	1	1							1							1							1							5				
Maryland	13						4		4				1																2								1	1			
Michigan	75				1			1	24	5	4	2	1		2	3					5	1				4			13		1	1			1		2			4	
Minnesota	31								9		7				1			2				2			1				1				1		1					6	
Missouri	22			1							3	10	5		1			1																					1		
Nebraska	48						1		15	1	18	5	1		1			2							1				1							1					1
Nevada	23									4	7		1		1	2		3	1		3																			1	
New Jersey	76					1			2						5			1	1					1		65															
New York	29																	8							20				1												
North Carolina	1																									1															
North Dakota	17								8		4							4																						1	
Ohio	48						1		17	7	4				2	3		10				1			1															2	
South Carolina	3								1																													2			
South Dakota	35										26								7																					2	
Tennessee	6							3	1				2																												
Texas	17						1	5				1		1					3							1					3							2			
Utah	3								1			1									1																				
Vermont	1								1																																
Virginia	16						3									8															1								4		
West Virginia	9						1						1					1																				6			
Wisconsin	87								55	1	5	1						10	6			1						1	2				1		4						
Wyoming	22								7	1	3	1						1			4	3						1				1									
Total received from each state through reciprocity	989	2	1	5	2	1	15	10	240	30	126	33	21	3	16	25	6	62	29	1	79	30	2	1	27	79	1	3	39	4	15	2	4	5	12	1	12	11	6	27	1

This table shows the number of physicians registered by each state through reciprocity during 1907. "Reciprocity" is not the best term to use, however, since some states, Colorado for instance, register candidates who have satisfactory credentials including a license, regardless as to whether the state issuing the original license reciprocates with those states or not. Taking New York as an example, reading from left to right, the table shows that New York registered a total of 29 applicants through reciprocity during 1907, of which number 8 came from Michigan, 20 from New Jersey and 1 from Ohio. Reading from above downward, the table shows that 79 physicians left New York during 1907 and registered in other states under the reciprocity provision, of which number 7 registered in Colorado, 1 in Kansas, 4 in Michigan, 65 in New Jersey, 1 in North Carolina and 1 in Texas.

Colorado leads, having registered 154 physicians through reciprocity, followed by Kansas, which registered 111, Wisconsin with 87, New Jersey with 76, and Michigan with 75.

It is interesting to note in what states the original licenses were issued. The table shows that of the 989 applicants registered through reciprocity, 240, or nearly 25 per cent., obtained their original licenses in Illinois, 126 in Iowa, 79 each in Missouri and New York and 62 in Michigan.

Altogether 989 licenses were issued through reciprocity in 1907, an increase of 304 over 1906, when 685 such licenses were issued.

TABLE A.—PHYSICIANS EXAMINED BY STAT

Marginal Number.	NAME OF COLLEGE.	1 Alabama.		2 Arizona.		3 Arkansas.		4 California.		5 Colorado.		6 Connecticut.		7 Delaware.		8 Dist. of Col.		9 Florida.		10 Georgia.		11 Idaho.		12 Illinois.		13 Indiana.		14 Iowa.		15 Kansas.		16 Kentucky		17 Louisiana.		18 Maine.		19 Maryland.		20 Massachusetts.		21 Michigan.	
		P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F
	ALABAMA.																																										
1	Birmingham Medical College.—R.	11	2															1	0	1	0																						
2	Medical College of Alabama.—R.	26	2			1	0											2	0	1	0																						
	ARKANSAS.																																										
3	Arkansas University Med. Department.—R.					1	0											1	0																								
	CALIFORNIA.																																										
4	Cooper Medical College.—R.							19	7																																		
5	University of California, Medical Dept.—R.			1	0			17	1																																		
6	California Medical College.—E.			1	0			1	1																																		
7	Hahnemann Med. Coll. of the Pacific.—H.							2	0																																		
8	College of Physicians and Surgeons.—R.							6	7																																		
9	Oakland College of Med. and Surgery.—R.							2	0																																		
10	Univ. of Southern Cal., Coll. of Med.—R.			1	0			21	7															1	0																		
11	Coll. of Phys. and Surg., Los Angeles.—R.							1	1																																		
	COLORADO.																																										
12	Denver and Gross College of Medicine.—R.							1	0	15	0											1	0	1	0																		
13	Westminster University Coll. of Med.—P.									5	0																																
14	Colorado School of Medicine, Boulder.—R.							1	0	14	0											1	0																				
	CONNECTICUT.																																										
15	Yale University Medical School.—R.									1	0	23	0			1	0																					1	0	3	0		
	DISTRICT OF COLUMBIA.																																										
16	George Washington Univ., Dept. of Med.—R.					1	0	1	0							32	16																					7	3	1	1		
17	Georgetown Univ., School of Medicine.—R.							0	1							10	4	1	0																			3	0	3	0		
18	Howard University, Medical Department.—R.							0	2							7	7	1	0	5	0			2	0					2	0	1	0					5	2	1	0		
	GEORGIA.																																										
19	Atlanta College of Phys. and Surgs.—R.	4	0															9	0	30	3							1	0														
20	Georgia Coll. of Eclectic Med. and Surg.—E																			11	1																						
21	Atlanta School of Medicine.—R.	0	1															2	0	16	1																						
22	Medical College of Georgia.—R.																	0	1	21	0																						
23	International Med. Miss. Coll.—R.																			1	0																						
	ILLINOIS.																																										
24	American Medical Missionary College.—R.	1	0																			1	0	3	0													1	0	1	1		
25	Bennett Coll. of Eclectic Med. and Surg.—E.							0	2													1	0	25	3	1	1	2	0	1	0												
26	College of Medicine and Surgery.—Ph.M.																							1	1																		
27	College of Phys. and Surg., Chicago.—R.	1	0					1	4	0	1							2	0			2	0	98	3	6	1	5	0											0	1		
28	Hahnemann Med. College and Hospital.—H.			1	0	2	0	0	3			1	0									0	1	25	7	4	0			3	0											1	0
29	Hering Medical College.—H.									1	0													5	3																		
30	Illinois Medical College.—R.					1	0																	12	1	3	1	0	1					1	0							1	0
31	Jenner Medical College.—R.																							16	6	0	1																
32	Northwestern University Med. School.—R.					2	0	2	1	2	0							2	0			5	0	107	0	6	0	6	2											1	0		
33	Rush Medical College.—R.			5	0	1	0	4	0	2	0											2	0	63	0	5	1																
34	National Medical University.—P.																							13	4															0	1		
35	Chicago Coll. of Med. and Surgery.—R.																							31	4	4	0	2	0														
	INDIANA.																																										
36	Indiana Medical College.—R.			1	0					1	1													1	1	67	5																
37	Physio-Medical College of Indiana.—Ph.M.																							1	1	6	0																
38	Eclectic Medical College of Indiana.—E.																									3	2																
39	Indiana University, School of Med.—R.																							1	0	24	0																
	IOWA.																																										
40	Drake University, College of Medicine.—R.																					1	0					14	1														
41	Keokuk Med. Coll. of Phys. and Surg.—R.			2	0			2	0	0	1											1	0	1	1			28	3														
42	Sioux City College of Medicine.—R.																											5	3														
43	State Univ. of Iowa Coll. of Medicine.—R.							0	3													1	0					51	1														
44	State Univ. of Iowa, Homeopathic Dept.—H																											3	1														
	KANSAS.																																										
45	Kansas Medical College.—R.							0	1																					15	0												
46	University of Kansas, School of Med.—R.									1	0																			25	1												
	KENTUCKY.																																										
47	Hospital College of Medicine.—R.																	1	0					2	1	3	1			1	0	13	4	4	1							1	0
48	Kentucky School of Medicine.—R.	2	1					0	1															2	0	13	1	1	0			4	3	1	0	1	1			0	1		
49	Louisville Medical College.—R.	3	0			1	0	0	1									1	1							3	1			2	0	8	1	5	0								
50	Louisville National Medical College.—R.																			0	1											0	1										
51	Southwestern Homeopathic Med. Coll.—H.					1	0																															0	1				
52	University of Louisville, Medical Dept.—R.	5	0			2	0	0	1									1	0	2	2	0	1	6	1	7	1			4	1	10	2	5	0								
	LOUISIANA.																																										
53	Flint Medical College.—R.																																	11	1								
54	Tulane University, Medical Department.—R.	4	0					0	1									1	0	1	0													70	0								
	MAINE.																																										
55	Medical School of Maine, Bowdoin Coll.—R.							0	1															1	0											17	0			2	0		
	MARYLAND.																																										
56	Baltimore Medical College.—R.							0	1			2	3			1	5			2	0							1	1							3	0	9	7	16	12		
57	Baltimore University, School of Med.—R.											0	1							0	1													1	1	2	0	0	3	1	6		
58	Coll. of Phys. and Surgs. of Baltimore.—R.	2	0	1	0							2	0													1	0									0	1	10	1	4	2		
59	Johns Hopkins Medical School.—R.	3	0	1	0							3	0			2	1			2	0			1	0			1	0			2	0					31	1	3	0	1	0
60	Atlantic Medical College.—P.																																					10	0				
61	University of Maryland, School of Med.—R.	2	0			1	0	1	2			1	1			0	1	2	0	4	0									1	0							32	7	1	0		
62	Woman's Medical College of Baltimore.—R.																																					6	1				
63	Maryland Medical College.—R.									0	1	2	1	1	2					1	0																	0	8	0	1		
	MASSACHUSETTS.																																										
64	Boston University, School of Medicine.—H.											1	0			1	0																			4	0			13	1		
65	College of Physicians and Surgeons.—R.							0	1			0	1																							4	0			9	7		
66	Harvard University Medical School.—R.							3	1			1	0											1	0	1	0							1	0	5	1	1	0	50	1		
67	Tufts College Medical School.—R.							0	1			1	1											2	0											9	0			48	5		
	MICHIGAN.																																										
68	Detroit College of Medicine.—R.							1	1															0	1																	67	2
69	Detroit Homeopathic Medical College.—H.																																									9	0
70	Univ. of Mich., Dept. of Med. and Surg.—R.	10	0	1	0			1	4									1	0					1	0	2	0	1	0	1	0	1	0					1	0	1	0	50	0
71	Univ. of Michigan, Homeopathic Dept.—H.							0	2																	1	0															10	0
	MINNESOTA.																																										
72	Univ. of Minn., Coll. of Med. and Surg.—R.							1	0													1	0																				
73	Univ. of Minnesota, Homeopathic Dept.—H.																																										
74	Minnesota College of Phys. and Surgs.—R.																					1	0																				
	MISSISSIPPI.																																										
75	Mississippi Medical College.—R.	1	0			0	1																																				
		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21	

R, Regular; H, Homeopathic; E, Eclectic; P, Panpathic.

22 Minnesota.		23 Mississippi.		24 Missouri.		25 Montana.		26 Nebraska.		27 Nevada.		28 New Hamp.		29 New Jersey.		30 New Mexico.		31 New York.		32 N. Carolina.		33 North Dakota.		34 Ohio.		35 Oregon.		36 Pennsylvania.		37 Rhode Island.		38 S. Carolina.		39 South Dakota.		40 Tennessee.		41 Texas.		42 Utah.		43 Vermont.		44 Virginia.		45 Washington.		46 West Virginia.		47 Wisconsin.		48 Wyoming.		Totals.	Examined—Passed.	Examined—Failed.	Percentage of Failures.	No. of States Examined in.	Marginal Number.
P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F						
																																																						15	13	2	13.3	3	1
		1	2																																											1	0							36	32	4	11.1	6	2
																				1	0																																	3	3	0	0.	3	3
										1	0							3	0																											1	0							31	24	7	22.6	4	4
						0	1											1	0																															1	0			22	20	2	9.1	5	5
																										0	1																			1	2							7	3	4	57.1	4	6
																																																						2	2	0	0.	1	7
																										0	1													1	0													15	7	8	53.3	3	8
																																																						2	2	0	0.	1	9
																																												1	0	4	0							35	28	7	20.0	5	10
																																														1	0							3	2	1	33.3	2	11
		0	1							1	0					1	0											1	0									1	0	3	0					2	1			1	0	2	0	32	30	2	6.2	13	12
																																																						5	5	0	0.	1	13
																										1	0											1	0	2	0													20	20	0	0.	6	14
																		8	0					1	0					1	0																							39	39	0	0.	8	15
		1	0															1	0	3	0							4	0					1	0	2	0	3	0	1	0			5	1			1	0					85	64	21	24.7	15	16
														1	0			3	0							1	0	2	0																									29	24	5	17.2	9	17
				1	0									3	0					1	0							6	2			1	0					1	0					2	0	1	0	2	0					55	42	13	23.6	18	18
		2	1																	2	0											3	0													1	0							56	52	4	7.1	8	19
																																																						12	11	1	8.3	1	20
																																																						20	18	2	10.0	3	21
																										1	0					2	2																					27	24	3	11.1	4	22
																																																						1	1	0	0.	1	23
						2	0											1	0					1	0	0	1									1	0													1	0			15	13	2	13.3	11	24
1	0			0	2	0	1	1	0									1	0			1	1			0	2	2	0					1	1																			50	37	13	26.0	15	25
																												1	0																									3	2	1	33.3	2	26
6	1			2	1	2	0	1	0							1	0					3	0	1	0	1	3							4	0			2	0	1	0					13	0	1	0	6	0	1	1	176	160	16	9.1	24	27
1	0			1	0	0	1			1	0			1	0			3	1			1	0																							5	0			1	0			64	51	13	20.3	18	28
																								0	1																													10	6	4	40.0	3	29
						0	1											0	1			1	0	1	0			0	1																					1	1			28	21	7	25.0	12	30
																																						2	0															25	18	7	28.0	3	31
3	0			3	0	2	0	2	0					1	0							1	0			4	0							4	0			3	0	2	0					11	2			1	0			175	170	5	2.9	21	32
6	1			5	0	2	0	2	0									3	1							4	0							1	0			1	0	3	0			1	0	8	3			4	0	2	1	131	124	7	5.3	20	33
				1	1											0	1											0	1																	0	1							23	14	9	39.1	6	34
0	2			0	1	1	0	1	0																	0	1	1	0					1	1											2	0							52	43	9	17.3	11	35
																																		1	1			1	0							1	0							81	73	8	9.9	7	36
																																														1	0							9	8	1	11.1	3	37
																																																						5	3	2	40.0	1	38
																																																						25	25	0	0.	2	39
				1	0			1	0																																					0	1							19	17	2	10.5	5	40
1	0			0	1			1	0																	1	1											1	0							1	0							46	39	7	15.2	12	41
0	1					0	1	0	1																																													11	5	6	54.5	4	42
						1	0																			1	1							1	0			2	0							4	0							66	61	5	7.6	8	43
																										0	1																			1	0							6	4	2	33.3	3	44
																																																						16	15	1	6.3	2	45
				3	0																																									1	0							31	30	1	3.2	4	46
		1	2	1	0	0	1													0	1															1	0	3	0					6	1	1	1	1	1					53	39	14	26.4	16	47
				1	0																					2	1	0	2									3	0							2	0	6	5					54	38	16	29.6	15	48
		4	1			0	1																			0	2	2	1									4	0							2	1	3	0					48	38	10	20.8	15	49
																																																						2	0	2	100.0	2	50
																																																						2	1	1	50.0	2	51
0	1	2	1	2	0									2	1			2	0	0	1							5	0							6	1	2	1	2	0							13	0					93	78	15	16.1	22	52
		0	9																																			0	1															22	11	11	50.0	3	53
		8	4																													1	0					13	0															103	98	5	4.9	8	54
																		1	0	1	0																									2	0							25	24	1	4.0	7	55
0	1					1	0	1	0			4	2	7	3			13	3	1	1					0	1	13	3	2	6	0	1									2	0	4	4			8	0					144	90	54	37.5	22	56
		0	1									0	1	0	1			1	0							1	0	0	1	1	3																	0	2					28	7	21	75.0	14	57
						2	0							2	1			7	0	4	0			2	0			16	2	1	1	0	1	1	0	1	0							4	0	2	0	19	0					90	81	9	10.0	20	58
1	0													3	0			14	0	3	0			1	0			12	0	1	0					1	0							1	0	2	0	2	0					95	93	2	2.1	22	59
																										1	0	1	0																			1	0					13	13	0	0.	4	60
						1	0					1	1	2	0			1	0	8	2			1	1			6	1	1	0	2	0											4	2	0	1	3	0					94	75	19	20.2	22	61
						1	0											3	0	1	0																																	12	11	1	8.3	4	62
														1	1					0	1							7	5	0	2	0	1			1	0	3	1			0	1	2	0			6	0					49	24	25	51.0	16	63
												1	0					4	0									1	0	1	0					1	0																	28	27	1	3.6	9	64
								1	0			1	0					2	1									1	0	2	8											2	0											32	22	10	31.2	10	65
0	1			1	0													12	0					2	0	2	0	2	0	6	0													1	0	7	1	1	0					102	97	5	4.9	18	66
				1	0							1	0																	4	0			1	0							0	1							1	0			76	68	8	10.5	11	67
						1	0											1	0							1	1	0	1																	1	1							80	72	8	10.0	8	68
																																																						9	9	0	0.	1	69
2	0					1	0			1	0							1	0							2	0											2	0	1	0			1	0	6	0							83	79	4	4.8	21	70
																								1	0	2	0	1	0																	2	0							19	17	2	10.5	7	71
37	7					4	1															12	0			1	1																			8	0			1	0			74	65	9	12.2	8	72
																						1	0																															1	1	0	0.	1	73
14	10					2	0															5	0																							1	1							34	23	11	32.4	5	74
		16	13																																																			31	17	14	45.2	3	75
22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48							

TABLE A.—PHYSICIANS EXAMINED BY STA

Marginal Number	NAME OF COLLEGE	1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21	
		Alabama.		Arizona.		Arkansas.		California.		Colorado.		Connecticut.		Delaware.		Dist. of Col.		Florida.		Georgia.		Idaho.		Illinois.		Indiana.		Iowa.		Kansas.		Kentucky.		Louisiana.		Maine.		Maryland.		Massachusetts.		Michigan.	
		P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F
	MISSOURI.																																										
76	University Medical College, Kansas City.—R.							0	1	1	0											1	0					0	2	21	4												
77	Kansas City Hahnemann Med. College.—H.																					1	1			1	0			5	0												
78	Eclectic Medical University.—E.																													8	0												
79	Ensworth Central Medical College.—R.							0	1													1	0					2	1	18	0												
80	Barnes Medical College.—R.	1	0	0	2	3	1											1	0			2	0	20	5					5	3	0	1							0	1		
81	St. Louis University, Med. Department.—R.					1	0			1	0											2	1	26	1	1	0	1	0	1	0			1	0								
82	St. Louis Coll. of Phys. and Surgeons.—R.	1	0			1	0									0	1			1	0	2	0	23	3			0	1	1	0									0	1		
83	American Medical College.—E.			1	0			0	1																																	0	1
84	Homeopathic Med. College of Missouri.—H.					3	0																	3	0																		
85	Washington University, Med. Dept.—R.					1	0	1	0									1	0			0	1	25	0																		
86	University of Missouri, Dept. of Med.—R.							0	1									1	0																								
	NEBRASKA.																																										
87	University of Nebraska, Coll. of Med.—R.																							1	0					1	0												
88	John A. Creighton Medical College.—R.																											10	6	0	1												
89	Lincoln Medical College.—E.																							1	0					2	0												
90	Nebraska College of Medicine.—R.																																										
	NEW HAMPSHIRE.																																										
91	Dartmouth Medical College.—R.											4	0																							3	0			8	1		
	NEW YORK.																																										
92	Albany Medical College.—R.																					1	0																				
93	College of Physicians and Surgeons.—R.			1	0			0	1	1	0	5	0					2	0					1	1											1	0	0	1	5	0		
94	Cornell University Medical College.—R.							1	0									1	0					2	0											1	0			3	0		
95	Eclectic Med. Coll. of City of New York.—E.																																										
96	Long Island College Hospital.—R.			1	0			1	0			1	0											0	1															1	0		
97	New York Homeo. Med. Coll. and Hosp.—H.					1	0	0	1			2	0			1	0											2	0														
98	N. Y. Med. Coll. and Hosp. for Women.—H.																																										
99	Univ. and Bellevue Hosp. Med. Coll.—R.							2	3			4	0					3	0	1	0			2	0															4	0		
100	Syracuse University, Coll. of Med.—R.																																										
101	University of Buffalo, Medical Dept.—R.																																										
	NORTH CAROLINA.																																										
102	Leonard School of Medicine.—R.	3	1													0	1	2	0	2	1																	0	1				
103	North Carolina Medical College.—R.																																										
104	Univ. of North Carolina, Med. Dept.—R.	1	0															1	0																								
	OHIO.																																										
105	Western Reserve Univ., Med. Dept.—R.																																										
106	Cleveland College of Phys. and Surgs.—R.							1	0																																		
107	Cleveland Homeopathic Medical College.—H.							0	1																																		
108	Eclectic Medical Institute.—E.							2	0									2	0	1	0			3	0	2	1	1	0	1	0	1	0										
109	Medical College of Ohio—R.			2	0					1	0							2	0			1	0			2	0					2	1										
110	Pulte Medical College.—H.					1	0																																				
111	Miami Medical College.—R.																	1	0							1	0			0	1	2	0									1	0
112	Starling Ohio Medical College.—R.																							1	0					1	0											1	0
113	Toledo Medical College.—R.																																										
	OREGON.																																										
114	University of Oregon, Med. Dept.—R.																																										
115	Willamette University Medical Dept.—R.																																										
	PENNSYLVANIA.																																										
116	Temple College of Medicine.—R.																																										
117	University of Penn., Dept. of Med.—R.			1	0			3	3			2	0			1	0	2	0					1	0	1	0					1	0			2	0	10	0	1	1		
118	Hahnemann Med. Coll. and Hospital.—H.							3	2			1	0			2	0							1	0			1	0									5	0	3	1		
119	Jefferson Medical College, Philadelphia.—R.			2	0	1	1	4	4			2	0	2	0			1	0	1	0	1	0	4	0			2	0							2	0	1	2	8	0	0	1
120	Woman's Med. Coll. of Pennsylvania.—R.													1	0					1	0																	2	0	5	2		
121	Medico-Chirurgical Coll. of Philadelphia.—R.							0	2			1	0									1	0	1	0	1	0							1	0	1	0	2	1	0	1		
122	Western Pennsylvania Med. Coll.—R.			1	0																							1	1							1	0						
	SOUTH CAROLINA.																																										
123	Med. Coll. of the State of So. Carolina.—R.	1	0															1	1	1	0																						
	TENNESSEE.																																										
124	Tennessee Medical College.—R.									1	0																																
125	Knoxville Medical College.—R.																			1	1																						
126	University of Nashville, Med. Dept.—R.	16	1			2	0																	1	0							0	1	8	1								
127	Vanderbilt University, Med. Dept.—R.	4	0			2	0											0	1	2	0													1	0								
128	Univ. of Tennesse, Med. Department.—R.	6	1			0	2											7	0	12	1											1	2	1	0								
129	Meharry Medical College.—R.	4	0			2	11											7	0	12	1					1	0			4	3	2	1	5	2			0	2			1	0
130	Memphis Hospital Medical College.—R.	7	1			1	1											1	0															21	1								
131	Coll. of Phys. and Surgeons, Memphis.—R.	0	1			0	1													0	1													1	0								
132	University of the South, Medical Dept.—R.	2	0			1	0											2	1	11	1													6	0	2	1			0	1		
133	Chattanooga Medical College.—R.	12	2															2	0	3	8											0	2	2	0								
134	Univ. of West Tennessee, Med. Dept.—R.					0	3																																				
	TEXAS.																																										
135	Fort Worth University, Med. Dept.—R.																																										
136	University of Texas, Dept. of Medicine.—R.																																										
137	Baylor University, College of Medicine.—R.																			1	0													2	0								
138	Gate City Med. Coll., Texarkana.—R.																			2	0																						
139	Southwestern Univ. Med. Coll., Dallas—R.			1	0																																						
140	Coll. of Phys. and Surgeons, Dallas.—R.					0	1																											2	0								
	VERMONT.																																										
141	Univ. of Vermont, Medical Dept.—R.											3	0					1	0					2	0															12	2		
	VIRGINIA.																																										
142	Medical College of Virginia.—R.			1	0													1	0																								
143	University College of Medicine.—R.	1	0															1	0			0	1																	1	0		
144	Univ. of Virginia, Dept. of Medicine.—R.	1	0			2	0									0	1	1	0	1	0	2	0	1	0	1	0							1	0								
	WISCONSIN.																																										
145	Milwaukee Medical College.—R.																							1	0																		
146	Wisconsin Coll. of Phys. and Surgs.—R.																																										
147	Canadian Colleges							3	0	1	0	1	1			1	0					3	0	6	0			5	0					1	0	15	0			7	5	1	0
148	Foreign	1	0	1	0			7	2	1	1	1	8					1	0					6	1	1	0	0	1					1	0			2	0	3	3		
149	Miscellaneous Medical Colleges	1	1	2	0	3	1	2	2	1	0							4	2			2	1	25	2			0	1	2	0					1	0					6	3
150	Undergraduates	12	24			33	83			0	1																													7	59		
	Totals by States	180		31		178		202		56		81		6		96		80		161		45		632		189		172		139		67		160		78		180		344		158	
	Totals—Examined—Passed	142		29		72		118		50		64		4		59		72		139		38		580		172		146		125		48		153		74		139		226		150	
	Totals—Examined—Failed	38		2		106		84		6		17		2		37		8		22		7		52		17		26		14		19		7		4		41		118		8	
	Percentage of Failures	21.1		6.5		59.5		41.6		10.7		21.0		33.3		38.5		10.0		13.7		15.6		8.2		9.0		15.1		10.1		28.4		4.4		5.1		22.8		34.3		5.1	
		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21	

22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48							
Minnesota.		Mississippi.		Missouri.		Montana.		Nebraska.		Nevada.		New Hamp.		New Jersey.		New Mexico.		New York.		N. Carolina.		North Dakota.		Ohio.		Oregon.		Pennsylvania.		Rhode Island.		S. Carolina.		South Dakota.		Tennessee.		Texas.		Utah.		Vermont.		Virginia.		Washington.		West Virginia.		Wisconsin.		Wyoming.		Totals.	Examined—Passed.	Examined—Failed.	Percentage of Failures.	No. of States Examined in.	Marginal Number.
P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F						
				29	9	0	1			2	0					2	0	0	3	1	0					0	2											3	0	1	0					0	1					1	0	85	62	23	27.1	16	76
				1	0																																			1	0					1	0							11	10	1	9.1	6	77
				1	0																																	0	1															10	9	1	10.0	3	78
				5	2																					0	1	0	1																	0	1							33	26	7	21.2	8	79
		2	0	25	14			2	3																	0	2							0	1			2	0							2	2	1	0	0	1			102	66	36	35.3	18	80
				26	5	1	0	1	0																													2	0							3	0	1	0					75	68	7	9.3	14	81
		0	1	8	12			1	0																			0	3									3	0							1	3							67	42	25	37.3	15	82
				4	6																																																	13	5	8	61.5	4	83
				3	1																																																	10	9	1	10.0	3	84
		1	1	32	5													1	0							1	0							1	1			1	0	1	0					4	0							78	70	8	10.3	13	85
				1	0	1	0																																															4	3	1	25.0	4	86
								20	0													2	0											1	0																			25	25	0	0.	5	87
						1	0	19	5													1	0																	1	0					1	0							45	33	12	26.7	7	88
				0	1			8	4													1	0			1	0							1	0											1	0							20	15	5	25.0	8	89
1	0							2	1																																													4	3	1	25.0	2	90
												6	1	1	0			4	0																					1	0	2	0											31	29	2	6.5	8	91
1	0					0	1					1	0					39	3			1	0					1	0																									48	44	4	8.3	7	92
1	0									1	0	1	0	3	0			106	1	1	0			1	0			1	0	1	0					1	0					1	0							1	0			139	135	4	2.9	21	93
														1	0			69	0					1	0	1	0			1	0																							81	81	0	0.	10	94
																		11	0																																			11	11	0	0.	1	95
														1	0			76	6					2	0					1	1													1	0									93	85	8	8.6	10	96
																		28	1					1	0					1	0																							38	36	2	5.3	8	97
																		5	0									1	0																									6	6	0	0.	2	98
												0	1					67	1					2	0					1	0									1	0	1	0			1	0							94	89	5	5.3	13	99
																		26	1									1	0																	1	0							29	28	1	3.4	3	100
0	2																	54	1					3	0			2	0									1	0	1	0					1	0							65	62	3	4.6	7	101
		0	1																	11	1							4	1			1	2					1	0					8	8									49	32	17	34.7	11	102
																				13	4											2	4											3	1									27	18	9	33.3	3	103
																				10	1											1	0																					14	13	1	7.2	4	104
																								10	0			1	0									1	0							1	0							13	13	0	0.	4	105
																		1	0					13	1			1	0																									17	16	1	5.9	4	106
																		3	0					6	1	1	0	4	0																									16	14	2	12.5	5	107
0	2			1	0															1	0			15	1			4	1							1	0											2	0					42	37	5	11.9	15	108
1	0							1	0															29	0	1	0	1	0																	1	1	1	0					47	45	2	4.3	13	109
																								5	0			1	0																	1	0							8	8	0	0.	4	110
0	1																							17	0			1	0																	1	1							27	24	3	11.1	9	111
																		3	1			1	0	39	3			0	2									1	0									1	0					54	48	6	11.1	9	112
																								8	0	1	0																											9	9	0	0.	2	113
																										15	7																			9	0							31	24	7	22.6	2	114
																										6	18																			2	1							27	8	19	70.4	2	115
																										1	0	5	0																									6	6	0	0.	2	116
														15	1			13	0	5	0			3	0			86	0	4	0					3	0	1	0					1	0	5	0	1	0	2	0			169	164	5	3.0	23	117
														8	0			2	0					2	0	1	0	41	1													2	0	0	1									77	72	5	6.5	14	118
1	0			3	0	3	0							5	0			7	1	10	0	1	0	3	0	1	0	72	6	2	0			1	0							3	0			3	1	5	0	1	0			168	152	16	9.5	30	119
		1	0									1	0	9	0			6	0									15	0					1	0																			44	42	2	4.5	10	120
														5	0			4	0	2	0							80	3											1	0					3	1							111	103	8	7.2	15	121
										1	0							1	0	1	0			2	0			46	9							1	0											1	0					66	56	10	15.2	10	122
																				3	0									1	0	17	3											1	0									29	25	4	13.8	6	123
																				1	1															12	4							0	1									20	14	6	30.0	4	124
		0	1																													0	1			0	1																	5	1	4	80.0	4	125
		6	10																	1	0					1	0					2	0			11	0	8	0					1	0			1	0					71	58	13	18.3	13	126
																		0	1	1	0											1	0			19	0	6	0					1	0	1	0							40	38	2	5.0	12	127
		1	1																	3	4															25	0	1	1															52	40	12	23.1	9	128
		3	14	1	1													1	0	1	0			0	1			0	1			1	0			12	3	2	4					2	1									106	61	45	42.5	20	129
		19	18	0	2											1	0	1	0																	9	0	12	0															95	72	23	24.2	10	130
		4	2																																	4	0																	14	9	5	35.7	6	131
		1	2																	1	1							1	1			0	1			2	0	1	0					0	3			1	0					43	31	12	28.0	15	132
		0	1																	2	0											4	1			6	2							2	1	1	0	1	0					52	35	17	32.7	12	133
																																																						3	0	3	100.0	1	134
																																						8	1															9	8	1	11.1	1	135
																																						20	0															20	20	0	0.	1	136
																																						8	2															13	11	2	15.4	3	137
		2	1	0	1											0	1					0	1															0	1															9	4	5	55.6	6	138
																																						9	0															10	10	0	0.	2	139
																																																						3	2	1	33.3	2	140
												0	1	1	0			7	0							0	1	1	0	1	0											26	4			0	1					1	0	64	55	9	14.1	13	141
																				3	1											1	0											24	0			6	1					38	36	2	5.3	6	142
				1	1									1	0					12	1			1	0							1	0											25	1			3	0					51	47	4	7.8	11	143
1	1			1	0													3	0	3	0							3	1			1	0			1	0	1	0					20	6	2	0							55	46	9	16.4	19	144
	1																					2	0																											22	1			27	25	2	7.5	4	145
																						1	0																							3	0			18	2			24	22	2	8.3	3	146
2	2					1	1	3	0	0	1	1	3					16	0			9	1	1	0	2	2			1	4			1	0	1	0	1	0	1	0	1	1	1	0	10	3							120	96	24	20.0	28	147
				2	3	0	1			1	0	0	1	0	6	0	1	47	26			3	1	2	0	1	0	7	4	2	0													1	0	4	0					0	1	155	95	60	38.7	27	148
	1	1	2			4	2			1	0	1	0	0	1			4	1			2	0	2	0	2	3	1	0					1	0			4	4	1	0			1	2	4	6					0	2	115	78	37	32.2	29	149
		81	101	19	17																					0	2			0	6					11	129	42	47															674	205	469	69.6	9	150
	115		348		272		48		82		11		30		88		8		745		131		53		188		118		519		59		58		28		273		251		26		47		157		201		101		67		12	7271	....	....	....	....	
	80		157		186		34		68		10		19		73		5		691		111		49		179		62		465		36		41		23		133		187		26		40		124		163		92		62		7	....	5723	....	....	....	
	35		191		86		14		14		1		11		15		3		54		20		4		9		56		54		23		17		5		140		64		0		7		33		38		9		5		5	....	....	1548	....	....	
	0.4		54.9		31.6		29.2		17.1		9.1		36.7		17.0		37.5		7.2		15.3		7.5		4.8		47.5		10.4		39.0		29.3		17.9		51.3		25.5		0.		14.9		21.0		18.9		8.9		7.5		41.7	....	....	....	21.3	....	
22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48							

TABLE B.—GRADUATES OF 1907 EXAMI

Marginal Number.	NAME OF COLLEGE.	1 Alabama.		2 Arizona.		3 Arkansas.		4 California.		5 Colorado.		6 Connecticut.		7 Delaware.		8 Dist. of Col.		9 Florida.		10 Georgia.		11 Idaho.		12 Illinois.		13 Indiana.		14 Iowa.		15 Kansas.		16 Kentucky.		17 Louisiana.		18 Maine.		19 Maryland.		20 Massachusetts.		21 Michigan.	
		P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F
	ALABAMA.																																											
1	Birmingham Medical College.—R.	10	2																																									
2	Medical College of Alabama.—R.	23	1																1	0	1	0																						
3	Arkansas University Med. Department.—R.					1	0																																				
	CALIFORNIA.																																											
4	Cooper Medical College.—R.							17	6																																		
5	University of California, Medical Dept.—R.							16	1																																		
6	California Medical College.—E.																																											
7	Hahnemann Med. Coll. of the Pacific.—H.							2	0																																		
8	College of Physicians and Surgeons.—R.							2	3																																		
9	Oakland College of Med. and Surgery.—R.							2	0																																		
10	Univ. of Southern Cal., Coll. of Med.—R.			1	0			16	3																																		
11	Coll. of Phys. and Surg., Los Angeles.—R.							1	1																																		
	COLORADO.																																											
12	Denver and Gross College of Medicine.—R.									14	0																																
13	Westminster University Coll. of Med.—P.									5	0																																
14	Colorado School of Medicine, Boulder.—R.							1	0	12	0																																
	CONNECTICUT.																																											
15	Yale University Medical School.—R.											16	0																											1	0		
	DISTRICT OF COLUMBIA.																																											
16	George Washington Univ., Dept. of Med.—R.							1	0							21	6																					4	3	1	1		
17	Georgetown Univ., School of Medicine.—R.															5	0	1	0																			1	0	1	0		
18	Howard University, Medical Department.—R.															2	3			2	0									2	0	1	0					4	1				
	GEORGIA.																																											
19	Atlanta College of Phys. and Surgs.—R.	3	0															7	0	29	3																						
20	Georgia Coll. of Eclectic Med. and Surg.—E.																			11	1																						
21	Atlanta School of Medicine.—R.	0	1															1	0	16	1																						
22	Medical College of Georgia.—R.																			20	0																						
23	International Med. Miss. Coll.—R.																			1	0																						
	ILLINOIS.																																											
24	American Medical Missionary College.—R.	1	0																					1	0																		
25	Bennett Coll. of Eclectic Med. and Surg.—E.																					1	0	25	3	0	1	2	0	1	0												
26	College of Medicine and Surgery.—Ph.M.																							1	1																		
27	College of Phys. and Surg., Chicago.—R.							0	2									1	0			1	0	93	2	3	0	5	0														
28	Hahnemann Med. College and Hospital.—H.																							24	3	2	0			3	0											1	
29	Hering Medical College.—H.																							5	3																		
30	Illinois Medical College.—R.																							11	0	2	0	0	1					1	0							1	
31	Jenner Medical College.—R.																							15	4	0	1																
32	Northwestern University Med. School.—R.					1	0	2	0	2	0											2	0	101	0	2	0	5	2														
33	Rush Medical College.—R.			1	0					1	0													46	0	1	0																
34	National Medical University.—P.																							12	3																		
35	Chicago Coll. of Med. and Surgery.—R.																							31	4	1	0	2	0														
	INDIANA.																																											
36	Indiana Medical College.—R.									1	0															65	2																
37	Physio-Medical College of Indiana.—Ph.M.																							1	1	6	0																
38	Eclectic Medical College of Indiana.—E.																									2	1																
39	Indiana University, School of Med.—R.																							1	0	24	0																
	IOWA.																																											
40	Drake University, College of Medicine.—R.																											14	1														
41	Keokuk Med. Coll. of Phys. and Surg.—R.																											27	2														
42	Sioux City College of Medicine.—R.																											5	3														
43	State Univ. of Iowa Coll. of Medicine.—R.							0	1													1	0					51	1														
44	State Univ. of Iowa, Homeopathic Dept.—H.																											3	0														
	KANSAS.																																											
45	Kansas Medical College.—R.																													14	0												
46	University of Kansas, School of Med.—R.																													25	1												
	KENTUCKY.																																											
47	Hospital College of Medicine.—R.																							1	0	2	0					12	4	2	0							1	
48	Kentucky School of Medicine.—R.	2	0																					1	0	10	1	1	0			4	3										
49	Louisville Medical College.—R.	3	0															1	0							1	0			1	0	4	1	1	0								
50	Louisville National Medical College.—R.																			0	1											0	1										
51	Southwestern Homeopathic Med. Coll.—H.																																											
52	University of Louisville, Medical Dept.—R.	4	0			1	0											1	0	2	2			5	1	6	0			4	1	10	1	3	0								
	LOUISIANA.																																											
53	Flint Medical College.—R.																																	9	0								
54	Tulane University, Medical Department.—R.	3	0																															67	0								
	MAINE.																																											
55	Medical School of Maine, Bowdoin Coll.—R.																																			16	0						
	MARYLAND.																																											
56	Baltimore Medical College.—R.											1	1			0	1			1	0															1	0	8	6	10	5		
57	Baltimore University, School of Med.—R.																																					0	2	0	1		
58	Coll. of Phys. and Surgs. of Baltimore.—R.	1	0									2	0													1	0											8	1	3	2		
59	Johns Hopkins Medical School.—R.	2	0									1	0			0	1			1	0			1	0													26	1	1	0		
60	Atlantic Medical College.—P.																																					10	0				
61	University of Maryland, School of Med.—R.							0	2			1	1					1	0	2	0																	30	6				
62	Woman's Medical College of Baltimore.—R.																																					4	1				
63	Maryland Medical College.—R.											1	1	1	2																							0	6	0	1		
	MASSACHUSETTS.																																											
64	Boston University, School of Medicine.—H.											1	0			1	0																			1	0			5	1		
65	College of Physicians and Surgeons.—R.																																			1	0			8	4		
66	Harvard University Medical School.—R.																							1	0											1	0	1	0	38	1		
67	Tufts College Medical School.—R.																																			3	0			38	3		
	MICHIGAN.																																											
68	Detroit College of Medicine.—R.																																									63	3
69	Detroit Homeopathic Medical College.—H.																																									8	0
70	Univ. of Mich., Dept. of Med. and Surg.—R.	1	0																									1	0															47	0
71	Univ. of Michigan, Homeopathic Dept.—H.																									1	0															10	0
	MINNESOTA.																																											
72	Univ. of Minn., Coll. of Med. and Surg.—R.																																											
73	Univ. of Minnesota, Homeopathic Dept.—H.																																											
74	Minnesota College of Phys. and Surgs.—R.																																											
	MISSISSIPPI.																																											
75	Mississippi Medical College.—R.	1	0			0	1																																				
		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21	

R, Regular; H, Homeopathic; E, Eclectic; P, Panpathic.

	22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48		Totals.	Examined—Passed.	Examined—Failed.	Percentage of Failures.	No. of States Examined in.	Marginal Number.
	Minnesota.		Mississippi.		Missouri.		Montana.		Nebraska.		Nevada.		New Hamp.		New Jersey.		New Mexico.		New York.		N. Carolina.		North Dakota.		Ohio.		Oregon.		Pennsylvania.		Rhode Island.		S. Carolina.		South Dakota.		Tennessee.		Texas.		Utah.		Vermont.		Virginia.		Washington.		West Virginia.		Wisconsin.		Wyoming.							
	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F						
1																																																							12	10	2	16.7	1	1
2			0	2																																																	28	25	3	10.7	4	2
3																																																							1	1	0	0.	1	3
4																																																							23	17	6	26.1	1	4
5																																																							17	16	1	5.9	1	5
6																																																												6
7																																																							2	2	0	0.	1	7
8																																								1	0													6	3	3	50.0	2	8
9																																																							2	2	0	0.	1	9
10																																														4	0							24	21	3	12.5	3	10
11																																																							2	1	1	50.0	1	11
12			0	1							1	0					1	0											1	0																					1	0	1	0	20	19	1	5.0	5	12
13																																																							5	5	0	0.	1	13
14																																																							13	13	0	0.	2	14
15																																																							17	17	0	0.	2	15
16																													3	0					1	0									2	1			1	0					45	34	11	24.4	8	16
17																																																							8	8	0	0.	4	17
18					1	0									2	0													4	1									1	0					2	0			2	0					28	23	5	17.9	11	18
19			2	0																	2	0											3	0																					49	46	3	6.1	6	19
20																																																							12	11	1	8.3	1	20
21																																																							19	17	2	10.5	3	21
22																																	1	0																					21	21	0	0.	2	22
23																																																							1	1	0	0.	1	23
24																																																							2	2	0	0.	2	24
25	1	0							1	0													1	1					2	0																									39	34	5	12.8	9	25
26																																																							2	1	1	50.0	1	26
27	4	0			1	0			1	0							1	0							1	0									1	0											1	0	1	0	4	0	0	1	123	118	5	4.1	16	27
28																							1	0																							1	0			1	0			36	33	3	8.3	7	28
29																																																							8	5	3	37.5	1	29
30																																																			1	0			17	16	1	5.9	6	30
31																																																							20	15	5	25.0	2	31
32	2	0							1	0																	2	0											1	0	1	0					1	0							125	123	2	1.6	13	32
33	3	0			1	0																																	1	0	1	0													55	55	0	0.	8	33
34																	0	1											0	1																									17	12	5	29.4	3	34
35	0	1			0	1	1	0	1	0																			1	0																									43	37	6	14.0	8	35
36																																			1	0			1	0															70	68	2	2.9	4	36
37																																																							8	7	1	12.5	2	37
38																																																							3	2	1	33.3	1	38
39																																																							25	25	0	0.	2	39
40					1	0																																																	16	15	1	6.3	2	40
41																																																							29	27	2	6.9	1	41
42																																																							8	5	3	37.5	1	42
43							1	0																			1	1																			2	0							59	56	3	5.1	6	43
44																																															1	0							4	4	0	0.	2	44
45																																																							14	14	0	0.	1	45
46					3	0																																																	29	28	1	3.4	2	46
47					1	0																																	2	0					5	0			0	1					31	26	5	16.1	9	47
48					1	0																							0	1																			3	4					31	22	9	29.0	8	48
49			2	0																							0	1	2	1									2	0									2	0					22	19	3	13.6	11	49
50																																																							2	0	2	100.0	2	50
51					2	0																																																	2	2	0	0.	1	51
52			2	0																									2	0							3	0	1	0	1	0							11	0					61	56	5	8.2	15	52
53			0	5																																			0	1															15	9	6	40.0	3	53
54			5	3																													1	0					11	0															90	87	3	3.3	5	54
55																																																							16	16	0	0.	1	55
56	0	1							1	0			2	0	4	2			6	1	0	1					0	1	9	3	2	5	0	1									1	0	3	3			8	0					88	57	31	35.2	19	56
57																															0	1																							4	0	4	100.0	3	57
58																					3	0			1	0			9	1	1	1													3	0			18	0					55	50	5	9.1	11	58
59															1	0			4	0									9	0																			1	0					49	47	2	4.1	11	59
60																													1	0																			1	0					12	12	0	0.	3	60
61																					1	1			1	0			4	0	1	0													2	1			2	0					56	45	11	19.6	11	61
62																			2	0	1	0																																	8	7	1	12.5	3	62
63															1	1					0	1							6	4	0	1							1	1					1	0			3	0					32	14	18	56.2	11	63
64																			1	0											1	0																							11	10	1	9.1	6	64
65																															1	0																							14	10	4	28.6	3	65
66	0	1																	2	0											2	0																	1	0					48	46	2	4.2	8	66
67																															4	0																							48	45	3	6.3	3	67
68																																															1	0							67	64	3	4.5	2	68
69																																																							8	8	0	0.	1	69
70	2	0					1	0																																															52	52	0	0.	5	70
71																									1	0			1	0																									13	13	0	0.	4	71
72	31	4																					2	0																															37	33	4	10.8	2	72
73																																																												73
74	10	5																					1	0																															16	11	5	68.8	2	74
75			16	13																																																			31	17	14	45.2	3	75
	22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48							

TABLE B.—GRADUATES OF 1907 EXAMIN

		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21	
Marginal Number.	NAME OF COLLEGE.	Alabama.		Arizona.		Arkansas.		California.		Colorado.		Connecticut.		Delaware.		Dist. of Col.		Florida.		Georgia.		Idaho.		Illinois.		Indiana.		Iowa.		Kansas.		Kentucky.		Louisiana.		Maine.		Maryland.		Massachusetts.		Michigan.	
		P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F
	MISSOURI.																																										
76	University Medical College, Kansas City.—R																													15	4												
77	Kansas City Hahnemann Med. College.—H.																									1	0			5	0												
78	Eclectic Medical University.—E.																													7	0												
79	Ensworth Central Medical College.—R.																					1	0					2	1	16	0												
80	Barnes Medical College.—R.					2	1															1	0	19	2					4	1												
81	St. Louis University, Med. Department.—R.									1	0											1	0	25	1					1	0												
82	St. Louis Coll. of Phys. and Surgeons.—R.	1	0													0	1							21	2			0	1														
83	American Medical College.—E.																																										
84	Homeopathic Med. College of Missouri.—H.					2	0																	2	0																		
85	Washington University, Med. Dept.—R.					1	0																	21	0																		
86	University of Missouri, Dept. of Med.—R.																																										
	NEBRASKA.																																										
87	University of Nebraska, Coll. of Med.—R.																																										
88	John A. Creighton Medical College.—R.																																										
89	Lincoln Medical College.—E.																											9	5														
90	Nebraska College of Medicine.—R.																							1	0					1	0												
	NEW HAMPSHIRE.																																										
91	Dartmouth Medical College.—R.											1	0																											6	0		
	NEW YORK.																																										
92	Albany Medical College.—R.																																										
93	College of Physicians and Surgeons.—R.																																					0	1				
94	Cornell University Medical College.—R.							1	0															1	0											1	0			2	0		
95	Eclectic Med. Coll. of City of New York.—E.																							2	0																		
96	Long Island College Hospital.—R.											1	0																											1	0		
97	New York Homeo. Med. Coll. and Hosp.—H															1	0											2	0														
98	N. Y. Med. Coll. and Hosp. for Women.—H.																																										
99	Univ. and Bellevue Hosp. Med. Coll.—R.											1	0					1	0																					1	0		
100	Syracuse University, Coll. of Med.—R.																																										
101	University of Buffalo, Medical Dept.—R.																																										
	NORTH CAROLINA.																																										
102	Leonard School of Medicine.—R.																	2	0	1	0																	0	1				
103	North Carolina Medical College.—R.																																										
104	Univ. of North Carolina, Med. Dept.—R.	1	0															1	0																								
	OHIO.																																										
105	Western Reserve Univ., Med. Dept.—R.																																										
106	Cleveland College of Phys. and Surgs.—R.																																										
107	Cleveland Homeopathic Medical College.—H.																																										
108	Eclectic Medical Institute.—E.							1	0									2	0							2	0	1	0			1	0										
109	Medical College of Ohio—R.																									1	0					2	1										
110	Pulte Medical College.—H.																																										
111	Miami Medical College.—R.																																										
112	Starling Ohio Medical College.—R.																															1	0										
113	Toledo Medical College.—R.																							1	0					1	0												
	OREGON.																																										
114	University of Oregon, Med. Dept.—R.																																										
115	Willamette University Medical Dept.—R.																																										
	PENNSYLVANIA.																																										
116	Temple College of Medicine.—R.																																										
117	University of Penn., Dept. of Med.—R.											1	0											1	0	1	0									1	0	8	0				
118	Hahnemann Med. Coll. and Hospital.—H.															2	0											1	0									3	0	1	1		
119	Jefferson Medical College, Philadelphia.—R.							3	2					1	0					1	0	1	0					1	0									1	1	5	0		
120	Woman's Med. Coll. of Pennsylvania.—R.													1	0																							1	0	2	0		
121	Medico-Chirurgical Coll. of Philadelphia.—R.																							1	0													1	0				
122	Western Pennsylvania Med. Coll.—R.																																			1	0						
	SOUTH CAROLINA.																																										
123	Med. Coll. of the State of So. Carolina.—R.																																										
	TENNESSEE.																																										
124	Tennessee Medical College.—R.																																										
125	Knoxville Medical College.—R.																																										
126	University of Nashville. Med. Dept.—R.	12	1			1	0																	1	0									7	0								
127	Vanderbilt University, Med. Dept.—R.	3	0			1	0													1	0													1	0								
128	Univ. of Tennesse, Med. Department.—R.	5	1															1	0													1	2	1	0								
129	Meharry Medical College.—R.	3	0			0	8											6	0	10	1					1	0			3	2	2	1	2	0			0	2				
130	Memphis Hospital Medical College.—R.	6	1			1	1																											10	0								
131	Coll. of Phys. and Surgeons, Memphis.—R.					0	1													0	1													1	0								
132	University of the South, Medical Dept.—R.	1	0																	7	0																						
133	Chattanooga Medical College.—R.	10	0															2	0	2	2											0	2										
134	Univ. of West Tennessee, Med. Dept.—R.					0	2																																				
	TEXAS.																																										
135	Fort Worth University, Med. Dept.—R.																																										
136	University of Texas, Dept. of Medicine.—R.																																										
137	Baylor University, College of Medicine.—R.																																										
138	Gate City Med. Coll., Texarkana.—R.																			2	0																						
139	Southwestern Univ. Med. Coll., Dallas—R.			1	0																																						
140	Coll. of Phys. and Surgeons, Dallas.—R.																																	2	0								
	VERMONT.																																										
141	Univ. of Vermont, Medical Dept.—R.											1	0																											4	0		
	VIRGINIA.																																										
142	Medical College of Virginia.—R.																	1	0																								
143	University College of Medicine.—R.	1	0																																					1	0		
144	Univ. of Virginia, Dept. of Medicine.—R.	1	0																	1	0	2	0	1	0																		
	WISCONSIN.																																										
145	Milwaukee Medical College.—R.																							1	0																		
146	Wisconsin Coll. of Phys. and Surgs.—R.																																										
147	Canadian Colleges							1	0															2	0			3	0							9	0			1	1		
148	Foreign																																										
149	Miscellaneous Medical Colleges	1	0																					24	1																	6	3
	Totals by States	106		3		25		87		36		31		5		44		30		123		11		531		142		151		112		54		114		35		142		151		143	
	Totals—Examined—Passed	99		3		11		66		36		28		3		32		30		111		11		500		136		134		103		38		114		35		110		130		137	
	Totals—Examined—Failed	7		0		14		21		0		3		2		12		0		12		0		31		6		17		9		16		0		0		32		21		6	
	Percentage of Failures	6.6		0.		60.0		24.1		0.		97.0		40.0		27.3		0.		9.8		0.		5.8		4.2		11.3		8.0		29.6		0.		0.		22.5		13.9		4.2	
		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21	

22 Minnesota.		23 Mississippi.		24 Missouri.		25 Montana.		26 Nebraska.		27 Nevada.		28 New Hamp.		29 New Jersey.		30 New Mexico.		31 New York.		32 N. Carolina.		33 North Dakota		34 Ohio.		35 Oregon.		36 Pennsylvania.		37 Rhode Island.		38 S. Carolina.		39 South Dakota.		40 Tennessee.		41 Texas.		42 Utah.		43 Vermont.		44 Virginia.		45 Washington		46 West Virginia.		47 Wisconsin.		48 Wyoming.		Totals.	Examined—Passed.	Examined—Failed.	Percentage of Failures.	No. of States Examined in.	Marginal Number.
P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F						
				29	9											2	0																					1	0															60	47	13	21.7	4	76
				1	0																																									1	0							8	8	0	0.	4	77
				1	0																																																	8	8	0	0.	2	78
				5	0																																																	25	24	1	4.	4	79
		1	0	22	10																																	1	0							1	0							65	51	14	21.5	8	80
				22	1			1	0																													2	0							3	0	1	0					59	57	2	3.4	9	81
				6	7			1	0																													1	0															41	30	11	26.9	7	82
				3	3																																																	6	3	3	50.0	1	83
				3	1																																																	8	7	1	12.5	3	84
				30	4																																									3	0							59	55	4	6.8	4	85
				1	0																																																	1	1	0	0.	1	86
								18	0													2	0																															20	20	0	0.	2	87
								19	3																																					1	0							37	29	8	21.6	3	88
				0	1			8	4																																													15	10	5	33.3	4	89
1	0							2	1																																													4	3	1	25.0	2	90
												2	0																																									9	9	0	0.	3	91
																		29	2										1	0																										32	30	2	6.2	2	92
																		53	1	1	0			1	0					1	0												1	0											58	57	1	1.7	6	93
														1	0			52	0							1	0			1	0																								60	60	0	0.	8	94
																		10	0																																				12	12	0	0.	2	95
																		56	5					1	0																														64	59	5	7.8	4	96
																		20	1																																				24	23	1	4.2	3	97
																		4	0																																				4	4	0	0.	1	98
																		50	1																																				54	53	1	1.9	4	99
																		22	1										1	0																										24	23	1	4.2	2	100
																		40	0					3	0			1	0																										44	44	0	0.	3	101
		0	1																	8	0									1	0			1	1												6	4									26	19	7	73.1	8	102
																				12	2													1	3																						18	13	5	27.8	2	103
																				7	1													1	0																						11	10	1	9.1	4	104
																								10	0			1	0																										11	11	0	0.	2	105
																								12	1			1	0																										14	13	1	7.2	2	106
																		1	0					4	1			3	0																										9	8	1	11.1	3	107
0	1																							12	0			4	0																			2	0					26	25	1	3.8	9	108
																								29	0																													33	32	1	3.0	3	109
																								5	0			1	0																										6	6	0	0.	2	110
																								15	0																													16	16	0	0.	2	111
																								37	0																							1	0					40	40	0	0.	3	112
																								8	0																													8	8	0	0.	1	113
																										13	4																			5	0							22	18	4	18.2	2	114
																										3	15																			1	0							19	4	15	78.9	2	115
																												4	0																									4	4	0	0.	1	116
														10	0			2	0					2	0			73	0	2	0					1	0																		102	102	0	0.	11	117
														5	0			1	0					2	0			37	1																										54	52	2	3.7	8	118
														2	0			1	0	9	0			2	0			61	5	1	0													2	0					4	0					103	95	8	7.8	15	119
		1	0											7	0			4	0									12	0																										28	28	0	0.	7	120
														4	0													69	2													1	0							1	0							79	77	2	2.5	6	121
																								1	0			42	7																										51	44	7	13.7	3	122
																				1	0											15	3																						19	16	3	15.8	2	123
																																				10	3									0	1									14	10	4	28.6	2	124
																																																										125
		5	6																	1	0											2	0			7	0	6	0					1	0			1	0					51	44	7	13.7	11	126
																																1	0			15	0	2	0					1	0									25	25	0	0.	8	127
																				1	1															23	0																	36	32	4	11.1	6	128
																												0	1							9	0	2	3															57	39	18	31.6	12	129
		3	9																																	6	0	7	0															50	39	11	22.0	6	130
		12	13																																	4	0																	32	17	15	46.9	5	131
		4	2																																											0	2									16	12	4	25.0	4	132
																				1	0											3	1			4	2									0	1									30	22	8	26.7	8	133
																																																						2	0	2	100.0	1	134
																																						7	1															8	7	1	12.5	1	135
																																						17	0															17	17	0	0.	1	136
																																						7	2															9	7	2	22.2	1	137
		1	0																																			0	1															4	3	1	25.0	3	138
																																						8	0															9	9	0	0.	2	139
																																																						2	2	0	0.	1	140
														1	0													1	0													19	4											30	26	4	13.3	5	141
																				1	0																							20	0			5	0					27	27	0	0.	4	142
														1	0					11	1											1	0											24	1			3	0					44	42	2	4.5	7	143
				1	0															1	0									1	1			1	0							1	0					5	4									30	25	5	16.7	10	144
																						2	0																													21	1			25	24	1	4.0	3	145
																																																		17	2			19	17	2	10.5	1	146
1	0							1	0											1	0			1	0	1	0																							1	0							23	22	1	4.4	11	147
																																																										148
																																																						35	31	4	11.4	3	149
68		109		172		4		62		1		4		42		5		372		69		11		151		42		397		25		40		3		87		92		5		27		103		28		76		48		2		4121	....	....	....	....	
55		54		135		4		54		1		4		39		4		361		61		10		149		20		368		17		31		3		82		83		5		23		85		28		71		45		1		....	3660	....	....	....	
13		55		37		0		8		0		0		3		1		11		8		1		2		22		29		8		9		0		5		9		0		4		18		0		5		3		1		....	....	461	....	....	
19.1		50.5		21.5		0.		12.9		0.		0.		7.1		20.0		3.0		11.6		9.1		1.3		52.4		7.3		32.0		22.5		0.		5.7		9.8		0.		14.8		17.5		0.		6.6		6.3		50.0		....	....	....	11.2	....	
22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48							

TABLE C.—GRADUATES OF 1902 TO 1907 INCLUS

Marginal Number.	NAME OF COLLEGE.	1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21	
		Alabama.		Arizona.		Arkansas.		California.		Colorado.		Connecticut.		Delaware.		Dist. of Col.		Florida.		Georgia.		Idaho.		Illinois.		Indiana.		Iowa.		Kansas.		Kentucky.		Louisiana.		Maine.		Maryland.		Massachusetts.		Michigan	
		P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F
	ALABAMA.																																										
1	Birmingham Medical College.—R.	16	2															1	0	1	0																						
2	Medical College of Alabama.—R.	26	2															2	0	1	0																						
	ARKANSAS.																																										
3	Arkansas University Med. Department.—R.					1	0											1	0																								
	CALIFORNIA.																																										
4	Cooper Medical College.—R.							19	7																																		
5	University of California, Medical Dept.—R.							17	1																																		
6	California Medical College.—E.							1	1																																		
7	Hahnemann Med. Coll. of the Pacific.—H.							2	0																																		
8	College of Physicians and Surgeons.—R.							6	7																																		
9	Oakland College of Med. and Surgery.—R.							2	0																																		
10	Univ. of Southern Cal., Coll. of Med.—R.			1	0			21	7															1	0																		
11	Coll. of Phys. and Surg., Los Angeles.—R.							1	1																																		
	COLORADO.																																										
12	Denver and Gross College of Medicine.—R.							4	0	15	0													1	0																		
13	Westminster University Coll. of Med.—P.									5	0																																
14	Colorado School of Medicine, Boulder.—R.							1	0	14	0											1	0																				
	CONNECTICUT.																																										
15	Yale University Medical School.—R.									1	0	23	0			1	0																					1	0	3	0		
	DISTRICT OF COLUMBIA.																																										
16	George Washington Univ., Dept. of Med.—R.					1	0	1	0							31	16																					7	3	1	1		
17	Georgetown Univ., School of Medicine.—R.															10	4	1	0																			8	0	3	0		
18	Howard University, Medical Department.—R.							0	1							7	7			4	0			2	0					2	0	1	0					5	2	1	0		
	GEORGIA.																																										
19	Atlanta College of Phys. and Surgs.—R.	4	0															9	0	29	3																						
20	Georgia Coll. of Eclectic Med. and Surg.—E.																			11	1																						
21	Atlanta School of Medicine.—R.	0	1															2	0	16	1																						
22	Medical College of Georgia.—R.																	0	1	21	0																						
23	International Med. Miss. Coll.—R.																			1	0																						
	ILLINOIS.																																										
24	American Medical Missionary College.—R.	1	0																			1	0	3	0													1	0	1	1		
25	Bennett Coll. of Eclectic Med. and Surg.—E.							0	2													1	0	25	3	0	1	2	0	1	0												
26	College of Medicine and Surgery.—Ph.M.																							1	1																		
27	College of Phys. and Surg., Chicago.—R.	1	0					1	3	0	1							2	0			2	0	96	3	5	1	5	0											0	1		
28	Hahnemann Med. College and Hospital.—H.							0	1			1	0											25	5	3	0			3	0											1	0
29	Hering Medical College.—H.									1	0													5	3																		
30	Illinois Medical College.—R.					1	0																	12	1	3	1	0	1					1	0							1	0
31	Jenner Medical College.—R.																							16	6	0	1																
32	Northwestern University Med. School.—R.					1	0	1	1	2	0							2	0			5	0	105	0	5	0	6	2											1	0		
33	Rush Medical College.—R.			5	0	1	0	3	0	2	0											1	0	59	0	5	0																
34	National Medical University.—P.																							13	4															0	1		
35	Chicago Coll. of Med. and Surgery.—R.																							31	4	4	0	2	0														
	INDIANA.																																										
36	Indiana Medical College.—R.			1	0					1	1													1	0	67	5																
37	Physio-Medical College of Indiana.—Ph.M.																							1	1	6	0																
38	Eclectic Medical College of Indiana.—E.																									3	2																
39	Indiana University, School of Med.—R.																							1	0	24	0																
	IOWA.																																										
40	Drake University, College of Medicine.—R.																											11	1														
41	Keokuk Med. Coll. of Phys. and Surg.—R.			1	0																	1	0					28	3														
42	Sioux City College of Medicine.—R.																											5	3														
43	State Univ. of Iowa Coll. of Medicine.—R.							0	1													1	0					51	1														
44	State Univ. of Iowa, Homeopathic Dept.—H.																											3	0														
	KANSAS.																																										
45	Kansas Medical College.—R.																													14	0												
46	University of Kansas, School of Med.—R.									1	0																			14	0												
	KENTUCKY.																																										
47	Hospital College of Medicine.—R.																	1	0					1	1	3	1					13	4	4	1							1	0
48	Kentucky School of Medicine.—R.	2	1																					1	0	11	1	1	0			4	3			1	1			1	1		
49	Louisville Medical College.—R.	3	0			1	0											1	0							2	0			1	0	8	1	3	0								
50	Louisville National Medical College.—R.																			0	1											0	1										
51	Southwestern Homeopathic Med. Coll.—H.					1	0																															0	1				
52	University of Louisville, Medical Dept.—R.	5	0			2	0	0	1									1	0	2	2			6	1	6	1			4	1	10	1	5	0								
	LOUISIANA.																																										
53	Flint Medical College.—R.																																	11	1								
54	Tulane University, Medical Department.—R.	4	0																	1	0													69	0								
	MAINE.																																										
55	Medical School of Maine, Bowdoin Coll.—R.																																			16	0			2	0		
	MARYLAND.																																										
56	Baltimore Medical College.—R.							0	1			2	3			0	2			2	0							1	1							3	0	9	7	16	12		
57	Baltimore University, School of Med.—R.																			0	1													1	1			0	3	1	6		
58	Coll. of Phys. and Surgs. of Baltimore.—R.	2	0									2	0													1	0									0	1	10	1	3	2		
59	Johns Hopkins Medical School.—R.	5	0	1	0							3	0			1	1			2	0			1	0			1	0			2	0					31	1	3	0	1	0
60	Atlantic Medical College.—P.																																					10	0				
61	University of Maryland, School of Med.—R.	2	0					0	2			1	1			0	1	2	0	3	0									1	0							32	7	1	0		
62	Woman's Medical College of Baltimore.—R.																																					6	1				
63	Maryland Medical College.—R.									0	1	2	1	1	2					1	0																	0	8	0	1		
	MASSACHUSETTS.																																										
64	Boston University, School of Medicine.—H.											1	0			1	0																			4	0			11	1		
65	College of Physicians and Surgeons.—R.							0	1			0	1																							4	0			9	7		
66	Harvard University Medical School.—R.							1	1			1	0											1	0											5	0	1	0	50	1		
67	Tufts College Medical School.—R.							0	1			1	1											1	0											8	0			48	4		
	MICHIGAN.																																										
68	Detroit College of Medicine.—R.																																									67	3
69	Detroit Homeopathic Medical College.—H.																																									9	0
70	Univ. of Mich., Dept. of Med. and Surg.—R.	1	0	1	0			1	1									1	0							2	0	1	0	1	0	1	0					1	0	1	0	48	0
71	Univ. of Michigan, Homeopathic Dept.—H.																									1	0															10	0
	MINNESOTA.																																										
72	Univ. of Minn., Coll. of Med. and Surg.—R.																																										
73	Univ. of Minnesota, Homeopathic Dept.—H.																																										
74	Minnesota College of Phys. and Surgs.—R.																					1	0																				
	MISSISSIPPI.																																										
75	Mississippi Medical College.—R.	1	0																																								
		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21	

R, Regular; H, Homeopathic; E, Eclectic; P, Panpathic.

22 Minnesota.		23 Mississippi.		24 Missouri.		25 Montana.		26 Nebraska.		27 Nevada.		28 New Hamp.		29 New Jersey.		30 New Mexico.		31 New York.		32 N. Carolina.		33 North Dakota.		34 Ohio.		35 Oregon.		36 Pennsylvania.		37 Rhode Island.		38 S. Carolina.		39 South Dakota.		40 Tennessee.		41 Texas.		42 Utah.		43 Vermont.		44 Virginia.		45 Washington.		46 West Virginia.		47 Wisconsin.		48 Wyoming.		Totals.	Examined—Passed.	Examined—Failed.	Percentage of Failures.	No. of States Examined in.	Marginal Number.
P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F						
																																																						14	12	2	14.3	3	1
		1	2																																																			34	30	4	11.8	4	2
																																																						2	2	0	0.	2	3
										1	0																																											27	20	7	25.9	2	4
						0	1											1	0																																			20	18	2	10.0	3	5
																																														1	2							5	2	3	60.0	2	6
																																																						2	2	0	0.	1	7
																																								1	0															14	7	7	50.0	2	8
																																																						2	2	0	0.	1	9
																																												1	0	4	0							35	28	7	20.0	5	10
																																														1	0							3	2	1	33.3	2	11
		0	1							1	0					1	0													1	0									1	0	1	0					1	1			1	0	1	0	27	25	2	7.5	12	12
																																																						5	5	0	0.	1	13
																										1	0															2	0													19	19	0	0.	5	14
																		8	0					1	0					1	0																									39	39	0	0.	8	15
		1	0															1	0	3	0							4	0					1	0	2	0	2	0	1	0			5	1			1	0					83	62	21	25.3	15	16
																		2	0							1	0	2	0																									26	22	4	15.4	7	17
				1	0									3	0					1	0							6	2			1	0					1	0					2	0			2	0					51	39	12	41.2	16	18
		2	1																	2	0											3	0													1	0							54	50	4	7.4	7	19
																																																						12	1	1	8.3	1	20
																																																						20	18	2	10.0	3	21
																										1	0					2	2																					27	24	3	11.1	4	22
																																																						1	1	0	0.	1	23
						2	0											1	0					1	0																													12	11	1	8.3	8	24
1	0			0	1			1	0									1	0			1	1			0	2	2	0					1	1																			47	36	11	23.4	14	25
																																																						2	1	1	50.0	1	26
6	1			2	1	2	0	1	0							1	0					1	0	1	0	0	3							4	0			2	0	1	0					11	0	1	0	6	0	0	1	166	151	15	9.0	24	27
1	0					0	1			1	0			1	0			1	1			1	0																							4	0			1	0			51	43	8	15.7	14	28
																																																						9	6	3	33.3	2	29
																						1	0	1	0																									1	1			25	21	4	16.0	9	30
																																						2	0															25	18	7	28.0	3	31
3	0			2	0	2	0	1	0					1	0											3	0							4	0			1	0	2	0					9	0							159	156	3	1.9	19	32
5	1			3	0	1	0	2	0									2	0							2	0											1	0	3	0					5	1			2	0			104	102	2	1.9	17	33
				1	1											0	1											0	1																	0	1							23	14	9	39.1	6	34
0	2			0	1	1	0	1	0																	0	1	1	0					1	1											2	0							52	43	9	17.3	11	35
																																		1	1			1	0							1	0							80	73	7	8.7	7	36
																																																						8	7	1	12.5	2	37
																																																						5	3	2	40.0	1	38
																																																						25	25	0	0.	2	39
				1	0																																																	16	15	1	6.3	2	40
																										1	0											1	0							1	0							36	33	3	8.3	6	41
0	1					0	1	0	1																																													11	5	6	54.5	4	42
						1	0																			1	1							1	0			1	0							3	0							62	59	3	4.8	8	43
																																														1	0							4	4	0	0.	2	44
																																																						14	14	0	0.	1	45
				3	0																																									1	0							31	30	1	3.2	4	46
		1	2	1	0															0	1																	3	0					6	1	1	0	1	1					48	36	12	25.0	13	47
				1	0																					1	0	0	2									1	0							2	0	6	5					45	31	14	31.1	13	48
		4	1			0	1																			0	2	2	1									4	0							2	1	3	0					41	34	7	17.1	14	49
																																																						2	0	2	100.0	2	50
																																																						2	1	1	50.0	2	51
0	1	2	1	2	0									1	1			2	0	0	1							5	0							5	1	2	1	2	0							13	0					88	75	13	14.8	21	52
		0	9																																			0	1															22	11	11	50.0	3	53
		6	4																													1	0					13	0															98	94	4	4.1	6	54
																		1	0																											1	0							20	20	0	0.	4	55
0	1					1	0	1	0			4	2	7	3			12	2	0	1					0	1	11	3	2	6	0	1									2	0	3	4			8	0					134	84	50	37.1	22	56
		0	1									0	1	0	1															1	3																	0	2					22	3	19	86.4	9	57
						1	0							2	1			4	0	4	0			2	0			16	2	1	1	0	1											3	0	1	0	19	0					80	71	9	11.2	17	58
1	0													3	0			14	0	3	0			1	0			12	0																	2	0	2	0					91	89	2	2.2	19	59
																												1	0																			1	0					12	12	0	0.	3	60
												1	1	2	0			1	0	7	2			1	1			6	1	1	0	2	0											4	2			3	0					88	70	18	20.5	19	61
						1	0											2	0	1	0																																	11	10	1	9.1	4	62
														1	1					0	1							7	5	0	2	0	1					3	1			0	1	2	0			6	0					48	23	25	52.1	15	63
												1	0					3	0									1	0	1	0																							24	23	1	4.0	8	64
												1	0					2	1									1	0	2	0											2	0											31	21	10	32.3	9	65
0	1			1	0													10	0					2	0	2	0	2	0	5	0															6	0	1	0					91	88	3	3.3	15	66
				1	0							1	0																	4	0											0	1							1	0			72	65	7	9.7	10	67
						1	0											1	0							0	1	0	1																	1	1							76	70	6	7.9	6	68
																																																						9	9	0	0.	1	69
2	0					1	0			1	0							1	0							1	0											1	0	1	0					3	0							71	70	1	1.4	19	70
																								1	0			1	0																	2	0							15	15	0	0.	5	71
37	7					4	1															12	0																							6	0			1	0			68	60	8	11.8	5	72
																																																											73
14	10					1	0															5	0																							1	1							33	22	11	33.3	5	74
		16	13																																																			31	17	14	45.2	3	75
22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48							

TABLE C.—GRADUATES OF 1902 TO 1907 INCLUSIV

Marginal Number.	NAME OF COLLEGE.	1 Alabama. P	F	2 Arizona. P	F	3 Arkansas. P	F	4 California. P	F	5 Colorado. P	F	6 Connecticut. P	F	7 Delaware. P	F	8 Dist. of Col. P	F	9 Florida. P	F	10 Georgia. P	F	11 Idaho. P	F	12 Illinois. P	F	13 Indiana. P	F	14 Iowa. P	F	15 Kansas. P	F	16 Kentucky. P	F	17 Louisiana. P	F	18 Maine. P	F	19 Maryland. P	F	20 Massachusetts. P	F	21 Michigan. P	F
	MISSOURI.																																										
76	University Medical College, Kansas City.—R.							0	1																			0	2	19	4												
77	Kansas City Hahnemann Med. College.—H.																					1	1			1	0			5	0												
78	Eclectic Medical University.—E.																													8	0												
79	Ensworth Central Medical College.—R.																					1	0					2	1	18	0												
80	Barnes Medical College.—R.			0	2	2	1															2	0	20	4					5	8	0	1										
81	St. Louis University, Med. Department.—R.					1	0			1	0											2	1	26	1	1	0	1	0	1	0			1	0								
82	St. Louis Coll. of Phys. and Surgeons.—R.	1	0			1	0									0	1							22	3			0	1											0	1		
83	American Medical College.—E.							0	1																																		
84	Homeopathic Med. College of Missouri.—H.					2	0																	3	0																	0	1
85	Washington University, Med. Dept.—R.					1	0	1	0													0	1	25	0																		
86	University of Missouri, Dept. of Med.—R.																	1	0																								
	NEBRASKA.																																										
87	University of Nebraska, Coll. of Med.—R.																							1	0					1	0												
88	John A. Creighton Medical College.—R.																											10	6	0	1												
89	Lincoln Medical College.—E.																							1	0					2	0												
90	Nebraska College of Medicine.—R.																																										
	NEW HAMPSHIRE.																																										
91	Dartmouth Medical College.—R.											3	0																							2	0			7	0		
	NEW YORK.																																										
92	Albany Medical College.—R.																																										
93	College of Physicians and Surgeons.—R.									1	0	3	0											1	0											1	0	0	1	4	0		
94	Cornell University Medical College.—R.							1	0									1	0					2	0											1	0			3	0		
95	Eclectic Med. Coll. of City of New York.—E.																																										
96	Long Island College Hospital.—R.			1	0							1	0																											1	0		
97	New York Homeo. Med. Coll. and Hosp.—H							0	1			2	0			1	0											2	0														
98	N. Y. Med. Coll. and Hosp. for Women.—H.																																										
99	Univ. and Bellevue Hosp. Med. Coll.—R.							1	1			2	0					1	0	1	0			2	0															1	0		
100	Syracuse University, Coll. of Med.—R.																																										
101	University of Buffalo, Medical Dept.—R.																																										
	NORTH CAROLINA.																																										
102	Leonard School of Medicine.—R.	3	1													0	1	2	0	2	1																	0	1				
103	North Carolina Medical College.—R.																																										
104	Univ. of North Carolina, Med. Dept.—R.	1	0															1	0																								
	OHIO.																																										
105	Western Reserve Univ., Med. Dept.—R.																																										
106	Cleveland College of Phys. and Surgs.—R.							1	0																																		
107	Cleveland Homeopathic Medical College.—H.																																										
108	Eclectic Medical Institute.—E.							1	0									2	0					3	0	2	1	1	0			1	0										
109	Medical College of Ohio—R.																	1	0							2	0					2	1										
110	Pulte Medical College.—H.																																										
111	Miami Medical College.—R.																	1	0							1	0					2	0									1	0
112	Starling Ohio Medical College.—R.																							1	0					1	0											1	0
113	Toledo Medical College.—R.																																										
	OREGON.																																										
114	University of Oregon, Med. Dept.—R.																																										
115	Willamette University Medical Dept.—R.																																										
	PENNSYLVANIA.																																										
116	Temple College of Medicine.—R.																																										
117	University of Penn., Dept. of Med.—R.			1	0			2	1			1	0			1	0	1	0					1	0	1	0					1	0			2	0	10	0	1	0		
118	Hahnemann Med. Coll. and Hospital.—H.							1	0							2	0											1	0									3	0	2	1		
120	Woman's Med. Coll. of Pennsylvania.—R.			1	0			3	2			2	0	2	0			1	0	1	0	1	0	3	0			2	0							2	0	1	2	7	0		
119	Jefferson Medical College, Philadelphia.—R.													1	0					1	0																	2	0	5	2		
121	Medico-Chirurgical Coll. of Philadelphia.—R.							0	2			1	0									1	0	1	0									1	0	1	0	2	1	0	1		
122	Western Pennsylvania Med. Coll.—R.																											1	1							1	0						
	SOUTH CAROLINA.																																										
123	Med. Coll. of the State of So. Carolina.—R.																	0	1																								
	TENNESSEE.																																										
124	Tennessee Medical College.—R.																																										
125	Knoxville Medical College.—R.																			1	1																						
126	University of Nashville, Med. Dept.—R.	15	1			1	0																	1	0							0	1	8	0								
127	Vanderbilt University, Med. Dept.—R.	3	0			1	0													2	0													1	0								
128	Univ. of Tennesse, Med. Department.—R.	6	1			0	2											1	0													1	2	1	0								
129	Meharry Medical College.—R.	4	0			2	11											7	0	12	1					1	0			4	3	2	1	5	2			0	2			1	0
130	Memphis Hospital Medical College.—R.	7	1			1	1											1	0															18	0								
131	Coll. of Phys. and Surgeons, Memphis.—R.	0	1			0	1													0	1													1	0								
132	University of the South, Medical Dept.—R.	2	0			1	0											2	1	11	1													6	0	1	0			0	1		
133	Chattanooga Medical College.—R.	11	2															2	0	3	5											0	2	2	0								
134	Univ. of West Tennessee, Med. Dept.—R.					0	3																																				
	TEXAS.																																										
135	Fort Worth University, Med. Dept.—R.																																										
136	University of Texas, Dept. of Medicine.—R.																																										
137	Baylor University, College of Medicine.—R.																			1	0													2	0								
138	Gate City Med. Coll., Texarkana.—R.																			2	0																						
139	Southwestern Univ. Med. Coll., Dallas—R.			1	0																																						
140	Coll. of Phys. and Surgeons, Dallas.—R.					0	1																											2	0								
	VERMONT.																																										
141	Univ. of Vermont, Medical Dept.—R.											3	0					1	0																					10	2		
	VIRGINIA.																																										
142	Medical College of Virginia.—R.																	1	0																								
143	University College of Medicine.—R.	1	0															1	0			0	1																	1	0		
144	Univ. of Virginia, Dept. of Medicine.—R.	1	0			2	0									0	1	1	0	1	0	2	0	1	0	1	0							1	0								
	WISCONSIN.																																										
145	Milwaukee Medical College.—R.																							1	0																		
146	Wisconsin Coll. of Phys. and Surgs.—R.																																										
147	Canadian Colleges							2	0	1	0	0	1									2	0	5	0			5	0							14	0			6	4		
148	Foreign							1	2	1	0	0	1											2	1													1	0	3	1		
149	Miscellaneous Medical Colleges	1	1	1	0																			24	2					2	0											5	3
	Totals by States	137		17		45		145		49		64		6		89		58		152		30		599		176		168		131		66		148		68		177		258		153	
	Totals—Examined—Passed	123		15		24		93		46		55		4		55		55		133		26		555		161		145		118		48		143		66		136		206		146	
	Totals—Examined—Failed	14		2		21		52		3		9		2		34		3		19		4		44		15		23		13		18		5		2		41		52		7	
	Percentage of Failures	10.2		11.8		46.7		35.9		6.1		14.1		33.3		38.2		5.2		12.5		13.3		7.3		8.5		13.7		9.9		27.3		3.4		2.9		23.2		20.2		4.5	
		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21	

22 Minnesota.		23 Mississippi.		24 Missouri.		25 Montana.		26 Nebraska.		27 Nevada.		28 New Hamp.		29 New Jersey.		30 New Mexico.		31 New York.		32 N. Carolina.		33 North Dakota.		34 Ohio.		35 Oregon.		36 Pennsylvania.		37 Rhode Island.		38 S. Carolina.		39 South Dakota.		40 Tennessee.		41 Texas.		42 Utah.		43 Vermont.		44 Virginia.		45 Washington.		46 West Virginia.		47 Wisconsin.		48 Wyoming.		Totals.	Examined—Passed.	Examined—Failed.	Percentage of Failures.	No. of States Examined in.	Marginal Number.
P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F						
				29	9					2	0					2	0	0	1	1	0					0	2											2	0	1	0											1	0	76	57	19	25.0	12	76
				1	0																																									1	0							10	9	1	10.0	5	77
				1	0																																	0	1															10	9	1	10.0	3	78
				5	2																					0	1																			0	1							31	26	5	16.1	6	79
		2	0	24	14			2	3																	0	2							0	1			1	0							1	1	1	0	0	1			93	60	33	35.5	15	80
				26	5	1	0	1	0																													2	0							3	0	1	0					75	68	7	9.3	14	81
				8	12			1	0																			0	2									2	0							0	1							56	35	21	37.5	11	82
				4	5																																																	11	4	7	63.6	3	83
				3	1																																																	9	8	1	11.1	3	84
		1	1	32	5													1	0															1	0			1	0	1	0					3	0							74	67	7	9.5	11	85
				1	0	1	0																																															3	3	0	0.	3	86
								20	0													2	0																															24	24	0	0.	4	87
						1	0	19	5													1	0																	1	0					1	0							45	33	12	26.7	7	88
				0	1			8	4													1	0			1	0							1	0																			19	14	5	26.3	7	89
1	0							2	1																																													4	3	1	25.0	2	90
												6	1					3	0																							1	0											23	22	1	4.4	6	91
												1	0					39	2									1	0																									43	41	2	4.7	3	92
1	0													1	0			106	1	1	0			1	0			1	0	1	0					1	0					1	0							1	0			127	125	2	1.6	16	93
														1	0			68	0					1	0	1	0			1	0																							80	80	0	0.	10	94
																		11	0																																			11	11	0	0.	1	95
														1	0			76	5					1	0					1	1																							88	82	6	6.8	7	96
																		28	1					1	0					1	0																							37	35	2	5.4	7	97
																		5	0																																			5	5	0	0.	1	98
																		67	1					1	0															1	0													79	77	2	2.5	9	99
																		26	1									1	0																	1	0							29	28	1	3.4	3	100
																		54	0					3	0			2	0											1	0													60	60	0	0.	4	101
		0	1																	11	1							4	1			1	2					1	0					8	8									49	32	17	34.7	11	102
																				13	4											2	4											1	1									25	16	9	36.0	3	103
																				10	1											1	0																					14	13	1	7.2	4	104
																								10	0			1	0																									11	11	0	0.	2	105
																								13	1			1	0																									16	15	1	6.3	3	106
																		2	0					5	1	1	0	4	0																									13	12	1	7.7	4	107
0	1																							13	1			4	1																			2	0					33	29	4	12.1	10	108
																								29	0			1	0																	1	0	1	0					38	37	1	2.6	7	109
																								5	0			1	0																									6	6	0	0.	2	110
0	1																							17	0			1	0																	1	0							25	24	1	4.0	8	111
																		2	1					39	3			0	1									1	0									1	0					51	46	5	9.8	8	112
																								8	0																													8	8	0	0.	1	113
																										14	7																			9	0							30	23	7	23.3	2	114
																										6	18																			2	1							27	8	19	70.4	2	115
																										1	0	5	0																									6	6	0	0.	2	116
														14	0			10	0	4	0			3	0			85	0	3	0					2	0	1	0							1	0	1	0	2	0			149	148	1	0.7	22	117
														6	0			1	0					2	0			41	1													1	0	0	1									63	60	3	4.8	11	118
				1	0	3	0							5	0			6	0	10	0	1	0	3	0	1	0	71	6	1	0			1	0							3	0			2	1	5	0	1	0			151	140	11	7.3	27	119
		1	0											8	0			5	0									14	0					1	0																					40	38	2	5.0	9	120
														5	0			3	0	2	0							79	3											1	0					3	0							107	100	7	6.5	14	121
																								2	0			46	9																			1	0					61	51	10	16.4	5	122
																				2	0									1	0	17	3											1	0									25	21	4	16.0	5	123
																				1	1															12	4							0	1									19	13	6	31.6	3	124
		0	1																													0	1			0	1																	5	1	4	80.0	4	125
		6	10																	1	0					1	0					2	0			11	0	8	0					1	0			1	0					68	56	12	17.6	13	126
																				1	0											1	0			18	0	4	0					1	0									32	32	0	0.	9	127
																				2	2															25	0	1	0															44	37	7	15.9	8	128
		3	14	1	1															1	0			0	1			0	1			1	0			12	3	2	4					0	1									103	58	45	43.7	19	129
		15	18	0	2											1	0																			9	0	11	0															85	63	22	25.9	9	130
		4	2																																	4	0																	14	9	5	35.7	6	131
		1	2																	1	1							1	1			0	1			2	0	1	0					0	3			1	0					41	30	11	26.9	15	132
		0	1																	1	0											4	1			6	2							2	1	1	0	1	0					47	33	14	29.8	12	133
																																																						3	0	3	100.0	1	134
																																						8	1															9	8	1	11.1	1	135
																																						20	0															20	20	0	0.	1	136
																																						8	2															13	11	2	15.4	3	137
		2	1	0	1											0	1					0	1															0	1															9	4	5	55.6	6	138
																																						9	0															10	10	0	0.	2	139
																																																						3	2	1	33.3	2	140
												0	1	1	0			7	0							0	1	1	0	1	0											26	4											58	50	8	13.8	10	141
																				3	1											1	0											24	0			6	1					37	35	2	5.4	5	142
														1	0					11	1											1	0											24	1			3	0					46	43	3	6.5	9	143
1	1			1	0													2	0	3	0							3	1			1	0			1	0	1	0					20	6	2	0							54	45	9	16.7	19	144
0	1																					2	0																											22	1			27	25	2	7.5	4	145
																						1	0																							3	0			18	2			24	22	2	8.3	3	146
2	2					1	1	3	0	0	1	1	2					12	0			8	1	1	0	0	1			1	3			1	0	1	0	1	0			1	1	1	0	5	1							92	74	18	19.6	24	147
										1	0	0	1	0	5			17	13			2	1	2	0	1	0	5	3																	2	0							66	38	28	42.4	15	148
0	1	1	2			2	0											4	0					2	0	0	1											3	2					0	1	2	1							61	47	14	22.9	14	149
107		157		218		34		77		8		25		76		7		655		118		43		181		85		502		45		58		22		122		142		20		44		141		133		101		62		3		5922	....	....	....	....	
75		69		156		28		63		7		16		64		5		625		100		39		173		41		454		29		41		18		111		128		20		37		109		118		92		57		2		....	5030	....	....	....	
32		88		62		6		14		1		9		12		2		30		18		4		8		44		48		16		17		4		11		14		0		7		32		15		9		5		1		....	....	892	....	....	
29.9		56.1		28.4		17.6		18.2		12.5		36.0		15.8		28.6		4.6		15.3		9.3		4.4		51.8		9.6		35.6		29.3		18.2		9.0		9.9		0.		15.9		22.7		11.3		8.9		8.1		33.3		....	....	....	15.1	....	
22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48							

TABLE D.—GRADUATES OF 1901 AND PREVIO

Marginal Number.	NAME OF COLLEGE.	1 Alabama. P	F	2 Arizona. P	F	3 Arkansas. P	F	4 California. P	F	5 Colorado. P	F	6 Connecticut. P	F	7 Delaware. P	F	8 Dist. of Col. P	F	9 Florida. P	F	10 Georgia. P	F	11 Idaho. P	F	12 Illinois. P	F	13 Indiana. P	F	14 Iowa. P	F	15 Kansas. P	F	16 Kentucky. P	F	17 Louisiana. P	F	18 Maine. P	F	19 Maryland. P	F	20 Massachusetts. P	F	21 Michigan. P	F
	ALABAMA.																																										
1	Birmingham Medical College.—R	1	0																																								
2	Medical College of Alabama.—R					1	0																																				
	ARKANSAS.																																										
3	Arkansas University Med. Department.—R																																										
	CALIFORNIA.																																										
4	Cooper Medical College.—R																																										
5	University of California, Medical Dept.—R			1	0																																						
6	California Medical College.—E			1	0																																						
7	Hahnemann Med. Coll. of the Pacific.—H																																										
8	College of Physicians and Surgeons.—R																																										
9	Oakland College of Med. and Surgery.—R																																										
10	Univ. of Southern Cal., Coll. of Med.—R																																										
11	Coll. of Phys. and Surg., Los Angeles.—R																																										
	COLORADO.																																										
12	Denver and Gross College of Medicine.—R																					1	0																				
13	Westminster University Coll. of Med.—P																																										
14	Colorado School of Medicine, Boulder.—R																																										
	CONNECTICUT.																																										
15	Yale University Medical School.—R																																										
	DISTRICT OF COLUMBIA.																																										
16	George Washington Univ., Dept. of Med.—R															1	0																										
17	Georgetown Univ., School of Medicine.—R							0	1																																		
18	Howard University, Medical Department.—R							0	1									1	0	1	0																						
	GEORGIA.																																										
19	Atlanta College of Phys. and Surgs.—R																			1	0							1	0														
20	Georgia Coll. of Eclectic Med. and Surg.—E																																										
21	Atlanta School of Medicine.—R																																										
22	Medical College of Georgia.—R																																										
23	International Med. Miss. Coll.—R																																										
	ILLINOIS.																																										
24	American Medical Missionary College.—R																																										
25	Bennett Coll. of Eclectic Med. and Surg.—E																									1	0																
26	College of Medicine and Surgery.—Ph.M																																										
27	College of Phys. and Surg., Chicago.—R							0	1															2	0	1	0																
28	Hahnemann Med. College and Hospital.—H			1	0	2	0	0	2													0	1	0	2	1	0																
29	Hering Medical College.—H																																										
30	Illinois Medical College.—R																																										
31	Jenner Medical College.—R																																										
32	Northwestern University Med. School.—R					1	0	1	0															2	0	1	0																
33	Rush Medical College.—R							1	0													1	0	4	0	0	1																
34	National Medical University.—P																																										
35	Chicago Coll. of Med. and Surgery.—R																																										
	INDIANA.																																										
36	Indiana Medical College.—R																							0	1																		
37	Physio-Medical College of Indiana.—Ph.M																																										
38	Eclectic Medical College of Indiana.—E																																										
39	Indiana University, School of Med.—R																																										
	IOWA.																																										
40	Drake University, College of Medicine.—R																					1	0																				
41	Keokuk Med. Coll. of Phys. and Surg.—R			1	0			2	0	0	1													1	1																		
42	Sioux City College of Medicine.—R																																										
43	State Univ. of Iowa Coll. of Medicine.—R							0	2																																		
44	State Univ. of Iowa, Homeopathic Dept.—H																											0	1														
	KANSAS.																																										
45	Kansas Medical College.—R							0	1																					1	0												
46	University of Kansas, School of Med.—R																																										
	KENTUCKY.																																										
47	Hospital College of Medicine.—R																							1	0					1	0												
48	Kentucky School of Medicine.—R							0	1															1	0	2	0							1	0								
49	Louisville Medical College.—R							0	1									0	1							1	1			1	0			2	0								
50	Louisville National Medical College.—R																																										
51	Southwestern Homeopathic Med. Coll.—H																																										
52	University of Louisville, Medical Dept.—R																					0	1			1	0					0	1										
	LOUISIANA.																																										
53	Flint Medical College.—R																																										
54	Tulane University, Medical Department.—R							0	1									1	0															1	0								
	MAINE.																																										
55	Medical School of Maine, Bowdoin Coll.—R							0	1															1	0											1	0						
	MARYLAND.																																										
56	Baltimore Medical College.—R															1	3																										
57	Baltimore University, School of Med.—R											0	1																							2	0						
58	Coll. of Phys. and Surgs. of Baltimore.—R			1	0																																			1	0		
59	Johns Hopkins Medical School.—R															1	0																										
60	Atlantic Medical College.—P																																										
61	University of Maryland, School of Med.—R					1	0	1	0											1	0																						
62	Woman's Medical College of Baltimore.—R																																										
63	Maryland Medical College.—R																																										
	MASSACHUSETTS.																																										
64	Boston University, School of Medicine.—H																																							2	0		
65	College of Physicians and Surgeons.—R																																										
66	Harvard University Medical School.—R							2	0																	1	0							1	0	0	1						
67	Tufts College Medical School.—R																							1	0											1	0			0	1		
	MICHIGAN.																																										
68	Detroit College of Medicine.—R							1	1															0	1																		
69	Detroit Homeopathic Medical College.—H																																										
70	Univ. of Mich., Dept. of Med. and Surg.—R							0	3															1	0																	2	0
71	Univ. of Michigan, Homeopathic Dept.—H							0	2																																		
	MINNESOTA.																																										
72	Univ. of Minn., Coll. of Med. and Surg.—R							1	0													1	0																				
73	Univ. of Minnesota, Homeopathic Dept.—H																																										
74	Minnesota College of Phys. and Surgs.—R																																										
	MISSISSIPPI.																																										
75	Mississippi Medical College.—R																																										
		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21	

R, Regular; H, Homeopathic; E, Eclectic; P, Panpathic.

22 Minnesota.		23 Mississippi.		24 Missouri.		25 Montana.		26 Nebraska.		27 Nevada.		28 New Hamp.		29 New Jersey.		30 New Mexico.		31 New York.		32 N. Carolina.		33 North Dakota.		34 Ohio.		35 Oregon.		36 Pennsylvania.		37 Rhode Island.		38 S. Carolina.		39 South Dakota.		40 Tennessee.		41 Texas.		42 Utah.		43 Vermont.		44 Virginia.		45 Washington.		46 West Virginia.		47 Wisconsin.		48 Wyoming.		Totals.	Examined—Passed.	Examined—Failed.	Percentage of Failures.	No. of States Examined in.	Marginal Number.
P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F						
																																																						1	1	0	0.	1	1
																																														1	0							2	2	0	0.	2	2
																				1	0																																	1	1	0	0.	1	3
																		3	0																											1	0							4	4	0	0.	2	4
																																																		1	0			2	2	0	0.	2	5
																										0	1																											2	1	1	50.0	2	6
																																																												7
																										0	1																											1	0	1	100.0	1	8
																																																												9
																																																												10
																																																												11
																																								2	0					1	0					1	0	5	5	0	0.	4	12
																																																												13
																																						1	0															1	1	0	0.	1	14
																																																												15
																																						1	0															2	2	0	0.	2	16
														1	0			1	0																																			3	2	1	33.3	3	17
																																														1	0							4	3	1	25.0	4	18
																																																						2	2	0	0.	2	19
																																																												20
																																																												21
																																																												22
																																																												23
																										0	1									1	0															1	0	3	2	1	33.3	3	24
				0	1	0	1																																															3	1	2	66.7	3	25
																												1	0																									1	1	0	0.	1	26
																						2	0			1	0																			2	0					1	0	10	9	1	10.0	7	27
				1	0													2	0																											1	0							13	8	5	38.4	9	28
																								0	1																													1	0	1	100.0	1	29
						0	1											0	1									0	1																									3	0	3	100.0	3	30
																																																												31
				1	0			1	0													1	0			1	0											2	0							2	2			1	0			16	14	2	12.5	11	32
1	0			2	0	1	0											1	1							2	0							1	0									1	0	3	2			2	0	2	1	27	22	5	18.5	14	33
																																																												34
																																																												35
																																																						1	0	1	100.0	1	36
																																														1	0							1	1	0	0.	1	37
																																																												38
																																																												39
								1	0																																					0	1							3	2	1	33.3	3	40
1	0			0	1			1	0																			0	1																									10	6	4	40.0	8	41
																																																												42
																																						1	0							1	0							4	2	2	50.0	3	43
																												0	1																									2	0	2	100.0	2	44
																																																						2	1	1	50.0	2	45
																																																												46
						0	1																													1	0									0	1							5	3	2	40.0	5	47
																										1	1											2	0															9	7	2	22.2	6	48
																																																						7	4	3	42.9	5	49
																																																												50
																																																												51
														1	0																					1	0																	5	3	2	40.0	5	52
																																																												53
		2	0																																																			5	4	1	20.0	4	54
																				1	0																									1	0							5	4	1	20.0	5	55
																		1	1	1	0							2	0															1	0									10	6	4	40.0	5	56
																		1	0							1	0	0	1																									6	4	2	33.3	5	57
						1	0											3	0															1	0	1	0							1	0	1	0							10	10	0	0.	8	58
																														1	0					1	0							1	0									4	4	0	0.	4	59
																										1	0																											1	1	0	0.	1	60
						1	0													1	0																									0	1							6	5	1	16.7	6	61
																																																						1	1	0	0.	1	62
																																				1	0																	1	1	0	0.	1	63
																		1	0																	1	0																	4	4	0	0.	3	64
								1	0																																													1	1	0	0.	1	65
																		2	0											1	0													1	0	1	1							11	9	2	18.1	8	66
																																		1	0																			4	3	1	25.0	4	67
																										1	0																											4	2	2	50.0	3	68
																																																												69
																										1	0											1	0					0	0	3	0							12	9	3	25.0	7	70
																										2	0																											4	2	2	50.0	2	71
																										1	1																			2	0							6	5	1	16.7	4	72
																						1	0																															1	1	0	0.	1	73
						1	0																																															1	1	0	0.	1	74
																																																												75
22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48							

TABLE D.—GRADUATES OF 1901 AND PREVIO

Marginal Number.	NAME OF COLLEGE.	1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21	
		Alabama.		Arizona.		Arkansas.		California.		Colorado.		Connecticut.		Delaware.		Dist. of Col.		Florida.		Georgia.		Idaho.		Illinois.		Indiana.		Iowa.		Kansas.		Kentucky.		Louisiana.		Maine.		Maryland.		Massachusetts.		Michigan.	
		P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F
	MISSOURI.																																										
76	University Medical College, Kansas City.—R.									1	0											1	0							2	0												
77	Kansas City Hahnemann Med. College.—H.																																										
78	Eclectic Medical University.—E.																																										
79	Ensworth Central Medical College.—R.							0	1																																		
80	Barnes Medical College.—R.	1	0			1	0											1	0					0	1															0	1		
81	St. Louis University, Med. Department.—R.																																										
82	St. Louis Coll. of Phys. and Surgeons.—R.																			1	0	2	0	1	0					1	0												
83	American Medical College.—E.			1	0																																						
84	Homeopathic Med. College of Missouri.—H.					1	0																																				
85	Washington University, Med. Dept.—R.																	1	0																								
86	University of Missouri, Dept. of Med.—R.							0	1																																		
	NEBRASKA.																																										
87	University of Nebraska, Coll. of Med.—R.																																										
88	John A. Creighton Medical College.—R.																																										
89	Lincoln Medical College.—E.																																										
90	Nebraska College of Medicine.—R.																																										
	NEW HAMPSHIRE.																																										
91	Dartmouth Medical College.—R.											1	0																							1	0			1	1		
	NEW YORK.																																										
92	Albany Medical College.—R.																					1	0																				
93	College of Physicians and Surgeons.—R.			1	0			0	1			2	0					2	0					0	1															1	0		
94	Cornell University Medical College.—R.																																										
95	Eclectic Med. Coll. of City of New York.—E.																																										
96	Long Island College Hospital.—R.							1	0															0	1																		
97	New York Homeo. Med. Coll. and Hosp.—H					1	0																																				
98	N. Y. Med. Coll. and Hosp. for Women.—H.																																										
99	Univ. and Bellevue Hosp. Med. Coll.—R.							1	2			2	0					2	0																					3	0		
100	Syracuse University, Coll. of Med.—R.																																										
101	University of Buffalo, Medical Dept.—R.																																										
	NORTH CAROLINA.																																										
102	Leonard School of Medicine.—R.																																										
103	North Carolina Medical College.—R.																																										
104	Univ. of North Carolina, Med. Dept.—R.																																										
	OHIO.																																										
105	Western Reserve Univ., Med. Dept.—R.																																										
106	Cleveland College of Phys. and Surgs.—R.																																										
107	Cleveland Homeopathic Medical College.—H.							0	1																																		
108	Eclectic Medical Institute.—E.							1	0											1	0									1	0												
109	Medical College of Ohio—R.			2	0					1	0							1	0			1	0																				
110	Pulte Medical College.—H					1	0																																				
111	Miami Medical College.—R.																													0	1												
112	Starling Ohio Medical College.—R.																																										
113	Toledo Medical College.—R.																																										
	OREGON.																																										
114	University of Oregon, Med. Dept.—R.																																										
115	Willamette University Medical Dept.—R.																																										
	PENNSYLVANIA.																																										
116	Temple College of Medicine.—R.																																										
117	University of Penn., Dept. of Med.—R.							1	2			1	0					1	0																					0	1		
118	Hahnemann Med. Coll. and Hospital.—H.							2	2			1	0											1	0													2	0	1	0		
119	Jefferson Medical College, Philadelphia.—R.			1	0	1	1	1	2															1	0															1	0	0	1
120	Woman's Med. Coll. of Pennsylvania.—R.																																										
121	Medico-Chirurgical Coll. of Philadelphia.—R.																									1	0																
122	Western Pennsylvania Med. Coll.—R.			1	0																																						
	SOUTH CAROLINA.																																										
123	Med. Coll. of the State of So. Carolina.—R.	1	0															1	0	1	0																						
	TENNESSEE.																																										
124	Tennessee Medical College.—R.									1	0																																
125	Knoxville Medical College.—R.																																										
126	University of Nashville, Med. Dept.—R.	1	0			1	0																											0	1								
127	Vanderbilt University, Med. Dept.—R.	1	0			1	0											0	1																								
128	Univ. of Tennesse, Med. Department.—R.																	1	1																								
129	Meharry Medical College.—R.																																										
130	Memphis Hospital Medical College.—R.																																	3	1								
131	Coll. of Phys. and Surgeons, Memphis.—R.																																										
132	University of the South, Medical Dept.—R.																																			1	1						
133	Chattanooga Medical College.—R.	1	0																	0	3																						
134	Univ. of West Tennessee, Med. Dept.—R.																																										
	TEXAS.																																										
135	Fort Worth University, Med. Dept.—R.																																										
136	University of Texas, Dept. of Medicine.—R																																										
137	Baylor University, College of Medicine.—R.																																										
138	Gate City Med. Coll., Texarkana.—R.																																										
139	Southwestern Univ. Med. Coll., Dallas—R.																																										
140	Coll. of Phys. and Surgeons, Dallas.—R.																																										
	VERMONT.																																										
141	Univ. of Vermont, Medical Dept.—R.																							2	0															2	0		
	VIRGINIA.																																										
142	Medical College of Virginia.—R.			1	0																																						
143	University College of Medicine.—R.																																										
144	Univ. of Virginia, Dept. of Medicine.—R.																																										
	WISCONSIN.																																										
145	Milwaukee Medical College.—R.																																										
146	Wisconsin Coll. of Phys. and Surgs.—R.																																										
147	Canadian Colleges							1	0			1	0			1	0					1	0	1	0									1	0	1	0			1	1	1	0
148	Foreign	1	0	1	0			6	0	0	1	1	7					1	0					4	0	1	0	0	1					1	0			1	0	0	2		
149	Miscellaneous Medical Colleges			1	0	3	1	2	2	1	0							4	2			2	1	1	0			0	1							1	0					1	0
	Totals by States	7		14		17		57		6		17		....		7		22		9		15		33		13		4		8		1		12		10		3		20		5	
	Totals—Examined—Passed	7		14		15		25		4		9				4		17		6		12		25		11		1		7		0		10		8		3		13		4	
	Totals—Examined—Failed	0		0		2		32		2		8				3		5		3		3		8		2		3		1		1		2		2		0		7		1	
	Percentage of Failures	0.		0.		11.8		56.1		33.3		47.1		....		42.9		22.7		33.3		20.		24.2		15.4		75.		12.5		100.		16.7		20.		0.		35.		20.	
		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21	

22 Minnesota.		23 Mississippi.		24 Missouri.		25 Montana.		26 Nebraska.		27 Nevada.		28 New Hamp.		29 New Jersey.		30 New Mexico.		31 New York.		32 N. Carolina.		33 North Dakota.		34 Ohio.		35 Oregon.		36 Pennsylvania.		37 Rhode Island.		38 S. Carolina.		39 South Dakota.		40 Tennessee.		41 Texas.		42 Utah.		43 Vermont.		44 Virginia.		45 Washington.		46 West Virginia.		47 Wisconsin.		48 Wyoming.		Totals.	Examined—Passed.	Examined—Failed.	Percentage of Failures.	No. of States Examined in.	Marginal Number.
P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F						
						0	1											0	2																			1	0									0	1							9	5	4	44.4	7	76
																																								1	0													1	1	0	0.	1	77
																																																											78
																												0	1																									2	0	2	100.0	2	79
				1	0																																	1	0							1	1							9	6	3	33.3	8	80
																																																											81
		0	1																									0	1									1	0							1	2							11	7	4	36.3	8	82
				0	1																																																	2	1	1	50.0	2	83
																																																						1	1	0	0.	1	84
																										1	0							0	1											1	0							4	3	1	25.0	4	85
																																																						1	0	1	100.0	1	86
																																		1	0																			1	1	0	0.	1	87
																																																												88
																																														1	0							1	1	0	0.	1	89
																																																												90
														1	0			1	0																					1	0	1	0											8	7	1	12.5	7	91
1	0					0	1											0	1			1	0																															5	3	2	33.3	5	92
										1	0	1	0	2	0																																							12	10	2	16.7	9	93
																		1	0																																			1	1	0	0.	1	94
																																																												95
																		0	1					1	0																			1	0									5	3	2	40.0	5	96
																																																						1	1	0	0.	1	97
																												1	0																									1	1	0	0.	1	98
												0	1											1	0					1	0											1	0			1	0							15	12	3	20.0	9	99
																																																												100
0	2																	0	1																			1	0							1	0							5	2	3	60.0	4	101
																																																												102
																																												2	0									2	2	0	0.	1	103
																																																												104
																																						1	0							1	0							2	2	0	0.	2	105
																		1	0																																			1	1	0	0.	1	106
																		1	0					1	0																													3	2	1	33.3	3	107
0	1			1	0															1	0			2	0											1	0																	9	8	1	11.1	8	108
1	0							1	0																	1	0																			0	1							9	8	1	11.1	8	109
																																														1	0							2	2	0	0.	2	110
																																														0	1							2	0	2	100.0	2	111
																		1	0			1	0					0	1																									3	2	1	33.3	3	112
																										1	0																											1	1	0	0.	1	113
																										1	0																											1	1	0	0.	1	114
																																																												115
																																																												116
														1	1			3	0	1	0							1	0	1	0					1	0							1	0	4	0							20	16	4	20.0	12	117
														2	0			1	0							1	0															1	0											14	12	2	14.3	9	118
1	0			2	0													1	1									1	0	1	0															1	0							17	12	5	29.4	12	119
												1	0	1	0			1	0									1	0																									4	4	0	0.	4	120
																		1	0									1	0																	0	1							4	3	1	25.0	4	121
										1	0							1	0	1	0															1	0																	5	5	0	0.	5	122
																				1	0																																	4	4	0	0.	4	123
																																																						1	1	0	0.	1	124
																																																												125
																																																						3	2	1	33.3	3	126
																		0	1																	1	0	2	0							1	0							8	6	2	25.0	7	127
		1	1																	1	2																	0	1															8	3	5	62.5	4	128
																		1	0																									2	0									3	3	0	0.	2	129
		1	0																																			1	0															10	9	1	10.0	4	130
																																																												131
																																																						2	1	1	50.0	1	132
																				1	0																																	5	2	3	60.0	3	133
																																																												134
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																																																												139
																																																												140
																																														0	1					1	0	6	5	1	16.7	3	141
																																																						1	1	0	0.	1	142
				1	1															1	0			1	0																			1	0									5	4	1	20.0	4	143
																		1	0																																				1	0	0.	1	144
																																																													145
																																																													146
												0	1					4	0			1	0			2	1			0	1									1	0					5	2							28	22	6	21.4	16	147
				2	3	0	1							0	1	0	1	30	13			1	0					2	1	2	0													1	0	2	0					0	1	89	57	32	36.0	23	148
						2	2			1	0	1	0	0	1			0	1			2	0			2	2	1	0					1	0			1	2	1	0			1	1	2	5					0	2	54	31	23	42.6	24	149
8		9		18		14		5		3		5		12		1		90		13		10		7		31		17		8		....		6		11		20		6		[illegible]		16		68		....		5		[illegible]		675	....	....	....	....	
5		7		11		6		5		3		[illegible]		9		0		66		11		10		6		21		11		7		....		5		11		17		6		[illegible]		15		45		....		5		[illegible]		...	488	...	....	....	
3		2		7		8		0		0		[illegible]		3		1		24		2		0		1		10		6		1		....		1		0		3		0		[illegible]		1		23		....		0		4		...	...	187	....	....	
37.5		22.2		38.9		57.1		0.		0.		10.		25.		100.		26.7		15.4		0.		14.3		32.3		35.3		12.5		....		16.7		0.		15.0		0.		0.		6.3		33.8		..		0.		44.4		...	...	....	27.7	....	
22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48							

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

May 16.

1 *Occurrence of Epileptiform Attacks in Diabetes Mellitus. L. A. Conner, New York.
2 Surgical Treatment of Alveolar Pulmonary Emphysema. C. Goodman and S. Wachsmann, New York.
3 *Plea for Stricter Prophylaxis and More Scientific Management of Obstetric Cases in Tenement House Practice. E. K. Brown, New York.
4 *Air-Borne Infections. Their Mode of Entrance, Preventive, Abortive and Ameliorative Treatment. W. S. Bryant, New York.
5 Problem Which Confronts the Otologist in Treatment of Chronic Catarrhal Deafness. C. M. Cobb, Boston, Mass.
6 *Nitroglycerin in Treatment of Neuritis. H. B. Stevenson, Rider, Md.

1. **Epileptiform Attacks in Diabetes Mellitus.**—Conner summarizes his paper as follows: Although some of the epileptiform attacks which occur in the course of diabetes are manifestly due to other associated conditions (uremia, cerebral softening, meningitis, etc.), a certain proportion of them are unquestionably related directly to the diabetes itself and are the expression of some form of diabetic intoxication. Such attacks may simulate closely the general convulsions of true epilepsy, or they may be distinctly Jacksonian in character and be limited to one side of the body or to certain groups of muscles. These localized convulsions are usually associated with transient paralysis of the affected muscles, aphasia, sensory disturbances, or other symptoms suggestive of a circumscribed brain lesion, and may thus lead to serious errors in diagnosis. The convulsions may appear only during the terminal coma, or they may be repeated at frequent intervals for days or weeks before coma develops, or finally, they may cease with improvement of the diabetic symptoms. The association of such epileptiform attacks with the signs of acid intoxication is by no means constant. In several of the cases it is certain that no such acidosis existed. It seems probable, therefore, that the cause of the convulsive attacks must be sought for in some other form of diabetic intoxication.

3. **Tenement House Midwifery.**—Brown describes the condition of tenement house midwifery in New York, and insists on the necessity of discarding the old *laissez-faire* methods in obstetrics and attending to the antepartum prophylaxis by pelvimetry, proper nursing and aseptic conditions. The large infantile and maternal mortality of symphyseotomy render Cesarean section still the operation of selection. There must be a campaign of education and enlightenment among the child-bearing women of the poor.

4. **Air-Borne Infections.**—Bryant considers the first tonsil or adenoid the portal of invasion in almost all infectious diseases, and for a time at least the seat of primary local infection. He therefore considers that the prevention of such diseases can be effected by care and treatment directed to the first tonsil.

6. **Nitroglycerin in Neuritis.**—Stevenson reports thirty-two cases of neuritis treated with nitroglycerin after the method suggested by Krauss of Buffalo. Beginning with 1/100 of a grain every eight hours the interval was reduced one hour in every twenty-four until the full physiologic action of the drug was manifest, or the patient was taking 1/100 of a grain every three hours, at which interval it was continued. Sodium bromid controls the flushing and headache. In acute cases the effect was marked within forty-eight hours. In chronic cases, ammonium and potassium iodid in progressively increasing doses hastened the action of the nitroglycerin. The actual cautery was also used over the nerve.

Boston Medical and Surgical Journal.

May 14.

7 *Comparative Study of Tsutsugamushi Disease and Spotted or Tick Fever of Montana. P. M. Ashburn and C. F. Craig, U. S. Army.
8 *Value of Measurements of Chest Expansion. H. W. Goodall and J. L. Belknap, Boston.
9 *Extraintestinal Origin of Hydrobilirubin. A. E. Austin and M. D. Ordway, Boston.
10 Lipoma Arising from the Brachial Plexus: Review of Some Rare Forms of This Tumor. W. P. Coues, Boston.

7. **Tsutsugamushi Disease and Spotted Fever.**—Ashburn and Craig compare the Japanese river fever or blood fever with the Rocky Mountain fever, or spotted fever of Montana. Some writers seem to consider these diseases identical. As to the etiology of the Japanese disease, three hypotheses at present obtain: 1. That the disease is due to a bacterium, a belief favored by the workers of the Institute for Infectious Diseases. 2. That it is a protozoal infection. Professor Ogata is the leading exponent of this idea. 3. Tanaka thinks the disease due to a toxin contained in the body of the red mite. The authors then discuss comparatively and in detail the etiology, symptoms, blood examination, mortality, immunity conferred by attack, susceptibility of animals, pathologic anatomy, prognosis, diagnosis, prophylaxis and treatment of these diseases, and report seven cases of the Japanese disease. They conclude that these diseases are separate and distinct entities, and that though they present many points of resemblance they do not show enough of them to overbalance those of difference. They report cases occurring in the Philippines which, while they can not assert them to be cases of tsutsugamushi, they consider present enough points of resemblance to render the subject one for investigation by physicians practicing there.

8. **Chest Expansion.**—Goodall and Belknap conclude from their experiments that mensuration of the chest alone does not give an accurate measurement of respiratory capacity. To be of any value, corresponding abdominal measurements must be taken in order to determine, as nearly as possible, the position of the diaphragm, the chief respiratory agent. As much as 50 per cent. of the increase in chest circumference during maximum expansion may be due to change in the shape of the thoracic cavity due to muscular contractions alone. From these two facts it is evidently erroneous to conclude from chest measurement alone that a supposedly healthy individual with a chest expansion of less than two inches has a diminished respiratory capacity, or that an individual with an expansion of two inches or more necessarily has a normal respiratory capacity.

9. **Hydrobilirubin.**—Austin and Ordway, as a result of investigations, conclude that the liver does not form urobilin. They reach the following conclusions: 1. When no bile enters the intestine (absence of urobilin in feces and urine) urobilin may occasionally be found in fistula bile. 2. This is not due to the conversion of bilirubin to urobilin by the blood; what effect cells actively may have on it we do not yet know. 3. It is evident that the liver does not form urobilin, or it would be oftener found when complete closure of the common duct occurs. 4. If urobilin is ever regenerated to bilirubin, it is probably not an oxidative process, as so often stated. 5. As cholecystitis is often accompanied by bacterial infection of the gall bladder, from which these germs may easily make their way into the liver and there exercise their functions as in the intestines, the query appears a just one, if the formation of urobilin other than in the intestine may not be due to bacterial infection.

New York Medical Journal.

May 16.

11 *Diagnostic Value of Symptoms of the Larynx, Pharynx and Nose in Nervous Diseases. T. J. Harris, New York.
12 *Hysteria and the Re-Education Method of Dubois. S. E. Jelliffe, New York.
13 The Medical Profession's Duty to the Children of America. L. T. Royster, Norfolk, Va.
14 Association of Tuberculosis of the Lungs with Diabetes Mellitus. H. L. Shively, New York.
15 Association of Tuberculosis Clinics of the City of New York. J. A. Miller, New York.
16 Transfusion: History, Development, Present Status and Technic of Operation. G. M. Dorrance and N. Ginsburg, Philadelphia.
17 Incongruities in the Medical Profession. L. S. Oppenheimer, Tampa, Fla.
18 Chronic Diarrhea Accompanied by Pyloric Insufficiency. E. Palier, New York.

11. **Laryngeal Symptoms in Nervous Diseases.**—Harris describes the innervation of the larynx. He then applies these considerations practically to diagnosis in regard to tabes dorsalis; multiple sclerosis; syringomyelia; progressive bulbar paralysis; progressive muscular atrophy; neuroses: paralysis agitans; hysteria in (a) laryngeal spasm, (b) nervous laryngeal cough; and disturbances of co-ordination during phona-

tion, (a) dysphonia spastica, (b) the paretic manifestations of inco-ordination known as aphonia. The author concludes: 1, That pharyngo-laryngeal symptoms in nervous diseases are deserving of more attention on the part of the neurologist than they have received up to the present; and 2, that no field offers greater opportunity to the laryngologist for original study and research than that which embraces the innervation of the larynx.

12. **Hysteria and Re-Education.**—Jelliffe discusses hysteria thoroughly in all its aspects. From his study of the subject he concludes that we have arrived at a moral conception of hysteria, which seems to be the logical termination of a study which has for its object pathologic manifestations of the mind which are most intimately bound up with the moral personality of man. If psychology is absolutely indispensable for the analysis of the mechanism of hysterical phenomena, and we have full justification for those methods of study as outlined by Freud, Jung, Janet and others, it can not in itself alone resolve the complex problem of the origins of the hysterical modification of mentality. To all psychologic conceptions of hysteria there must be associated a moral conception of it. It is chiefly this moral conception which ought to inspire all rational treatment of hysteria; such as has been indicated by Dubois in maintaining for the psychoneuroses a moral treatment in the highest sense of the word. The psychologic analysis alone is but a step in the process toward reaching, from the therapeutic point of view, anything but partial results and the suppression of such and such symptoms. To get at hysteria in its very origin, one must penetrate profoundly into the personality of the patient. He must be helped to reconstruct his mental synthesis on the basis of good logic, and to reconstruct his moral education, a complicated and often arduous task, but in Dubois' terms it is a true treatment of the soul which no physician could repudiate to-day.

Lancet-Clinic, Cincinnati.

May 9.

19 Ambroise Paré; a Surgeon of the Sixteenth Century. S. C. Ayres, Cincinnati.
20 Opsonic Treatment in Gonorrheal Arthritis. A. Ravogli, Cincinnati.
21 Acute Bronchitis in Children. W. W. Pennell, Mt. Vernon, Ohio.
22 Congenital Deficiency of Extrinsic Ocular Muscles. J. S. Wyler, Cincinnati.
23 Nursing as a Profession. J. L. Ransohoff, Cincinnati.

Journal of the South Carolina Medical Association, Greenville.

April.

24 Keratoderma Palmaris et Plantaris. I. Schayer, Laurens, S. C.
25 Diagnosis and Early Treatment of Appendicitis. G. R. Dean, Spartansburg.
26 Headache as a Symptom. L. O. Mauldin, Greenville.
27 Pseudomyxoma Peritonei. A. B. Knowlton, Columbia.
28 Sea Bather's Ear. C. W. Kollock, Charleston.

American Journal of Physiology, Boston.

May.

29 *Direct and Reflex Response of the Cardioinhibitory Center to Increased Blood Pressure. J. A. E. Eyster and D. R. Hooker, Baltimore.
30 *Antagonistic Action of Calcium on the Inhibitory Effect of Magnesium. S. J. Meltzer and J. Auer, New York.
31 Equilibrium Between Carbonic Acid, Sodium Bicarbonate, Monosodium Phosphate, and Disodium Phosphate at Body Temperature. L. J. Henderson and O. F. Black Boston.
32 *Theory of Neutrality Regulation in the Animal Organism. L. J. Henderson, Boston.
33 *Action of Strontium Compared with that of Calcium and Magnesium. S. J. Meltzer and J. Auer, New York.
34 *Vasomotor Changes in the Cerebral Vessels Obtained by Stimulating the Carotid Plexuses. C. J. Wiggers, Ann Arbor.
35 Effect of Hemorrhage on the Vasomotor Reflexes. W. T. Porter and H. K. Marks, Boston.

29. **Slowing of the Pulse from Increased Blood Pressure.**—Eyster and Hooker find that the slowing of the heart in consequence of increase in the blood pressure is due to the action of the cardio-inhibitory center, through inhibitory fibers which run in the vagus, since the effect persists after section of the accelerator or depressor nerves. The inhibiting action is brought about, either by the direct effect of increased pressure in the vessels supplying the cardio-inhibitory nerves, or reflexly by the stimulation of peripheral nerves in the vessels. The increase of pressure in the ventricle has little or no effect but the principal source of this reflex seems to be the thoracic aorta. This reflex stimulation may disappear while the effect of direct pressure on the blood vessels in the cardio-inhibitory center still remains. The mechanism by which this slowing of the pulse is brought about is delicate, and may be much disturbed or abolished by the abnormal conditions to which the research animal is necessarily subjected, especially if these are much prolonged.

30. **Antagonism of Calcium and Magnesium.**—Meltzer and Auer find that calcium injected intravenously antagonizes the inhibitory and paralyzing actions of magnesium, restoring the unconscious and paralyzed animal to normal activity after fatal doses of magnesium salts, unless the dose of the magnesium salt has been very large. Calcium efficiently antagonizes the abnormal activity of its three inorganic associates in the animal body, magnesium, potassium and sodium, whether the abnormal action shows itself as over-inhibition or as over-excitation. The antagonism of calcium to magnesium is a phenomenon common to animals and plants. The facts, as known at present, are still in harmony with the theory that magnesium favors essentially inhibitory processes in the animal body.

32. **Neutrality Regulation.**—Henderson's work is not easily abstracted, but it tends to show that the constitution of the animal fluids provides such a balance of acid and alkaline constituents as give them nearly the highest efficiency which can occur in isolated aqueous solution, for the preservation of neutrality.

33. **Effects of Strontium.**—Meltzer and Auer find that the effects of strontium differ strikingly from those of magnesium; it does not cause anesthesia and does not affect sensibility and the reflexes. The paralysis which it causes develops very slowly, and only after very large doses given subcutaneously. It does not neutralize the inhibitory effect of magnesium, as calcium does, nor are its effects antagonized by calcium but rather increased.

34. **Vasomotor Reflexes After Hemorrhage.**—The observations of Porter and Marks indicate that the blood pressure may be reduced almost to zero without materially impairing the reflex power of the vasomotor cells, provided the animal be motionless in the horizontal position. Under the influence of gravity a reverse current sets in by way of the veins through the bulbar capillaries, providing the vasomotor center with food, poor it is true, but better than none.

Interstate Medical Journal, St. Louis.

April.

36 *Hernia: A General Study, Especially Its Medicolegal Elements. W. B. Outten, St. Louis.
37 *Injuries to the Eyes of the Child Incident to Instrumental Delivery. J. Green, Jr., St. Louis.
38 *Relation of Instrumental Delivery to Trauma of the Child's Nervous System. S. I. Schwab, St. Louis.
39 Coxa Valga; Ununited Fracture of the Femoral Neck; Report of Two Cases. N. Allison, St. Louis.
40 History of the House; the struggle for Fresh Air and Light. (Concluded.) G. M. Gould, Philadelphia.

36. **Hernia.**—Outten, from a vast experience of railroad work and injuries, discusses the question of traumatic hernia. After a brief but interesting history of hernia from the time of Celsus, he reviews the five principal types of radical operation, and then proceeds to consider the assertion of Kingdon, that "hernia is a disease and not an accident: that it is a pathologic condition and not merely a mechanical lesion." He gives statistical and other reasons in support of the proposition that "any surgeon who has made a careful study of the surgery of violence, that is, railway and allied injuries, must and will come to the conclusion that traumatic hernia is so extremely uncommon as to leave doubt as to its verity in almost every case."

37. **Obstetrical Forceps and Eye Injuries.**—Green collects the various kinds of injuries to the eyes recorded as due to the use of the forceps, and estimates their importance from the points of view of the ophthalmologist in regard to severity and frequency, and of the obstetrician in relation to the absoluteness of the indication for forceps on behalf of the mother and the child, and to the result on maternal and fetal morbidity and mortality. He concludes that "the possibility of injury to the infant's eyes can hardly weigh as a serious

contraindication to the employment of obstetrical forceps, but the possibility of such injury should always be borne in mind by those who attend women in confinement." We must remember that on the accoucheur rests the responsibility of two lives. Viewed in this light even the loss of an eye seems trivial compared with the possible sacrifice of the mother's and baby's life.

38. **Instrumental Delivery and Nervous Injuries.**—Schwab, in discussing the frequency and importance of injuries to the child's nervous system in instrumental delivery, points out that there is always one unknown factor in this inquiry, viz., the condition of the child before the mechanism of birth is set in action. He discusses the various conditions that have been attributed to the use of forceps, and says that prenatal pathology could no doubt explain many of the symptom complexes that have been attributed to the act of birth itself and to the manipulations accompanying it.

Northwestern Lancet, Minneapolis.

April 1.

41 *Misconceptions Concerning Insanity. R. M. Phelps, Rochester.
42 X-Ray Therapy. W. P. Roberts, Sioux Falls, S. D.
43 *Syphilitic Simulation of Malignancy. J. C. Stewart, Minneapolis.
44 Technic of the Intranasal Method of Operating for Chronic Empyema of the Maxillary Sinus. W. R. Murray, Minneapolis.
45 The Physician's Problem. E. O. Giere, Madison, Minn.
46 Case of Impalement Injury from Pitchfork Handle. A. N. Bessesen, Minneapolis.

April 15.

47 Fracture of the Elbow Joint. J. W. Andrews, Mankato, Minn.
48 Ulceration of the Stomach. H. W. Sherwood, Doland, S. D.
49 *Association or Confusion of Appendicitis with Other Diseases of the Female Pelvis. A. E. Benjamin, Minneapolis.
50 Empyema Pleuræ. J. A. Thabes, Brainerd, Minn.

41. **Insanity.**—Phelps remarks on the number of misconceptions of practical importance and affecting the character of many important decisions in active life which constantly obtrude themselves. These are: 1, A common idea that there are in our hospitals many seniles who are not insane or who at least are not deserving of commitment; 2, that commitment should depend on the fact or degree of insanity, whereas in point of fact it is the trouble patients cause that is the cause for commitment; 3, the assumption that insanity shuts out intelligence; 4, that acute cases are more frequent than they really are; 5, that delusions are needful to prove insanity; 6, that a distinct line separates insanity from sanity; 7, that insanities are entities; 8, that defectiveness is not insanity; 9, that there are no fatal results in insanity; 10, that a large proportion of the insane in Minnesota come from the foreign born; 11, erroneous opinions concerning heredity.

43. **Syphilitic Simulation of Malignant Disease.**—Stewart reports two cases which lead him to remark on the constant confusion of syphilis with tuberculosis, malignant and other diseases, in view of the great and increasing prevalence of syphilis ,and he urges recourse to the therapeutic test of iodid in doubtful cases of late syphilis.

49. Abstracted in The Journal, Feb. 1, 1908, p. 397.

Cleveland Medical Journal.

April.

51 Benign and Malignant Tumors of the Female Mammary Gland with Reference to Early Diagnosis. A. F. House, Cleveland.
52 *Theories of Sex Determination Resting on a Cytologic Basis. M. W. Blackman, Cleveland.
53 *Blennorrhea of the Eye. J. Stotter.
54 Outing Work Among the Children of the Poor in Cleveland with Report of the Findings in the Medical Examination of 1,071 Children. J. Phillips, Cleveland.

52. **Sex Determination.**—Blackman discusses various theories of sex determination, namely, that common among both scientific men and the laity, that sex is subject to control through the environment of the developing organisms, especially through the regulation of the nutrition of the mother; McClung's theory that the accessory chromosome is the bearer of those qualities which pertain to the male organism—that is, that an egg fertilized by a spermatozoon containing the accessory chromosome will develop into a male, while an egg which copulates with a spermatozoon having no accessory chromosome will develop into a female; Wilson's observations, which lead him to alternative conclusions; and Castle's theory. Blackman concludes that from psychologic data it seems nearly certain that one or other of Wilson's alternatives is true, as the validity of the data on which they are based can hardly be assailed; for a number of independent investigators have confirmed the observations and extended them to a large number of forms.

53. **Blennorrhea of the Eye.**—Stotter discusses the prevalence of ocular blennorrhea and urges the inclusion of the disease as a communicable disease within the meaning of the acts requiring report to the health authorities. He also urges the addition of a provision to the act, such as is in vogue in many European cities, requiring any midwife noticing a redness or swelling in the eyes of the new-born, accompanied with secretion, however slight, to call a physician to attend the case.

American Journal of Surgery, New York.

April.

55 *Point in the Technic of Appendicectomy. H. Lilienthal, New York.
56 *Nature of Colic and Remarks Concerning I'ts Diagnostic Value. G. F. Shiels, New York.
57 Uterine Fibroids Complicating Pregnancy. C. C. Barrows, New York.
58 Blood Examination in Surgical Diagnosis. A Practical Study of Its Scope and Technic. I. S. Wile, New York.
59 Early Restoration of Function After Excision of the Tuberculous Elbow Joint. G. G. Cottam, Rock Rapids, Iowa.
60 Treatment of the Bladder After Suprapubic Cystotomy for Stone. W. C. Goldsmith, Atlanta, Ga.
61 Gastroenterostomy. J. Darrington, Yazoo City, Miss.
62 Matas' Operation; Report of Four Cases. C. Barrow, Savannah, Ga.
63 Cesarean Section; Report of Two Cases. E. J. Johnson, Yazoo City, Miss.
64 Two Cases of Complicated Uterine Prolapse; Complete Prolapse of Uterine Fibroid; Ovarian Cyst Complicating Second Degree Prolapse. W. Krusen, Philadelphia.
65 Fecal Fistula Following Appendicectomy, with Report of Three Cases. J. B. Bissell, New York.
66 Treatment of Fracture of the Hip, with Special Reference to Whitman's Method. C. N. Cowden, Nashville, Tenn.

55. **Appendicectomy.**—Lilienthal uses the following method to avoid the danger of shock consequent on handling the intestines in appendicectomy: Through a small incision made in the locality preferred by the operator, a gloved finger is inserted, locating the cecum; a portion of this viscus is withdrawn with dressing forceps, and landmarks are followed in the usual way to locate the base of the appendix. During this procedure there will be a little unavoidable handling of intestine outside of the abdomen. Having exposed the base of the appendix, a ligature is passed through the mesenteriolum, to be used subsequently for ligating the organ; the ends of this ligature are left long, and are tied together or held with a clamp. The exposed part of the appendix and all other intestines are now returned to the abdominal cavity. When traction on the ligature is made the base of the appendix, and nothing more, is brought into the wound. In the majority of cases it will then be found extremely simple to deliver the entire appendix, even though a considerable number of adhesions should be encountered. The ligation of the mesenteriolum, the ablation of the appendix, and the treatment of the stump are carried out in the usual manner. During the procedure of freeing and removing the appendix this organ and nothing else is in the field.

56. **Colic.**—Shiels discusses the various interpretations of the nature of colic, and endeavors to show that colic is a characteristic, acute, spasmodic, peritoneal pain wave, most frequently, but not always, associated with an effort of a hollow viscus or structure, whose muscular walls are of the smooth or non-striated variety, to rid itself of an irritant or obstruction; such viscus or structure being either covered by, or in close relationship to, the peritoneum.

Journal of the Medical Society of New Jersey, Orange.

March.

67 Medical Inspection of Schools. R. P. Francis, Montclair.
68 *Epidemic Paralysis in Children. H. D. Chapin, New York.
69 *Appendicitis Described by the Early Writers. E. J. Ill, Newark.
70 *Incipiency in Tuberculosis from Standpoint of the Sanatoria. H. B. Dunham, Glen Gardner.
71 *Classification of Cases of Appendicitis. J. J. McGrath, New York.
72 President's Address Before Camden County Medical Society. A. H. Lippincott, Camden.

68. **Epidemic Paralysis in Children.**—Chapin differentiates the epidemic from the endemic form as follows: 1, Epidemic is occasionally fatal, endemic rarely, if ever; 2, epidemic forms show great variations in extent of paralysis; 3, pain is more severe and more enduring in the epidemic form; 4, a certain proportion of complete recovery is seen in the epidemic form, rarely, if ever, in the endemic; 5, the lesion is more varied and extensive in the epidemic form, and may include polioencephalitis of Strümpell, poliomyelitis, peripheral neuritis, and occasionally meningitis.

69. **Appendicitis.**—Ill reproduces a remarkable pathologic report of a case of appendicitis from the work of Lawrence Heister, published in 1750.

70. Published in the *Medical Record*, Feb. 8, 1908, and abstracted in The Journal, Feb. 22, 1908, page 641.

71. This article appeared in the *Medical Record*, Feb. 1, 1908.

Northwest Medicine, Seattle.

April.

73 Gastrogenic Intestinal Disease. N. W. Jones, Portland, Ore.
74 Infected Wounds. W. C. Cox, Everett, Wash.
75 Should We Expect Aseptic Results in Emergency Surgery? W. S. Durand, Everett, Wash.
76 Tumors of the Mediastinum, with Report of Mediastinal Dermoid Cyst. F. Hinman, Spokane, Wash.

St. Paul Medical Journal.

April.

77 *Diagnosis of Cardiospasm. W. Lerche, St. Paul.
78 Therapeutic Tendencies. R. T. Edes, Reading, Mass.
79 *Primary Mastoiditis with Objective Tinnitus Aurium. S. M. Smith, Philadelphia.
80 Pathologic Changes in Old Dislocations of the Elbow and Their Bearing on Operative Treatment; Paralysis Due to Elastic Tourniquet. A. R. Colvin, St. Paul.

77. **Cardiospasm.**—Lerche describes and figures an apparatus of his own devising for determining the capacity of the esophagus which he uses in the diagnosis of cardiospasm. He describes cases of idiopathic and secondary cardiospasm.

79. **Primary Mastoiditis.**—Smith says that cases that develop during a middle-ear disease or occur after the same has run its course can not properly be described as primary, though bacterial infection primarily attacking the nasopharynx and tympanum, may, in its migratory passage to the mastoid, produce temporary inflammation of the tympanic cavity. His belief is that the so-called primary cases are of this nature. The only cases of mastoiditis to which we are justified in applying the term primary, are those occurring by metastasis or resulting from trauma. Smith is of opinion that in the cases in which the chief symptom is continuous, prolonged pain, the diploe is first involved, the resultant osteomyelitis slowly extending, externally involving the cortex, and internally complicating the pneumatic cells. He describes an unusual case.

Journal Missouri State Medical Association, St. Louis.

April.

81 *Digital Insalivation and Its Influence in the Spread of Disease. G. Homan, St. Louis.
82 Insanity. G. W. Robinson, Nevada.
83 Infantile Paralysis (Acute Atrophic Paralysis, Acute Anterior Poliomyelitis). V. A. Bles, St. Louis.
84 Infantile Intussusception. J. D. Brummall, Salisbury.
85 Medical Education, Preliminary and Professional. H. E. Dunlop, Canton.

81. **Licking the Fingers.**—Homan cogently draws attention to the importance of the nasty practice of licking the fingers for turning over pages, etc., as a cause of disease, next only to the danger of promiscuous spitting. Healthy persons may infect themselves by germs carried from their own fingers to their mouths, and as specific organisms are often present in the mouths of persons in a fair state of health, they may also transfer them in this way to other people. It is well known that money, papers, books, etc., carry active germs. Employés in official life who persist in this habit should be deprived of their positions.

Atlanta Journal-Record of Medicine.

April.

86 Rest in the Treatment of Bright's Disease. H. F. Harris, Atlanta.
87 *The Value of Determining the Opsonic Index in the Treatment of Chronic Infections with Vaccines. J. E. Paullin.
88 Observations in 271 Cases of Mastoiditis. F. P. Calhoun, Canton, Ohio.
89 Excesses of Modern Times and Their Relation to Disease. M. M. Hull, Atlanta.
90 President's Address Before California Association for Study and Prevention of Tuberculosis. C. B. Boothe.
91 Hypospadias; Pseudohermaphrodite. E. G. Ballenger, Atlanta.
92 Spring Coughs. J. Burke, Manitowoc, Wis.

87. **The Opsonic Index.**—Paullin, in a communication from the laboratory of the state board of health, considers the practicability and feasibility of determining the opsonic index in reference to the administration of vaccines. He gives the results of his own investigations into this matter, which have led him practically to abandon the determination of the index, and he is satisfied that observation of the clinical condition of the patient is often enough to show whether administration of the vaccine is necessary or not. His experience with vaccine therapy amounts to about 50 cases of tuberculous lymph glands, tuberculosis of bone and skin, furunculosis, chronic empyema, chronic pustular acne, and chronic gonorrheal arthritis, in which he has administered vaccines without determining the index. The improvement has been marked, and he holds that the administration of vaccines can be carried out as satisfactorily without as with the determination of the opsonic index.

Journal of Inebriety, Boston.

Vol. XXX, No. 1.

93 Inebriety; Its Causation and Control. R. W. Branthwaite, London.
94 Poison Tolerance. M. Kassowitz, Vienna.
95 Action of Alcohol on Sight. G. B. Cutten, Columbus, Ohio.
96 *What Is Morphin Disease? C. W. Carter, Richmond, Ind.
97 Experimental Effect of Tobacco on the Nervous System. L. P. Clark, New York.
98 Psychical Aspects of the Morphin Addict. J. L. Bowman, Union Springs, Ala.

96. This article appeared in the *Lancet-Clinic*, May 2, 1908.

Denver Medical Times.

May.

99 Teaching Regarding Sex in the Public Schools. E. Jackson, Denver.
100 Social Hygiene in Relation to Abortion. M. Hawes, Denver.
101 The Social Evil in Non-Christian Lands. M. E. V. Fraser, Denver.
102 The Social Evil Among Modern Christian Nations. C. G. Hickey, Denver.
103 The Colorado Society for Social Health. M. E. Bates, Denver.
104 Sexual Desire in Tuberculous Patients. L. P. Barbour, Rocky Ford.
105 Present Treatment of Puerperal Sapremia and Puerperal Sepsis. J. E. Cannaday, Hansford, W. Va.

Utah Medical Journal, Denver.

May.

106 Surgical Treatment of the Prostate Gland. E. Viko, Salt Lake City.
107 Scientific Treatment of Diabetes Mellitus. W. R. Tyndale, Salt Lake City.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London.

May 2.

1 *Influence of Pregnancy on Certain Medical Diseases and of Certain Medical Diseases on Pregnancy. H. French.
2 *Special Psychology of Women. T. C. Shaw.
3 Ophthalmia Neonatorum: An Experiment in Treatment. A. N. Walker and A. A. Mussen.
4 Treatment of Trachomatous Dacryocystitis. T. H. Butler.
5 Pathology and Treatment of Inguinal Hernia in Children. C. H. Fagge
6 Disseminated Sclerosis Commencing with Failure of Vision. R. T. Williamson.
7 *Rectal Administration of Antitoxic Sera. J. P. Parkinson.
8 Motoring Notes. C. T. W. Hirsch.

1. **Pregnancy and Medical Diseases.**—French treats of herpes gestationis and its allied conditions, impetigo herpetiformis, eczema and psoriasis, in relation to pregnancy, and discusses the pyelonephritis of pregnancy.

2. **Psychology of Women.**—Shaw makes a detailed comparison of the mental attributes of the sexes, with the result that he considers the points of resemblance as existing essentially while those of divergence are the result of education, training, environment, and other adventitious circumstances, in short, are artificial. The three main points which have hitherto been relied on as evidencing "inferiority" he enumerates as: 1, submission to authority; 2, a smaller range of

idealism, and 3, a more delicate and, therefore, less strong bodily organization. He essays to show that under altered conditions of education and environment these stigmata of "inferiority" have almost disappeared among women. He discusses woman's attitude to dress, and aptly says: "The psychology of dress is that it makes you think that you are what you profess to be. That is why the common soldier is never allowed to appear out of uniform and why the priest always wears his black clothes and white tie." A very important part of his theme is what he considers the popular error that mind in either sex is something very complicated, very profound, whereas "as a rule, thinking is a very simple thing, scarcely more than a reflex. . . . Many an action that looks like a manifestation of intelligence most surely originates in association."

7. **Rectal Administration of Antitoxic Sera.**—Parkinson describes the technic as follows: A cleansing enema is unnecessary unless there is much constipation. The patient lies on the left side and a No. 6 Jacques catheter, having attached to it the barrel of a glass urethral syringe into which the serum is poured, is passed as far as possible into the rectum. Usually gravity is sufficient, but if not the piston can be used. The patient should continue lying for a quarter of an hour. Parkinson's experience of this method, which he published some six years ago, leads him to claim rapid and frequent improvement, absence of any of the untoward accidents that have been reported after subcutaneous injection, and avoidance of the objection made by some to the needle. To the objection that the antitoxin would not be absorbed, he replies that the existence of ascending currents in the mucous canals was demonstrated in 1905 in the address in surgery at the British Medical Association. He reports one case of diphtheria antitoxin thus given—which he had not done before, fearing that it might be less rapidly absorbed thus than by the subcutaneous method, though this case demonstrated the contrary—and a case of gonorrheal infection with arthritis, in which the symptoms rapidly disappeared after the rectal injection of 25 c.c. of polyvalent antistreptococcus serum.

British Medical Journal, London.

May 2.

9 *Influence of Pregnancy on Certain Medical Diseases and of Certain Medical Diseases on Pregnancy. H. French.
10 *Treatment of Widespread Suppuration and Multilocular Abscesses. W. G. Spencer.
11 Consecutive Series of 34 Cases of Excision of a Portion of the Rectum for Carcinoma. C. A. Morton.
12 Case of Strangulated Femoral Hernia. D. V. Maxwell-Adams.
13 Acute Fecal Impaction in the Rectum. W. M. Robson.
14 Case of Tuberculous Leprosy. M. Mackinnon.
15 *Kala-Azar in the Royal Navy. P. W. Bassett-Smith.

9. See Abstract No. 1.

10. **Widespread Suppuration.**—Spencer describes cases of subpectoral suppuration, diffuse suppuration of the breast, abdominal abscess, and suppuration in connection with amputation, treated with long and free incision and the breaking down of septa, the sloughs and pus being removed and the entire cavity dressed with iodoform gauze. He considers short incisions and the insertion of drainage tubes in such cases as insufficient, for a fatal ending may then take place due to suppuration beyond the area drained, often with the intervention of septic pneumonia or pleurisy. Even if improvement takes place, suppuration may take place with the formation of sinuses.

15. This article appeared in the *Journal of Tropical Medicine and Hygiene*, March 16, 1908.

Medical Press and Circular, London.

April 29.

16 Medical Treatment of Phlebitis. A. Robin.
17 Ascites Relieved or Cured by Paracentesis. F. Hawkins.
18 Surgical Treatment of the Imperfectly Descended Testicle. E. M. Corner.
19 Dyspareunia in the Male Occasioned by a Condition in the Female. S. J. Aarons.
20 Henoch's Purpura and Its Association with Intussusception. H. Lett.

Clinical Journal, London.

April 29.

21 Pneumonia and Emphysema. N. Moore.

Dublin Journal of Medical Science.

April.

22 Dublin Tuberculosis Exhibition of 1907, and Lessons to be Learned from It. Sir R. Matheson.
23 *Microscopic Examination of the Viscera After the Operation of Gastrojejunostomy for Non-malignant Disease. W. J. Greer.
24 Diagnosis of Scarlet Fever. G. A. Crowley.

23. **The Viscera After Gastrojejunostomy.**—Greer reports the result of a histologic examination of the stomach and intestine in two cases of gastrojejunostomy by Murphy's button for non-malignant disease of the stomach.

Intercolonial Medical Journal of Australasia, Melbourne.

March.

25 Preventive Medicine in Victoria. W. Morrison.
26 *Preservation of Infant Life. A. J. Wood.
27 Milk in Dietary of Babies. W. H. Summons.
28 Treatment of Early Tuberculosis of Bladder. R. A. Stirling.
29 *Method of Rapidly Staining the Spirochæta Pallida. K. Hiller.
30 *Subcutaneous Injections of Sterilized Air. E. J. Roberts.

26. **Infant Life.**—Wood's article, though directed primarily to the amelioration of conditions in Victoria, discusses the subject on a broad ground. The most important factor is the milk supply, and he details the Copenhagen method of regulation by private enterprise, the work of Nathan Strauss in New York, and the methods in use in various English cities and in France. He next considers the schemes that exist in so many places in the United States for providing fresh air for babies and mothers and children generally. The subject of illegitimate children next receives attention, and he describes in detail the history of the London Foundling Hospital, which "has been repeated all over the world." He deprecates the institutional idea of trying to bring up these children in masses, and says that these children should be distributed among the general population, and not massed together in an institution. "Every child is entitled to one pair of mother's arms. No institutional ingenuity can ever take the place of maternal interest." The plan of pensioning mothers to nurse their own children is commended. He considers the need of cleanliness as regards pillows, mattresses, bathing—especially the necessity for seeing that several children are not bathed in the same water—the danger of flies, etc.; also the need of realizing the change that has come over our treatment of respiratory diseases by allowing plenty of fresh air, instead of keeping the little patients suffocating in stuffy, heated rooms.

29. **Staining the Spirochæta Pallida.**—Hiller modifies the original method by substituting heat staining for cold staining as follows: Giemsa's azure stain is used, one drop to one c.c. of distilled water. It is important to keep from contact of any foreign body which will inevitably produce a precipitation that is fatal to results. Slides are preferable to cover slips for the smear. They must be perfectly clean, washed in sodium bicarbonate solution, rinsed and placed in equal parts of absolute alcohol and ether. The smear is made in the usual manner with two slides, dried and fixed over a Bunsen burner. The dilution of the stain must be made fresh and must on no account have any precipitate. It is heated to 40 or 50 C. in an incubator, leaving the door open. The stain is poured over a smear and the slide placed on the floor of the incubator for two or three minutes. The stain is then poured off and a fresh lot applied. This is repeated three or four times and watched until it attains a dark pink color. If the staining solution should show a precipitate after it has come into contact with the film, it is poured off and the slide rapidly washed in distilled water. When the staining is deep enough it is allowed to dry and is examined with an oil immersion lens.

30. **Injections of Sterilized Air.**—Roberts, incited by Gubb's article in the *British Medical Journal*, Nov. 9, 1907 (abstracted in The Journal, Dec. 7, 1907, page 1957), has used the method of subcutaneous injection of sterilized air in six cases of sciatica, neuralgia, rheumatic lumbago, etc., with excellent results. He describes the method.

Practitioner, London.

April.

31 *Treatment of Acute Pneumonia. S. West.
32 Polycythemia in Diseases of the Heart and Lungs and During Residence at High Altitudes. F. P. Weber.

33 Injuries to the Head in Young Children. D. Drew.
34 Importance of Accurate Diagnosis and the Treatment of Fractures in the Vicinity of Joints. C. H. Fagge.
35 *Relations Between Sciatica and Diseases of the Hip Joint. W. I. Bruce.
36 *Important Points in Connection with Infant Feeding. J. Burnet.
37 Chronic Colitis and Its Surgical Treatment. P. L. Mummery.
38 Ambulatory Treatment of Fractures as Applied to Osteotomy. G. B. Buchanan.
39 Recent Literature on Arthritis. F. J. Poynton.

31. **Pneumonia.**—West says that pneumonia, though a germ disease, is not infectious in the sense that it does not spread from the sick to the healthy. He shows by a chart from the registrar general's figures the strikingly parallel course of the mortality from pneumonia and influenza between 1889 and 1905. He divides treatment into: 1, Prophylactic and preventive; 2, antibacterial and antitoxic; 3, symptomatic. Under the first heading he calls special attention to the importance of a careful mouth toilet, especially during the course of specific infectious fevers. Avoidance of cold and fatigue, especially by influenza convalescents, is enjoined. The antitoxic and antibacterial treatments are at present beyond our reach, but he hopes that before long we shall be able to have some antitoxic treatment for pneumonia. In a mild, uncomplicated case a cool room and plenty of fresh air are essential. The outdoor treatment may be suitable for hospitals, but is hardly available in most private cases. Milk, two or three pints, and two eggs, with beef tea, in the twenty-four hours, constitute the best diet. Too much milk should not be given. If thirst is complained of, acidulated water may be given or the milk should be diluted with effervescing water. A dose of castor oil or a pill of calomel and colocynth should be given at the outset; a diaphoretic mixture may be given if the skin is hot and dry. Expectorants are unnecessary. Counter-irritation or leeches are recommended for pain in the side. It is a good rule not to allow the patient to leave bed until the temperature has been normal for at least ten days. During convalescence the pericardium and pleura should be regularly examined. Hyperpyrexia calls for the cold bath, sponging, cradling or packing. A hot bath is better for children. Antipyretic drugs are to be avoided. Cardiac failure is the great risk in pneumonia. When the lungs are greatly engorged, the patient cyanosed, and the right heart over-distended, great relief may be given by bleeding, free and rapid, a pint or a pint and a half in full-blooded, healthy, florid subjects. It is contraindicated in the weakly and unhealthy. Stimulants are not ordinarily required, but may be necessary for the aged and feeble and in persons of alcoholic habits. For pain he has not found cold applications either so successful or so agreeable as leeches or counter-irritation. Hiccough is a grave symptom. Hyoscyamin and veronal, which have been highly praised, are both risky remedies. Sleeplessness, according to its cause, must be overcome by the measures recommended for removing pain or reducing temperature. In extreme cases recourse must be had to morphin, but narcotics of any kind must be used with discrimination.

In the discussion that followed the reading of West's paper at the Harveian Society of London the proper use of venesection was emphasized, and in nearly every instance the speakers eulogized the use of leeches for the relief of pain, and all but one spoke highly of the good effects of alcoholic stimulants.

35. **Sciatica.**—Bruce considers that the clinical evidence in support of the view that the origin of the pain in sciatica is in the hip joint is now established by radiographs of the joint in cases of sciatica, of which eleven are reproduced. He reports cases and concludes that if systematic examination of the hip joint by *x*-rays in intractable cases of sciatica were carried out, it would be found in many of the cases that the sciatica was present only as a symptom of disease of the joint.

36. **Breast Feeding.**—Burnet offers the following suggestions as a move in the direction of ideal infant feeding: 1. Every infant should be breast-fed unless the mother is unable to nurse or is suffering from some condition which renders it inadvisable to do so. 2. As a substitute for breast milk, scalded cow's milk is to be preferred to sterilized or other forms of "treated" milk. 3. Gain in weight should not be looked on as the chief criterion of the infant's progress. 4. Artificial foods should never be used before the tenth month, and even then they should not be regarded as essential. 5. In places where infant milk depots are a necessity only medical men should be placed in charge. The physician of such a depot must see to it that no milk is supplied to women who are able to nurse their offspring.

Annales de l'Institut Pasteur, Paris.

March, XXII, No. 3, pp. 209-288.

40 *Malta Fever in Goats in Algiers, 1907. (Fièvre méditerranéenne chez les chèvres algéroises.) E. Sergent, V. Gillot and G. Lemaire. Id. at Kleber. Id. Experimental Research. E. Sergent.
41 Normal Antibodies. (Anticorps normaux.) Nicolle.
42 Bitterness of Milk and of Cheese. (Amertume du lait et des fromages.) A. Trillat and Sauton.
43 *Experimental Research on Yaws. (Etude du pian.) C. Levaditi and L. Nattan-Larrier.
44 Research on Antirabies Serum. A. Marie.

40. **Malta Fever in Goats in Algiers.**—Sergent found that the milk of 4.2 per cent. of 609 goats agglutinated the micrococcus of Malta fever; two goats had the micrococcus in their blood. At Kleber 3.3 per cent. of 650 goats agglutinated, and a few horses, mules and dogs. The clinical experience suggests that milk can not be the only source of infection, and that direct contagion is probable. In isolated barracks substitution of condensed for goat milk has banished the disease.

43. **Yaws.**—Levaditi found it impossible to transmit yaws to monkeys.

Presse Médicale, Paris.

April 25, XVI, No. 34, 265-272.

45 Antibodies in Experimental Work. (Anticorps.) L. Hallion.

Archiv für klinische Chirurgie, Berlin.

LXXXV, No. 4, pp. 841-1068.

46 Modifications of the Suprapubic Incision. (Modificationen der Sectio alta.) Wullstein.
47 Subcutaneous Extraperitoneal Rupture of the Bladder. (Blasenrupturen.) A. Schönwerth.
48 Early Diagnosis of Acute Infectious Osteomyelitis and Total Extirpation of the Scapula. E. Koerber.
49 Pathology of the Bursa in the Shoulder. (Schultergelenkschleimbeutel.) A. Stieda.
50 *Importance of Fecal Concretions for the Origin and Course of Acute Appendicitis. P. Klemm.
51 Treatment of Fractures by Leather Extension Apparatus. (Fracturenbehandlung im Chromlederstreckverbande.) Evler.
52 Total Loss of the Scalp. T. Miyata.
53 *Autoplastic Ligation of the Intestine. (Unterbindung des Darmes.) W. L. Bogoljuboff.
54 *Prophylaxis of Surgical Infections by Preventive Immunization. G. Lerda.
55 Kidney Tumors and Retroperitoneal Tumors. (Nierentumoren und retroperitonealen Geschwülste.) J. Hagen-Torn.
56 Treatment of Retention of Testicle. (Kryptorchismus.) N. W. Kopyloff.
57 *Postoperative Pneumonia. F. Protopopow.

50. **Fecal Concretions and Appendicitis.**—Klemm has encountered seven cases of concretions in the appendix. He does not think that the presence of stones causes any specific phenomena in the appendix, but the course of inflammation is much more rapid than in the stoneless appendix.

53. **Ligation of the Intestine.**—An illustrated description is given of a means of ligating with a strip of aponeurosis, the knot being fastened with a silk suture. In experiments on dogs there was no tendency for the ligature to cut through; the walls of the intestine showed no traces of necrosis, and the lumen remained permanently occluded. This technic is said to be working with Nature, while using a substance foreign to the body is working against Nature. The strip of aponeurosis must be broad, thick and free from muscle and fat, and it must be tied tight. By this autoplastic transplantation the intestine can be artificially shut off with the least resulting inconveniences or disturbance.

54. **Preventive Immunization Against Surgical Infections.**—Lerda reports promising results from preventive inoculation with mixtures of sterilized cultures of different varieties of staphylococci and streptococci and their endotoxins in prophylaxis of surgical infections. The immunization is of a polyvalent character. Active immunization requires from eight to twelve days, and the problem now is to obtain an efficient passive immunizing serum.

57. **Postoperative Pneumonia.**—At the surgical clinic at Moscow 135 cases were observed in the last 17 years. The pneumonia occurred after local as well as after general anesthesia. Infection by the lymph and blood vessels was generally responsible; aspiration was not the cause in any instance. Lately the patients have been urged to deep breathing and to change their position frequently, as preventive measures.

Beiträge zur klinischen Chirurgie, Tübingen.

March, LVII, No. 2, pp. 231-512.

58 A Very Young Malignant Mammary Tumor. G. v. Saar.
59 *Indications for the Various Methods for Anesthesia. O. Roith.
60 Remote Results of Treatment of Tuberculosis of the Ankle by Resection with Transverse Incision Front and Rear. (Behandlung der Fusswurzeltuberkulose durch Resektion.) E. Ohse.
61 Epigastric Hernia. Lindenstein.
62 Operation for an Embolomycotic Aneurism of a Mesenteric Artery. K. Stern.
63 Incarcerated Hernia with Volvulus; Primary Enterostomy. P. Sick.
64 Postoperative Complications in the Lungs. A. v. Lichtenberg.
65 Resection of the Thorax for Old, Large Empyema. E. Bergeat.

59. **Indications for the Various Methods of Anesthesia.**—Roith concludes from study of 1,011 anesthesias that general anesthesia is still the best, the most certain and practicable of all methods. It is better to anesthetize a tranquil rather than an agitated patient. Whether this is best realized with morphin alone or with atropin or scopolamin, with alcohol, with hypnotics of the fat series, with veronal, or with combinations of these, is still undecided. This slow management of the anesthesia is inconvenient, but it has many advantages. He thinks it wrong to use spinal anesthesia when a local anesthetic would answer the purpose. Local anesthesia deserves more extensive use, he says, especially in combination with inhalation anesthesia. Preliminary treatment with sedatives is as useful for local as for general anesthesia. By combining a sedative with the anesthetic the respiratory organs are relieved. Besides their vital functions, they also have to take charge of the intake and elimination of the inhaled drug, which is an extra task, part of which can be done away with by incorporating some of the anesthetic by another route. The subcutaneous route has been used very little to date, he says, for the anesthetics derived from the fatty hydrocarbons. He adds that dilute anesthetics can pass even through the intact skin in such quantities as to induce profound anesthesia.

Berliner klinische Wochenschrift.

April 27, XLV, No. 17, pp. 821-860.

66 *Friction Sounds with Pericardial Adhesion. (Pericardiales Reiben bei Synechie des Pericards.) E. Richter.
67 Diagnosis of Sympathetic Ophthalmia. (Neuere Untersuchungsergebnisse bei der sympathischen Ophthalmie.) G. Lenz.
68 Successful Removal of Thymus Obstructing Breathing and Feeding in Young Infant. W. Hinrichs.
69 Modes of Oxidation of Sugar. (Oxydationswege des Zuckers.) G. Rosenfeld.
70 Antituberculosis Dispensaries. (Fürsorge für Tuberkulose.) Aufrecht.
71 Ultimate Results of Sanatorium Treatment. (Dauererfolge der Heilstätten.) B. Fränkel.
72 *Local Hypersusceptibility to Tuberculin. (Tuberkulin-Ueberempfindlichkeit der Conjunctiva.) S. Cohn.

66. **Pericardial Friction Sounds with Pericardial Adhesion.**—Richter reports a case of aortic incompetence, relative mitral incompetence and complete pericardial adhesion. Pericardial friction sounds were heard for a few days, afterward subsiding. The patient was presented in the clinic as a case of fresh pericarditis, but autopsy a few days later showed old total obliteration of the pericardium with no recent inflammation. The adhesions were of long standing and the friction sounds must have been produced by rubbing the blood clots against each other in the loose connective tissue of the pericardial adhesions. Relics of extravasation in the pericardial adhesions were evident at autopsy.

72. **Local Hypersensitiveness of the Conjunctiva to Tuberculin.**—Cohn has been testing the tuberculin reaction on 112 patients, and found that the conjunctiva of the non-tuberculous after a single instillation of a 1 per cent. solution of "old tuberculin" became hypersensitive. A later instillation caused a decided inflammatory reaction. The conjunctiva also displayed a tendency to attract to the spot tuberculin circulating in the blood and thus reproduce the local reaction. Both properties are strictly localized to the conjunctiva in question. At least five days are required, and the acme of hypersensitiveness is reached by the third week.

Deutsche medizinische Wochenschrift, Berlin.

April 23, XXXIV, No. 17, pp. 721-768

73 *Operative Treatment of Old Fracture of the Patella. (Neue Operationsmethode zur Heilung veralteter Kniescheibenbrüche.) J. Rotter.
74 *Physiology of the Supramarginal Gyrus. F. Kudlek.
75 Ultimate Results of Tracheotomy. W. Wolf.
76 *Bronchoscopy for Foreign Bodies. C. v. Eicken.
77 Universal Illuminator for Throat Work, etc. (Universale Demonstrations-Handgriff-Lampe für Laryngoskopie, Oesophagoskopie, etc.). H. Horn.
78 *Operative Treatment of Extensive Cancer of the Stomach. (Ausgedehnte Magencarcinome.) Riese.
79 *Ligation of Ovarian Veins in Puerperal Pyemia. (Unterbindung der Venæ spermaticæ bei puerperaler Pyämie.) K. Berkofsky.
80 The Current in the Tissues During Constriction Hyperemia. (Gewebsstrom unter der Stauungshyperämie.) E. Joseph and L. Schliep. Commenced in No. 16.
81 Apparatus for Lightning Treatment of Cancer. (Neues Fulgurationstrumentarium.) Abel.

73. **Treatment of Old Fractures of the Patella.**—When there is a wide space between the divided halves of the patella, Rotter cuts a long rectangular flap in the aponeurosis of the quadriceps, the base below resting on the upper fragment. This flap is then turned over downward; the anterior aspect of the flap thus lies against and over both fragments and the ligament of the patella proper, with which it is then united by a number of catgut button sutures. By this means the contractions of the quadriceps are transmitted to the lower fragment of the patella, and the extension apparatus of the knee is restored to function. The results have been satisfactory in a case reported in which this technic was applied eight months ago.

74. **Physiology of the Supramarginal Gyrus.**—Two cases are reported in which this part of the cortex met with severe trauma, the results showing that all the motor and sensory functions persisted unimpaired, but that there was complete loss of the stereognostic sense and muscle sensation in the forearm and hand. The injury and the resulting disturbances were remarkably similar in each case.

76. **Bronchoscopy for Foreign Bodies.**—Eicken has used the bronchoscope in 15 cases. It revealed the foreign body in twelve and demonstrated its absence in two others. Bronchoscopy can never be applied too early, he says, and it is never too late for its use in case of foreign bodies in the air passages.

78. **Operative Treatment of Extensive Gastric Cancer.**—Riese has performed 130 operations on the stomach, for malignant disease in 89 cases. In 24 cases extensive resection was necessary, and 17 of these patients are still in good health from seven months to nearly six years since the operation. His experience shows that it may be possible to save the patient even in advanced cases, that radical cure is possible and that survivals average longer after resection than after an anastomosis.

79. **Transperitoneal Ligation of the Ovarian Veins in Puerperal Pyemia.**—Three patients were saved out of seven on whom Berkofsky performed this operation. The others succumbed to pre-existing septic complications. Transperitoneal ligation of the ovarian veins in puerperal pyemia is an almost entirely harmless intervention, he says, so far as shock and danger of peritoneal infection are concerned. In 27 cases on record in which this was done, 15 of the patients recovered. He now excludes from this operation all cases with severe septic complications, but advocates it after failure of other measures including evacuation and rinsing of the uterus, tamponing, opening of abscesses, quinin internally (0.5 gm.-7.5 grains), intravenous injection of a silver salt and dietetic measures. There are forty-three cases on record in which the ovarian veins were ligated, either through or outside of the peritoneum, with eighteen recoveries.

Deutsche Zeitschrift für Chirurgie, Leipsic.

March, XCII, Nos. 4-6, pp. 263-584.

82 Resection of the Lower Jaw. (Methodik der Unterkieferresektionen.) E. Heller.

83 Migrating Flaps in Plastic Operation for Contracture of Hand from a Burn. (Verbrennungskontrakturen der Hand und Finger durch Wanderlappen-Fernplastik.) P. Klemm.
84 *Temporary Gastrostomy for Ulcer in Stomach or Duodenum. K. G. Lennander.
85 Ankylosis of the Spine. (Versteifung der Wirbelsäule.) M. Matsuoka.
86 Surgery of Non-parasitic Cysts in the Spleen. (Milzcysten.) E. Bircher.
87 Resection of the Stomach. Second Billroth Method. (Magenresektion.) H. Ito and W. Y. Soyesima.
88 Resection of Intestine for Gangrenous Invagination in a Child. (Darmresektion bei brandiger Darmeinstülpung.) N. Damianos.
89 Incarceration in Hernia of the Appendices epiploicæ. F. Linkenheld.
90 *Appendicitis in the Aged. E. Haim.
91 Congenital Anomalies of the Biliary Passages. (Anomalien der Gallenwege.) Dreesmann.
92 Isolated Fracture of the Transverse Processes of the Spine in the Lumbar Region. Ehrlich.
93 *Treatment of External Anthrax. (Milzbrand beim Menschen.) Schwarz.
94 *Entrance of Air into the Internal Jugular Vein During Operative Injury. A. v. Oppel.
95 Backward Dislocation of the Shoulder. (Schulter-Luxationen nach hinten.) N. Ellerbroek.
96 Pressure Cyanosis in the Head. (Entstehung der Rückstauungsblutungen am Kopf.) R. Milner.
97 Suture of the Lungs. (Lungennaht.) G. Hotz.
98 Osteoplastic Amputation of the Leg. (Neue Methode der Amputatio cruris osteoplastica.) F. L. Dumont.
99 Traumatic Laceration of the Cartilage in the Knee. (Knorpelriss im Kniegelenk.) K. Budinger.
100 Bullet Wounds of the Cervical Vertebræ. A. Hoffmann.
101 Removal of Appendix in Herniotomies. (Entfernung des Wurmfortsatzes bei der Bruchoperation.) Kruger.
102 Constant Finding of Wenzel-Gruber Fibular Epiphysis of the Tuberosity of the Fifth Metatarsal Bone in the Roentgen Picture at Age of 13 or 14. H. Iselin.
103 Radium Burns of the Skin. (Radiumverbrennung der Haut.) M. Matsuoka.
104 Adjustable Bench Support. (Verstellbares Lagerungsbänkchen.) P. Sick.

84. See abstract in The Journal, Jan. 11, 1908, page 164.

90. **Appendicitis in the Aged.**—Haim comments on the remarkably slight disturbance of the general health in appendicitis in the aged. The clinical picture generally simulates ileus. The temperature usually keeps near normal. Vomiting is frequent. The prognosis is grave, although the infection is generally a mild colon bacillus process. Treatment is the same for all ages, but the resemblance of the syndrome to ileus must not mislead the physician.

93. **Treatment of Anthrax.**—Schwarz has had occasion to treat 12 patients with external anthrax, and he here expatiates on the importance of refraining from operative measures in treatment. The main point is to protect the lesion from irritation from without. His experience shows that even severe lesions on the limbs have a favorable prognosis. Antibodies are evidently produced in adequate amounts.

94. **Entrance of Air into the Jugular Vein During Operations.**—When the peripheral part of the internal jugular vein is involved in a neoplasm the central portion generally collapses while the walls beyond are held gaping by adhesions. This combination favors aspiration of air. Oppel has resected the vein in eight cases, and states that central ligation of the vein is the best means of preventing aspiration of air and profuse hemorrhage. The patients always tolerated the ligation well; only two succumbed, both from the result of concomitant ligation of the carotid artery.

Jahrbuch für Kinderheilkunde, Berlin.

April, LXVII, No. 4, pp. 282-512.

105 Elimination of Uric Acid in Infants. (Harnsäureeausscheidung im Säuglingsalter.) A. Orgler.
106 *Recurrence and Pseudorecurrence of Scarlet Fever. (Scharlach-Rezidiv und Pseudorezidiv.) E. F. Wyss.
107 Granulomatosis of Lymphatic Tissue of Pseudoleukemic Type. H. Lehndorff.
108 Euquinin in Whooping Cough. (Euchininbehandlung des Keuchhustens.) L. Sior.

106. **Recurrence of Scarlet Fever.**—Wyss reports five cases of recurrences of scarlet fever in advanced convalescence. A familial predisposition is evident, as in scarlatinal nephritis. The recurrences do not seem to render the prognosis graver. He advises isolating the new cases from those in the later stages, and especially those with otitis and other complications from those without.

Medizinische Klinik, Berlin.

April 26, IV, No. 17, pp. 609-648.

109 *Placenta Prævia. Hammerschlag.
110 Roentgen Examination of the Stomach. (Radiologische Untersuchungen des Magens.) B. Baisch.
111 Administration of Emetics. C. Bachem.
112 *What Can We Learn from Anesthesia with Part of the Circulation Cut Off and Klapp's Method of Autotransfusion? (Was lehrt uns die Narkose bei künstlich verkleinertem Kreislauf, und wie wirkt die von Klapp proponierte Methode der Autotransfusion gegen gefährliche Narkosezufälle am Tierversuche?) H. Ziegner.
113 Exophthalmic Goiter. (Morbus Basedowii.) F. Schultze. Id. Krehl. Id. Martius.
114 The Various Specific Tuberculosis Remedies. (Spezifische Tuberkulosemittel.) Schrader.
115 Lupus and Tuberculosis of Nasopharynx. O. Seifert. Commenced in No. 16.
116 Improved Technic for Gallstone Surgery. Schemmel.
117 Ocular Tuberculin Reaction in Cutaneous Tuberculosis. Reichmann.
118 Pharmacologic Tests of Atoxyl. F. Croner, E. Seligmann and F. Blumenthal.
119 *Predisposition to Disease. (Krankheitsdisposition.) E. Wieland.

109. **Treatment of Placenta Prævia.**—Hammerschlag always tells the family that the child is doomed when called to a case of placenta prævia. In his 191 cases only 16 per cent. of the children survived. He advises against tamponing except when the patient is to be carried to a hospital during hemorrhage; the colpeurynter is better to arrest the bleeding. Tamponing with the body of the child by traction on one foot always gave excellent results. He advises it when further expectant treatment is contraindicated or when delivery follows the initial bleeding. In case the cervix tears, the uterus, the laceration and the vault of the vagina should be tamponed firmly at once with scrupulous asepsis. A pad should be fastened to exert pressure on the uterine artery. This tampon should not be removed for 48 hours. It is better not to suture the tear, as all of it is seldom accessible. The cervix was torn in 5 of his cases by incorrect delivery of the head, continuous traction on the foot and excessive straining during the labor contractions. These factors should be avoided.

112. **General Anesthesia with Dammed Circulation.**—Ziegner excluded the legs from the circulation by a constricting band in experiments on rabbits and found that a smaller amount of chloroform was required for general anesthesia and that the animals recovered much more rapidly than the controls. The blood in the legs dilutes the anesthetics as from a fresh reservoir when the constricting band is taken off. Klapp has been using this autotransfusion for more than a year, and both clinical and experimental findings seem to confirm the harmlessness of the constriction and the benefits of the measure.

119. **Predisposition to Disease.**—Wieland shows how much valuable work can be done in the early recognition of a predisposition to certain affections on the part of certain organs and prompt measures to ward off injurious influences and to bring these predisposed organs up to par. Preventive medicine should prevent the breeding of weaklings. Wider enlightenment of the public in respect to the close connection between disease and inherited predisposition to disease will certainly tend to make parties contemplating marriage select their consorts with greater care, while those liable to transmit a dreaded taint may refrain from matrimony on principle. Children liable to be predisposed from parental taint should be supervised with extra care. The defective development of certain organs in the child must be borne in mind at different ages and the child be guarded against injury accordingly. The digestive tract, skin and mucous membranes in the infant are still imperfect, and also the nervous system in the infant and child. From the second to the sixth year is the age for "children's diseases," but he ascribes their prevalence more to the exceptional opportunities for infection at this age than to any special predisposition on the part of the child. The rapid growth of the bones in childhood also affords a predisposition for localization of various affections, rachitis, caries, etc. He concludes his monograph, which is printed as a supplement, with the remark that it is easier, more rational and a more grateful task to prevent disease than to cure it, and that the surest means to accomplish this is by studying and conquering the predisposition.

Monatsschrift für Geb. und Gynäkologie, Berlin.

April, XXVII, No. 4, pp. 415-554.

120 *Diagnosis and Treatment of Hydrocephalus. Hammerschlag.
121 *Immediate and Remote Results for Mother and Child of Forceps Deliveries. (Zangenoperation.) H. Gans.

122 Siren Deformities and Their Genesis. (Sirenenmissbildungen.) P. Kuliga. Commenced in No. 3.
123 Disturbances in Gait After Pubiotomy. (Gehstörung nach Hebosteotomie.) M. Neu.

120. Diagnosis and Treatment of Hydrocephalus in Labor Cases.—Hammerschlag reviews 22 cases of hydrocephalus from his experience. He says that there is no absolutely reliable sign, only the combination of various signs is instructive. The size of the head, the width of the sutures and fontanelles, may all be misleading. Exploratory puncture of the skull is dangerous. The diagnosis once made, puncture is generally followed at once by vigorous uterine contractions and spontaneous delivery. When interference was necessary, expression from without, extraction with the finger in the skull or seizing the scalp with toothed forceps from which a weight was suspended, have given the best results in his experience. In certain cases it may be wise to cut out some of the skull with the bone forceps and draw down one of the arms. With moderate degrees of hydrocephalus, the head in the pelvis, the forceps may sometimes be allowed, but the danger of their slipping is great.

121. Results of Forceps Deliveries for Mother and Child.—Gans reports 8,276 deliveries, with forceps in 562 cases. The dangers seem to be less than generally believed. His conclusions are that in the hands of a skilled obstetrician the forceps may prove a blessing, but that in the hands of the inexperienced the most serious consequences may result.

Wiener klinische Wochenschrift.

April 23, XXI, No. 17, pp. 607-640.

124 Antagonisms of Poisons. (Antagonismus der Gifte.) H. Meyer.
125 Bacteriologic Tests of Dentists' Treatment of Gangrene of the Pulp. B. Mayrhofer and F. Ballner.
126 Fracture of the Astragalus. (Ein Talusbruch.) F. Neugebauer.
127 Schmidt's Iodized Catgut. (Iodkatgut.) E. Szili.
128 Behavior of Human Skin in Response to Bacterial Toxic Substances. (Verhalten der menschlichen Haut gegen bakterielle Giftstoffe.) C. v. Pirquet.
129 Development of Serum Diagnosis of Syphilis. E. Weil and H. Braun.

Zeitschrift für Geb. und Gynäkologie, Stuttgart.

LXI, No. 3, pp. 449-644.

130 Ancient Illustrations on Gynecologic and Obstetric Subjects. E. Ingerslev.
131 *Pulsation in Intrafetal Portion of Umbilical Cord. (Nabelkegelpuls.) F. Ahlfeld.
132 *Children at Term and Yet Immature. (Ausgetragene und noch nicht raife Kinder.) Id.
133 Influence of Chest Measure on the Position and Presentation of the Child. (Einfluss des Brustumfangs der Neugeborenen auf Haltung und Lage des Kindes.) Id.
134 Lungs That Float Without Containing Air. (Schwimmende Lungen ohne Luftgehalt.) Id.
135 Functional Results in Thirteen Cases of Anastomosis Between Ureter and Bladder. (Ureter-Blasenanastomose.) G. Rauscher.
136 Psoriasis of the Uterus. F. Berka.
137 Anatomic Study of Spinal Anesthesia. (Rückenmarksanästhesie.) E. Gerstenberg and F. F. Hein.
138 Differentiation of Streptococci by Blood Culture Media. (Unterscheidung der Streptokokken durch Blutnährboden.) F. Freymuth.
139 Participation of Fallopian Tubes in Menstruation and Rutting Process. (Tubenbrunst und die Tuben-Menstruation.) E. Holzbach.
140 Behavior of Ovary in Osteomalacia. (Eierstocksdrüse bei Osteomalacie.) J. Wallart.
141 Simple Congenital Pemphigus of the New-Born. Id. and A. Labhardt.

131. Pulsation in the "Umbilical Cone."—Ahlfeld says that the absence of pulsation in the intrafetal part of the umbilical cord does not indicate the death of the child, and that the presence of pulsation even in profound asphyxia is an easier and more certain means of revealing persisting life than the direct movements of the heart. Pulsation here persists longer than in the cord. Once it had vanished, it never returned in his experience. It is far easier to palpate the "umbilical cone" with two fingers than to palpate the thorax to detect the heart beat.

132. Children Born at Term and Yet Immature.—Ahlfeld reports a case which shows a striking difference between the stage of development of the fetus and the duration of pregnancy. This anomaly should suggest an unsuspected kidney affection, as this was evident in his case. The latent kidney affection gave no other signs of its presence for some time.

Zentralblatt für Gynäkologie, Leipsic.

April 25, XXXII, No. 17, pp. 545-576.

142 *Extraperitoneal Cesarean Section. (Extraperitonealer Kaiserschnitt.) F. Fromme.
143 Cervical Cesarean Section. W. Rubeska.
144 Permanent Enlargement of Contracted Pelvis. (Bleibende Erweiterung des engen Beckens.) G. Schickele.
145 Application of Forceps in Abortion. (Anwendung der Abortzange.) Hammerschlag.
146 *Psychoneurotic Climacteric Phenomena. (Ausfallserscheinungen.) M. Walthard.

142. Modified Extraperitoneal Cesarean Section.—Fromme announces that his modified Cesarean section proved highly satisfactory in nine cases. He aims to shut out the peritoneum completely from the field of operation by suturing the uterine peritoneum, after incision, to the parietal sheet. He claims that this simple technic of extraperitoneal abdominal section utilizes the natural conditions while obtaining all the advantages of other technics. The incision in the median line is carried down through the uterine peritoneum, which is loosened on both sides and sutured to the parietal sheet. He applies this technic whenever there is a suspicion of possible contamination.

146. "Climacteric" Psychoneurotic Phenomena.—Walthard states that among 64 women with myoma, 54 presented various climacteric symptoms such as hot flashes, vertigo, palpitations, etc., long before the radical operation. Ten of the women were entirely free from these psychoneurotic phenomena both before and after the radical operation. These and other experiences which he relates show that the loss of genital functioning is not a direct necessary cause of these psychoneurotic, so-called climacteric phenomena. He admits that the natural and artificial menopause is liable to induce certain phenomena which attract the patient's attention, but he claims that they never assume disquieting proportions except in women who magnify their slightest sensations. These psychoneurotic phenomena may occur with normal genital findings. Psychic rather than ovarian treatment, etc., is required.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

The Sexual Question. By August Forel, M.D., Ph.D., LL.D., formerly Professor of Psychiatry at and Director of the Insane Asylum in Zurich (Switzerland). English translation by C. F. Marshall, M.D., F.R.C.S., Late Assistant Surgeon to the Hospital for Diseases of the Skin, London. Pp. 536, with illustrations. Cloth. Price, $3.00. New York: Rebman Co.

The Development of Ophthalmology in America. 1800 to 1870. By Alvin A. Hubbell, M.D., Ph.D., Professor of Clinical Ophthalmology in the University of Buffalo, New York. Cloth. Pp. 197, with illustrations. Price, $1.75. Chicago: W. T. Keener & Co., 1908.

Ohio Sanitary Bulletin. Proceedings of the Fourth Conference of the Ohio State Board of Health, with Representatives of Local Boards of Health, held Jan. 23, 24 and 25, 1908. Pp. 109. Paper. Columbus: Office of State Board of Health.

Abdominal Tuberculosis. By A. Earnest Maylard, M.B., B.S., (Lond.). Surgeon to the Victoria Infirmary, Glasgow. Pp. 360, with illustrations. Cloth. Price, $4.00. Philadelphia: P. Blakiston's Son & Co., 1908.

Transactions of the Nineteenth Session of the American Pediatric Society. Edited by Linnæus Edford La Fétra, M.D. Vol. XIX. Pp. 220, with illustrations. Cloth. New York: E. B. Treat & Co., 1908.

The Opsonic Method of Treatment. By R. W. Allen, M.B., B.S. (Lond.), Pathologist to the Royal Eye Hospital, London, s.e. Pp. 138. Cloth. Price, $1.50. Philadelphia: P. Blakiston's Son & Co.

Untersuchungen zur Kenntnis der Psychomotorischen Bewegungsstörungen bei Geisteskranken. By Dr. Karl Kleist. Pp. 171. Paper. Price, $4.50. Leipzig: Dr. Werne Klinkhardt.

Nuova Classificazione dei Delinquenti. By Dott. José Ingegnieros, Professor all, Università di Buenos Aires. Pp. 48. Paper. Milano-Palermo-Napoli: Remo Sandron, 1907.

Index to the Transactions of the American Laryngological, Rhinological and Otological Society from 1896 to 1907 Inclusive. Pp. 43. Cloth. Published by the Society, 1908.

Proceedings of the Pathological Society of Philadelphia. New Series. Vol. X. Pp. 229, with illustrations. Paper. Boston: Office of *The Journal of Medical Research*.

The Mother's Year Book. By Marion Foster Washburne, Author of "Family Secrets," etc. Pp. 259. Cloth. Price, $1.25. New York: The MacMillan Co., 1908.

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Addresses

A NEW DUTY OF THE MEDICAL PROFESSION: THE EDUCATION OF THE PUBLIC IN SCIENTIFIC MEDICINE.

PRESIDENT'S ADDRESS AT THE FIFTY-NINTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, AT CHICAGO, JUNE 2-5, 1908.

HERBERT L. BURRELL, M.D.
BOSTON.

The welcome that is extended to us this year by this great metropolis is peculiarly grateful, for Chicago is the home station of this national Association. This great city should serve as an inspiration to us all, for it personifies the best of the American spirit—vigor, enterprise, and stability of purpose. This city, during the year has lost one of its most gifted citizens, one whose name was honored in all countries, an ex-president of the Association. All honor to the memory of Nicholas Senn, surgeon, writer, investigator, publicist, a man who did pioneer work in surgery and who was always ready to promote the interests of the medical profession.

The coming together of men of mutual aims must always be a subject of public interest. What is the meaning of this gathering of medical men from the length and breadth of this great country?

First: That individually they may be better able to care for the sick. Second: That they may collectively be better fitted to prevent disease. Third: That they may know men and their ways and by social intercourse may live fuller and broader lives. This Association is a great power for good or for evil. May its acts be guided by motives that are directed toward the health and prosperity of the people.

There are many subjects of which I should be glad to speak. Some of them have been considered by the Association in previous years. Medical education, medical legislation; the desirability and the question of the advisability of the medical profession taking an active interest in practical politics; the establishment of a national bureau of health; the abuse of medical charity, and the work of the Council on Pharmacy and Chemistry; all are subjects of vital interest. To-day I invite your attention to what I believe is a relatively new duty of the medical profession, that of judiciously educating the public in the present position of medical knowledge and in the advances that are being made in scientific medicine.

Until recently medicine has observed a silence as to its position and accomplishments that has made it unique among its sister sciences. A veil of mystery has surrounded it. Born, as medicine was, of fear, nurtured by superstition, it went through the centuries in twilight until it grasped the torch of science, which is beginning to illuminate its way. For long years medicine was only a handmaiden to theology. Faith, that inestimable gift to man, was the guiding star of medicine. Faith in "simples," in fetiches, in amulets, in poisons, in all the forces of Nature and in all the dread legion of phantasms that may be formulated by the mind, all these at times have held sway in medicine. Theories, hypotheses and "fads" ingenious and often containing a grain of truth have in turn dominated medical practice.

The profession has properly been conservative, because the truth in reference to health and disease has not been known. When the vital processes are looked at in the abstract, they are so marvelous and still so far from being entirely understood that it is little wonder they are surrounded by an air of mystery. The family practitioner of our grandfathers' days was a man who was greatly respected. He was discreet and silent. When he entered the sickroom he held his counsel. He appreciated the fact that he was in the presence of a human being afflicted with disease. Frequently he realized that he did not know either the natural processes of health or the natural history of the disease that he was facing; therefore, he was silent. The satirists have always pictured the practitioner of medicine as a venerable old gentleman who discreetly nodded his head in acquiescence or disapproval, who said vague things, and who encouraged his patient and the household to hope for the best and to prepare for the worst. I believe it is generally accepted that our profession has been deemed one that has been filled with charity and love of man, but it has not been conspicuous for its scientific methods.

During my lifetime I have seen, as have many of you, the development of scientific medicine. But medicine to-day, although a science, is still in part an art. Yet the sum of scientific knowledge in medicine is already very large, and as a science medicine has changed from the position in which it haltingly progressed until now it is advancing steadily along many lines.

The art of the practitioner during the past few years has not progressed so rapidly as the science of medicine. Rightly, the attention of the profession has been directed to ascertaining the causes of disease; hence the natural history of disease and its diagnosis have in large measure occupied the attention of the profession. The lack of training in scientific methods led men to reach conclusions from insufficient data; and when these men found that they were mistaken they were frequently swept to the other extreme—that of failing to accept anything of value unless it could be absolutely proved.

Meantime the art of the practitioner has languished. Proprietary medicines and nostrums have been too frequently used by practitioners, feeling as they have that "they may help and the patient wants them." Fortunately, experimental pharmacology at last has come to give us the truth, for by its findings we now know what really follows when a drug is given.

At present I believe that physicians are too conventional in their methods of treating disease. They have not paid sufficient attention to the alleviation of the suffering that accompanies some of the incurable maladies. Hydrotherapy, massage, electrotherapy, and particularly psychotherapy, as measures of relief, are permitted to rest in the hands of empirical practitioners, who but slightly understand the forces with which they are dealing. Human beings cling hard and fast to hope. They, fortunately, will rarely accept defeat. They constantly hope when in distress that aid will come by some intervention, physical, psychic or divine. This insistent demand for relief must be remembered by practitioners, but they should also recognize, as Louis did, that there is a natural course of disease.

Progress in science is always haltingly made. In medicine, which is but applied biology, the movement now is steadily forward; for through chemistry, biology and physics has come some knowledge that enables us to comprehend more clearly many of the vital phenomena of life. To-day we are in possession of certain irrefutable facts. It is unnecessary for me to catalogue to you the advances that have been made in medicine during this last generation; suffice it to say that it has caused a revolution. The application by Lord Lister of Pasteur's work in biology has made a new era in surgery. Chemistry and biology have made sanitation a science. Physics has enabled us to comprehend some of the vital processes. These contemporary sciences have illuminated medicine, but have medicine and surgery in themselves properly advanced? I think not. The field for advance is still open in clinical medicine and surgery. The human being, particularly when sick, has not been scientifically observed as thoroughly as he should. Valuable scientific facts may be obtained by the clinician in the out-patient department and wards of a hospital, or, for that matter, wherever he meets disease. The reason that more of these observations have not been made in hospitals is due primarily, I believe, to the lack of adequate training of men in scientific methods, but perhaps more largely to the general belief that scientific work in medicine must be done in a laboratory. It will be granted, I think, that in science the closer one can observe a problem the better. Should not the wards of a hospital be the real laboratories of medicine? To-day there is in the wards of hospitals a wealth of facts that is not recorded even when recognized. When the opportunities that are really within our grasp are fully utilized, then there will be still greater progress in medicine.

The three great professions, theology, law and medicine, have ever been the custodians of the spiritual, the material and the physical welfare of man. Medicine has been until recently in the background. The principle of theology has always been and always will be a matter of faith. The law has been a series of rules of action based on precedent and intended to secure equity and justice between human beings. Medicine, however, from being an art that ministered to the physical distress of man, has come into a broader field of activity. Intelligent men and women now recognize that faith is dependent in large measure on the physical condition of the individual. Our criminal classes, it is now known, are frequently physical degenerates. Moral obliquities are often caused by physical conditions. The material welfare of man is no longer in the hands of the law alone; for great epidemics, which destroy scores of people and invalid thousands, and which often paralyze the commerce of a part of the world, may to-day be controlled by a knowledge of contagious diseases.

The leech which served in the Crusades was a camp follower, a servant retainer. To-day the medical man who is responsible for the health of troops in the field has as high a responsibility in gaining success as the commander-in-chief of the army. The balance of power between the nations of the earth is maintained, in part at least, by the fitness of troops for service. This statement I make as applicable to every civilized nation. Its truth has been demonstrated in every modern war; never more strikingly than in the Spanish-American War.

A singular and unprecedented apathy, to be charitable, prevented the chairman of the Committee on Rules of the House of Representatives of the United States Congress from permitting the United States Army Reorganization Bill to come before that body. And this notwithstanding the fact that the bill was favored by the President of the United States, the Secretary of War, and the United States Senate, while a careful canvass demonstrated the fact that the bill was favored by a majority in the House of Representatives. But within a few weeks the chairman of the House has seen the truth and has allowed the bill to be passed and it has now received the signature of the President. We are at last in a position to meet, in part at least, the exigencies of a modern war.

No man, woman or child in the civilized world can be so situated, in labor, in travel, in attending schools or churches, in fact in existing, without being a debtor to the knowledge that has come from scientific medicine. This new phase of development in our profession adds greatly to its responsibilities. We are no longer a group of men and women who only soothe the brows of the afflicted and alleviate human suffering. Intelligent physicians or surgeons to-day know the natural history of some of the diseases with which they come in contact. Science has placed in their hands knowledge with which to control these diseases. They are public servants and their duty demands that they protect the individual against the ravages of disease as well as alleviate or cure. We, as the medical profession, are now in possession of truths that can help our fellow man. Is it not our duty to tell our fellow man? For we are told that "the gospel must first be published to all nations" (Mark 13:10).

Education has been, and I sincerely trust always will be, the cornerstone of our civilization in this country. No permanent advance will ever be made unless the people are educated to the truth. Laws are never effective unless the people want them to be enforced. I can not recall any great or permanent advance that has been made by force alone; and even when force has apparently succeeded, it usually leaves an unjust and more or less complex, unstable condition. Our Civil War blotted out a great evil, but it left a race problem that has not been satisfactorily settled. The "flare-back" of force usually defeats itself. I have an abiding faith in the public. I believe in it. When made to think, it reaches a wise solution of a problem. Observe—the key to safe public opinion is to make the public think. Unthinking people are less to be depended on than animals. If it is true, that the medical profession now has accepted facts that bear on the welfare of the people, is it not our duty to make them known? Judicious publicity is, I believe, a new duty of the medical profession to the laity. How can this be accomplished? There has already been established a Board of Public Instruction in this Association. This board, as well as all committees, should be answerable to the Board of Trustees; it should be representative and eminently judicial in character, and should have as advisors the experts in the profession.

In what medical subjects should the public be educated? It will be better to teach thoroughly a few important subjects than to attempt to cover too large a field. Let us not be blind to the fact that our scope of usefulness as physicians in dealing with the large disease problems depends in great measure on the cooperation of the public. We must have intelligent cooperation to make our work as effective as may be. Tuberculosis is still the most pertinent subject on which information should be given. The public should be informed that at present an early, thorough operation is the most certain way of curing cancer. The work already accomplished by the public in cooperation with physicians in controlling tuberculosis, ophthalmia neonatorum and scarlet fever comes to everyone's mind. The work that has been done in controlling yellow fever in Louisiana by the public and the medical profession is a striking example of educating the people as to the facts concerning disease. The various infectious diseases are obviously ones concerning which the public should be informed. The people should be educated as to the necessity of pure air, pure water and pure food; they should know the hygienic value of bathing. They should know that hospitals are provided not alone for the care of the sick poor but that knowledge of disease may be advanced. Take a familiar example in our social life: When it is recognized and brought home to the public that contagious diseases in children are to a degree unnecessary, that by proper sanitation and medical school inspection they may be in large measure prevented, then people will demand that their little ones in public schools shall be protected against disease, which often leaves them invalided and crippled for life. A child among the better classes to-day, until it begins to go to school, is usually free from contagious diseases, but the moment it enters a school it is subjected to dangers from infection which it rarely escapes. To be consistent in our present method of life we might as well expose our children deliberately, as they did in country districts in former times, when a child was sent to a neighbor's to get the measles, as it was a convenient time for him to be sick. The physical and intellectual development of our children is in the public mind, but the possibility of preventing them, by adequate precautions, from having infectious diseases is not appreciated. The sanitation of churches, places of amusement, vehicles of transportation, so intimately concern the public that the essentials of their proper care should be widely known. When the public is so informed, it will demand a reasonable degree of security from infection. But, it may be said, all the truth is not known regarding these subjects; true, and, therefore, we must be very sure that we tell only the truth.

Commercial houses within a few years have found that it pays to care for their employés. It is true that in some instances a spirit of altruism has led to this action, but practical experience has shown that a higher and a better type of work comes from employés who are intelligently cared for. In one commercial house in Boston a physician gives his professional services to the employés as he might to a hospital clinic. If any salesman falls below in his sales he is directed to appear before this physician. A careful examination usually reveals some adequate physical cause that accounts for the individual's lack of energy. Anemia, indigestion, constipation, incipient tuberculosis are recognized and treated, and the salesman is frequently restored to his full earning capacity. Intelligent merchants recognize that the better care that they take of their employés the better service will be rendered in return. Loyalty is a force the value of which can not be overestimated, and it is secured and preserved by employers who are really interested in their employés.

The czar-like dictation of labor unions which arbitrarily limits the amount of work that a man or woman is permitted to do is a force that seems necessary to meet the greed of capital, which in the past often cast aside its employés like worn-out garments when they were no longer useful. I hope that labor unions in the future will demand not that the number of hours and the productiveness of the individual shall be limited, but that capital and labor shall protect the individual against disease, in order that he may have the highest degree of productiveness. Throughout the world there are cooperative business establishments in which the interests of the employés are protected in a measure, but this protection is usually financial. If the employer and employé could recognize that the preservation of the working capacity of the employé is of even greater importance than a 10 per cent. dividend on a few hundred dollars saved, a great mutual gain would be secured. Business men should see to it that their employés are informed as to the proper methods of life; protection against disease by employers is not alone a duty on their part but a real financial investment, as recognized in the work of the Welfare Department of the National Civic Federation. The medical profession must recognize that cooperation with business men in these public duties is a new duty of citizenship.

Who among the public should first be educated? Those who are leaders in the community; those who are in positions of responsibility—national, state, city and town authorities, trustees of hospitals and schools—they should first be informed as to the facts concerning disease. Experience has shown that the lay public takes a keen interest in everything concerning medicine and its progress. The success of nostrum vendors has demonstrated their skill in appealing to the sentiment of the public. The Board of Public Instruction should always appeal to the reason of the people. Great discretion should be used in selecting the subjects in which the public should be educated. Experience would teach such a board what not to do. "Don't" should be the motto for this board when in doubt as to educating the public.

What are the means by which we may reach the public? Newspaper articles on selected subjects, giving facts concerning a given disease, but not the treatment of disease, should be furnished the press. These articles should be signed and published under the authority of the Board of Public Instruction. That these articles should be judiciously edited must be apparent to all. No statement issued by the Board of Public Instruction should fail to be the absolute truth. Irreparable damage to the medical profession and to the public might be done by unwisely exploiting mooted subjects. It would be unfortunate if this new duty of educating the public in medical matters were taken up indiscriminately by the members of the medical profession. It may well be appreciated that this new duty may be considered a legitimate means of advertising the individual. But self-seeking for the medical profession, or for any individual member of it, would be quickly recognized by the public. Discredit, then, would be brought on the profession and on the individual.

Another means of reaching the public might be by magazine articles. The facts concerning certain diseases might well be given to skilled lay-writers, who should be paid for their services. A lay-writer has the art of presenting a subject to the public in an attractive manner. For example, let the subject of animal experimentation be investigated by one of the magazine writers of this country. Open wide the sources of information to such a writer. Then let a series of articles be published in order that the public may know the truth as to the inestimable benefits that have come from animal experimentation, not to men alone but to animals as well. Reprints of such articles, pamphlets and circulars of information, would be a powerful means of educating the public. Let circulars of information regarding the subject of animal experimentation and of vaccination be placed in the hands of every legislator in this country; in fact, in the hands of every citizen who is misinformed as to the truth. In the event of a great epidemic of yellow fever or cholera, let a pamphlet containing the facts concerning the spread of the disease be sent to every householder in the district. Every physician would be then obliged to know the facts. This leads me to call your attention to one of the obvious effects on the medical profession of educating the public. It is to be regretted, but it is true, that there are ignorant practitioners in our profession. If the public is informed as to the facts concerning an individual disease, a physician will be forced to inform himself as to the recent advances in that disease.

To my mind, one of the most important movements in the Association is the establishment of county graduate schools in the various states. I can conceive of no better stimulus to this work than the adoption by the county schools of a plan by which one of its members shall inform the public, once a year, as to the facts concerning some selected disease.

The work of the Council on Medical Education is progressing. Dilapidated medical schools are disappearing. Why? Publicity. When the public recognizes that in order to become a well-educated physician certain requirements are absolutely essential, then, and not till then, shall we have true reform in medical education. I commend to your consideration the work of the Council on Medical Education. It is dealing with the tap root of the tree of the medical profession. Its reforms must not be too radical. There are still isolated areas in this great country that can not support the best educated physician. But the American Medical Association at least can stand firmly for safe, sane and sound practitioners. To my mind, one of the most important functions of the Council is that it has established a monitorship over medical schools. Let the Council give to the profession, and to the public if necessary, the facts concerning the various medical schools of this country; publicity will do the rest.

Free lectures to the public on selected medical subjects constitute one of the most useful methods of spreading information. These lectures should be given by men who are authorities in their subjects; and the experiment as it has been tried in various parts of the country, particularly in Chicago and at Harvard, has been a success. At Harvard during this last winter the lectures have been so popular that at times a hundred or more people have been turned away, being unable to gain admission. A wide range of subjects has been covered in these lectures. Many factors influenced the attendance: First, the subject selected; second, the individual who gave the lecture; and third, the condition of the weather. Sunday afternoon lectures were better attended than Saturday evening lectures. Inclement weather markedly diminished the attendance. The most conspicuous factor that influenced the attendance at the lectures was the cooperation of the press. For example, when a lecture was given on a subject of great public interest, then if the press devoted from a half column to three columns to noticing it, the stimulus to the attendance at succeeding lectures was marked. Personally I have had nothing to do with these lectures, but I believe that they can be made effective almost in proportion to the cooperation of the press.

The medical profession, and many of the public, are afraid of the press. Whether this position on the part of the public is justified or not need not be discussed. I have never had occasion to appeal to the press for assistance and cooperation in any public measure without receiving hearty, but at times, to my mind, indiscreet assistance. The position of the press, as I understand it, is that it is the judge as to what constitutes news. Newspapers will publish what they think the public wants to know, but not what we think the public ought to know. They assume, quite properly, the right of decision. The greatest power that we can have to diffuse information is the public press. Let us be frank with it, and I believe that it almost invariably will be honest with us. *Collier's Weekly* and the *Ladies' Home Journal* have been wonderful forces in diffusing the truth.

There yet remains, ladies and gentlemen, a means of educating the public which I believe will be the most potent of all. This rests in the hands of the family physician—the man who has the care of the household, who watches the growth of the children, who sees the father and mother bend under the strain of life, react and again assume their work, the counselor of the family—he it is who can carry into the homes of this country the judicious truth concerning disease. Well-educated people have recognized that the wave of specialism which threatened to obliterate the family practitioner was dangerous for the welfare of the whole. The trouble is that we all consider ourselves, when ill, as peculiar examples of some disease, when, as a matter of fact, all we need is the counsel and advice of a sound-minded family practitioner who has known us and our families for many years. This does not in the least deny the great advantage of having the benefit of special knowledge in reference to a special subject.

There is a distinct reaction, I believe, against the obliteration of the family practitioner. The well-educated family practitioner now has a new duty. He it is who should be the instructor of the family. This is particularly true in relation to the subjects which in medicine can not with propriety be taught the public in masses; these subjects may be taught most appropriately to the parents and, if need be, to the children by the physical counselor of the family.

A great duty rests on the practitioner of medicine today. He must not shirk it; he must rise to his new burden, accept it and bear it. The reward to the medical profession for taking this new burden of judicious publicity in medicine will be a broader life for the practitioner, a greater consideration for his fellow man, better citizenship and the recognition by the world that the medical profession is a great public benefactor.

22 Newbury Street.

ON SOME RELATIONS OF THE PHYSICIAN TO THE PUBLIC. DUTIES AND OPPORTUNITIES.

ORATION ON MEDICINE AT THE FIFTY-NINTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, AT CHICAGO, JUNE 2-5, 1908.

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BALTIMORE.

When, a year ago, you honored me with the invitation to deliver this address, it was my intention to speak on some specific problem in medicine. On further reflection, however, it has seemed wiser to take advantage of this occasion to express a few thoughts on some of the public relations of the physician—his duties and his opportunities.

The physician has always been and, from the very nature of his calling, must be, more or less a public character. In the smaller community he is a public character in the sense that he is a common source to which the citizens repair for advice, not only concerning their physical and mental but often also their material well-being. In the larger centers of population he is a public character in that it is on his direction, on the results of his studies and research that the community depends for the organization of those more general, broader sanitary measures which are demanded to meet the exigencies ever arising and multiplying with the growth of large urban communities.

In the early days of this country, when there were no large cities, the physician exercised this influence individually among his patients, as the family friend and adviser. With the growth and development of the nation, the great relative increase of the urban population, the multiplying complications of our life on the one hand, and on the other, with the enormous advances made in the knowledge of the nature and sources of disease, of the relations of physiology and pathology to other natural sciences, together with the rapid progress in the art of medicine and surgery—with all this growth, this expansion—yes, one may almost say, transformation, the functions of the physician have considerably broadened. In the old days the tree of medicine was a small affair; its roots ran wild and almost uncared for, and the physician gathered and used its fruits as they grew. The art which he sometimes showed in the employment of these fruits, such as they were, was indeed, remarkable. Of the tree and its roots which contained the sciences of anatomy and physiology and pathology, he knew little. But through the years, patient students have gained wonderful knowledge of the nature of that tree; of the sources from which it draws its strength; of the extent and ramifications of its roots; of their intimate and intricate entanglement with those of almost all the other denizens of the garden of science. And with the multiplication of these researches and discoveries, the tree, nourished and cared for as never before, has undergone a great transformation; it has put forth new branches; new shoots have sprung up about it; and the fruits which it bears for the art of medicine and surgery surpass, almost, that which one might have imagined but a few years ago.

The development of hospitals, of laboratories, of institutions for the study of the ever increasing ramifications of anatomy, physiology and pathology—ramifications leading directly to botanical, physical, chemical and indeed, even to mathematical problems—calls for an increasing body of students—physicians who accomplish their function, and a most important and radical function it is, in the study of special scientific problems—a life widely different from that of the country doctor of old.

Moreover, the advances and extension of the medical and surgical art are such that it has long been impossible for any one man to develop equal proficiency in all its branches. In all large centers of population, therefore, certain men have sought to devote themselves to special subjects in order that they may, in this manner, acquire a greater proficiency, and do more perfect and thorough work. This is natural and proper; it is only by the labors of such special workers that any art can be perfected.

At the same time, the crowding together of the population into great cities, a tendency which is to-day especially striking, has brought with it new dangers. The poisoned well may affect one or two families at most. The poisoned water supply of a great city may affect thousands. Scarlet fever in the country town has few victims and may be more or less readily controlled. In congested tenements populated by ignorant and suspicious aliens who do not understand the language of the people among whom they live, it is a widely different problem. These new dangers involving the broad questions of public health and prophylaxis, questions of drainage, of water, of milk and food supply, of the care of contagious diseases — these demand the individual attention of men who have had special training. The great questions of water supply and of drainage can not be attended to properly by the engineer alone, nor can the protection of the city from epidemics of infectious disease safely be entrusted to boards of health consisting only of public spirited citizens; both are dependent on the advice and assistance of the trained sanitarian.

In almost all large enterprises to-day the aid of the physician is sought, as for instance, in the organization of the relief departments of great railways and corporations and in large department stores. The health and comfort of the employé and the profit and success of the employer are indissolubly interwoven. But the distinctly public duties of the physician are by no means confined to exigencies arising in large centers of population. There are, in the history of mankind, examples of the gradual or sudden desolation of extensive districts by the insidious influence of diseases which we now know to be in great part preventable.

A recent historian[1] has brought forward as an illustration of the possible influence of a preventable endemic disease, the history of the decadence of ancient Greece.

To-day, as is known, malaria is the scourge of the Hellenic peninsula. Endemic throughout the land, it saps the vitality, the strength, the virility of the people, carrying away, annually, its thousands of human lives.

Through the shadows of departed years the light of ancient Greece shines with undying luster. The language, the poetry, the art, the philosophy, the ideals, the spirit of beauty, have been for ages and are to-day the inspiration of mankind. The sounding hexameters of Homer, the breath of

> Him, Æschylus, ancient of days, whose word is perfect song,[2]

the creative genius of Phidias, the eloquence of Demosthenes, the wisdom of Pythagoras, of Socrates, of Plato, of Aristotle, beckon across the centuries to remind us that all the wealth of modern worlds has given birth to no loftier thoughts, to no higher ideals of life and beauty than those which sprang up by the waters of the blue Ægean. And to-day as ever, Pallas Athene *"née intelligente chez les Grecs heureux,"*[3] dominates the elect of the world. "The garners of Sicily are empty now, but the bees from all climes still fetch honey from the tiny garden plot of Theocritus."[4] There is no trace in the literature of the early days of ancient Greece of the scourge which has since laid waste the land. Malaria appears to have been introduced into Attica during the fifth century B. C. Although the conditions of the soil and the probable presence of anopheles must have been favorable for the spread of the disease in the greater part of the Peloponnesus, yet the first mention of its occurrence is, apparently, in The Wasps of Aristophanes (422 B. C.). But the writings of the fourth century B. C. give evidence that the disease had gradually spread until, finally, it became chronic and endemic, prevailing among the children, giving rise to cachexia, conquering of the peninsula. And step by step with the spread of the disease, the historian traces the beginnings of that fatal degeneracy which marked the fall of the race. A spirit of criticism, of jealousy, of pessimism arose; discord, disunion and civil strife followed, and in a few centuries the earthly abode of the gods was a mere tributary of the Roman Empire. Poisoned by the subtle influence of a preventable disease, the spirit which had produced the science, the beauty and the art of ancient Greece faded from the world.

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[1] Jones, Ross and Ellett: Malaria. A Neglected Factor in the History of Greece and Rome. 12mo. McMillan and Bowers, Cambridge, 1907; Jones, Janus, Harlem, 1907, xii, 690.

[2] Swinburne: The Altar of Righteousness.

True or fanciful as this suggestion may be, it is hardly an exaggeration of what a preventable infectious disease may do. And one can but ask himself what might have been saved for the world had we known then what we know now?

To-day, with an educated and specially trained body of medical men, assisted by an enlightened government, the Italians have reduced the mortality in the fever-ridden parts of their neighboring peninsula two-thirds in five years; and the task is but begun. Already in regions where agriculture was abandoned, work is being renewed and a fresh life is springing up.

There is a modern example which touches us closely, of a great undertaking—one of the greatest undertakings that man has ever essayed—which depends for its success largely on the labors of physicians. I refer to the digging of the Panama Canal. The French, with unexcelled mechanical skill and energy had failed—failed largely because of the dreadful and continued mortality among the workmen. The United States took up the work. In the meantime there had come the great discoveries of Ross and Grassi and Bignami and Bastianelli, completing those of Laveran, concerning malaria, and the vital and illuminating contributions of our own Reed, Lazear, Carroll and Agramonte, with regard to yellow fever. And to-day the Panama Zone compares favorably, as to sanitary conditions, with the more healthy parts of this country. Yellow fever, though on all sides, is here unknown. It is the greatest triumph of preventive medicine that the world has ever known.

And to whom is this due? A few months ago I had the good fortune to listen to an account by a distinguished foreign physician, of the work at Panama whence he had just returned. After speaking with warmth of the general conditions, he said impressively, "The successful completion of the Panama Canal *depends on one man.*" If the measures admirably planned and carefully carried out by Colonel Gorgas fail, if there is a moment's relaxation, if the old epidemics recur, it will be impossible to find laborers, and the work will fail again as it did before. And he did not exaggerate. It is on the success of these prophylactic measures which can be designed and carried out only by a specially trained sanitarian, that the completion of this great undertaking depends. It is to the lasting credit of our country that medical men should have urged and our President recognized the importance of the appointment of a physician on the Panama Commission.

There is yet another opportunity for public usefulness in this country for which the training of the physician is peculiarly valuable. I refer to the career of the legislator. One has but to consider the few examples already mentioned of the various ways in which medical knowledge and skill are of value to the state, to realize how useful the education of a physician may be as a preparation for public life. The life of a physician, not only prepares a man to treat wisely those more specific and practical questions of which we have just spoken; more than this, no career brings a man into closer connection with his fellow; no career gives him a more intimate knowledge of mankind; no career is more fitted to develop those qualities of charity and tolerance so vital in our best public servants. It is true that medicine and public life are equally jealous mistresses, and that few men can serve both as they would and should be served; but we have, in this country, hardly realized how valuable a preparation for public life is the training and career of the physician. One has but to look to the prime minister of our sister republic in Europe for a most brilliant example of what may be accomplished in modern political life by the man with a medical training.

It is doubtless true that the development of the purely scientific branches of medicine together with the multiplication of specialties which is everywhere observable in our large centers of population, have resulted in a relative diminution of the number of family physicians in the old sense of the word, and have, in so far, limited the public influence which the old fashioned general practitioner formerly exerted among his patients. But on the other hand, there have developed many wholly new problems which are calling the physician more directly into public life. If perhaps, the wholesome influence of the family doctor is less felt in the community than it once was, yet the opportunities for public service which are to-day before the physician, nay, his public duties, have greatly increased.

The knowledge gained during the past forty years has taught us that we can accomplish far greater results by preventing disease than by attempting to promote recovery from that which has already started; it has taught us that a large proportion of the gravest maladies from which humanity suffers are acquired through our ignorance and carelessness and unclean habits; and with regard to many of these diseases, it has given us efficacious methods of prevention. Prophylaxis is the watchword of the day. We have in our hands the means, not only of delivering ourselves from dreaded epidemics of exotic pestilence, but of preventing largely the terrible yearly sacrifice to the contagious diseases which have for ages been endemic among us. But this deliverance can be brought about only through the united and conscientious efforts of the medical profession.

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[3] France, A.: Discours prononcé à l'inauguration de la statue d'Ernest Renan à Trêguier, 12mo. Paris, 1903, Calmann-Lévy. 40.

[4] Lowell: Harvard University. A Record of the Commemoration, etc., of the Foundling of Harvard College, 8mo, Cambridge, 1887. John Wilson & Son

This is an age of combination and concentration and cooperation—of large associations and undertakings. The great growth of this Association which we have known of recent years is but a feature of the times. Despite the increasing diversification of our interests, we physicians have been brought closer together than ever before—and to our lasting benefit. For wherever medical men come into social contact one with another they can not fail to feel a warm pride in their calling—they can not fail to be impressed with the earnestness, the simplicity, the honesty of the character and aims of their fellows—with the realization that, despite differences in natural endowment, in advantages, in surroundings, in temperament; despite the fact that we are all human, and possess our fair share of human frailties, we are with singularly few exceptions, all working earnestly, as best we can, in the search of truth and for the good of humanity. Association and acquaintance deliver us from doubt and suspicion and jealousy—those all pervading daughters of isolation. Our great Association has further enabled us to distribute to all parts of the country, an admirable journal, which is a monument to its honest, faithful, fearless editor, so that the practitioner in the distant rural community may reap, at the earliest moment, the benefits of the discoveries of the student of the urban laboratory. It enables us to lay with greater force before local and national legislatures necessary measures of sanitary reform. It helps us to combat more powerfully the many forces of evil which, from time immemorial, have battened on the credulousness and superstition of the invalid. It is helping us to teach the public with greater impressiveness the necessity of high and uniform standards of education for the physician and requirements for the license to practice medicine.

Here we are then, a great body of medical men, united in an Association, not for our personal, financial, political or social advancement, but solely in the cause of truth and for the benefit of humanity—the deliverance of the public from disease. Nevertheless, the work before us is unending, the obstacles, great. But why should there be obstacles? Why have not the recommendations of this Association the force of law? Why is it that, when laws themselves exist, all our strength is needed to secure their enforcement?

The main cause, I take it, of all this is the lack of comprehension on the part of the public of the nature and aims of medicine and of physicians. If the public had but a small part of the information which is ours, how many thousands of lives might be saved every year! The community as a whole, has a very vague understanding of the nature of the medical sciences and arts. Under these circumstances can we expect such a public to sympathize with and blindly follow all our recommendations? Surely not.

In how many ways is this ignorance shown! To take but a few examples:

We know well enough that the one successful way to prevent the spread of many contagious diseases in the large community is the establishment of well-conducted hospitals in which the patients may be isolated as soon as possible after the breaking out of the malady. By providing for the early segregation of these patients in institutions offering to the sufferers the most enlightened care, the community confers a blessing of incalculable value on the families of rich and poor alike. Such hospitals, moreover, afford the only opportunity for the proper instruction of students of medicine in the diagnosis of those contagious diseases, the early recognition of which is of such vital importance to the public. Furthermore, we know that such institutions are absolutely without danger to the neighborhoods in which they are situated. The records of the city of Boston which possesses a model hospital for contagious diseases, shows well what a blessing such an institution may be to the community.

But I know another great eastern city where there has been, until recently, no provision whatever for the care of contagious diseases. More than this, some years ago the state legislature passed a law forbidding the erection of a hospital for contagious diseases within the city limits without a two-thirds majority of each branch of the city council, which rendered the erection of such a hospital almost impossible. To us this law seems wicked and brutal in the extreme—worthy only of savages. And yet the measure was passed by men who were not inhuman; they were simply ignorant. And it is difficult to remedy such ignorance by immediate argument. The vehemence which we are too apt to display only excites the sensitiveness of the legislator—and where passion enters in reason passes out of the door.

I know again a great city, the water supply of which is open to serious contamination. At a period during which extensive and radical public improvements were under consideration, a meeting was held of a committee appointed to take counsel as to those steps which should be taken to improve the water supply. Before this committee there appeared a number of medical men and sanitarians, including representatives of the state and city boards of health—men who had made a careful study of such matters. These men urged that steps be taken to provide ultimately for a proper system of filtration. After they had spoken, a gentleman connected with one of the city departments, an engineer, who had the last word, made a long address in which he denied with passion that the water supply was or could be contaminated. He ridiculed the statements of the sanitarians and physicians, opposing to them the frequently repeated and wholly unfounded assertion that they were dealing with theories—he with facts. The committee, by an overwhelming majority, dismissed, for the time being, the question of filtration. The city, fortunately, has not yet suffered from the epidemic which may come at any time. The men on that committee were not unintelligent; they were simply ignorant of the medical aspect of the question at issue, and were utterly deceived by a plausible argument filled with pseudo-scientific statements which the orator himself appeared not wholly to understand.

A few years ago I happened to meet, on the railway, a high official of a large manufacturing concern situated in a most malarious district. At that time little had been done to protect the employés, who were nearly all victims of the disease. "This is a healthy enough place," said the official, who lived in a well-netted house in a dry part of the town. "The trouble with the people here is that they take too much quinin. If they would stop taking quinin they would stop having malaria." And this was a really intelligent citizen!

How often again do the trustees of large hospitals generously seek to "protect" the patient from what they regard as inconsiderate and unnecessary scientific zeal, by closing the wards to instruction and denying admission to student assistants, thereby blindly cutting off from the sufferer the greatest boon that they could offer him—the most enlightened observation and care. How far are these good men from a comprehension of the true significance and value of the hospital to the patient and to the public!

There could be no more striking example of the ignorance of a well-meaning part of the community than the agitation of the so-called anti-vivisectionists whose publications, shocking and wicked and brutal as they are misleading, are yet believed by some misguided people. But these dreadful publications, inspired for the most part, by individuals who probably mean to be honest, are but the offspring of fancy and prejudice, born themselves of an utter ignorance and misconception of the aims and significance of medical science and of the character and ideals of the student.

These are but a few examples, but they are enough to show how little a considerable part of the general public —often individuals in whom we might, indeed, expect more enlightenment—understand the nature of medicine or sympathize with the generous efforts of the physician and the investigator. We can hardly expect people with ideas such as these to heed the advice of a body such as ours. These considerations should bring home to us the realization that the education of the public is a most vital duty, not only of medical schools and associations, but of each separate member of the medical profession. On each one of us there rest public duties of the gravest import. On the sum of our individual efforts depends the success of all the great sanitary reforms of the future.

On a few of the opportunities which come to the physician of to-day, in his intercourse with his patients and his friends, to perform some of these public duties I would especially speak.

Many misconceptions concerning the nature of the healing art arise from that strange atmosphere of mystery which so often surrounds medicine. To physicians there is nothing mysterious or supernatural about medicine. We recognize that medicine is a practical art resting on a basis of scientifically proved facts; we realize that our knowledge amounts to an infinitely small part of that which we would know and hope some day to know. We know that there is an enormous field for study. We practice our art simply on the basis of what we have learned from the experience and study of those who have gone before us, and on what we acquire daily from our own study and experience and reason and common sense. But from time immemorial the art of medicine has been connected in the mind of man with the supernatural and the divine. Medicine has been regarded rather as a matter of faith than as an art resting on a scientific basis. People speak of their "belief" in this, that or the other "system" of medicine, and on the basis of such "belief" recklessly hand over their bodies to some individual who asserts that his practice is based on a theory or system revealed as by inspiration to some fortunate mortal, perhaps yesterday, perhaps two hundred years ago.

This blind faith in systems is not so far removed from the faith of the savage in the magic of his medicine man, and when we turn to our friends who with such delicious innocence and ingenuousness have termed their medical faith a "science;" when we see them, as we sometimes do, braving with fanatical contempt some dreadful infection only to find themselves in the end the prey of the fatal poison of reality, we seem almost to see the medicine man standing with a little group of determined warriors in the midst of the circle of fire, breathing defiance even as he falls, his "invulnerable" mantle pierced by a score of deadly bullets.[5]

Again, there is a very general idea among people that the physician is by practice, if not by nature, disingenuous; that while he may be trusted to do his duty as he sees it, to his patient, truth is not to be expected of him. Scarcely a week goes by that I am not asked by the friends of a patient to tell a deliberate falsehood.

From these misconceptions we physicians can not, I fear, be regarded as wholly guiltless. We know how few specifics there are in medicine. We know that by simple physical and mental means we accomplish our main results. But, alas, how easy it is to accomplish these ends by misleading means! How easy it is to write the prescription which we know is of itself of little value, which we should never dream of taking ourselves, and to allow the patient to believe that it is this that has "cured" him of the transitory, self-limited malady! How easy it is by assuming an impressive air—and if there be anything under the sun that we physicians should pray to be delivered from it is an impressive air—to make the patient feel that we possess that mysterious power which has, perhaps, come to us from a long line of medical ancestors, the power which enables us at a glance to divine that which might never be revealed to our uninspired colleague.

The same results can be achieved without misleading the patient one iota. It is perfectly possible to treat patients as we would be treated ourselves. It is scarcely likely that they would be treated otherwise. It takes a little longer; it involves a little more explanation; but how much safer and surer is the result!

The oracular method is easier, but I fear that some of us have forgotten that, by a special decree of the Olympian Assembly, Asklepios was forbidden to trade in oracles.[6] That it is necessary for the physician to tell untruths is a myth founded on kindness of heart, pure and simple—but an unreasonable and a weak, a short-sighted and a misguided kindness of heart. Truth is as sacred a duty in medicine as anywhere else in life. As a matter of policy, as Cabot has pointed out, it is almost a necessity, for whatever may be true in other spheres of life, *the doctor's lie is always detected.*

It is, of course, obvious that truthfulness in medicine does not mean that it is always necessary to tell the patient that he has a fatal disease if he does not ask you the direct question. Nor does it forbid the physician to seek and keep his eye fixed on the cranny of hope which may usually be found, as earnestly and sedulously as would the patient himself. Few events in human affairs are certain. A few years ago I had under my care a patient who had had one tuberculous kidney removed some years before. She had then bilateral pulmonary tuberculosis, tuberculous pleurisy, tuberculous peritonitis and tuberculosis of the remaining kidney. The temperature for weeks had been constantly elevated, the pulse rapid and feeble. She seemed *in extremis.* Had I been asked, I should have said that she had probably a few weeks to live. She asked me calmly if she were going to die or whether there was any chance of recovery. I answered her truly that she was very ill, that the outlook was not good, but that there was always a chance for an arrest of the disease, and that it would be wrong even to think of giving up the fight. For two years that patient has been free from fever, to all outward appearances well, and to-day she is actually working for her living.

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[5] I have seen in the possession of a friend, the "invulnerable" mantle of an Indian medicine man who with a small group of warriors fought until the last man had fallen, although completely surrounded by troops. The garment was pierced by many bullets.

[6] Lucian: Lucian's Dialogues, translated by Howard Williams, 12mo, London, 1893. Geo. Bell & Sons.

Few patients ask a physician the direct question, but when they do they should be told the truth as we should tell the truth in every other sphere of life.

I believe sincerely that most physicians do so, and that the annoying general suspicion of the doctor's statements is ill-founded; but I know a number of good men who too often allow their kindness of heart to get the better of their good judgment. I know nothing sadder, nothing more hopelessly demoralizing, nothing surer to upset the mutual confidence of a family than the entrance of the "white lie" into the household or the sick-room. Few of us are unfamiliar with the hopeless uncertainty of the invalid who comes finally to realize that a tissue of falsehood has been spun about him; that on no one can he rely. The affection of those about him he may not doubt, but of their sincerity how can he again be sure? There is no more pathetic picture in the experience of the practitioner of medicine.

The physician has no higher public duties than *the duty of simplicity, the duty of the avoidance of mystery in medicine* and *the duty of truthfulness.* Toward his patient I know of no more vital duty than *the duty of optimism.*

There is another widespread misconception to combat which is an important public duty. I refer to the too common feeling of the public that, with many of us, the practice of medicine is purely and simply a trade. Viewed in this light the practitioner can but be often an object of suspicion. His methods and his word are doubted. The best part of his influence is gone. There are few, if any, physicians who practice medicine as amateurs. The inconveniences which every earnest doctor must endure are always considerable. Most physicians are obliged to depend on their fees, as most clergymen are obliged to depend on their salaries, for their daily bread. They must provide, not only for themselves, but often for their families. There are many men to whom, for more reasons than one, the material gains from practice are an important—a highly important—element in life. There are many men, teachers, scientific workers, men who desire to limit their practical activities, as well as men who have achieved such position that they are obliged to restrict or select from the overwhelming practice which seeks them, who, for these very reasons, rightly demand large fees. If the public insists on having their services rather than those of the many other good men in the profession, they should and do understand that they must pay a larger honorarium. This is perfectly right and proper. But there are very few physicians who enter into the practice of medicine with the idea of laying up wealth. There are happily exceedingly few to whom medicine is a trade. The man to whom the scientific and humanitarian aspects of medicine mean nothing; the man who practices solely for what he can make; the man who finds no interest in medicine outside of that which he puts in his pocket; that man is on a level with the conscienceless quack, and the sooner he leaves the profession the better for it and for the public.

There exists, however, a tendency among some of us—men who are, for the most part, honest and honorable—which is, it seems to me, below the dignity of our calling. I refer to the tendency to regulate one's fees according to the means of his patient. It is well that a man should have a more or less definite estimate of the value of his services, a fixed maximal charge for work of a certain character, a charge which, in justice to himself, he should always make, unless he has reason to believe that the patient is not in condition to meet it. He will often, with a large proportion of his patients, perhaps, be obliged to accept less than the value of his services. But that he should speculate on the wealth of the rich, that he should demand exceptional recompense from the millionaire because of his wealth, is to make medicine a trade; is to bring distrust and suspicion and discredit on his profession; is to put a serious obstacle in the way of all the great reforms which we as physicians and sanitarians hope to accomplish.

Another duty, the grave public import of which comes to us with much force to-day, is the instruction of the public with regard to the necessary measures of prophylaxis in connection with infectious diseases. As has been demonstrated again and again, general laws and sweeping public measures are of themselves insufficient to prevent the spread of such diseases as malaria, yellow fever, plague, cholera and typhoid fever. It is only through the cordial and general cooperation of the practicing physician with an enlightened public that efficient prophylaxis can be established. It is impossible here to enter into particulars as one would. We can consider but a few examples. The great accomplishment of the medical department of our army in eradicating yellow fever from Havana is fresh in our minds. This work was rendered possible by the recognition of the fact that the causal element of yellow fever exists only in the body of the patient suffering from the disease and in the mosquito (*Stegomyia fasciata*) which has fed on the blood of the sufferer. The mosquito can acquire the infectious agent only from an individual affected with the disease, and the human being can acquire the disease only through the bite of an infected mosquito. Though a great deal can be accomplished by general measures directed toward the destruction of mosquitoes and the removal of breeding places, it is impossible, by these measures alone, to overcome an epidemic. The problem, it was realized, could be met satisfactorily only by sterilizing, as it were, each individual case of the disease. If each case of yellow fever could be successfully protected from mosquitoes, one might be sure that, from this case at least, there could be no spread of the disease. And so, by the cooperation of local physicians with the efficient medical corps of the army, every suspected case of yellow fever was reported. The houses of patients, together with those in the immediate neighborhood, were promptly netted and the mosquitoes already there were killed. In seven months the disease was banished from the city. Almost equally brilliant was the work in New Orleans, where a dreadful epidemic, already well under way, was eradicated by a period at which otherwise it would probably have been at the summit of its ravages. This problem, it is true, was an essentially simple one, once the fundamental knowledge of the manner of entrance and spread of the infection had been acquired. In its broader lines, however, the problem is the same in connection with many of the gravest and commonest affections with which humanity suffers. In malaria the task of prophylaxis is more difficult because the disease is so widespread, and for the reason that, because of its very mildness, many cases pass unnoticed. And yet how much can be done, and is being done in some parts of the world, has already been mentioned. In typhoid fever the problem is yet more difficult; in tuberculosis more so again.

But in all these diseases, as soon as the physician, the public and the government unite and work hand in hand to prevent, so far as possible, the spread of the infection from the individual case, enormous inroads can be made into the mortality. In all these conditions the infectious agent dies sooner or later outside of the animal body and is disseminated primarily by the infected human being and, in the case of tuberculosis, to some extent, by cattle.

To properly combat the spread of preventable infectious diseases we need: (1) An enlightened public, (2) a conscientious and united medical profession ready to do its duty as individuals and especially to work in a spirit of cordial cooperation, with (3) central and local boards of health which are under the direction of trained sanitarians.

The organization of all these measures depends, in the end, on the results of our individual efforts as physicians. The education of the public can be accomplished only by us; and it is our duty privately, publicly, day in and day out, to explain to the people the rules of self-protection. The faithful performance by us as physicians of the necessary measures of prophylaxis in every individual case is almost the corner stone of the edifice. These duties, it is true, greatly complicate the life of the physician. The measures which we ought to carry out, and which can perfectly well be carried out in every case of typhoid fever, are tedious and annoying, but they are no more so than the aseptic and antiseptic precautions employed daily by the surgeon. They are duties which we must recognize unless we are content to lose, as we do every year, thousands of the very flower of our youth through preventable diseases; unless we are content to remain as we are now, one of the few nations in which the disgraceful prevalence of typhoid fever, a filth disease, is a byword throughout the civilized world. Isolated, individual effort, however, goes but a short way of itself. We must cooperate with one another and with our boards of health; we must work in unison and see to it that, as in the case of scarlet fever and measles and diphtheria, so every case of typhoid fever and tuberculosis is reported and the proper measures of prophylaxis taken.

And lastly, the character of our state and local boards of health, that most vital point depends largely on the attitude and efforts of the medical profession. After what has been said it is hardly necessary to refer to the increasing importance to the community of local and central boards of health. It is on these bodies that we depend for the organization and direction of the more comprehensive measures of prophylaxis, the need of which is increasing daily with the greater complications of our life and the advances in medical knowledge. Moreover, in recent years, departments of health have assumed a wholly new significance with the establishment of diagnostic laboratories. Modern methods of diagnosis, microscopical examinations of sputa and of the blood, bacteriological examinations of smears and cultures from the throat, tests for specific agglutinins in the blood in fevers are too complicated and time-absorbing for the busy practitioner. Much of this work is done in private laboratories by specially trained men. There are, however, many who can not afford the additional expense of such examinations, people who are not objects of charity and who can and do bear the ordinary expenses incident to their medical attention, as well as many who must always be cared for by the benevolence of the physician or at the public expense. But it is absolutely necessary, not only for the sake of the patient, but also for the protection of the public, that these more precise measures of diagnosis be carried out so far as possible in all suspicious cases. If they are not carried out, a vitally important link is removed from the chain of our public measures of prophylaxis. And so it has come to pass that state and county and city boards of health are everywhere wisely establishing laboratories in which such examinations are made at the request of the attending physician. Now it is clear enough to any mind that the direction of such boards should be in the hands of men with a special training as public sanitarians, pathologists and bacteriologists. That these facts are not wholly appreciated by the general public, that the pernicious influence of political favoritism now and then plays a part in the selection of such bodies need not be mentioned. But I wish to assert and assert emphatically my conviction that, as a people, we are too fond of using the word "political" with a smile of contempt; we are too fond of speaking lightly of the conscience and honesty of the politician. Few politicians would voluntarily prostitute a branch of the public service which is so vitally concerned with the welfare and safety of the community. I have rarely met men in political life who did not pay considerate attention to the judicious and tactfully offered advice of conscientious physicians. It is for us physicians to set them an example. We know—every one in this hall knows—the kind of man who should preside over a department of health. And yet, what a spectacle do we see with changes of administration, in almost any of our cities! Applications from busy practitioners; from men who, perhaps, from age or infirmity, desire to retire from active work; from men who have been unsuccessful in practice and are in need of money! How is the politician to know what to do if we behave in this manner? We physicians do not always realize the responsibilities which rest on us in this connection. We ought to act and speak fearlessly and frankly, so that men obviously unfitted shall be ashamed to offer themselves publicly for such positions. We ought to see to it that the representatives of our profession on such bodies are capable and well-trained men; men who can give to their work all their time, all their thought, all their energy. This again is a public responsibility, a public duty which falls upon each one of us as a practicing physician.

Another opportunity which comes to us as individuals is the opportunity to help forward the movement, now happily started, for better instruction in our schools of medicine by increasing the opportunities for practical clinical experience. We all know that we improve in the art of medicine only by the actual study of disease and the observation of the effects of treatment. Rule and precept may help; they can not make the physician. Where, in our country, has this practical experience been offered? In but a very few of our schools have the students had opportunity to follow at the bedside the course of the more serious diseases with which they are to meet in after life. I myself was never offered the occasion of following a case of pneumonia or diphtheria or typhoid fever from beginning to end. Where then were the students of my day expected to gain this experience? Where? Why on the unfortunate human beings who might fall into their hands during their early years of practice. And why was this so? Simply because students were not allowed in the wards of the hospital except as they followed an occasional visit. Now in this country there are hospitals enough and more than enough to supply valuable clinical experience to all physicians while they are yet in their undergraduate days. This opportunity is lost because the public does not understand. "What," says the hospital trustee, "do you fancy that I want students to attend me or the sick men and women under my protection?" "Student" to them suggests an irresponsible, inquisitive youth who is conducting perilous experiments. And the student is excluded from the wards. They do not understand that the student, as a clinical clerk in the ward, is nothing more than a trained assistant. They do not realize that the presence of such students is not an experiment; that the system of clinical clerks has been in existence for years in England to the great advantage of physicians and community. The student is excluded from the wards; and what is the result? The "protected" patient enters the hospital, where he is under the direct charge of an interne, a recent graduate from a school where he has been denied the clinical advantages which he is now for the first time enjoying. He is, however, now in a position of considerable responsibility, for his busy chief can spare at the most an hour or two for his daily visit. He has many patients to care for, and little help in emergencies. He does his best, and in the midst of his multifarious duties the early symptoms of the typhoid perforation are perhaps unobserved, or probably, as he has never seen a case before, unrecognized. The dreadful reality comes upon him when it is too late. The young physician has learned something that he will never forget; but the patient? The patient is dead—his one chance, that of an early operation, lost; sacrificed to the well-meaning charitable ignorance of the public. Suppose, on the other hand, that the patient enters a ward in which there are a number of medical students on duty as clinical clerks and presided over by a similar young physician, a recent graduate, but one who, in his school days, has had some months of practical experience at the bedside. Under the watchful eye of the student who has but a few patients to follow, who is, as has been said, but an extra assistant, a trained assistant, the first suspicious symptoms are noted. The attention of the interne is excited. The blood is carefully examined from hour to hour. The surgeon, early notified, joins in watching every change, and by a timely operation, the patient is saved. What a different picture! "Fancy," one may say? No. Experience; personal experience. How, under these circumstances, can the public object to the presence of the student? Solely because of a word, because of the word "student," which means to them an irresponsible observer. As a busy, active assistant under the direction and orders of a trained superior officer, would the public object to his presence? The question is too absurd to ask.

In these matters we as physicians must teach our non-medical friends. When they realize that the hospitals *need* medical students as trained assistants, as a part, really, of the staff; when they realize that the students *need* hospital experience to make them capable physicians; when they realize that they *owe* this training to the physician in order to protect themselves and the public; then and then only will the old opposition to the instruction of students in the wards of hospitals disappear. The prejudice against ward teaching is largely a matter of words, of one word, the awful word, "student," in its absurdly perverted popular meaning. And while, incidentally, praying to be ourselves delivered from the tyranny of words, let us strive, each one as he can, to educate the public in this important matter, to help forward the movement which has already begun toward the more complete utilization of school by hospital and hospital by school.

The mention of these few opportunities for public service, opportunities which come to us all as physicians, should but impress on our minds the thought with which these remarks opened, namely that the physician is, from the very nature of his calling, essentially a public character. And however modest may be our field of work, our responsibility should always be before us. On our learning, on our progressiveness, on our alertness, on our honesty, on our fearlessness, on our perseverance, hang not only our own welfare, but that of the general public; in other words, that of our country, in much higher degree than we often realize. It is a heavy responsibility. Of much in the past we may be proud. There is much in the present on which we could improve. And the future? What shall that be? The answer lies with us.

406 Cathedral Street.

THE CANCER PROBLEM.

ORATION ON SURGERY AT THE FIFTY-NINTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, AT CHICAGO, JUNE 2-5, 1908.

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A just presentation of the status of surgery in any subject is as difficult as the honor of presenting it here is high, for the forward movement in research and investigation in the whole field of medicine is world-wide and aggressive, and singularly effective. Events follow each other so swiftly that the profession itself requires an almost daily readjustment. Is there within the past generation in any other department of human endeavor a record of so many basic discoveries as in medicine? Who can read the triumphs of preventive medicine, of biochemistry, of physiology, of pathology, without pride?

Surgery has all but conquered the infections and benign tumors of the pelvic organs, of the kidney, of the appendix, and of the gall bladder; it has mastered the complications of gastric ulcer, it has cured hernia, removed goiters and corrected deformities. All these are, or may be, serious operations, and yet in the hands of the present-day masters the average immediate mortality is not more than 1 per cent. What were, or what would have been, the results of such operations a generation ago? Many of these operations were then unknown, while those known were performed with possibly twenty times the present mortality.

Surgery points with pride to its success in combating infections, benign tumors, obstructions and deformities, but what can be said as to the progress in the treatment of certain malignant tumors, of cancer—a word used here to include all malignant new growths? It has been stated, and I believe truly, that the greatest outstanding obligation of medical science to mankind is the discovery of the cause of cancer, or at least of a cure for it. There is at present a universal movement in this direction. Governments and individuals have provided funds for laboratories and hospitals. Many of the greatest minds of to-day are engaged in an effort to solve this cancer mystery. The biologist, the chemist, the pathologist, the clinician and the statistician are enlisted. All honor to the men who have the courage to risk a life's work in what may prove to be vain endeavor; but what a victory for him who first reaches the goal—the delivery of mankind from its most dreaded disease!

Although the cause of cancer still remains unknown, many of its phenomena have been carefully studied. Cancer occurs in every climate and among all mankind, savage and civilized; in wild and in domestic animals, the carnivorous and the herbivorous; in birds, fishes and reptiles; and even in the lowly oyster. Throughout Nature the histologic picture of cancer of any definite type is the same.

The frequent assertion that cancer is on the increase, as shown by certain mortality tables, may be partly accounted for by the greater number of correct diagnoses, by the general increase in longevity, and by the decrease in infant mortality. Through the natural evolution of medicine one should expect a further fall in the death rate from infectious diseases, and hence a relative rise in the number of cancer and senile deaths. On the contrary, an increasing number of cases of cancer are cured surgically each year. This balancing of conditions will tend further to alter the percentage of cancer incidence. Bashford and Murray have shown that absolute statistics of cancer prevalence is not at this time available. If the rate of cancer prevalence estimated for the British Isles be adopted as accurate for this country, it may be estimated that there are in the United States at this moment approximately 80,000 cases of cancer, and possibly a million cases among the entire population of the world. According to statistics, one woman in eight who reaches her thirty-fifth year dies of cancer. The postmortem statistics of hospitals show that cancer is found in one in twelve autopsies.

Cancer not only destroys countless lives, but it destroys them by a method of merciless torture. To die from an accident or from an acute infection is a matter of days or weeks: to die from cancer is a matter of months or years, and this is a period not alone of suffering, but of suffering without hope—a horrible species of cellular cannibalism.

The biologic characteristic of the cancer cell is its power of limitless division. A single strain, for instance, the Jensen mouse tumor, has been transplanted thousands of times during a period much longer than the natural life of a mouse. In that period a large quantity of tumor tissue is grown, apparently capable of endless cellular division, and showing no evidence of decreasing activity. It seems probable that cancer cells may multiply indefinitely and may, possibly, like the ameba, prove to be immortal.

But few spontaneous cancers have been successfully transplanted from one individual to another of the same species, and no cancer has as yet been transplanted from one species to an individual of another species. Few, if any, cases of cancer transplantation have occurred between human beings. A surgeon's immunity from cancer infection during operations is apparently complete. Gaylord and Clowes have shown that in the transplanted cancer of the mouse an immunity may be established in the recipient. This immunity is produced by the growth of the transplanted tumor, and is made obvious by its complete regression and the impossibility of again successfully planting such a tumor in the same animal. Natural immunity to cancer has been found in some animals. Ewing and Beebe have observed similar immunity in a strain of transplantable sarcoma of dogs.

Although the primary cause of cancer is not known, many of the predisposing causes and pre-cancer states are known and can be recognized. In sarcoma of bone there is a history of trauma, usually severe, in not less than one in three cases. The growth of carcinoma rarely follows a single traumatism, but in the visible fields it is frequently preceded by chronic irritations, by scars and ulcers, by hyperplasias, by chronic inflammation, and by pre-existing benign growths. Examples are smoker's cancer of the lip, mouth and tongue; cancer resulting from friction of clothing; from the picking of warts and moles; from the irritation of nails in the mouths of lathers; from the irritation of a broken tooth or tooth plate; from the soot irritation of the chimney sweep; from fissures and cuts of the lip; from senile warts or scales of the face; and from irritation of foreign bodies, such as calculi in the gall bladder, the kidney and the urinary bladder.

There is, in fact, scarcely an instance of a complete account of a case of visible cancer that does not give a clear pre-cancer history—a history of chronic irritation, ulcer, scar, hyperplasia, innocent tumor, or a combination of these factors.

Cancer notably follows fixed laws. Is the inception and growth of cancer of the face, lip or tongue different from the inception and growth of cancer of the stomach? Were the stomach as exposed to view as is the lip and tongue, is it not probable that just as well-defined pre-cancer stages would be observed? Or, were the lip and tongue hidden, as is the stomach, what should we know of the inception phenomena of cancer of the lip or tongue?

Among the benign growths predisposing to cancer, let us note fibromata, papillomata, adenomata and cysts; such as papillomata of the larynx and bladder, adenomata of the uterus, breast and intestine; cysts of the ovary and breast; and the hypertrophy of the thyroid.

Among the benign tumors of the uterus, one in thirty becomes sarcomatous; and in one in fifty cases the uterus becomes carcinomatous. Most innocent tumors of the parotid gland ultimately become sarcomata. Many irritated moles freely metastasize as deadly melanomata. Warren, Cathcart and others have pointed out the frequency of the transformation of benign and malignant tumors. Indeed, as Bland-Sutton has well said: "The more carefully the histology of tumors is investigated, the more obvious does it become that the border-land between innocent and malignant species becomes less easily definable."

We may conclude, then, that chronic irritations, ulcers and benign tumors are potential cancers, and should be considered in that light. The pre-cancer stage is the prophylactic stage.

While the treatment of pre-cancer states and benign tumors is effective, easy and safe, the treatment of developed cancer is to-day perhaps the most difficult problem of surgery. Has there been progress? Has the limit of operative measures been reached? Inasmuch as excision is still the only reliable means of cure, what has excision accomplished?

Twenty-one years ago Butlin collected statistics of 364 operations for cancer of the larynx, esophagus, kidney, thyroid and pylorus. Two-thirds of the patients died of the operation, and of the 126 survivors only one was known to be alive and free from the disease three years later. Butlin characterizes this result as ghastly. Halsted quotes the elder Gross—and Gross was the first surgeon of his day—as stating that he had never cured a case of cancer of the breast. Halsted, however, developed this field by applying a perfected technic to a correct pathologic conception, and his work serves as a general model for cancer operations.

In the Johns Hopkins clinic, 47 per cent. of all cases of breast cancer operated on have remained well for three years or more. Considering only the cases that seemed at the time of operation to be clinically favorable, seventy-five out of every hundred were cured. A group of cases still more impressive is that consisting of those in which a clinical diagnosis of cancer could not be made prior to operation. Of these, 96 per cent. remained well for three years or more. The operative mortality in the representative clinics to-day is less than 1 per cent.

In cancer of the head and neck there has been a similar evolution, resulting in an improvement so extraordinary that to-day the mortality rate of the major operations in this field is no greater than that of tracheotomy or herniotomy a generation ago.

Little or no improvement is seen in the results in cancer of the esophagus or of the thyroid. Neither has there been any progress noted in the purely surgical treatment of round-cell sarcomata, especially of the bones and lymphatic glands.

The surgical possibilities in some of the well-developed cancer fields may be best displayed by arbitrarily dividing the cases into three clinical groups: those favorable to operation, those unfavorable, and those suitable for palliative operation.

In the favorable group are included all cases that prior to operation gave no evidence of the involvement of any other tissue than that originally attacked; for example, in cancer of the breast, those cases in which no glands are palpable and the growth has not sensibly involved the skin, the muscles, or other structures.

In the unfavorable group are included the cases presenting demonstrable extension beyond the tissue of primary lesion. Among these there are relatively few cures.

In the group of cases suitable for palliative operations are included those on which operations, such as gastroenterostomy, colostomy and visceral anastomosis for extensive visceral cancer are performed without hope of cure, but to relieve symptoms.

When operated on according to the highest standards of the present day, the favorable group of cancer cases of the skin, lip, tongue, breast, larynx and certain viscera show a three-year cure in approximately eighty out of every hundred cases. When the disease, even in the favorable group, is so situated, for example, in the tonsil or esophagus, that the surgeon is hampered in the application of the principles governing operations for malignant disease, the probability of cure is greatly reduced.

From the aggregate results of operative treatment, then, it may be concluded that great progress has been made. Why? Because certain fundamental principles have governed the technic. These principles are block excision of the entire cancer field, including the area of lymphatic distribution and drainage, and extreme care in handling the cancer tissue to prevent the spread of cancer cells beyond the operative field. The knife must never touch cancer tissue. Rough surgery constantly defeats itself. Pathologic thoroughness and gentleness, added to a perfected surgical technic, have been rewarded by so many cures that first the profession and then the public gained confidence in the surgical treatment of cancer. Hence, patients applied earlier and better results followed, thereby increasing public confidence—a species of beneficent circle constantly leading to still earlier, hence more effective, operations. It is axiomatic to state that the earlier the operation the more certain is the cure. The chance of failure, as Andrews has emphasized, rises in geometric ratio with the lapse of time from the onset of the disease.

Has the limit of operative measures been reached? An answer to this question demands that the obstacles in the way of better results first be known. Many, perhaps the majority, of cancer patients are seen too late. Why? When the growth is in a visible field the patient may not suspect the changes in a wart, a mole, an ulcer, or a scar; or suspecting, even knowing the truth, he may not believe in the efficacy of an early operation. Education is here needed. The family physician may delay because he wishes to be sure of the diagnosis; he may wish to try local treatment, or a course of specific treatment, whereby, he argues, he is giving the patient a chance; but, as Butlin has remarked, the physician has thus too often robbed the patient of his only chance and has allowed the cancer to gain a mortal grip. Again, some physicians question the diagnosis until there appears glandular enlargement, general emaciation and cachexia. I have often thought, that, pending a more general enlightenment, it would be a great boon to mankind if the words "glandular enlargement and cachexia" as denoting symptoms of cancer were stricken from every text-book of medicine. These are terminal symptoms and indicate that the surgical opportunity is forever lost. Were the result not so tragic, such professional simple-mindedness would be ludicrous. Finally, some physicians make a diagnosis, but yield to their natural inertia and drift with the disease. Such men need an awakened conscience. While the early and hence curable stage is easily recognized in the external field, what possibility is there by our present inadequate means of diagnosis of recognizing internal cancer in its curable stage? It is in these cases of internal cancer that advanced disease only is recognized and in these that surgery appears at its worst. All clinicians acknowledge the inadequacy of present methods of diagnosis of concealed cancer. Ewald has well said: "Exploratory incision in suspected cases is all well enough, but one can not expect the whole community of possible suspects to submit to being opened for inspection in order that the occasional case may receive early operation."

By analogy and from actual experience we believe that operations for incipient cancer of the stomach and intestines yield as good results as operations at a like stage for external cancer. Is there in internal cancers a warning pre-cancer stage? Boas, Ewald, Hauser, Rosenheim, Lebert and many others recognize the fact that simple ulcer may become transformed into cancer, and they estimate the frequency of such transformation as 5 per cent. or more. Of cancers of the stomach, Mayo, Moynihan, Rodman and others find in over 50 per cent. a history of previous ulcer. Ewald has recently declared that such cancerous transformation is far more frequent than has hitherto been assumed.

The study of the living pathology at the operating table is daily convincing surgeons' that gastric cancer, like cancer of the skin, the tongue, the mouth and the lip, has frequently a pre-cancer stage, and that stage is usually ulcer. Ulcer, then, may have a sinister meaning. As Park has emphasized, cancer itself has no symptomatology. Kelling has interestingly opened the problem of a biologic test for cancer. Basing my inferences on the work by Beebe, Clowes and others, on the chemistry of cancer, and on the general work on hemolysis by many men in recent years, I was able to interpret the hemolysis in one of my early cases of direct transfusion of blood in a hopeless cancer case. Wile and Beebe have found hemolysins in transplantable sarcoma of dogs. My clinical case suggested the investigation of the hemolytic property of cancer blood as a possible aid to the diagnosis of cancer.

I am indebted to Dr. Beebe and Dr. Macleod for many suggestions. An assistant trained in this work has tested for me all available cancer material during the past eight months. The technic is exacting, requiring close attention, and unless precisely executed will not justify practical interpretation.

The reaction is the following: The blood serum of a cancer patient may hemolyze normal corpuscles, but normal blood serum usually does not hemolyze the red corpuscles of a cancer patient. In some patients—thus far only those with inoperable cancer — there was reverse hemolysis. The cancer corpuscles were hemolyzed by normal serum. In some cases there was no reaction. If this reaction is to be of diagnostic value, then it must occur in cancer cases only or in diseases not readily confused with cancer.

In one hundred and twenty-five normal individuals tested there was hemolysis in no instance. Among 80 patients with cancer, 82 per cent. showed hemolysis, while those with benign tumors showed no reaction. In the cases of tuberculosis those showing hemolysis showed a much greater autolysis than hemolysis, thus giving a characteristic reaction. In chronic suppurations and acute infections no hemolysis occurred.

Hemolytic tests of the extracts of cancers and benign tumors were also made. We were able to corroborate Beebe's observations that the extract from cancer tissue caused active hemolysis, while the extract from benign tumors showed no hemolysis. This suggests the origin of hemolysins in the blood of cancer cases. No hemolysis, then, has been observed in normal individuals, none in the victims of benign tumors, and none in those of pyogenic infections. Hemolysis occurred in 82 per cent. of cancer cases and in a considerable percentage of tuberculous cases, which, however, can be differentiated by the autolytic reaction.

Of the 20 per cent. of cancer cases that did not show hemolysis, all but one were either inoperable or very advanced. There was but one negative reaction in the early cases. In cases of suspected cancer giving negative tests the chances have been twenty to one that the cases were either in a late stage or non-malignant. Cured cases showed no hemolysis.

In a myxoma of the breast of long duration, which had recently enlarged, the clinical diagnosis was "cancer transformation." Hemolysis was negative. The case proved benign.

A bone tumor gradually enlarging during six months was clinically diagnosed as sarcoma; hemolysis was negative; osteomyelitis was demonstrated. A similar result was observed in a case of tumor of the clavicle. A solitary tumor in a large breast of a woman of 46 was clinically diagnosed carcinoma; hemolysis was negative. The tumor proved to be a small cyst surrounded by hyperplasia.

A case of secondary anemia with a history of indigestion without symptoms of cancer showed hemolysis; two months later a tumor of the epigastrium became palpable and a fragment in the vomitus showed carcinoma.

A case of luetic stricture of the sigmoid under treatment for ten years showed hemolysis. The patient was operated on and an early stage of "cancer transformation" was found.

In a uterine fibroid without suspicion of malignancy, a routine hemolysis test was made. Hemolysis occurred and at operation sarcomatous transformation in the center of the tumor was disclosed.

Although in its present state of development the hemolytic test for malignancy is not specific, the reaction may be a valuable aid in diagnosis, and has more than once been the only positive evidence. The entire subject is a promising field for investigation. The limit of resources in making an early diagnosis, hence, an early operation, even in internal cancer, has, therefore, by no means been reached. It has frequently been stated that the limit of operative possibilities has been attained. Have the minimum of operative mortality and the maximum of safe excision been reached? The principal operative risk may be expressed as the sum total of shock, hemorrhage and infection. Even if it is assumed that operators can not be more gentle, more precise and more dextrous, thereby still further minimizing shock and hemorrhage, newer methods of avoiding and of treating these complications are at hand.

In cases in which the blood of a cancer patient has not been so altered as to render the mixing of normal blood with it unsafe, hemorrhage and shock may be successfully controlled by the direct transfusion of blood. Cancer patients rendered poor surgical risks by hemorrhage may, by the means of direct transfusion of blood, become good risks and safely undergo operation. In like manner, a dangerous degree of shock following operation may be relieved almost with certainty by transfusion. The direct transfusion of blood, when properly employed, has proved almost a specific treatment for both shock and hemorrhage. Neither shock nor hemorrhage can cause death except by anemia. There can not be a fatal anemia if a sufficient amount of blood is in the circulation. The only exceptions to this statement are cases of certain organic lesions. Cancer patients reduced by hemorrhage, or otherwise, may be operated on with safety by uniting the vascular systems of the donor and the patient just prior to the administration of anesthesia. Enough blood is transferred from the donor to the patient to give sufficient stability to the latter's circulation and to warrant etherization. An assistant is detailed to take charge of the transfusion, regulating the flow at the discretion of the surgeon. If the patient's blood pressure falls during the operation, or if his pulse quickens, sufficient blood is transferred to regain a stable circulation. At the completion of the operation the patient's circulation is usually greatly improved over its condition at the beginning.

In every case of cancer it is necessary to make preliminary hemolytic tests. If the patient's serum hemolyzes the proposed donor's corpuscles but little harm will be done. The serum of the donor's blood will in itself answer the purpose of filling the patient's relaxed vessels. Should there be a reverse hemolysis, that is, should the donor's serum hemolyze the patient's corpuscles, then a transfusion is strictly contraindicated, but the cases of reverse hemolysis thus far observed have been inoperable.

The following is illustrative: A case of papilloma of the bladder which had degenerated into carcinoma had been reduced by long-continued and progressive hemorrhage to the following condition: Hemoglobin 25, red count 1,900,000, blood pressure 110, pulse rate 132. The patient was clearly unable to withstand a resection of a portion of the bladder, together with excision of a large tumor, but an operation was performed as above outlined, with the patient's son as donor. About one-fourth of the bladder was excised and an extensive plastic operation on the ureter was made. At the end of the operation the patient's shrunken, anemic face was full and pink, and his circulation was markedly better than before the operation. He made a splendid recovery. Other cases have been equally successful.

In the prevention and control of infections, especially in operations on the head and neck, much more may be accomplished. The mediastinum may be protected by developing a preliminary granulation barrier, which is done by making a preliminary dissection into the deep planes of the neck and packing with iodoform gauze five days prior to the operation; blood inhalation may be prevented and anesthesia simplified by nasopharyngeal tubage and packing. Better protection of patients from chilling, the employment of skilled anesthetists and other similar means are constantly decreasing the number of infections and pneumonias. In my last 72 major operations in this field there was but one fatality.

The *x*-ray and radium have a curative effect on certain superficial cancers. In doubtful cases the skin flaps after operation may be retracted and the *x*-rays applied directly. In this manner the deep field, and therefore the cancer cells, may become superficial, and hence amenable to the *x*-ray influence. A number of cases of sarcoma have been cured with Coley's toxins. According to Coley, the postoperative use of mixed toxins is an aid.

Truly, the attainment of the limits of surgical possibilities is still far removed; the operative sphere may be still further extended, and surgical risks may be further diminished. Although surgery has accomplished much and holds out bright hope of accomplishing more, is there not evidence that other methods also may cure cancer?

The work of Gaylord and Clowes, Beebe and Ewing, Ehrlich, Loeb and others, demonstrating a not infrequent immunity against cancer, was utilized by Beebe and myself in an attempt to cure transplantable sarcoma in dogs by maximum bleeding of the "tumor dog" and heavy overtransfusion from an immune dog. By this method we have cured of sarcoma nine out of eleven dogs, some of which were cachectic and had metastases. The cured animals in turn became immune and were successfully employed for curing and immunizing other dogs. These animals since have been repeatedly inoculated with sarcoma, but have remained not only well but immune for more than a year.

Arguing from this work and from the fact that among the lower animals certain ones are naturally immune, we have transfused normal blood into six human subjects having sarcoma, their tumors having been removed previous to transfusion. Sixteen months have now elapsed since the first case was so treated. Although the cases were of the round-cell and spindle-cell types, presenting an exceedingly bad prognosis if excision alone were done, and although they are at this time apparently free from the disease and show no hemolysis, they will be available, as arguments on which to form a final judgment, only after three or more years. Should these patients be cured and become immune, it is likely that they may be available for curing others, so that eventually a group of immunes may be established. The whole matter of immunizing against sarcoma is at this time wholly experimental, and my statements are presented with that understanding.

SUMMARY AND CONCLUSION.

Cancer is widely distributed in Nature; is slightly, if at all, communicable; is not yet proved to be increasing or hereditary; and is rarely transplantable. Its biologic characteristic is the power of endless division of its cells. The natural prognosis is death. Frequently there are well-defined predisposing causes and pre-cancer states. The pre-cancer stage is the preventable or curable stage. It is vastly better to prevent a cancer than to cure it. No specific therapeutic measure exists; the knife is still the most reliable means of treatment. In its beginning cancer is always local and is curable by complete excision. The chances of cure diminish in inverse geometric ratio to the lapse of time since its inception. There is evidence that a reliable blood test for cancer may be established; and there is a possibility of utilizing for cure the immunity principle through transfusion of blood.

If there is in many cases a recognizable and curable pre-cancer stage, if the disease in its incipiency is local and curable by excision, if the magnitude of the necessary operation increases in a direct geometric ratio and the chance for cure diminishes in a reverse geometric ratio with the lapse of time since inception, what is the duty of the profession, especially in its organized function and in its altruistic aim, toward the hundreds of thousands of fellow-creatures who now, without suspicion of the dreadful truth, are in the pre-cancer or early curable stage of cancer? What is the duty of the profession toward hundreds of thousands who will be stricken next year and each year to follow? This duty is to undertake a campaign of cancer education. The public is entitled to receive from the profession all the enlightenment required for self-preservation. It may be difficult to persuade a man to change his political tenet or his religious creed. Sentiment here may bind him closely. There is no tie of sentiment between a man and his cancer. Enlightenment ought to be easy and effective.

Finally, a careful consideration of the progress made in cancer research and in treatment should banish despair, give new hope, and urge all to put forth still greater endeavor to conquer in the end.

1021 Prospect Avenue, S.-E.

Original Articles

VARICOCELE AND ITS OPERATION.

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The etiology of varicocele depends largely an anatomic conditions. The veins of the spermatic cord are relatively long and take a vertical course, supported only by loose tissue. Their combined lumen is large as compared with that of the artery, so that the *vis à tergo* is reduced to a minimum (Treves). They are tortuous, have frequent anastomoses, and are imperfectly supplied with valves. These factors, taken with the pressure exerted on the vessels as they pass through the inguinal canal, must favor stagnation of the blood current and cause dilatation and lengthening of the veins, thickening of their walls, and lengthening and relaxation of the scrotum. The last result is given but slight notice in the writings of northern authors, but in warm climates it is an almost invariable accompaniment of varicocele.

Varicocele is a common condition, being found in 10 per cent. of all men between the ages of 15 and 30. Unsatisfied sexual desire and excessive intercourse have been ascribed as causes. The former must influence the trouble, since it sometimes disappears in young men after marriage. No doubt a predisposition may be inherited. Occupation plays a part in the causation, since varicocele is common among men who stand a great deal, such as clerks, bookkeepers, etc.

More than 90 per cent. of cases occur on the left side, the explanation of which is also on anatomic grounds. The veins in the left cord are larger, the testicle hangs lower, and the left vein empties into the renal vein at a right angle, while the right vein empties into the vena cava at an acute angle. Again, the left spermatic vein, as it runs behind the sigmoid flexure, is constantly subjected to pressure from the accumulation of feces in the bowel. It is said that the modern habit of "dressing" on the left side tends to increase varicocele on that side, and that mild cases sometimes are improved by changing to the right side.

A very large varicocele may produce no symptoms, while a small one often gives rise to pronounced symptoms, depending largely on the effect on the patient's mind. In a large number of cases the mental effect is the main feature of the disease and requires an operation for its relief. This is particularly true when the condition is associated with masturbation, the patient then being fearful of impotence. There is no proof that masturbation is connected with the cause of varicocele.

The usual complaint is a sensation of weight and dragging in the scrotum, accompanied at times by an aching pain which extends to the back and groins. The veins may become tender or inflamed and spasm of the cremaster muscle may produce an acute cramp. Occasionally the suffering is so marked as to force the patient to lie down before obtaining relief. In the beginning the testicle becomes slightly enlarged from impediment to the return circulation, but ultimately is apt to diminish in size, whether from true atrophy or not is uncertain.

Varicocele without symptoms requires no treatment, though it is sometimes necessary to operate to permit a candidate to pass a physical examination. Some cases are helped by palliative measures. The scrotum is douched daily with cold water, the bowels are kept regulated, and a comfortably fitting suspensory is worn. A suspensory causes much discomfort in hot weather, however, and the sweating and irritation it provokes almost counterbalance the benefit of the support it furnishes.

Operative treatment is best and can be carried out under local anesthesia, but a general anesthetic is more satisfactory. The text-books recommend ablation of part of the scrotum as being occasionally indicated, but in the south, where the pendulous scrotum is so common, it is generally indicated. Cures by this procedure alone have been reported. Certainly it is one of the most important steps in the operation. The shortened scrotum affords a natural and permanent support for the cord and testicle.

If the scrotum be not partially excised, the incision over the veins should be made just below the external abdominal ring, as advised by Dr. Bloodgood. Here the veins are fewer in number and the wound heals more readily than in the scrotum. In any operation the genital branch of the genitocrural nerve must not be injured, since it supplies the cremaster muscle and the scrotum, which, if deprived of their nerve supply, would tend to become lax and favor a return of the varicocele. The nerve runs down on the inner side of the cord and below it.

Some surgeons excise one or two inches of the veins at the thickest part of the mass by making a longitudinal incision through the scrotum, and then ablate a portion by using King's clamp. This clamp is applied close up to the testicles tight enough to prevent any tissue retracting when the scrotum is cut. After severing the scrotum with knife or scissors, silkworm-gut sutures are taken through the needle holes of the clamp and are tied in the slits without removing the clamp until all the sutures are taken and tied. The skin edges are then better approximated by a running suture of fine catgut, and thus a completely closed and bloodless operation is effected.

The advantages claimed for this method are rapidity and freedom from secondary hemorrhage, since the cut ends of all vessels are supposed to be caught in the sutures. The operation undoubtedly is rapid, but is it following good surgical principles to allow a clamp to compress tissues as tightly and for as long a time as this requires? It does not seem reasonable that the sutures will hold the ends of all the vessels, since these sutures are parallel to most of the vessels. Secondary hemorrhage has followed the plan. It will also follow the open method of operating if sufficient time and care be not given to securing and tying all bleeding points.

By the open method two incisions are avoided, as the veins may be removed through the same opening. Inspection of the testicle and tunica vaginalis is afforded, which in a large proportion of cases will reveal a hydrocele. It is well to give attention to small details in the operation, because so often it is performed on neurotic patients in whom the neglect of such details will have considerable mental effect. For instance, in ablating the scrotum a curved clamp should be used, or the ends of a straight incision rounded off in order not to leave any little elevations of tissue. These would absorb in a short time, but their presence will annoy some neurasthenic individuals while they remain.

A curved scrotal clamp or two curved long-jawed forceps are employed to hold the scrotum while the redundant portion is being removed. The clamp is pressed hard against the testicles, in a longitudinal direction, and as much subcutaneous tissue as possible pressed out before cutting. This lessens the number of vessels that will be cut. After severing the scrotum with knife or scissors the clamp is taken off and all bleeding points are carefully caught and tied with fine catgut.

The varicosed pampiniform plexus is now exposed as far away from the testicle as possible and separated from the vas deferens with its artery and veins. The plexus lies with the spermatic artery in a separate sheath which need not be split. Sometimes the separation is difficult on account of adhesions which exist as a result of inflammation. Ligation of the spermatic artery does not impair the nutrition of the testicle.

The vas deferens is easily recognized by its cord-like feel. It must not be handled unnecessarily, and is held aside with its vessels while a double chromicized catgut ligature is passed around the veins. This is separated and the veins firmly tied in two places two inches apart, the lower ligature being tied first. The intervening section is now removed, care being observed to leave the stumps long enough to prevent slipping. The ends of the ligatures may be left long and the cord shortened by tying them together. This saves time but leaves a lump which will persist for several weeks to vex a nervous patient. It is better to approximate the ends of the veins and stitch them together.

The wound is closed longitudinally with interrupted silkworm sutures, the ends of which are left long and tied together, as short ends will irritate the sensitive scrotum. Drainage usually is not necessary. Rubber tissue or oiled silk is placed over the dressing to prevent the possibility of contamination by urine. The dressing is held in place by a figure-of-eight roller bandage which supports the testicles. After a few days it is convenient to use a smaller dressing and a large suspensory bandage. The patient is kept in bed for ten days, and a suspensory worn only until the wound is thoroughly healed, then discarded. Otherwise there is danger of forming the "suspensory habit."

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MEANINGLESS DIAGNOSES.

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Medical science has shown an astounding progress in our generation, not only in knowledge but also in wisdom, and with this has come a refreshing education of the public in matters regarding disease and its treatment. This education, rather than interfering with the efficiency of the medical man by the obtrusiveness of the public with whom a little learning might have been a dangerous thing, has brought about a most invigorating cooperation and has increased the trust and confidence of the doctor's position.

This confidence physicians as a body should strive to merit, and it is, therefore, not in bad taste now to point out at least one matter in which, even in this enlightened day, many fall by the wayside. Advance in medicine has emphasized the fact that the *sine qua non* predicating the rational treatment of disease is the establishing of a diagnosis. Increased facilities for clinical examination have given us, in many cases, material evidence on which to base our diagnoses, and in others some tangible reasons for induction and inference.

The result of this is that we are now in a position to be thoroughly honest. Heretofore, perhaps quite subconsciously, we have not always been utterly frank with ourselves, and the time has now come when the profession should discard several ill-used and time-worn diagnoses that have expressed clinical entities, which if not fantastic, have at least never been proved to exist. These diagnoses have been used much too frequently to cover our ignorance and to pander to the desire of the patient to know what is the matter. This is a perfectly natural desire, too, and is so thoroughly relieved by an answer that it has tempted too many to resort to the diagnoses about to be mentioned.

Perhaps the most commonly used of these meaningless diagnoses is that of "biliousness," and there is no other outranks it in giving satisfaction to the patient. Just what is "biliousness"? Does it mean blocking of the biliary exit? If it does we should have jaundice and all the symptoms of biliary obstruction, and if that is so, then we are surely dealing with cholelithiasis, cholangitis, cholecystitis or new growth; in other words, a definite clinical entity which "biliousness" does not express. Does it mean insufficient secretion or excretion of bile? If so there should be those chemical changes in the stools and in general metabolism which are never looked for by the physician who diagnoses "biliousness." No, "biliousness" does not mean any of the above things, but is applied to those cases of general malaise whose true cause, if not to be found in constipation, can not be or is not ascertained. When "biliousness" has been diagnosed, nothing has been diagnosed. The diagnostician has satisfied both himself and patient and has cloaked his ignorance at the sacrifice of his frankness.

How many of us have encountered "typhoid pneumonia"? To-day there is firmly fixed in the minds of many practitioners the idea that such a combination of diseases actually exists, and when they announce the diagnosis they mean not the pneumonic type of typhoid (which, of course, does exist as well as the intestinal, meningitic and nephritic forms, and is not uncommon), but a true coincidence of the diseases. Such cases usually are typhoid pure and simple, and should there be any doubt a blood examination and Widal reaction will dispel it. Most of us, either directly or indirectly, have been influenced by the teachings of Osler, and it used to be a salient point of his that the "typhoid pneumonias" were usually typhoid, perhaps pneumonia, but never both. There is one possibility of such a diagnosis being true, and that is in a case of pneumonia caused by the typhoid bacillus, which would be striking for its rarity, that is, when not a part of typhoid fever.

"Typhoid malaria" is to be deprecated as severely as "typhoid pneumonia," for such cases are invariably one or the other. Naturally it is easily possible for a malarial patient to contract typhoid, and then he has typhoid following malaria. Such cases, however, are not the ones usually included in that class diagnosed as "typhoid malaria."

What a vogue "ptomain poisoning" has attained! It must be conceded that ptomain poisoning does exist, and may be very common for all we know, but that is no justification for calling every case of acute gastro-enteritis by that name. We are entirely ignorant as to whether such cases are actually caused by ptomains. Most of us appreciate the training in chemistry, the equipment and the time necessary to isolate ptomains, and yet many physicians blithely diagnose ptomain poisoning. It has been my experience to hear a practitioner testify at an inquest that ptomains are to be recognized by a microscopic examination of the gastric contents!

What is "gastric fever" of which we hear so commonly? It never has become quite clear to me, and probably is not quite clear to those who diagnose it, just what type of case it represents. Who first described the disease, in what works in medicine do we find accounts of it and ought we not record its death?

There are many more meaningless diagnoses than these, and it may be that each section of the country has its own particular foibles of this nature, but should not all conscientious physicians discard the use of these terms, and if there are none better to be found in the present terminology, why use terminology at all? It is self-evident that the expression "I don't know" is better than "biliousness" and the rest of the category, and brings the comfort that there is after all much doubt left, in the clearing of which we can find use for our years.

Our distance from Utopia in medicine, as in all things, is vast, and though we shall never attain the ideal, we make one step towards it when we face our ignorance when we find it, and we make still another when we try to overcome it. Rather than call things by false names or meaningless names, let us call them by no names at all, and so, for the love of Æsculapius and Hippocrates, let us hear little more of "biliousness," "ptomain poisoning" and the like.

1817 Jackson Street.

COMATOSE PERNICIOUS MALARIA.

WITH REPORT OF THREE CASES.

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The comatose form of malaria is met more frequently than any other of the pernicious varieties. Even in temperate latitudes it is not extremely rare. Its diagnosis compels an answer to the very old but frequently occurring and often difficult question, that of the cause of coma in a given case. Its prompt recognition is very important because of the effect on the mortality of the early institution of correct treatment. These considerations should make it a subject of more than usual interest.

ETIOLOGY.

Although any variety of the malarial plasmodia may give rise to pernicious symptoms, in the vast majority of cases such symptoms are due to the estivo-autumnal parasite. Nothnagel states that so far only two cases of comatose malaria have been observed in which the blood showed the ordinary tertian parasite. Aside from favoring conditions pre-existing in the individual, the development of coma depends on three factors: the number of parasites present; the amount of toxin secreted by them; and, most important of all, the localization of the parasites in the brain. In temperate latitudes malarial coma occurs almost always in the summer and fall, as do all other pernicious manifestations of the disease. In the tropics it occurs throughout the year and is quite common. The attacks usually occur in persons who have suffered from malaria for some time and have not been properly treated. Cardamitis believes that predisposing causes to comatose attacks are previous defective conditions of the organism, due to anemia, cachexia, physical or mental fatigue, the puerperium, insolation, alcoholism, etc.

PATHOLOGY.

The pathology of comatose malaria is the same in most respects as that of any severe malarial infection. There are the breaking down of the red cells, the oligocythemia and hemoglobinemia, the melanemia and pigmentation of the whites, and in most cases the relative increase in the mononuclears. There is also in the majority of cases, as in the less severe forms of malaria, a leucopenia, but in some of the fatal comatose cases a leucocytosis is observed (Craig). The changes in the spleen and liver are the same as those produced in any severe case of malaria.

The kidneys usually show the changes of acute nephritis, combined with the peculiar lesions due to the malarial infection. The urine contains albumin and hyalin and granular casts. "It can be stated, as a rule, that all fatal cases of malaria show albuminous urine containing casts prior to death" (Craig).

The most striking pathologic lesions, and those which may be said to be peculiar to the comatose form, are those found in the brain. Actual thrombi of malarial parasites occur in this organ blocking the capillaries. These can be readily demonstrated after death by simply placing a fragment of the brain tissue under a cover-glass, and the appearance presented is one likely to make a deep impression on the mind of the observer. The secondary changes are pronounced and consist of congestion of the capillaries, minute hemorrhages into the brain substances, and accumulation of pigment in varying amount. As has been shown by the researches of Marchiafava and Monti, changes occur in the protoplasm and nucleus of the nerve cells, leading to complete degeneration of the diseased tissue.

Guarnieri has described changes which take place in the retina in pernicious malaria. These consist of hemorrhages and congestion of the capillaries with impairment of function. Lellos has related a number of cases of meningitis which were apparently due to malarial infection and were cured by quinin.

The peripheral blood usually contains large numbers of malarial organisms of the estivo-autumnal variety.

SYMPTOMS.

The coma may come on suddenly like an apoplectic stroke, whence the old phrase *"intermittens apoplectica,"* or, as is more common, it may develop gradually during a paroxysm of fever, having been preceded by slight disturbances of the sensorium such as apathy, somnolence, restlessness and melancholia. The coma may disappear with the fall of the temperature to reappear again within twelve or twenty-four hours, or it may continue over a period of one to four days until death or recovery ensues.

The face is somewhat flushed, the pulse at first full and bounding, later weak. frequent and thready; the respirations are hurried and often stertorous. Attempts to rouse the patient call forth no response or only an unintelligible muttering. The patient usually lies perfectly quiet, but there may be restless movements of the limbs. The skin is warm and toward the latter part of the attack is bathed in sweat. It often has an icteric tint. The tongue is thickly coated. Feces and urine pass involuntarily. Retention of urine is not infrequent.

The temperature is not usually high, sometimes subnormal, but is irregular. One of my patients entered the hospital with a temperature of 103.6 F. It fell within three hours to 100.5 F., remained between 99.8 F. and 101.2 F. for twenty-four hours, then reached 103.5 F. and continued up until death ten hours later. One hour before death the temperature was 106 F.

When recovery occurs the patient may come to his senses gradually or at once. Sometimes there remains a condition of drowsiness and apathy for several days. With the onset of another paroxysm the patient may relapse into coma. In those cases which terminate fatally death usually occurs with symptoms of cardiac insufficiency. The pulse becomes small and frequent, edema of the lungs develops, and a cold sweat breaks out. The end usually comes suddenly and sometimes unexpectedly. This was true of two of the cases here reported.

The nervous symptoms which may be found in comatose malaria are of considerable interest. The limbs are usually relaxed and fall back lifeless when lifted, but irritative motor symptoms such as twitching of the extremities or of the muscles of the face may manifest themselves. In Case 3, reported below, there were tonic convulsions with opisthotonos. Hemiplegia has been observed. The eyes are often open and the balls roll from side to side. The corneal reflex is usually preserved. The pupils may be contracted or dilated and are generally equal. The reaction to light may be sluggish. Nothnagel says that the skin reflexes are markedly diminished but seldom abolished, while the tendon reflexes are ordinarily intact. In Case 2 there was marked exaggeration of the knee-jerks with ankle clonus and Babinski's and Oppenheim's phenomena on both sides. In Case 1 there was a well marked Babinski on the right.

Symptoms of focal disease of the brain sometimes persist after the attack. These may consist of hemiplegia, with or without aphasia, paraplegia with aphasia, and more rarely monoplegia. In some of the cases the symptoms disappear within a few days or weeks. In others they last longer, as in a case referred to by Nothnagel in which paraplegia and motor aphasia persisted four years after the comatose attack.

DIAGNOSIS.

When the previous history of the patient is obtainable the diagnosis may sometimes be made with a reasonable degree of certainty from the symptoms alone, without an examination of the blood. When, however, the patient is found comatose and a satisfactory history is unobtainable, a diagnosis may be very difficult or impossible without this aid. The conditions with which it is most apt to be confused are cerebral apoplexy, sunstroke and uremia.

The main points to be considered in distinguishing it from apoplexy are the age and general appearance of the patient, the splenic enlargement, the higher temperature in malaria (though this is not constant), and, of course, the examination of the blood.

Malarial coma sometimes quite closely resembles sunstroke, and the heat may aggravate or precipitate a severe malarial paroxysm. In such cases an examination of the blood is often the only means of determining the presence or absence of malarial infection. Cardamitis considers the temperature a point of considerable importance when the microscopic examination can not be had. He says that with the temperature above 104 F. the condition should be attributed to insolation rather than to comatose pernicious fever.

From the urinary examination alone it would be impossible to distinguish comatose malaria from uremia. Albuminuria and cylindruria exist in both conditions; therefore, it is necessary to rely on other data. Kraus reports an instance in which a man suffering from comatose malaria was treated by an osteopath for "uremia." Large numbers of estivo-autumnal organisms were found in the blood by a physician shortly before death.

PROGNOSIS.

On this point Nothnagel says: "The prognosis of comatose pernicious is always grave. Even after energetic treatment with quinin the mortality is large. Moreover, cases show that from the beginning a mild form may succumb in spite of the early administration of specific therapy." Craig says: "The prognosis is very grave in the cerebral forms, especially the comatose form. While a large number of such cases recover under proper treatment, a great majority of the fatal cases of malaria suffer from this form of estivo-autumnal infection." Cardamitis places the mortality under the most favorable conditions with prompt treatment at 20 per cent., under unfavorable conditions at 50 per cent. This is certainly low enough.

TREATMENT.

Quinin should be given hypodermically. It may be given in the form of the hydrochlorate, the bisulphate, or the muriate of quinin and urea. Regarding the dosage there is some difference of opinion. Osler advises 30 grains of the bisulphate hypodermically with 5 grains of tartaric acid every two or three hours, or 10-grain to 20-grain doses of the quinin and urea muriate. Craig thinks 8 grains of the hydrochlorate, repeated until 24 grains have been injected, is sufficient in most cases, but admits that in very severe infections more of the drug may be needed.

Baccelli first recommended the intravenous injection of quinin, and this method may be used in the presence of very grave symptoms.

Aside from specific therapy, treatment must be symptomatic. Stimulants, especially strychnin, are often useful.

Of the three cases reported here, two were under my care in the St. Louis City Hospital in the summer of 1906. Case 3 was treated at the Frisco Hospital by Dr. R. A. Woolsey, through whose kindness I am permitted to refer to it.

Case 1.—*Patient.*—J. P., Greek, laborer, age about 28, was brought to the hospital unconscious, August 27, at 10 a. m.

History.—Patient was found unconscious in the baggage-room of the Union Station. No history beyond this was obtainable.

Examination.—Fairly well nourished, rather anemic, young man of dark complexion. The skin had a decidedly yellow tint, was warm, and there was no edema. The temperature at the time of entering hospital was 103.6 F. The tongue was heavily coated, the abdomen soft and flat. The spleen was easily palpable, about an inch below the costal margin. The liver dulness was not perceptibly increased. Examination of the heart and lungs showed nothing abnormal. Breathing soon became stertorous and labored, and mucous râles could be heard. The pulse was regular, rather soft, and the first day was between 90 and 100 in frequency. The blood showed estivo-autumnal parasites in abundance. The man was entirely unconscious, though he would respond to painful irritation by frowning and moving his limbs. The conjunctival reflexes were present. The pupils were large and the right slightly larger than the left. Both reacted to light consensually and directly. There was slight effacement of the labiofacial groove on the right side. Patient could move both legs and both arms. There was some rigidity of the arms, most marked on the left. Babinski's toe phenomenon was present on the right. The patellar reflexes were present and equal. Cremasteric reflexes were present. The urine had a specific gravity of 1.015, was clear, and contained albumin and hyalin and granular casts.

Further Course.—The temperature went down within a few hours, but the coma persisted until death, thirty-six hours after admission. The reflexes were all abolished toward the last, the pulse became weaker and more rapid, the breathing difficult, and one hour before death the temperature was 106 F.

Treatment.—The administration of quinin was begun within a very short time after the patient entered the hospital. Six 15-grain doses of the muriate of quinin and urea were given hypodermically, and 90 grains of the sulphate by mouth. This composed the treatment excepting stimulants administered symptomatically.

Postmortem.—Nothing was found to explain the symptoms other than the changes to be expected in pernicious malaria. a piece of the brain was examined by Dr. H. F. Lincoln and its capillaries found to contain clumps of plasmodia.

CASE 2.—*Patient.*—W. H., American, age about 45, was brought to hospital August 30, at 2:30 a. m.

History.—No history was obtained except that he had been confined in the police station all day, and was found unconscious about midnight by the police. The urine was examined in the hospital reception-room and a provisional diagnosis of uremia made.

Examination.—Fairly well-nourished man with well-developed musculature. Skin moist and somewhat yellow. No edema. The lips showed a crop of herpes. The abdomen was soft and insensitive. The spleen was enlarged, extending a little below the costal margin. Examination of the lungs and heart was negative. The pulse was regular, somewhat soft, and 108 in frequency.

The blood contained large numbers of estivo-autumnal parasites. The patient could be slightly aroused and would attempt to answer questions, but speech was unintelligible. The conjunctival reflexes were preserved. The pupils were equal and reacted sluggishly to light. The limbs could be moved voluntarily, and were slightly rigid at times. The knee jerks were exaggerated and a well-marked ankle clonus, and Babinski's and Oppenheim's signs were present on both sides. The urine contained albumin and hyalin and granular casts.

Further Course.—The temperature remained at about 100 F. for twenty-four hours, and the coma gradually grew more profound. The respirations were stertorous and the pulse frequent. Sweating was profuse. Patient died somewhat suddenly about thirty-one hours after admission.

Treatment.—Quinin and urea muriate was given in 15-grain doses hypodermically until 105 grains had been given. Fowler's solution was given internally. Free purgation was secured and stimulants were given toward the last.

Postmortem.—The postmortem showed nothing of interest beyond the changes explainable by the malarial infection. There was, of course, parenchymatous nephritis and enlargement of the spleen. In a piece of the brain which was examined by Dr. S. P. Martin and myself malarial parasites were found.

CASE 3.—*Patient.*—H., American, age about 30, laborer, was admitted to the Frisco Hospital in July, 1905.

History.—Family history and previous personal history were negative. Patient had been working as a pumper in a town in Alabama. About three weeks before coming to hospital he had begun to have chills and these occurred daily for about one week. He had taken no treatment at the time. He was anemic and weak, but was perfectly conscious at the time of his entering the hospital, 4:00 a. m., and his temperature was normal.

Examination.—Poorly nourished and anemic appearing young man, of fair complexion. The skin was sallow. Spleen was considerably enlarged. Examination of the chest showed nothing abnormal. Blood examination showed the crescents of estivo-autumnal malaria.

Further Course.—About noon on the day of entering the hospital, after a period of chilliness, the patient was taken with general tonic convulsions, which caused him to cry out with pain and required a hypodermic of morphin. The head was drawn back and the body arched. The temperature was taken and found to be about 104 F. After a short time the convulsions ceased, leaving the patient comatose. He remained in a quiet coma during the afternoon and night. The next morning he became conscious for a time, was able to talk rationally about himself, and ask for something to eat. About noon there was a repetition of the convulsions, followed by coma, and he died suddenly in about half an hour.

Treatment.—Quinin hydrochlorate was given hypodermically in large doses, and pilocarpin and purgatives were administered.

No postmortem was obtained.

PSYCHOTHERAPY.

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The relations existing between mind and body, the dependence of the integrity of the function of one on that of the other and *vice versa,* have long been recognized and would seem to be expressed in a general way in the old Latin motto, "*Sit mens sana in corpore sano.*" Nevertheless, the fact of this interdependence did not meet with a due appreciation among the physicians for quite a long time. Too much weight was given to the direct chemical action of medicines and it was a long time before the conviction gained ground that in many cures which were attributed to the influence of drugs psychic moments played a much more important, if not exclusive, therapeutic part. Such psychic moments were: Influence on the mood, removal of harmful psychic factors, the authority and other personal qualities of the physicians, and the like.

The same considerations which have reference to medicinal treatment apply also to electrotherapy and hydrotherapy. These agents like drugs frequently have a direct favorable therapeutic effect; only their action has been very much overestimated. The achieved results have often been ascribed almost exclusively to their use. Such a one-sided interpretation raised well-founded doubts in the minds of the sober thinkers and led to a strong reaction, especially against electrotherapy, which again may have gone too far; that is to say, the psychic factor of this kind of treatment, with almost absolute negation of a direct effect, was perhaps given too much credit, especially by the neurologists.

The above-mentioned reaction was greatly furthered by the discovery or rediscovery of the phenomena of hypnotism. The recognition of these phenomena caused a marked revolution in the interpretation of many clinical symptoms and many previously obtained cures. Much that had been incomprehensible was now understood. The Liebault-Bernheim school demonstrated suggestion as the potent factor of hypnotism and proved, as it were, that hypnotism was a physiologic phenomenon and not the expression of a diseased condition, predominantly of hysteria, as the Parisian school (Charcot) had taught. Nevertheless, the similarity of the hypnotic phenomena to those of hysteria was recognized and the understanding of the latter disease was greatly furthered thereby.

The great hopes which had been built on the influence of hypnotism as a therapeutic power have only partially materialized. Attempts to influence psychoses favorably by hypnotism in particular have almost constantly been frustrated by the impossibility of inducing hypnosis in such patients. In other cases the success was frequently only temporary and the patients became so dependent on hypnotism that they had to apply to the physician for every little ailment in order to have it hypnotized away. Very soon, therefore, the need made itself felt of utilizing the advantages of hypnotic treatment in a scientific manner by working on a psychologic basis. It soon became repugnant to the scientific thinker to attempt supplying automatically by suggestion all that was wanting or to suggest away all that should not be present. A deeper understanding of the psychic processes seemed indispensable for a rational psychic influence. Therefore, several authors, of whom I mention particularly Janet, Breuer and Freud, began to make a thorough study of the psychic processes in certain psychoses, chiefly in hysteria. Breuer and Freud[1] thus were led to a new mode of treatment, named by them the cathartic method and described in the following manner:

> A necessary condition for the use of the cathartic method was the hypnotisablity of the patient, and the method was based on the broadening of consciousness taking place in the hypnotic state. It aimed at the removal of the symptoms of the disease and achieved this end by making the patient return to the psychic state in which the symptom had manifested itself for the first time. During the hypnotic state, memories, thoughts and impulses emerge, which before had been wanting in the patient's consciousness, and after having communicated to the physician these psychic processes with evidences of strong feeling, the symptom was overcome and its return frustrated.

Breuer and Freud explained this outcome in the following way: The symptom takes the place of psychic processes which have been suppressed and have not reached consciousness. It thus represents a conversion of these psychic processes. They explained the therapeutic efficacy of their procedure by the liberation of the hitherto incarcerated emotion which had been clinging to the suppressed psychic actions (abreagiren). But the simple scheme of the therapeutic interference became almost always complicated because it appeared that the symptom was participated in not by one single (traumatic) impression, but mostly by a whole series of such, which it was difficult to survey.

What characterizes the cathartic method in contrast with the other procedures of psychotherapy is the circumstance that here the therapeutic effect is not assigned to a suggestive prohibition of the physician. It expects rather that the symptoms will disappear of themselves when the therapeutic procedure, which is based on certain conceptions regarding the psychic mechanism, has succeeded in leading the psychic processes into another course than the one pursued by them before the formation of the symptoms.

With this method quite a step forward was gained; hypnotism found thereby a more satisfactory and rational utilization. We must not forget, furthermore, that the study of the phenomena of hypnotism itself contributed very much to the understanding of the psychologic processes in the normal as well as in the diseased mind. But, in spite of the progress gained, strong reasons opposed themselves to the therapeutic application of hypnotism. Many physicians objected especially to exposing themselves to ridicule by failures of inducing hypnotic sleep or of making the patient comply with the suggestions made. To tell a patient, "Now you can not move your arm any more; it is as immovable as if it were nailed fast," and then to see him move it vigorously, is a rather painful situation, and frequent repetition of such occurrences will soon deprive the physician of the confidence which is indispensable for bringing about the hypnotic state, and will make him lose his authority. For these reasons I have seen many a colleague give up treatment by hypnotism entirely. Moreover, there are many patients who are afraid to deliver themselves, so to say, body and soul into the hands of the physician and to confide to him eventually secrets which they would rather keep to themselves. To obviate this objectionable feature many physicians replaced the hypnotic suggestion in the waking state (Wachsuggestion).

However, Dubois has justly called attention to the disadvantages even of a suggestion in the waking state as a therapeutic procedure. He insists that suggestibility is a fault and that the individual who wishes to preserve the integrity of his common sense and to keep his mental health intact must always appeal to his intelligence and hold watch over his mentality. He may, by doing so, lose the small advantage of being some day cured by hypnotism, but will gain the great one of escaping his natural autosuggestions.

Dubois' method, based on the above-expressed principle, is, therefore, eminently one of moral education and persuasion, or, as it were, a moral hygiene and orthopedia.

The conditions to which this treatment is adaptable are the psychoneuroses, to which, as is known, neurasthenia, hysteria and similar conditions belong; among others also certain states of depression. Dubois lays great stress on pointing out to the patient the nature of his trouble. This has to be done in a tactful way. Patients are offended by the assurance that their disease is a product of their imagination, and justly so, because for them it is not imaginary, but very real. Nevertheless, they can be made to understand that imagination has an immense influence on the development, continuance or increase of their symptoms, and this knowledge has frequently a miraculously favorable effect on the course of the disease. Dubois does not neglect either to acquaint the patients with the normal physiologic functions and the conditions under which these occur, in order to show them their sins of omission or commission.

We, therefore, see here a complete renunciation of hypnotism as a curative agent and find substituted for it the application of a rational moral and psychic treatment based on a study of the functions of the nervous system in general and its relation to mind in particular.

It is only with a knowledge of these processes that a proper psychic hygiene and orthopedia can be attained.

Let us here select one instance, that of habitual constipation. How often is the neurotic, who is so often subject to this trouble, directed to take much exercise. Careful observation teaches, however, how ineffective, or sometimes even harmful, such a direction can be if not taken in the right sense. The exercise in itself, be it walking or gymnastics, bicyling or bowling, or any other, is not conducive to repairing the disturbed intestinal function underlying the constipation. In the cases in which it is of any use, the improvement is not caused by the exercise itself, but by the accompanying mental relaxation. Without this psychic relaxation all exercise is useless. The intestinal function requires, so to say, a certain amount of mind for its successful performance and has to suffer when deprived of the same. If the mind is occupied by a certain train of thought to the exclusion of everything else, there is, so to say, nothing left of it for the intestine.

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[1] Freud, Sigmund: Sammlung kleiner Schriften zur Neurosenlehre aus den Jahren 1893-1906 (Die Freudsche psycho-analytische Methode), pp. 218-219.

In such cases exercise may be directly harmful, for the patient needs at times complete physical and psychic rest instead. Lying on a couch for half an hour will then do him more good than a long walk or other physical exercise.

The above deductions find, in a certain sense, an interesting confirmation in the investigation carried on by Dr. Joseph Merzbach. This author made inquiries of 233 letter carriers, 243 policemen and 102 office clerks in regard to the movements of their bowels. This clinical material represented, therefore, occupations with excessive, moderate and little bodily exercise, respectively. His conclusions, expressed with a certain reserve, it is true, were these:

> Rest and ordinary exercise, but not excessive exercise, are equivalent in their functional results. Violent exercise certainly contains a factor influencing peristalsis, but this influence is more frequently in the direction of inhibition rather than in that of stimulation. Rest acts least favorably (i. e., in the smallest percentage of cases), but also much less unfavorably than moderate and excessive exercise.

Of great importance also is the attitude during the defecation. In this act, too, the intestine requires a certain participation of mind for securing proper function. Defecation is only to a small extent an act of the will, but is in a large part dependent on peristalsis, which can not be influenced by the will. Pressure movements, if not made at the right moment, are, therefore, not only unsuccessful to the immediate result, but even detrimental to the final result through the discouragement which this inefficiency causes. The action of mind must restrict itself to paying attention to the intestinal stimuli and yielding to them. This is accomplished chiefly through the relaxation of the sphincter and usually results in the discharge of gases which facilitate a further movement of the fecal mass. In this way consciousness indirectly supports the peristaltic movement of the intestine, which it can not influence directly. For this reason the patient need not feel discouraged when the result of his efforts is only a discharge of gases without defecation, for the movement of the fecal mass has been furthered by this action and his next attempt is apt to be successful; that is, to produce stool, especially if the patient will, as I would recommend, make two attempts daily at defecation. If one does not take his time about it and fails to heed the intestinal stimuli, being taken up with other matters and is anxious to get through quickly, the above-mentioned intestinal stimuli will often fail to appear, or rather they are psychically suppressed, crowded out by the predominance of the other contents of consciousness; furthermore, the attention is too much diverted to react properly and thus the effect is frustrated.

This does, of course, not exhaust the subject of habitual constipation. It was only my intention to emphasize the importance of the psychic factor in the treatment of such conditions and, in closing, to draw attention to the brilliant results achieved in many cases by a purely psychic treatment, of which fact Dubois' experience gives most eloquent evidence.

Let us select another example, that of insomnia. Many neurotics are subject to this disorder and, to treat it properly, a thorough study is necessary of the conditions which have led to the disturbance, as well as a knowledge of the physiology of normal sleep. Many patients can not find sleep, because they persistently seek it. And since normally sleep is not a voluntary act their efforts invariably fail. It is given to only few people to do like Napoleon I. and say, "I must sleep, ergo, I shall sleep." As Dubois expresses very prettily and explains to his patients for guidance, sleep is in one respect comparable to a pigeon. It will come to you if you pretend not to care, but it flees as soon as you try to catch it. Thus many patients find their sleep again by consoling themselves with the idea of eventually doing without it.

Any number of instances of this kind could be brought forward, but it would lead too far to enlarge on the subject.

I should like, however, to say a few words about one symptom in neurotics which is of special importance; I mean fatigue. Physiologically, it will be convenient to distinguish three phases or grades in fatigue, which division probably finds support also from the point of view of evolution in the sense of Lamarck and Darwin. The lowest grade of fatigue is probably muscular fatigue. It takes place when the muscle has to cease work because of exhaustion of chemical energy or because of accumulation of "fatigue substances" as recent investigations seem to indicate. This is economically probably the most unfavorable form, because after complete exhaustion of energy the restoration of function is slow in establishing itself and there is no reserve energy left for unforeseen exigencies. The second grade is represented by accession of the feeling of fatigue. This feeling serves as a danger signal, inducing us to stop muscular effort and thus obviate complete exhaustion of energy. There is, then, a reserve fund of energy still left for emergencies, and one is protected from overstepping the safety threshold of work. The third grade is manifested by the feeling of depression which is evoked by very great fatigue and is accompanied by a gloomy, pessimistic mood. It represents a still higher grade of protection, because, while we might feel inclined to disregard the warning which the feeling of fatigue ought to give us, the feeling of disinclination and the depression which follow excessive fatigue prevents that neglect. The inhibition of will power thus resulting warns us against excessive expenditure of energy. Now, it certainly happens frequently that the ratio between these grades or phases of fatigue is disturbed. Thus the feeling of fatigue is unusually strong in neurasthenics and other neurotics; they tire very easily and fatigue with them leads perhaps very quickly to depression. On the other hand, many neurotics suppress the feeling of fatigue by the use of stimulants such as tobacco and thereby keep back the depression needed as a protection from overwork; and through loss of this protective device an excessive, frequently irrevocable loss of energy is brought about.

On the other hand, the psychic depression caused by fatigue can develop hypertrophically and be quite out of proportion to the real fatigue, especially so in people who do chiefly intellectual work. Such a disproportion is perhaps the basis of pessimism.

It is further to be emphasized that the easily fatigued neurotics are usually of an emotional temperament, and since emotion represents a very powerful etiologic factor of psychic fatigue we often find in these patients a pronounced vicious circle.

Only by giving due consideration to these factors can such patients, and especially neurasthenics, be correctly treated.

I should like now to call your attention to some symptoms-complex in which the knowledge of the connection of certain physiologic processes with the mind is especially important and serves as guide for the treatment. Some of them Prince has designated as association neuroses. I give here three cases and begin with the report of a case seen by me:

A young girl with pronounced stigmata of hysteria has an intense blepharospasm, extreme convergency of the eyes, contraction of the pupils, and, as could clearly be demonstrated ophthalmoscopically, a pronounced spasm of accommodation. These symptoms, taken singly, remain quite incomprehensible. As a whole, however, they can be explained in the following manner: A hysterical girl develops a habitual condition of spasm of the apparatus of binocular fixation on the basis of a light defect of refraction (astigmatism and myopia). This is caused by her bringing objects nearer and nearer to the eyes in order to see them better. As we know, fixation consists in the convergence of the eye-axes, accommodation of the lenses and contraction of the pupils. The patient has made it such a habit to use this apparatus for near-fixation only, that she is no longer able to relax it; in this way this physiologic apparatus detaches itself, so to say, from the mind and acts in a certain manner independently. On the other hand the blepharospasm is secondarily built up on the spasm of the apparatus of fixation. With the improvement, i. e., with the relaxation of this apparatus, a dilation of the pupils went hand in hand. But, since, through former habitual contraction of the pupils, the eye had always received only a small amount of light, the retina became photophobic from the dilatation of the pupils caused by the improvement, and there followed, as a natural protective reflex, a pinching of the eyelids, a pronounced blepharospasm.

The treatment, which I could not follow in this case, has to take into consideration the spasm of fixation as well as the blepharospasm. It should, therefore, consist in the following measures: The use of atropin and the wearing of dark glasses to overcome the photophobia; then gradual substitution of less and less dark glasses and gradual diminution of the doses of atropin, that is, gradual diminution of the paralysis of accommodation and of the mydriasis; with this, an explanation of the state of affairs to the patient.

An exceedingly interesting case of this nature was reported in very classical diction by Dr. Janet before the New York Academy of Medicine.

It was also a case of pronounced hysteria. Dr. Dufour had successfully severed one optic nerve for certain visual disturbances. These continued in spite of the operation. They were referred by the patient to the eye deprived of its optic nerve and made her for most of the time practically blind, although the eye which had not been operated on was perfectly normal. A careful examination convinced Janet that the patient could see quite normally and without difficulty under certain conditions, and he found out that this was the case with acts of vision for which normally only one eye is used, such as using a telescope or microscope, or in taking aim; that in binocular vision, however, which in normal man represents the rule, those disturbances always took place which made her practically blind. Janet concluded, therefore, that the patient, although one of her optic nerves was completely severed and atrophied, had, so to say, not learned yet to see with one eye only, but continued psychically to use both eyes. Once having reached this conclusion the treatment was clearly indicated. The patient had to be taught to see monocularly always. This end was accomplished by putting before the normal eye a simple tube attached to a spectacle-like frame. This tube played in a way the part of a telescope, although it contained no lenses. It made her see monocularly and thus normally. By gradually reducing the length of this tube the patient was in the end taught to see normally without any tube.

It required much careful studying to arrive at the correct interpretation of the case, and Janet, therefore, had a right to feel amused when on his undertaking the treatment of the case the ophthalmologists who had consulted him asked him to hypnotize the disease away.

If Janet had been consulted in the beginning the patient would have been spared the serious operation of section of the optic nerve which had, indeed, not improved her condition.

I add a third case, which was reported by Dr. Mackenzie[2] of Baltimore and which is classified as a so-called association neurosis:

The case was that of a lady who for years had suffered from violent attacks of rose-cold or hay fever which were accompanied by attacks of asthma. On very small provocation, such as the presence of a rose in the same room, pronounced attacks of the disease were elicited. Dr. Mackenzie, suspecting the true nature of the malady, made the following experiment: He had an artificial rose made which was a splendid imitation of a real one. The next time the patient came to his office, after having inspected the mucous membrane of her nose and having found it free from coryza, the doctor took the artificial rose from behind a screen and held it suddenly before her. Almost immediately a violent attack of coryza developed. Her eyes filled with tears, the conjunctiva became injected, the puncta lacrimæ began to itch, her face became flushed, the nasal passages obstructed; the voice sounded hoarse and nasal. With that there was sneezing, actual secretion of fluid from the nose, a feeling of oppression and slight difficulty in breathing. On examining the patient the nasal passages were found almost completely closed by the swollen and inflamed turbinoid bodies.

The true nature of the rose was later disclosed to the patient with the result that at her next call she buried her face in a bunch of real roses without any detrimental effect.

This case is very instructive. Here we have to do with a disease which every one would certainly regard as organic because all the indications of a real catarrh are present; and probably it was originally caused by exogenous irritating agents, perhaps the pollen of a rose. Later, however, the idea of the rose became strongly associated with the etiology of the disease so that even the aspect of a rose was sufficient to excite, as it were, the disease picture. Thus a disease, originally caused by external irritants could later be originated by psychic concept.

It is clear, therefore, how intimate the relation of the mind to organic processes can be and how important it is therapeutically to recognize this connection.

I have referred previously to the so-called cathartic method of Breuer and Freud. This has been lately modified by Freud to what he designates as the psycho-analytical method. The latter is of such far-reaching importance for the treatment of certain psycho-neuroses and psychoses that a thorough discussion of the same is indicated. It is used in the following manner:

Instead of hypnotizing the patients he now influences them in the waking state. He makes a patient lie down comfortably on his back on a couch while Freud himself, unseen by the patient, takes position behind him. The closing of the eyes, handling of the patient by the physician, anything suggestive of hypnotism, is avoided. Freud then begins to converse with the patient but makes him do the talking, enjoining him to talk at random in relating his history; to say anything that passes through his head even if the patient thinks it of little importance or nonsensical or without bearing on the subject. Freud lays particular stress on patients not excluding any thought or idea from their communications because of its being painful or embarrassing. He always noticed, on using this method with neurotics, that they exhibit gaps of memory, and the demand to fill these by strong effort and attention meets with great resistance, that is, the ideas presenting themselves are repressed with all the means of criticism until in the end the patients feel direct discomfort when remembrance has really established itself.

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[2] Prince, Morton: Association Neuroses, Jour. Nerv. and Ment. Dis., May, 1897, p. 257.

Freud sees in the discarded streaks of thought the offspring of the psychic structures (thoughts and impulses) that were crowded out. They are to him distortions of the latter, brought about by the resistance with which their reproduction meets. The greater the resistance the more pronounced this distortion.

The therapeutic work consists in finding the way from the (discarded) streaks of thought to what was crowded out or otherwise repressed, i. e., in tracing the distorted from the distortions. In this manner, even without hypnosis, that which previously was unconscious may be made accessible to consciousness. The end in view is to fill out all gaps of memory, to clear up all mysterious effects of psychic life and by so doing render the continuance and, indeed, a renewal of the disease impossible. It is true that this can never be done completely, but one achieves in many cases the practical cure of the patient in restoring to him the possibility of work and enjoyment.

To reach this end an understanding of the psychic mechanism by means of which the crowding out and distortion develop is indispensable, and Freud has by careful study worked out a special scheme of interpretation, the principles of which are partly expounded in his extensive monograph entitled "Interpretation of Dreams" (*Traumdeutung*).

Of this method of interpretation the following case, which I had occasion to study, furnishes an interesting illustration and shows how simple the therapy can be in some cases when these are correctly interpreted, but how, on the other hand, the cure may be delayed or even frustrated through faulty understanding:

The case is that of a young woman whose husband had gone to America six months previously, and had left his wife with a grumpy, queer old mother. Soon after his departure, but especially in the last two months, the young wife cried much and was nervous. About three weeks before I first saw the patient she followed her husband to America. On the ship her conduct became strange. In every handsome man she saw her husband, but every time she changed her mind immediately, spat out with disgust, and said, "No, he is not my husband; I want my real husband." She maintained, too, that a tall man did lie down by her and acted crazily.

At the examination immediately on her arrival in America she exhibited a contradictory behavior, now laughing, now crying, in which behavior a distinctly erotic element, a half-suppressed coquetry, was manifest. With that she was reserved and even forbidding when questioned concerning the reason for her behavior. She expressed herself once or twice to the effect that she was not a good woman. Frequently her emotional manifestations contrasted strongly with her sayings. One could get no satisfactory information from her concerning time and place and her latest experiences; she always declined to answer by saying, "I don't know," and she said this in a manner as if she did not care and did not want to bother with thinking about it.

One salient point was her indifference towards her baby of about 3 months, suffering with light diarrhea, the care of which she left almost entirely to her mother.

The tall man on the ship whom she had accused of having lain down by her, she now believed to be a brother of hers who was said to have died thirteen years ago. She claimed that he very much resembled a picture that she had of him. She said that this man had been very nice, very noble, and very kind to the sick on board ship.

She showed from the beginning, but especially later, a certain fear, which she often disguised with laughter and jocular remarks, but which was always present and at times became very prominent. Thus she thought on one occasion that she was in a prison; she said she did not know what was to become of her, she did not know what had become of her mother and the baby (the latter were in the adjoining hospital). She thought, too, that an employé wanted to kill her, remarking laughingly that he had acted as if he wanted to cut her head off.

Then again she thought that somebody had followed her to America. This somebody was first a certain Dr. H., whom she had consulted before starting for America, and who was, according to her, angry because she had not gone to see him a second time, as directed. Later it seemed to her that the man whom she had declared to be Dr. H. was perhaps not at all Dr. H., but her uncle, who had left his wife and children in the lurch. It might be he wanted to assault her; at any rate she was afraid of him.

She confounded all kinds of persons. One man she took for Dr. H.; then again, after he had left the room, she asked if he was not his brother's father. Another man she took for her brother's brother because he resembled the man on the ship so much. Again, she took another man for a relative, claiming that he had told her so, while, on the contrary, it was she who had said it a short time before.

Psycho-analytical interpretation of the case: The absence of the husband and of sexual relations form the nucleus for the development of a psychosis with erotic contents and with a certain clouding of consciousness, which blurs the impressions made by external sensory stimuli, weakens the judgment and thus brings out prominently the psychogenic imaginings and dream fancies, making them seem real. In this way occur all kinds of substitutions and the confounding of personalties.

Seeing handsome men awakens erotic feelings. The feeling of modesty and of conjugal fidelity protests against their being aroused, but the impossibility to suppress them creates the wish to, in a way, legitimate them by mistaking those men or one of them for her husband. The need soon becomes a belief in her condition of clouded consciousness. This, however, is suppressed through a higher psychic instance and finds expression in these words, pronounced with a show of great disgust: "No, he is not my husband; I want my real husband." To save the situation in a way she finds a better substitution. The nice, noble, tall man on the ship is not her husband but her brother who is supposed to have died thirteen years previously. This substitution is much more justifiable and more rational and allows the expression of feelings of affection and tenderness. The sexual feeling which is at the bottom finds thereby a legitimate if not sufficient outlet.

The different expressions of fear can also be best explained on a sexual basis, namely, in the feeling of (sexual) guilt evoked by her addressing, so to say, her feelings to the wrong person, in spite of the apparently successfully established self-delusion above mentioned. This feeling of doing wrong finds also expression in her remark that she was not a good woman; and a confirmation of the sexual basis is shown in her fear that the bad uncle who had abandoned his wife and children may have come over to assault her.

The grouping of the confounded persons around two centers is interesting; one of these centers is erotism and the other is the protest against erotism, expressing itself in fear of sexual persecution. The erotic center is formed by the tall man whom she mistakes for her brother. The other persons whom she confounds are the "father of her brother" and her "brother's brother," strange expressions which, however, become comprehensible if one remembers that said brother takes for her the part of husband. This conception is also supported by her deriving these relationships from the resemblance with the tall man on the ship.

The sexual persecution is represented in the person of the bad uncle who abandoned his wife and children and whom she believes that she recognizes, now in Dr. H., now in different people surrounding her.

The correctness of the interpretation of the described case is confirmed by the fact that after a few visits of the husband the behavior of the patient was so much improved that a speedy recovery could be expected.

It would be making too great a demand on the reader's patience did I try to discuss all the conditions which could be successfully treated by the pyscho-analytical method. Let me mention only that some of the imperative concepts and phobias, certain hysterias, neuroses of fear (Angstneurose) and related conditions can be included in the number. It is true that to carry such treatment out, certain conditions are necessary. The patients must possess a certain degree of education, intelligence and ethical development and must be capable of presenting normal psychic states. The treatment may in some cases take months and even years.

From what I said above, it can be surmised that this method of treatment is not easy to apply. It presupposes a considerable knowledge of psychology, psychiatry and neurology. Wrong application can be as disastrous in its consequences, but of course in a different way, as the wrong application of the *x*-rays. The necessity of this knowledge holds also good for the selection of the cases. Certain diseases of the nervous system, like epilepsy, chorea, tabes dorsalis and other organic diseases of the spinal cord and brain, lie quite beyond the domain of this method. But since it is sometimes quite difficult to distinguish functional diseases, for example, hysteria from organic diseases of the nervous system, the importance of considerable knowledge of the subject is evident because nobody would think of treating brain syphilis, for instance, by the psycho-analytical or any psychotherapeutic method.

The field of activity of psychotherapy is even more extensive than I have here indicated. Dr. Adolph Meyer[3] made some very interesting comparative remarks in this respect, on the development of dementia præcox and other psychoses. Very appropriately he compares certain psychiatric problems with the tuberculosis problem, saying that in the same way that tuberculosis is now recognized in its incipient stages and thereby successfully treated it must be our endeavor to study the psychoses in their development, in their beginnings. In this manner some hope is expressed of suppressing in their beginnings such grave disorders as dementia præcox by education built up on adequate psychologic principles.

64 East Ninetieth Street.

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[3] Paper read before the N. Y. Neurological Society, from which I here quote from memory.

Mercurial Injections.—N. E. Aronstam, in *Central States Medical Monitor*, December, 1907, states that intragluteal injections of mercury constitute a most efficacious therapeutic measure in tubercular syphilids, pre-eminently in those cases in which the above agent is not tolerated by mouth. Under this method the lesions will invariably disappear and the process may be kept in abeyance indefinitely.

THE PRODUCTION OF DECIDUOMATA

AND THE RELATION BETWEEN THE OVARIES AND THE FORMATION OF THE DECIDUA.*

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Last summer I announced[1] that if an incision is made into the uterus of a guinea-pig at certain early stages of pregnancy, nodules will be formed that have the structure of the decidua of the guinea-pig. Since then these investigations have been continued. In the following I wish to summarize briefly some of the main results obtained:

1. The operative procedure consisted merely in making transverse and longitudinal cuts in the uterus of the anesthetized animal. In order to obtain a large number of deciduomata it is necessary to make many cuts that advantageously separate the continuity of the uterus in different directions. Under these conditions it is possible to obtain a very large number of deciduomata in the uterus of the guinea-pig.

2. The different stages in the development of these deciduomata were established by microscopic examination. In a number of cases serial sections of the nodules were made. These nodules originate through a proliferation of the interglandular connective tissue of the mucosa. The proliferation takes place through mitotic cell division. Occasionally apparent amitoses can be seen. At first a mass of myxoid tissue is formed underneath the epithelium of the mucosa. This newly-formed layer is very rich in blood capillaries, but extremely deficient in glandular structures. The glands of the uterus participate in this proliferation not at all or only to a very slight degree.

As early as twenty-four hours after the operation it is possible to observe the beginning of the proliferative changes. On the third day small myxoid nodules are present, with many mitoses. The size of the cells, especially directly beneath the epithelial layer, is markedly increased. During the following days the cell proliferation continues. After five days small decidual nodules have formed, with many mitoses, which are also present in the endothelium of the blood vessels. The cells beneath the epithelium are very large, but have not yet attained their full size. As in the earlier stages, the blood vessels run at right angles to the myxoid cells. The deciduomata reach their full size ten to eleven days after the operation. Mitoses are still present at that time, but are not so frequent as before. They are usually found, not in the large cells, but in foci of small cells. The cells at this stage have commonly very much increased in size and resemble the decidual cells of the normal placenta. The superficial part of the mucosa frequently becomes necrotic under the influence of the pressure of the nodule, and is cast off. At other places we find inclusions of the surface epithelium in the tumor. This is due to an occasional papillomatous condition of the growth. The epithelium between papillæ may be included in the tumor. In the fully developed deciduomata the structure of the tumor resembles very much that of the ordinary decidua of the placenta of the guinea-pig.

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*The term "deciduoma" implies that the new formation consists of decidua-like tissue. Those tumors which formerly had been called deciduoma malignum are now almost universally designated as chorionepithelioma malignum.

[1] Centralbl. f. allg. Path., 1907, xviii, No. 14.

3. After the deciduomata have reached their full growth the cells very rapidly die and the tumor becomes necrotic. Thirteen days after the operation was the latest period at which a few mitoses could still be seen. In one case, as late as seventeen days after the operation, the deciduomata were still alive, but no mitoses were present in these tumors; in the latter two cases the animals were pregnant at the same time. As a rule, fifteen days after the operation the deciduomata have become entirely necrotic and they gradually shrink.

4. I thought it possible that co-existing pregnancy might prolong the life of the deciduomata. In a series of experiments, therefore, I incised only one horn of the uterus, with the hope that in the other horn pregnancy might develop. In only three cases did I succeed. In two of these, thirteen and seventeen days after the operation, respectively, the deciduomata were still alive; but in the latter case cell proliferation had ceased. In the third case, twenty-one days after the operation, the deciduomata were necrotic, notwithstanding the presence of living embryos in the other uterine horn. Necrosis, therefore, can not be prevented by the co-existence of pregnancy, although it is possible that the life of the deciduomata may be slightly prolonged under these conditions.

5. These deciduomata can not be produced in the uterus of every female guinea-pig. In cases in which they are not obtained the mucosa of the uterus shows merely an edematous, hyperemic condition, without cell proliferation. They can be produced at certain periods after copulation. In eight cases in which the operation was done inside of twenty-four hours after copulation no deciduomata formed. In only one case in which the operation was done eighteen hours after copulation was a trace of decidual tissue detected on microscopic examination.

Nine animals were operated on the second day after copulation. In these animals either no deciduomata developed or those that did develop were very small. In one case the operation was performed three days after copulation, and small deciduomata were found after ten days. Of twelve animals operated on four days after copulation, deciduomata developed in ten. In one case in which the animal was examined twenty days after operation, no deciduomata were found. Possibly, however, a small deciduoma may have been dissolved at a period so long after operation, so that this case can not be fully counted as negative. In the second negative case the animal had been dead a long time before autopsy. This case is probably to be regarded as negative.

Twenty-three guinea pigs were operated on five days after copulation. All of them developed deciduomata. Among eight guinea-pigs operated on six days after copulation seven developed deciduomata. One case was negative. In the latter case the autopsy was made twenty-one days after operation, and the animal had had young ones shortly before the operation. It is possible that in this case also the deciduoma may have disappeared. Thirteen guinea-pigs were operated on seven days after copulation. Twelve of these developed deciduomata. One case was, perhaps, negative. Microscopic examination is still to be made in this case. This negative result may be explained through the special kind of incision used in this instance. Two guinea-pigs operated on eight days after copulation developed deciduomata. Four guinea-pigs were operated on nine and ten days after copulation, respectively. In one case, in which the operation was done not quite nine days after copulation, pregnancy developed, and simultaneously small decidual nodules were found. Two other cases were negative, and in the fourth case deciduomata developed. In five cases cuts were made into the uterus in more advanced stages of pregnancy, but in none of these did deciduomata develop.

From the fourth to the eighth day after copulation deciduomata almost invariably develop, if the correct incisions have been made. Inside the first day after copulation no deciduomata usually develop. On the second day only very small or no deciduomata develop. On the ninth and tenth days after copulation, again, the formation of deciduomata becomes very uncertain; and it is absent in the later stages of pregnancy. There exists, therefore, a definite curve that indicates the chances for the development of deciduomata after copulation.

The optimum lies between five and eight days thereafter, and this corresponds with the time when the uterus normally responds to the stimulation of the ovum with the formation of a decidua.

6. We see, therefore, that at certain stages after copulation the uterus is able to form a very large number of deciduomata, if it is stimulated in the proper way. Preceding copulation is not, however, necessary for the formation of deciduomata. At certain periods after the condition of heat has passed in animals the uterus likewise responds to the proper stimulation with the production of deciduomata.

Fifteen animals were operated on inside of the next ten days after the period of heat. In twelve of these cases deciduomata developed. In two of these the deciduomata were very small, namely, in the cases in which the animals were operated on very soon after the period of heat (twenty-one to thirty-six hours, respectively).

In the other positive cases the animals were operated on from four to six days after the period of heat. In the three other cases no deciduomata developed after the operation. In one of these the operation was done two days after the period of heat, in another three days thereafter, and in the third five days afterward

We know that even experiments performed two days after copulation are not always successful; and in the other two negative cases, namely, three and five days after the period of heat had passed respectively, a special method of incision was used. This incision was also used in a few other cases, and did not yield satisfactory results. In six of these fifteen cases the ovaries were examined microscopically in serial sections, and corpora lutea were found to be present.

7. We found that at a later period than ten days after copulation deciduomata did not develop. Correspondingly, we find that if we operate thirteen to sixteen days after the period of heat, deciduomata almost invariably do not develop. Eighteen animals were operated on at this period. Seventeen did not develop deciduomata. In only one case did the deciduomata develop. It is, of course, not impossible that in this case either a mistake may have been made in determining the period of heat, or some complicating factor was added. In four of these eighteen cases, ovaries of which were examined microscopically in serial sections, no corpora lutea were present.

8. The period at which no deciduomata are formed is followed by another period in which the uterus again becomes responsive.

9. We see, therefore, that animals, at certain stages

of their sexual life, can form deciduomata without a preceding copulation. Here also we notice the presence of a certain curve, the optimum of which lies approximately at four to nine days after the period of heat. From thirteen to sixteen days the chances for decidual formation are almost nil, and then gradually the uterus seems again to become responsive.

10. The ovaries of six guinea-pigs that had been operated on inside of ten days after the period of heat were examined microscopically in serial sections. They all showed the presence of corpora lutea. In all these animals deciduomata developed. The ovaries of five of the guinea-pigs that had been operated on thirteen to sixteen days after the period of heat were likewise examined in serial sections microscopically. In four cases no corpora lutea were found. In one case the corpora lutea had been present. At this time the deciduomata, as I stated above, do not develop. The ovaries of three guinea-pigs that, according to the statement of the breeder, had been in the period of heat inside of ten days (but that did not after operation, develop deciduomata), did not on microscopic examination show the presence of any corpora lutea. Four guinea-pigs that had apparently not been in heat for some time were operated on in the usual way. Only one of these developed deciduomata. Eight guinea-pigs in which the period of heat had not been determined previously were taken at random and operated on in the usual way. In these cases, of course, it is possible that a certain number or the majority of the animals may have been in a favorable condition for the development of the deciduomata, but after operation in seven the uterus healed without the formation of deciduomata, and only in one of them did deciduomata develop.

11. These differences between the results obtained after operation on animals from the third to the ninth day after the period of heat, on the one hand, and those obtained with guinea-pigs operated on at other periods, on the other hand, are so striking that we may conclude that the development of the deciduomata depends on a certain condition in the sexual cycle of the animal at the time of operation.

12. In order to obtain a deeper insight into the causes that lead to this peculiar predisposition to the development of deciduomata, several series of experiments were made. It was possible that the contact of the ovum with the mucous membrane might cause the predisposition of the mucous membrane to the development of the deciduomata. This, however, is very improbable, because the deciduomata can develop in horns of the uterus without the corresponding ovaries containing a corpus luteum. It is, furthermore, improbable, because the deciduomata can develop below the seats of pregnancy. I could exclude this hypothesis with certainty in the following way:

One or two days after copulation, before the ovum had passed into the lower part of the uterus, a ligature was applied to the center of both horns. This prevented the ovum from touching the mucous membrane of the lower half of the uterus. A few days later, the uterus below and above the ligature was incised in the usual way, and in three cases treated in this manner, deciduomata developed both above and below the ligature. We may, therefore, state that the contact of the ovum with the mucous membrane is not necessary for the development of the deciduomata.

13. The second series of experiments that we made in order to clear up the peculiar predisposition of the uterus in certain animals, consisted in the extirpation of the ovaries before the incisions into the uterus were made in guinea-pigs that had been previously copulated. Twenty-nine guinea-pigs were operated on in this way. In twenty-one of them, the incisions into the uterus were made from two to five days after the extirpation of the ovaries. In seventeen of these no deciduomata developed. In one animal there developed only microscopically recognizable deciduomata. Two died prematurely, and one developed an abscess. Of eighteen guinea-pigs, therefore, seventeen were without deciduomata, and one had only a microscopically recognizable deciduoma, although all of them had been operated on at the most favorable time after copulation. In eight guinea-pigs, incisions were made into the uterus immediately after the ovaries had been extirpated, or one day later. In three of them, at most places of incision, no deciduomata developed, and only at one or two places, small microscopic deciduomata were found. In one a somewhat larger microscopic deciduoma developed; the others were entirely free from deciduomata.

From these experiments we may conclude that extirpation of the ovaries in most cases prevents entirely the formation of deciduomata in animals that are operated on at the most favorable period after copulation.

14. In accordance with the results of these experiments it was found that of five guinea-pigs that had been taken from the common stock without any knowledge of the period of heat and whose ovaries had been extirpated, after a subsequent incision of the uterus four did not develop deciduomata. In one case, small microscopic deciduomata were found.

15. In order to rule out the objection that a previous operation had in itself prevented the formation of deciduomata, in three guinea-pigs another series of experiments was carried out, in which the ovaries were merely pulled out of the wound without being extirpated. In all cases a second operation was followed by the formation of deciduomata.

16. In eight other guinea-pigs that had been previously copulated, the ovaries were cauterized at various places several days before incising the uterus. Six of these developed deciduomata. One died prematurely, and in one case a microscopic examination has still to be made to determine the outcome. We see, therefore, that a previous ovarian operation does not in itself interfere with the formation of the deciduomata, if, after the first operation, the uterus is later incised in the usual way during a second operation.

17. These experiments establish the fact that the presence of the ovaries is responsible for the peculiar predisposition of the uterus at certain periods, which enables it to form deciduomata under the influence of certain indifferent stimuli. The question next to be determined was, whether the influence of the ovaries is transmitted through nerves, or whether we have to deal with the effect of chemical substances secreted by the ovaries. In order to determine this problem I transplanted pieces of the uterus of guinea-pigs into the subcutaneous tissue at the proper time after copulation. It was found that in two cases deciduomata developed in pieces of uterus transplanted into the subcutaneous tissue. This makes it probable[2] that an internal secretion of the ovaries is responsible for the above mentioned predisposition of the uterus to form deciduomata.

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[2] It is very improbable that such a proliferation in the transplanted uterus would take place under any conditions irrespective of the state of the ovaries. Further experiments will decide these points with certainty.

18. Certain facts that have been mentioned before suggest that the corpora lutea which are present in the ovaries after copulation, and probably at certain times after the period of heat, represent that part of the ovary that secretes the substance necessary for the development of the deciduomata. In nineteen guinea-pigs, we, accordingly, attempted to burn out the corpora lutea soon after copulation and, at a second operation, the usual incisions into the uterus were made. One of these nineteen animals died too early to be used. Of the others, four developed good deciduomata; but the microscopic examination of the ovaries showed that not all the corpora lutea had been destroyed. In each of these cases corpora lutea had been left in the ovaries. In the four other cases in which deciduomata were produced, a complete examination of the ovaries has not yet been made. Four other guinea-pigs did not develop deciduomata. Microscopic examination of their ovaries showed the absence of corpora lutea. In one of these four cases one ovary only has so far been examined. In two animals in which only small microscopic deciduomatous areas developed, the corpora lutea were almost entirely destroyed. In four cases no deciduomata developed; but the ovaries have not as yet been examined.

19. In seven guinea-pigs, only one ovary was removed. Five of them developed deciduomata. In two of these cases, the ovaries were examined microscopically and corpora lutea were found in the remaining ovary. In one, no deciduomata developed, and the examination showed that no corpus luteum was present in the remaining ovary. In one case only small doubtful nodules were found, without a microscopic examination of the uterus or ovaries having as yet been made.

20. All these facts show that a certain substance secreted by the ovaries is responsible for the formation of the deciduomata, and make it at least very probable that the corpora lutea represent that part of the ovary which secretes this substance. This latter point, however, can be made certain only by further experiments, which are under way at the present time.

21. A certain substance present in the ovaries is necessary for the production of deciduomata. If, as we found, very small deciduomata can be formed even after the extirpation of the ovaries, it is most likely that a certain amount of this substance is still present in the circulation at the time of the incision into the uterus. We noticed especially the fact that extirpation of the ovaries is followed by the formation of microscopic deciduomata in such cases in which the uterine operation was carried out very soon after the extirpation of the ovaries, and this circumstance speaks in favor of the interpretation just given.

22. The process leading to the formation of deciduomata differs in essential points from the connective tissue proliferation in ordinary wound healing. (a) The production of new cells by mitotic division is incomparably more extensive in the development of the deciduomata. For some time the proliferative energy resembles closely the growth of a malignant sarcoma. (b) Instead of forming mainly connective tissue fibrils, the new cells enlarge and assume more or less the appearance of decidua cells. Scar tissue is not produced. (c) Instead of growing into the wounds and filling the defects, the cells grow upward between the glands of the uterine mucosa and raise the epithelial covering of the uterine mucosa. (d) At a certain stage of the development the whole new formation becomes necrotic.

23. As we stated above, the deciduomata invariably become entirely necrotic twelve to twenty days after operation. This might be due to interference with the circulation. In cases of rapid cell-proliferation the development of the blood vessels does not proceed adequately and frequently we find, therefore, in rapidly growing tumors, areas of necrosis. Such an interpretation can not, however, explain the invariable necrosis of the deciduomata at a certain period of their development. Such a necrosis takes place quite independently of the condition under which they develop; it is always complete, even if at certain places the blood vessel supply is quite sufficient. This necrosis must be compared to the general disappearance of the corpus luteum after the causative factors leading to its development have ceased to exist. We saw that certain substances prepare the uterine connective tissue cells to proliferate and to form decidua. It seems, therefore, evident that the same substances which prepared the cells for the cell-proliferation are necessary for their life. The cells die, as soon as the "growth substances" have disappeared.

24. A problem of great interest which at the present we merely wish to state as such, is the limitation of the proliferation to the connective tissue of the uterus. The subserous or subcutaneous connective tissue which is likewise incised, does not form nodules. Does that depend on a physico-chemical difference of connective tissue cells in different parts of the body, or does it depend on the specific relation of connective tissue cells to certain differentiated cells in their neighborhood, in this case on the influence of the uterine epithelium? The latter interpretation seems to be the more probable one.

25. If as we saw, a certain "internal secretion" of the ovaries is of great significance for the production of deciduomata, we are justified in concluding that it has the same significance for the formation of the placental decidua. The early extirpation of the ovaries and not unlikely the early destruction of the corpora lutea interferes with the normal course of pregnancy, because the substance which is necessary for the development of the decidua is absent.

26. Towards the end of the first week following copulation the ovum implants itself into the uterine wall and causes the decidua formation which is necessary for embryonic production. We have here an instance of an especial adaptation. The uterus responds at the proper time in the proper way to insure the development of the embryos. Our experiments permit us a further analysis of this adaptive process. We saw, first, that an ovum is not necessary for the stimulation of the uterine mucosa—that we have to deal with a two-fold cause; second, that the uterus has the potential power to produce many more placentas than it can ever be called on to produce under normal conditions; third, that the stimulus of the ovum alone would probably be powerless without secretion of the predisposing substance by the ovary. It is especially noticeable that the action of this "preparing" substance becomes potent at the time when the ovum is ready for implantation; but as we saw, even without copulation this substance is secreted and acts on the uterus.

27. In conclusion I wish to point out a certain analogy which exists between these artificially produced deciduomata and a variety of multiple tumors that are limited to certain organs, as for instance, multiple fibroneuromata, enchondromata, symmetric lipomata, or adenomata of the intestinal mucosa; they might be called multiple systemic tumors. The deciduomata represent a type of new formations which I designated

"transitory tumors." If the substance were secreted by the ovaries continuously, instead of intermittently, the tumors would lose their transitory character and would become permanent new growths. In the case of the systemic tumors and of the deciduomata we have to deal with multiple benign tumors of a more or less transitory character affecting one organ or one tissue. We know that the origin of the deciduomata depends on two sets of conditions: (a) That a predisposing chemical substance be produced by a certain organ; and (b) that such a substance having been produced, indifferent stimuli, for instance, traumatisms, are sufficient to produce the tumors. Clinical observation makes it likely that certain tumors, as for instance, sarcomata, have at times been caused by traumatisms. Experimentally, attempts to produce tumors through traumatism or through long continued irritation have never been successful. It may be suggested that such attempts could have been successful only if the necessary "preparatory" substance had been secreted prior to the action of the indifferent stimuli.

As stated above, the new formations which we produced differ in several essential aspects from regenerative proliferation of the connective tissue during wound healing. Furthermore, the processes leading to the formation of deciduomata have nothing in common with so-called inflammatory reactions. Neither do they represent an example of compensatory hypertrophy although there exist cases of compensatory hypertrophy, which apparently almost imperceptibly merge into adenomatous new formations, just as certain hypertrophic processes taking place in the connective tissue in connection with wound healing lead to the production of keloids, which are usually classed among the fibrous tumors. If we injure the perichondrium near the ear cartilage the regenerative processes setting in may lead to the formation of small nests of cartilage. A similar result can be obtained, if we transplant pieces of perichondrium. It is very doubtful whether we should call such small cartilaginous areas, "chondromata." But let us assume that under the influence of an abnormal internal secretion, which suddenly comes into play, the connective tissue of the mucosa of the intestines began to proliferate at circumscribed areas in the neighborhood of places of injury, raising up the epithelium and forming relatively large polypoid out-growths covered by epithelium, we should be much tempted to regard such multiple polypoid out-growths as related to tumor formation, especially if the connective tissue of the mucosa showed a metaplasia into another variety of connective tissue. A sharp line of demarcation between regenerative and tumorous new formations does not exist. We are inclined to use the term "tumor" if the cell proliferation is very marked and limited to a certain circumscribed area and leads to a well defined formation and if—and this is an essential point—we can not entirely account for the tissue proliferation by including it among the regenerative or inflammatory reactions—if there exists an unknown factor leading to the cell growth.

In the case of deciduoma we have found the definite cause for its formation; and it is very desirable to emphasize certain similarities between the deciduoma and various other tumors in order to indicate the possible presence of predisposing "preparing" substances, as the unknown cause of certain tumors. Given such a "preparing" substance, otherwise indifferent stimuli would be sufficient to excite the potential proliferative energy of the tissues. The fact that the deciduomata degenerate as soon as the "preparing" substance ceases to be active is no valid reason for denying the designation "tumor" to these new formations. In order to indicate the ephemeral character of such new formations they may be called, "transitory tumors." Even carcinomata may retrogress spontaneously. As I have pointed out in another paper,[3] the presence of "preparing" substance can only explain the formation of a "transitory tumor" or at the best, of a tumor that grows indefinitely in the same individual in which it originated, but it can not explain the growth of a tumor which can be transplanted into many other individuals in which such a "growth" substance is not likely to be present. In order to explain on such a basis the inoculability of tumors we should have to assume the hereditary transmission of an increased energy of growth to the following generations of tumor cells which thus would be able to continue to proliferate without the further presence of the growth substance in the inoculated animal. The possibility of such a transmission into later generations has not yet been established. Until such a proof has been given we must assume that transplantable tumors carry with them in the tumor cells or in their direct neighborhood the stimulus which enables them to proliferate in a new host. But it is quite possible that a non-transplantable tumor which originated through the action of a "preparing" substance may grow very rapidly and be, therefore, malignant. Transplantable tumors, on the other hand, do not need to be very malignant. As I have pointed out,[4] the degree of inoculability and energy of tumor growth are two distinct properties which do not need to be associated in the same tumor. But the transplantability of tumors depends, in all probability, not only on the presence of a permanent stimulus in or near the tumor cells, but on some other factors, as yet unknown. The presence or absence of such secondary factors might determine the inoculability or non-inoculability of a tumor, even if the essential cause in the tumor formation was the same in both cases.

Clinical Notes

CASE OF PERFORATION OF THE GALL BLADDER IN THE THIRD WEEK OF TYPHOID FEVER;

LAPAROTOMY; CHOLECYSTOTOMY; DEATH AND PARTIAL NECROPSY.*

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Ashurst,[1] in 1908, under the title, "Perforation of the Gall Bladder During Typhoid Fever; Cholecystectomy; Recovery," reports two cases of operations on the gall bladder for perforation during the course of typhoid fever, and analyzes nineteen cases of other operations done during the course of typhoid fever for lesions of this viscus. As such cases are rather rare, and are worthy of record, I desire to report one such case:

Patient.—Frank S., No. 777, aged 28, fireman on a tug, was admitted, Feb. 22, 1905, to the medical wards of the U. S. Marine Hospital at Stapleton, N. Y., under my care.

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[3] Über einige Probleme der experimentellen Tumorforschung, Ztschr. f. Krebsforsch., 1907, v, p. 17.

[4] Über einige Probleme der experimentellen Tumorforschung, Ztschr. f. Krebsforsch., 1907, v, p. 18.

* In the service of Surgeon P. H. Bailhache, U. S. Public Health and Marine-Hospital Service, and is published with his permission.

[1] Am. Jour. Med. Sci., April, 1908.

History.—He was born in Austria. Habits, family and previous medical history contained no facts of importance. He had been ailing for about seven days; complained of general malaise, weakness, anorexia, chilly sensations, slight cough, nose bleed two or three times, some pain in abdomen, no diarrhea, no chills. He could not speak much English, and, in the absence of an interpreter, his history was unsatisfactory.

Examination.—Examination showed a well-nourished and developed individual, with dull and apathetic facies, coated tongue, slight cough, rapid and dicrotic pulse; heart, normal; numerous dry râles over both lungs; abdomen, several rose spots on the skin, no enlargement of spleen noted; temperature 39° C., pulse 88, respirations 24.

Diagnosis and Hospital Record.—The case was regarded as probable typhoid and the man was put to bed on symptomatic treatment. Up to March 1 it was noted that he daily grew more apathetic, but without delirium. Slight diarrhea developed and he passed four or five liquid, yellowish stools daily. A fresh crop of rose spots appeared; the temperature was not very high, was very irregular and decidedly remittent; twice it reached 40° C. (rectal) for a brief time, but usually was near 38° C., and on February 28 was normal for nearly twenty-four hours. His bronchitis continued; his pulse and respiration showed nothing worthy of note; no jaundice was noted. Plasmodia malariæ were not found in his blood and a Widal test was negative (February 26); his urine showed nothing of importance; white blood cells, 6,500 (February 28).

March 1: He had a chill, followed by a rise of temperature, for which no cause could be found. March 2 and 3: It was noted that more rose spots had appeared, that he was very dull and at times a little delirious; tongue was dry; his temperature from March 1 to 6 showed a marked daily remission from about 40° C. in the evening to 37.5° or 38° C. in the morning; pulse and respirations continued about as before. March 2, Widal test was negative; March 3, white blood cells, 11,000; March 5 and 6, Widal test gave a partial reaction; March 5, sputum was negative for tubercle bacilli; a blood culture made for tubercle bacilli was also negative. Tubercle bacilli were sought for on account of the absence of a positive Widal test and the character of the temperature curve. The increase in the leucocyte count was thought possibly due to his bronchitis, which was not severe, however. His abdomen had been examined daily, but nothing found.

Perforation.—On March 7, at 7 a. m. (twentieth day of the disease), he was seized with sudden, severe, abdominal pain, more or less general in character and very severe; dorsal decubitus with flexed knees; general rigidity and tenderness, but both seemed greater in the right lower quadrant. Pulse was small, rapid and wiry; facies distressed and anxious. A short time later a differential count of the white blood cells gave polynuclears 85 per cent., small lymphocytes 4.5 per cent., large lymphocytes 10.5 per cent. Hot applications to the abdomen gave some relief, no anodyne was given. It was thought that intestinal perforation had occurred.

Operation.—At 10 a. m., the patient having reacted somewhat, was removed, with his consent, to the operating room, and under ether I opened the abdomen, making a small incision at the outer border of the right rectus muscle, near the umbilicus. On opening the peritoneum there was a slight flow of dark fluid which appeared to be bile; there was general congestion of omentum and intestines, and both showed dark with distended vessels; the cecum, appendix and ileum were rapidly searched for perforations, but none was found. The color of the free fluid in the peritoneal cavity and the bilious color imparted to the sponges directed attention to the gall bladder; this could be reached through the incision and was palpated; several soft adhesions were felt around a fairly well-distended gall bladder, and one of them being accidentally torn, a gush of fluid was felt over the palpating fingers; the incision was lengthened and the gall bladder was found ruptured. The patient's condition, which was not very good in the beginning, was now growing alarming, so the gall bladder, after a hasty examination, was packed off with gauze from the rest of the peritoneal cavity, opened, drained, and a gauze wick inserted, after it had been anchored in the wound by a large suture; the rest of the incision was closed rapidly with through and through sutures; the patient in the meanwhile had been given 750 c.c. of salt solution intravenously.

Postoperative Condition.—His condition improved somewhat after the infusion, and he was removed to bed, where he soon reacted from the anesthetic, but still remained in a precarious state. He was given strychnin sulphate, atropin sulphate and a small dose of morphin sulphate hypodermically, external heat was applied, and a little later hot saline solution was given by the rectum; the salt solution was ordered repeated every six hours and the strychnin, hypodermically, every three hours, depending on his condition. The next morning it was thought that his pulse had improved somewhat in quality, though still very rapid, and that his facies was better; his respirations, however, were increasing in rapidity, and mucus was accumulating in his throat; he had had no nausea or vomiting; there was a free discharge of bile on the dressings, which were also somewhat blood-stained. The strychnin and the saline solution by rectum were continued; very small quantities of liquids and whisky were given by mouth, and he was sponged off every four hours so far as dressings would permit. His temperature, which had reached 40° C. a few hours after the operation, continued steadily at this point. During the afternoon and evening he became delirious and talked a good deal, but was otherwise quiet. During the night his pulse showed a slight increase in rapidity, but remained of good volume under the conditions; his temperature remained high; his respirations reached 42. On the morning of March 9 he was in delirium, more talkative, though still quiet in other respects; pulse, 150, still of fair volume; respirations, 40; general condition, much worse. During the day he steadily grew worse, his pulse lost volume, respirations grew more shallow, lungs filled up, tracheal râles appeared, and at 6:40 p. m. he died.

Necropsy.—The next morning at 10 o'clock a partial necropsy was done. I was unable to be present and the following abstract is made from notes kindly taken at my request, by Passed Assistant Surgeon T. D. Berry of the Public Health and Marine-Hospital Service.

The gall bladder was found well held up in the wound by the retention suture, the gauze wick being still in place; it was found walled off by recent adhesions from the general cavity, and there had been no apparent further leakage of bile into the peritoneum; the gall bladder contained still about 50 c.c. of dark bile and mucus, its wall was generally much thickened, and on its outer surface, near the neck, were two spots much roughened and deeply bile-stained; on opening the bladder these two discolored spots were shown to be perforations due to ulceration; the entire mucous membrane was studded with ulcers, ranging in size from 1 or 2 mm. up to 1.5 or 2 cm. in diameter, and numbering about twenty in all; the ulcers were roundish in shape, with sharply defined, punched out borders and fairly clean bases; the mucous membrane around all ulcers was much undermined, and in one or two places the ulcers communicated with each other under the mucous membrane; the two perforating ulcers were of a dissecting type, obliquely through the wall, forming sort of valve-like openings, which probably accounted for a distended bladder at the time of operation in spite of perforations; no gallstones were found, and all ducts were patent except the cystic, which was found completely occluded about 1.5 cm. from its junction with the hepatic duct, and here for a short distance the lumen was obliterated and the duct was nothing more than a fibrous cord.

The general abdominal cavity presented signs of recent peritonitis, the intestines being very moist and flecked with flakes of lymph; there was also a small quantity of cloudy, purulent looking fluid in the pelvis; the mesenteric lymph glands were uniformly, though not greatly enlarged; spleen was not enlarged, weight 165 gm.; on slitting up the lower ileum general hyperplasia and ulceration of the intestinal lymph follicles was noted. Other organs were not examined.

As for the immediate cause of death, it was thought that the patient's resistance had proved insufficient for the sepsis superadded to his typhoid.

It is much regretted that owing to unfortunate circumstances no cultures were made from the gall bladder either at operation or at necropsy.

It might be added that the anesthetic used is open at least to consideration. At the time, under the conditions, ether seemed to be the choice. It can not be denied, however, that the ether undoubtedly exaggerated the bronchitis, and it is possible that it may have contributed, in some degree at least, to the final fatal outcome.

THE LEPROSY-LIKE DISEASE AMONG RATS ON THE PACIFIC COAST.

WILLIAM B. WHERRY, M.D.
Bacteriologist to the San Francisco Board of Health,
SAN FRANCISCO.

It seems worth while recording that out of over 30,000 rats examined, two have been found ill of the leprosy-like disease due to acid-fast bacilli. This disease was first described by Stefansky,[1] next by Dean[2] of the Lister Institute of Preventive Medicine, and by the last Indian Plague Commission.[3] I am informed that Dr. W. R. Brinkerhoff has also found the disease among rats in the Hawaiian Islands.

Both of the specimens I have encountered were large adult female rats (*Mus decumanus*). One was found in San Francisco on February 13, and the other in Oakland on April 17. My particular attention was called to the rats by the general subcutaneous congestion; the congestion and hypertrophy of the cutaneous, axillary and inguinal lymph glands; the presence of numerous minute yellowish tubercles in the subcutis; and the irregular nodular thickening of the skin. Externally there was a noticeable alopecia, especially about some of the largest nodular thickenings, which had ulcerated. No fleas could be found on either rat.

No micro-organisms were found in preparations stained with the ordinary anilin dyes. In decinormal caustic soda preparations numerous rod-like bodies were seen. These did not stain with Loeffler's methylene blue but retained the stain in the tubercle method. When colored with hot carbol fuchsin they resisted decolorization with 20 per cent. nitric acid in 95 per cent. alcohol. In such preparations the morphologic resemblance to the bacilli in leprosy was striking, but when less acid was used, for example, 5 per cent., the rods appeared thicker and more like tubercle bacilli. Smears from the skin ulcers showed that these were discharging enormous numbers of bacilli. The rods were in the greatest numbers in the subcutis and lymph nodes. Very few scattered groups could be found in preparations or sections from the liver and spleen.

The histologic changes in the skin were strikingly like those found in leprosy; but the bacilli, and the so-called lepra-cells crowded with them, were much more numerous than in any leprosy sections I have studied.

Owing to accidents my wild rat and guinea-pig inoculation experiments were failures. Two white rats inoculated subcutaneously over two months ago are still under observation and appear to be unaffected.

Additional note.—On reading proof of the above I am able to add that I found two more cases of this disease. Both of these very large specimens of *M. decumanus*, a male and a female, were caught in Oakland. The inmates of a store had noticed the female in their basement for some days previous to its capture and set a trap for it on account of its scabby, hairless and sickly appearance. The anatomic findings were as above described, excepting that the male specimen showed no cutaneous ulceration. One flea (*Ceratophyllus fasciatus*, Bosc.) found on the male specimen was ground up on a slide and stained by the tubercle method. It contained no acid-proof bacilli. During the past month Dr. George W. McCoy, U. S. Public Health and Marine-Hospital Service, has found seven similar rats from widely scattered parts of San Francisco. My assistant, Mr. A. Venske, recalls having dissected a number of such rats in old Chinatown, San Francisco, in 1901, although at that time the nature of the disease was unrecognized.

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[1] Cent. f. Bakt., 1903, xxxiii, 481.
[2] Jour. Hygiene, 1905, v, 99.
[3] Jour. Hygiene, 1907, vii, 337.

CASE OF BRAIN ABSCESS.

W. B. HOLDEN, M.D.
PORTLAND, ORE.

Patient.—Mr. D., aged 35, bookkeeper, came under my care Nov. 1, 1907.

History.—Previous history was as follows: For some weeks he had been suffering from left earache. The tympanum had twice been incised and a little mucus drained for a short time. Headache had been severe and unrelenting. There was loss of weight, constipation, anorexia and difficulty in passing the urine. The temperature had been running from 98 F. in the morning to 99.5 F. in the evenings. Pulse was not accelerated.

Examination.—Examination showed marked photophobia, mental dulness, a peevish restlessness, no anesthesias, no paralysis, pupils negative, tongue heavily coated, mastoid not tender except one-half inch above and behind the external auditory meatus. Catheterized urine showed no changes. The question of diagnosis lay between abscess of brain and tuberculous meningitis.

Blood Examination.—Dr. Wylie Jones was called in to make a differential leucocyte count. November 2 he reported a leucocytosis of 15,000 with polymorphonuclear count of 90 per cent.

Simultaneously the nurse reported Mr. D. in a severe chill, temperature 103 and pulse 110.

Operation.—Operation on the left mastoid was done at once. The antrum and mastoid cells contained some granulation tissue. The dura was exposed by chisel and rongeur above and behind the ear over an area of a square inch. The dura did not bulge. There was strong pulsation of the brain beneath. The upper mastoid cells were followed back until an extradural abscess of a dram or more capacity was opened. The abscess was just above the sigmoid sinus, one and one-half inches behind the external auditory meatus. Gauze drainage was used. The patient slept most of the following night.

Postoperative History.—On November 3 the patient's temperature was 97 F.; pulse, 70. Catheterization was necessary. On November 4 his temperature was 101 F., pulse 84. The following ten days his temperature ranged from 96.4 to 98 F., and pulse from 62 to 70. His headache was relieved, his appetite returned somewhat, and he appeared brighter. Daily catheterization was necessary. Photophobia persisted. The tongue remained coated.

A few days after the operation, word-blindness and loss of memory for words were discovered. He could not tell his letters. He forgot nouns rather than verbs. He called his ear an eye. Names of near relatives could not be recalled. His automobile was "the thing you ride around in." The rock pile was "where they pound up things."

November 14: There was weakness, stupor, restlessness and refusal to take nourishment appeared. The patient had been very restless all night.

November 15 at 7:45 a. m., the patient's temperature was recorded as 95.2 F. and pulse as "weak." He was decidedly stupid and wanted to be left alone. He said, "I don't know much." He complained of feeling bad, but not of pain. His pupils were negative and no paralysis was discovered. At 1:30 p. m. his axillary temperature was 100.2 F., pulse 92. At 2:30 p. m. his temperature was 101 by rectum.

Second Operation.—At 4:10 p. m., an operation was performed. The first wound in scalp and skull was opened and enlarged. The extradural abscess and mastoid antrum were healed and filled with healthy granulations. The dura bulged in opening over the temporosphenoidal lobe. A crucial incision of the dura was made. The brain pulsated very little. A grooved director entered an abscess about one-half an inch beneath the surface of the brain. This abscess was one inch above and anterior to the extradural abscess. It contained two or three drams of pus. The wound was enlarged by spreading closed artery forceps and soft rubber tube drainage was used, passing through a button-hole in the scalp.

Result.—Temperature records were 97.2 to 98.4, pulse 64 to 70 after the second operation. Two days after the second operation the patient noticed that he could talk much better. His appetite soon returned, and was ravenous; his tongue cleared up. After four days the patient urinated voluntarily. He slept well, had no headache, and was bright, cheerful and happy. Five days after the operation photophobia disappeared. Drainage was used three or four days only.

Subsequent History.—The patient left the hospital in three weeks. He has been doing his work for several weeks. He writes letters correctly; occasionally he hesitates for a word, but is considered entirely well. The time between first and second operations is quite a blank to him, though to his friends he appeared to be nearly himself.

The special features of this case are: First, the mild catarrhal otitis media, though early and efficiently drained, yet with severe sequelæ; second, abscess of distinctive localizing symptoms; and, third, the rapid and perfect recovery from word blindness and aphasia.

Corbett Building.

OXYURIS VERMICULARIS FOUND IN THE VERMIFORM APPENDIX.

RALPH W. WAKEFIELD, M.D.
BAR HARBOR, ME.

Parasites found within the vermiform appendix have been so seldom reported that I submit the following case, believing it to be of scientific interest.

Metchnikoff, Becquerel, Natale, Girard and others have reported finding lumbricoids; Bloodgood, round worms; and Rammstadt, the oxyuris.

The case was referred to me for operation by Dr. George R. Hagerthy.

Patient.—Female, white, single, 17 years old, housemaid by occupation.

Family History.—Unimportant, except that father is syphilitic.

Personal History.—Patient had ordinary diseases of childhood. She enjoyed good health until one year ago, since which time she has suffered more or less from intestinal indigestion and constipation.

Present Trouble.—Six weeks before operation patient was seized with colicky pain in right side of abdomen, radiating toward the back. There was nausea and vomiting; no perceptible rigidity of recti muscles; pulse and temperature normal.

Patient improved under treatment, but would relapse when solid food was taken. At time of operation patient's temperature and pulse were normal. There was intermittent pain and marked tenderness at McBurney's point; slight rigidity of right rectus muscle; no nausea or vomiting. Bowels were constipated.

Operation.—The appendix was removed without incident. No adhesions were found and the external appearance of the organ showed evidence of only a moderate inflammatory process.

The appendix was inflated with air and suspended in absolute alcohol for three days. On exposing the lumen by a longitudinal incision, a nest of some six or eight pin-worms was found imbedded in the wall of the organ at the extreme distal extremity. The parasites had penetrated about one-third the thickness of the wall and, no doubt, would have caused a perforation had they been allowed to remain.

The patient made an uneventful recovery.

A MODIFIED ESMARCH CHLOROFORM INHALER.

W. H. ALLEN, M.D.
Anesthetist to the Eye and Ear Hospital.
PITTSBURG.

The inhaler illustrated herewith was designed primarily with the object in view of allowing the anesthetist the practically free use of one hand for the control of the patient's jaw and the palpation of the facial artery. It also at all times prevents the chloroform from too closely approaching the face, a point which I consider of paramount importance for the safety of the patient and one which is too often neglected. The percentage of chloroform and air may be varied by the adjustment of the sliding arms (A, A′, A″, A‴), which have a range of extension from three-fourths of an inch to one and three-eighths inches, as well as by the rapidity with which the anesthetic is dropped. It will, however, rarely be found necessary to employ the inhaler at anything but its fullest extension.

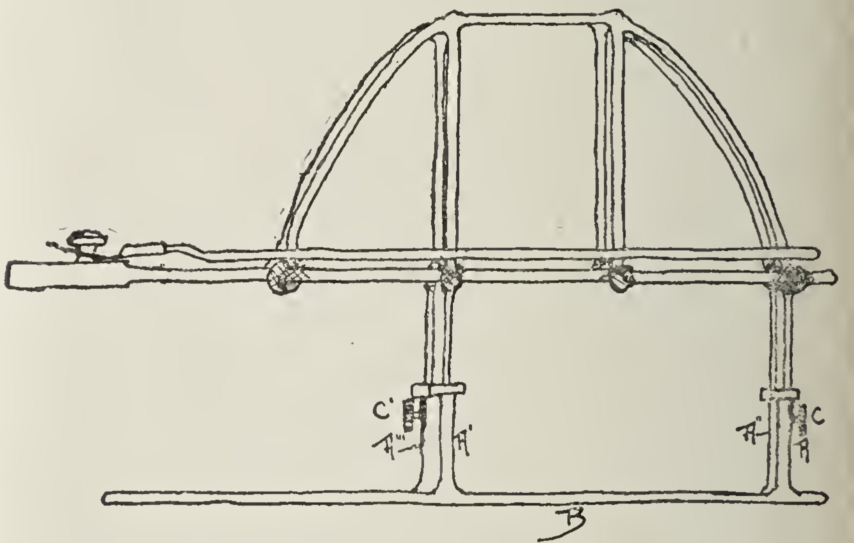

Fig. 1.—Modified inhaler. A, A′, A″, A‴ uprights, having telescopic adjustment; B, frame modeled to fit face; C, C^1, set-screws.

The construction consists of an ordinary Esmarch inhaler from which, for convenience, the handle has been removed, with a wire frame (B), modeled to fit the face, attached below. This frame is connected with the inhaler by four uprights (A, A′, A″, A‴), having a telescopic adjustment controlled by two setscrews (C, C^1). The part of the substage frame nearest the nose serves to hold a piece of gauze over the eyes of the patient.

The inhaler may readily be held in place by hooking the thumb of one hand about one of the uprights while the fingers control the jaw and palpate the facial pulse.

The whole inhaler may be readily cleaned and boiled.

252 Shady Avenue.

Contagion in Eczema.—M. H. Hallopeau, *Bull. de la Soc. Francaise de Dermatologie*, xix, January, 1908, avows himself an adherent of the parasitic theory of eczema, and reports two cases in which the transmission of the disease from one patient to the other was, he thinks, hardly to be questioned. He does not consider the failure to detect the parasite as a valid argument against this theory; there are a number of transmissible diseases the microbe of which is unknown. The inflammation in eczema precedes the vesicle, and if a parasite is sought for it should be sought in the surrounding tissues rather than in the perfected vesicle

FOUR FRONTAL SINUSES.

MARTIN COHEN, M.D.

NEW YORK.

Through the courtesy of Mr. Burchell of the New York Eye and Ear Infirmary I am enabled to report on this interesting anomaly, which, to my knowledge, has not been described in the text-books.

In the skull, which otherwise presented no unusual anatomic features, there were present on each side of the frontal septum two sinuses, one posterior to the other, and each having a distinct and separate nasofrontal duct, which drained into the middle meatus of the nose. A complete bony septum separated the sinuses on each side.

It is conceivable that this anomaly might offer considerable difficulty to the surgeon in the diagnosis and treatment of suppurative conditions of the frontal sinus. If the anterior set only were involved, no unusual features would be present, but simultaneous involvement of the anterior and posterior frontal sinus would lead to a persistence of the suppurative condition even after the radical measures had been adopted, as the existence of additional sinuses would probably not be suspected. Should the condition be recognized by the surgeon, the proper treatment would still offer considerable difficulty. To reach the posterior sinuses by an intranasal operation would be very difficult, while a radical operation on the posterior frontal sinus might prove dangerous (unless it is certain that there is a posterior sinus) on account of the posterior location and the proximity of these sinuses to the frontal lobes of the brain.

It remains to be seen whether the *x*-rays will prove helpful in the recognition of this anomalous condition. At any rate, the possibility of the existence of these additional sinuses should always be borne in mind, especially in cases of prolonged suppuration.

Other anomalies which have come under my observation recently are:

1. No frontal sinuses.
2. Only one large frontal sinus on left side with its nasofrontal duct.
3. Three frontal sinuses; two to the right of the frontal septum situated laterally. These two sinuses were divided by a vertically situated bony septum extending from the anterior wall, roof and floor to the opening of the nasofrontal duct. Both sinuses on the left side emptied into one nasofrontal duct. The left frontal sinus showed no anomaly.

34 East Fifty-eighth Street.

USE OF NEBULIZER PRESSURE IN SPHYGMOMANOMETER.

W. A. RUBLE, M.D.

WASHINGTON, D. C.

I wish to call attention to the advantage of applying the compressed air in a common nebulizer to the sphygmomanometer. By applying the cut-off to the rubber tube of the sphygmomanometer and turning the pressure gauge down low the pressure can be controlled perfectly and the attention of the operator given to detecting the systolic and diastolic pressure of the pulse. The blood pressure apparatus should be placed on the nebulizer stand and the patient seated with the left side to the instrument. The air-cushion bandage should be adjusted to the left arm of the patient, the air pressure controlled with the right hand and the effect detected with the left hand. This plan does away with the necessity of pumping away with the right arm while trying to detect the fine variations of the pulse with the left. It also makes the storage bulb, which is forever bursting just at the critical moment, unnecessary.

AN ECONOMICAL METHOD OF MAKING TUBERCULIN DILUTIONS.

H. J. DAVIDSON, M.D.

SEATTLE, WASH.

Making tuberculin dilutions by the usual methods entails taking a large quantity of tuberculin, 0.2 c.c., thereby making it possible to get but five diluted solutions from 1 c.c., and it is usual to measure it in a pipette of rather large caliber. I deem it worth while to present a more accurate and a more economical method.

The counting pipette for red blood corpuscles is used for measuring the quantity of tuberculin taken, but the tuberculin and diluent are not mixed in the cell of the pipette. My pipette holds 0.9 c.c. Having measured out that quantity of the diluent in a small graduate (5 c.c.), I draw tuberculin up to the mark (0.5) on the stem of the pipette and expel it into the sterile graduate containing the diluent. This gives me a dilution of 1 to 200. Adding to this four equal volumes of the diluent I have a 1 to 1,000 dilution, 0.2 c.c. of which serves as the recommended initial dose. A small sterile glass ball is dropped into the graduate and shaken for a few minutes to get an even mixture.

Far greater economy can be practiced by drawing the tuberculin up to the first mark on the stem of the pipette, in which case I get a dilution of 1 to 1,000 in 0.9 c.c. of the diluent, or only about enough for four doses without any waste. As the dilutions deteriorate in from ten days to two weeks, the practicability of this method to the man who has but one or a few patients under observation is obvious.

The technic is extremely simple and the accuracy of dilution superior to that obtained by using a large caliber pipette. By knotting the distal end of the rubber tube on the pipette it makes an efficient bulb.

606 Eitel Building.

The Exceptional Child.—The criminal, the insane and the neurasthenic in a certain sense are the waste material of civilization from which something useful can be produced if the effort be made while the material is still in the plastic period of childhood. The National Association for the Study and Education of Exceptional Children has been formed to make this effort. In addition to conducting a school for such children where experimental work can be carried out, the association has determined to extend its work by offering to teachers and others, who are fitted to profit by it, a course of instruction in the care and education of such children. A summer course for this purpose has been arranged to be held at the school from July 13 to Aug. 22, 1908. The course is to include both theoretical and practical instruction. The terms of admission are a previous course in psychology covering sixty hours, and three years' experience as a grade public school teacher or its equivalent. Further evidence of special fitness is required, which is to be determined by the educational manager. Further particulars may be had of the secretary of the National Association for the Study and Education of Exceptional Children, Watchung Crest, Plainfield, N. J.

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SATURDAY, JUNE 6, 1908.

THE PRESIDENT'S ADDRESS AND THE ORATIONS.

In his presidential address, Dr. Burrell gives particular attention to a subject now interesting the profession, viz., the education of the public in regard to scientific medicine. There has probably never been a time when man has not taken some interest in the subjects of health and disease, but it has seldom been an intelligently directed interest. The profession, as Dr. Burrell says, has been conservative and it is only in recent years that scientific medicine has developed; therefore judicious publicity is a new duty of the profession to the public. Better results in this line will be attained, he thinks, by teaching thoroughly a few important subjects than by attempting to cover too large a field. Among these subjects he enumerates: Prophylaxis of tuberculosis, need of early recognition of malignant disease, the various forms of infectious disease and means of avoiding them, and the main principles of hygiene and sanitation. When one considers the vast amount of misinformation which is being diffused, the need of instruction of the public in scientific truth is obvious. But when all the truth is not known, we should be careful to tell only the truth and should also guard against the possible conveyance of misconceptions, which is so common when half truths or still mooted points are given to the public; Dr. Burrell insists, therefore, on the importance of judicious editing of whatever is sent out under the auspices of the Board of Public Instruction, whose program was given in The Journal May 23.

Authorized newspaper and magazine articles should not be the argumentative ones that now appear, many of them excellent in their way, but should be each a calm exposition of the writer's views on the questions of popular interest in hygiene and medicine.

What is said in regard to the part to be taken by the family physician and his function in this work needs no endorsement; he is the direct instructor of the family, especially in those matters which are less suited for lay press or lecture publication. It is, moreover, especially in those matters of hygiene where appetite, social customs or established institutions antagonize the individual or public welfare that the family and personal counsellor, the general practitioner, can be most useful, and the method proposed by the Board of Public Instruction of sending out circular letters and special authoritative monographs to physicians comes well into play. Some such stimulation to the fulfillment of an often neglected duty is one of the urgent needs of the hour.

Dr. Thayer's Oration on Medicine covers a somewhat broader scope, but touches on the same ground in his discussion of the public duties of the physician, which, however, are not limited to his functions as a counselor or instructor. The physician is recognized as an executive officer in sanitary matters, and as a guardian of the public health. Beyond this, however, though not so generally recognized, is a possible range of usefulness in the making of the laws, the execution of which has been so generally entrusted to him. The public has not yet, in this country, at least, come to appreciate how useful a medical training may be in our legislatures and highest councils, where matters concerning the temporal salvation of the people have to be decided. The medical profession has been too self-effacing in this matter and it will be for the advantage of the public when we can have representative members of our profession less exceptionally in our national and state legislatures. "They do these things better in France," where there is always a more adequate representation of the profession in the highest councils of the state, and where the present prime minister is, as Dr. Thayer points out, an educated physician and was once literally one of us when a practitioner in New York. The instruction of the public as to the nature of the medical sciences and arts is taken up by Dr. Thayer, who gives striking illustrations of the mischief caused by lack of such instruction. We may not be entirely guiltless in the matter, and the want of candor in our dealings with patients, which he deprecates, has undoubtedly played a part at times in producing misconceptions. Whoever offends in this way at present goes against the best accepted teachings and there should be no more lack of simplicity or truthfulness in the dealings of the physician with the public or the individual patient. Dr. Thayer's view in relation to regulation of fees according to the means of the patient, may not be acceptable to every one, but it is worth considering. The practice, however justifiable by precedent and custom in another profession, and however right it may appear to some, is a source of adverse criticism which is not altogether agreeable. The other suggestion, possibly unacceptable to some, in many respects, worthy members of our profession, of the impropriety of courting political support for positions for which the applicant is not specially qualified, is always timely. Public sentiment in the profession itself needs some education on this point; there are sometimes those in responsible positions who can not do us credit with all their good intentions, and who can only hold such places by virtue of public ignorance and our own too facile acquiescence. The evil is not peculiar, it exists in all kinds of public service, but we should strive to avert it. His concluding remarks on the need of better utilization of our hospitals for medical instruction and the ignorant public prejudice preventing it, indicate a line of endeavor for reform that ought to be thoroughly carried out. The "hospital year" for every medical graduate may not be an immediate possibility, but some practical hospital training is not only possible but imperative.

The Oration on Surgery is an illuminating résumé of some of the latest facts and conclusions regarding malignant growths. It may be a surprise to some, but it will be satisfactory to all, to learn that Dr. Crile does not regard cancer as increasing. The prolongation of human life, the lowering death rate from infections and the decrease of infant mortality make, in his opinion, the apparent increase of mortality from this cause really only a relative one. We are therefore only better realizing the extent of this formidable enemy of our race. Another fact he emphasizes is that cancer may almost always be eradicated if operated on early enough. If the surgical opportunity is not lost, approximately 80 per cent. of the favorably situated superficial cancers will show a three years' cure if operated on according to the highest standards of the present day. It would be a good thing, in Dr. Crile's opinion, if the later symptoms of glandular enlargement and cachexia were stricken from the text-books as guide to the diagnosis, which has little but academic interest, once such symptoms have appeared.

Crile's results with hemolysis as an early test for malignancy are encouraging and his suggestion of the possibility of utilizing the immunity principle for cure through transfusion should be followed up and investigated. Of course, he emphasizes the importance of the education of the public in the cancer problem to the extent of making the patient as well as the physician alert to suspect its earlier symptoms. The problem may remain long unsolved in its entirety, but the progress already made should, as he says, "banish despair, give us new hope, and urge us to put forth still greater endeavor to conquer in the end."

It is only in the enlightenment of the public that Dr. Harrington in his oration[1] on State Medicine sees the possible solution of the difficult problem of centralized national regulation of health matters that is now being so vigorously discussed. He shows how every attempt thus far has been hampered by constitutional limitations, and he sees no real remedy except by a constitutional amendment giving the central government authority to act for the common good when it is necessitated by local neglect or inability, and only then. His expressed opinion that the national pure food law is not a health law can hardly be accepted—it is, it is true, a commercial regulation, but its underlying idea is the preservation of the public from harm as much as in the case of quarantine against actual disease. He shows very conclusively that the matter can not be left to the separate states, many of which have not yet learned the value of even keeping a record of vital statistics. Hence, notwithstanding our regard for the rights and privileges of the states, which Dr. Harrington seems to share, the need of a higher supervision is sufficiently obvious. He does not, however, emphasize the fact that with the fullest appreciation of the needs by the several legislatures there would probably still be more or less conflict of laws on account of local interests and jealousies, and if this inconvenience, to call it nothing worse, can only be overcome by a constitutional amendment the sooner the public is educated to the point of adopting such an amendment the better.

HETEROPLASTIC FORMATION OF BONE.

It seems to be a general law of pathology that any dead tissue or foreign body which is not impervious to the tissue fluids, and which remains unabsorbed for any considerable time, will be the seat of deposition of calcium salts. Why this infiltration with lime salts should take place has never been ascertained, and there is as yet no agreement as to the chemistry of the process any more than there is concerning the physiologic form of calcium infiltration that occurs in the normal process of ossification. One would expect that the chemistry of ossification might be readily worked out in view of the fact that the chemistry of the calcium salts, the chief participants in the process, is so simple and so well understood; but even this, which seems to be the least "vital" of all the growth processes, has so far entirely resisted investigation.

A very remarkable feature of pathologic calcification is that the lime salts after being deposited do not simply remain as an inert inorganic substance, but exercise a peculiar influence on the neighboring connective tissues, causing them to undergo a transformation so that they take up actively the occupation of bone forming tissues. Wherever the lime salts come in contact with young proliferating connective tissue they seem to modify its proliferative activities in such a way that instead of ordinary scar tissue formation the result is osteoid tissue and true bone; eventually bone marrow, with all its characteristic blood-forming elements, may make its appearance in this heteroplastic bone. As pathologic calcification may take place in any part of the body, and everywhere seems to have this same peculiar effect on the surrounding fibrous tissue, there is no place where bone tissue may not be found, no matter how strikingly abnormal the presence of bone tissue in that particular place may seem to be. For example, destruction of an eye by suppurative processes is often followed, in case the eye is left in, by calcification of the inflammatory exudate and the thickened coats of the eye; this calcium deposit may then stimulate the surrounding fibrous tissues to take on bone-forming activities, with the surprising result that the eye may become lined with a thin sheet of living bone. Scarcely less surprising is the formation of bone with areas of typical marrow in the heart valves, the aorta, and even in the smaller vessels.[1]

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[1] Dr. Harrington's oration was received too late for publication this week, but will appear June 13.

On account of the frequency of calcification of healed tuberculous foci in the lungs, bone formation in the lungs is common. Pollack found nodules of bone in no less than sixteen of one hundred lungs, and Poscharissky found that 60 per cent. of all calcified foci show the presence of bone. At present we have records of heteroplastic bone formation in the pia and chorioid, voluntary muscles, laparotomy scars, urinary bladder, pleura, stomach, liver and lymph glands, besides the sites already mentioned; and now that attention has been called to this matter the transformation of calcified into osseous areas is becoming a common observation. Although this phenomenon has no immediate practical importance, it is of great scientific interest, for it suggests the action of a chemical stimulus, the lime salts, which directly modify the character and results of tissue growth.

THE PARATHYROIDS.

Our knowledge of the existence of the parathyroids is only of recent date, and we are gradually learning something of their function. They are small reddish or yellowish brown ductless organs usually situated behind the lateral lobes of the thyroid gland and within the capsule of the latter. They vary in number from one to five, although usually there are four, two on either side. Each has a capsule of its own and also an independent blood supply through a branch of one of the thyroid arteries. It has been shown that many of the nervous symptoms immediately following removal of the thyroid are due to associated removal of the parathyroid bodies or to the cutting off of their blood supply. Chemical investigation has demonstrated that there is diminished retention of calcium salts in the body in the presence of tetany following removal of the parathyroids, and relief has been afforded under such circumstances by administration of one of the salts of calcium. Dr. Norman Philip Geis[2] has made dissections of thirty-seven parathyroids in twelve subjects, and from his studies he concludes that the glands are essential organs and that in order to save them and to maintain their blood supply in the course of operations on the thyroid only the blood vessels that enter that gland should be cut and the safest method of operating to this end is from above downward.

RACE SUICIDE IN FRANCE.

According to the latest reports, the vital statistics of France show a still further marked decrease in the birth rate—33,000 reduction in 1907 against an average decrease of 12,000 a year for the preceding seven years. The deaths of the same year are said to exceed the births by 19,000. If these figures are correct France would seem to be indeed in the act of committing race suicide, for her population has ceased to be stationary. Many economists have held that a moderate, seeming decrease in the birth rate of a country is a sequence of the thrift of its inhabitants, though whether such thrift tends altogether to national advancement may be open to question. The lines,

> Ill fares the land, to hastening ills a prey,
> Where wealth accumulates and men decay,

may be as applicable here as to the conditions of which Goldsmith wrote. There can be no question, however, that thrift of the tontine type, whereby profits increase with the death rate, is against good public policy in any country.

THE TEST OF PROFESSIONAL STANDING.

An extraordinary statement appears in an article[1] on "Medical Departments in Public Libraries" by Samuel H. Ranck, librarian of the Grand Rapids Public Library. This writer, speaking of the difficulties attendant on the maintenance of such departments, includes among them the commercialism of many doctors to whom "medicine . . . is a business rather than a science or art." He continues: "I recall the instance of a leading physician in one of our large cities who remarked to me in discussing the work of another physician whom I know, 'What is his annual income from his practice? You see, that is the only way we doctors have of gauging the standing of a man.'" We have always supposed such a method of "gauging the standing" of a physician to be confined entirely to the laity. Certainly it will not stand the test of application in the case of many men whose financial success is far from commensurate with the standing their abilities or learning have gained for them among their colleagues. Were this method of "gauging the standing of a man" at all prevalent among his colleagues, we fear that not a few of our most venerated names would have to yield their honored places to some with which we are most familiar through the advertising columns of the newspaper press.

DILATATION OF THE SUPERFICIAL THORACIC VENULES.

The presence of a bow or arc of dilated venules roughly following the attachment of the diaphragm on one or both sides of the anterior chest wall is frequently noted. A number of explanations for this phenomenon have been offered, but most of them fail to explain why the vessels should be more dilated in this region than in any other portion of the chest. Haeberlin,[2] who has made a study of this sign in a series of patients suffering from circulatory and respiratory disorders, has made an interesting contribution to the subject. He believes in the first place that it is most apt to occur in patients whose vasomotor tone is poor and whose arterial blood pressure is low. Some local obstruction is frequently the immediate cause. Rhythmical compression of the chest wall by a hypertrophied left ventricle is, he believes, frequently responsible for stasis in the small veins of the apical region with subsequent dilatation. An exaggerated type of abdominal breathing with marked variations in the diameter of the thoracic outlet may cause more or less obstruction of the veins situated near the costal margin. Haeberlin states that inspiratory filling of these dilated venules can sometimes be observed. Lastly he believes that insufficiency of the right heart, even if very slight, will on account of gravity, affect the inferior vena cava and its tributaries more than the superior vena cava. As the lower intercostal veins empty into the former system through the azygos veins they will be more affected by such insufficiency than will the upper ones. If Steele's theory in regard to the occurrence of hydrothorax in heart disease through obstruction of the azygos veins by a dilated right heart be correct, such an obstruction might also explain a certain proportion of the cases under consideration. Chronic cough or asthma by increasing the intrathoracic pressure would predispose to dilatation of the superficial veins, and tumors, pleuritic adhesions, etc., are frequently responsible for localized obstructions.

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[1] Buerger and Oppenheimer, Jour. Exp. Med., 1908, x, 354.

[2] Ann. Surg., xlviii, 4, 523.

[1] Medical Library and Historical Journal, September, 1907, p. 212.

[2] Deutsch, Arch. f. klin. Med., 1908, Nos. 1 and 2.

THE CHICAGO SESSION.

From the outset the Chicago session demonstrated that it would be all that had been expected of it. Registration began the first thing on Monday morning, and kept up in a steady stream all day, so that by the time the registration bureau closed 2,210 had registered, a number exceeding the phenomenal Monday's registration at Boston in 1906 by 663. As we go to press (Wednesday noon) the registration has reached a total of 5,944. In point of attendance, therefore, the Chicago Session of 1908 has set a fresh standard for the annual sessions. Last year the total registration reached 3,713, and the Boston Session, which had the largest attendance of any preceding the present one, was 4,722. The section meetings are wonderfully well attended, and the meeting places are proving decidedly satisfactory. It is not too much to say that the fifty-ninth annual session of the American Medical Association, held in its home city, will go on record as a permanent milestone in the onward and irresistible march of American medicine.

Medical News

ALABAMA.

Sailed for Europe.—Dr. and Mrs. Elbert T. Fields, Ensley, sailed from New York for Europe May 20.

Sentence Confirmed.—The Supreme Court on May 12 confirmed the decision of the lower court whereby Dr. Charles E. Thomas, a colored physician of Anniston, convicted on the charge of malpractice, was sentenced to imprisonment for three years in the penitentiary.

Commencement.—The annual commencement exercises of the Medical Department of the University of Alabama, Mobile, were held May 1. Hon. W. H. Goodwin, Ozark, delivered the salutatory address and Dr. John W. Abercrombie, president of the state university, conferred diplomas on a class of 26. Governor B. B. Comber delivered the address to the graduating class and Dr. Luckey A. Jenkins, Cardiff, delivered the alumni address.

Alumni Meet.—The annual meeting of the Alumni Association of the Medical Department of the University of Alabama, Mobile, was held May 1. The following officers were elected: Dr. Louis W. Johnston, Tuskegee, president; Drs. Charles A. Mohr, Mobile, and Rufus H. Kilpatrick, Camden, vice-presidents; Dr. Percy J. Howard, Mobile, secretary-treasurer, and Dr. S. S. Tam, Mobile, orator.

ARKANSAS.

State Society Meeting.—At the annual meeting of the Arkansas Medical Society, held in Little Rock, May 13 to 15, the following officers were elected: President, Dr. Joseph T. Clegg, Siloam Springs; vice-presidents, Drs. E. Kindle Williams, Arkadelphia; Robert J. Haley, Paragould, and Benjamin D. Luck, Pine Bluff; secretary, Dr. Morgan Smith, Little Rock; treasurer, J. William Scales, Pine Bluff; councilors—second district, Dr. Henry O. Walker, Newport; fourth district, Dr. William H. Blankenship, Pine Bluff; sixth district, Dr. John H. Weaver; eighth district, C. P. Merriweather, Little Rock, and tenth district, Dr. Frank B. Young, Springdale; delegate to American Medical Association, Drs. Charles C. Stephenson, Little Rock, and alternates, Drs. G. A. Warren, Black Rock, and Buchanan Hatchett, Fort Smith. The 1909 meeting will be held at Pine Bluff. The house of delegates endorsed the recommendation in the president's address that the Old State House be converted into the Arkansas State Charity Hospital, and referred the matter to the committee on public health and legislation for action.

GEORGIA.

Would Merge Colleges.—A petition has recently been circulated by the Atlanta College of Physicians and Surgeons, asking that the institution be made a branch of the state university.

Society Election.—Acworth Medical Association was organized April 23 by physicians of Acworth and surrounding country. Dr. William C. Humphries was elected president and Dr. C. W. Burt, secretary.

Societies Amalgamate.—At a joint meeting of the Georgia Medical Society and Chatham County Medical Society, May 13, the two organizations were amalgamated, retaining the name of the older organization, the Georgia Medical Society, for the merged societies.

Commencements.—The seventy-sixth annual commencement exercises of the Medical Department of the University of Georgia, Augusta, were held May 1. The annual address was delivered by Rev. Richard Wilkinson and diplomas were given to 32 graduates by the chancellor of the university, David C. Barrow, Athens.——On April 24 the fifty-third annual commencement exercises of Atlanta College of Physicians and Surgeons were held, when a class of 30 was graduated.——The Atlanta School of Medicine held its annual commencement exercises April 22, graduating a class of 49.

Personal.—After serving 18 years as a member of the Augusta board of health, and for four years as president of the board, Dr. James B. Morgan has retired and has been succeeded by Dr. Eugene E. Murphey. The board adopted resolutions commending Dr. Morgan's services and administration in the highest possible terms. At a meeting of the board May 7, the five city physicians presented Dr. Morgan with a handsome gold ring, in token of the esteem in which his associates hold him.——Dr. J. McFadden Gaston, Atlanta, has been made medical missionary to Lai-chou, China, by the Southern Baptist Foreign Missionary Board, and will leave for his new post of duty about September 1.——Dr. William Z. Holliday has resigned his professorship in the University of Georgia Medical Department and has been elected emeritus professor.——Dr. Victor H. Bassett has been selected as bacteriologist of Savannah.

ILLINOIS.

Smallpox.—Plainview reports 5 cases.——Elgin is said to have 20 cases.——Four cases have been discovered in Decatur.——Several cases are reported in and near Abingdon.

Chicago.

Cocain Seller Fined.—Jim King, a West Side Chinaman, was fined $400 and costs May 23 on two charges of selling cocain.

Recognition Restored.—Advice from Dr. James A. Egan, secretary of the State Board of Health, states that recognition has been restored to the College of Medicine and Surgery, Chicago.

Spirits of Physicians Fail Her.—Mrs. Christine Simanek, charged with practicing medicine without a license, and whose line of work is said to have been incantations whereby the spirits of departed physicians were forced to prescribe for her patients, is said to have been found guilty May 27, and to have been fined $100.

Communicable Diseases.—There were reported to the bureau of contagious diseases during the week 507 cases, distributed as follows Measles, 279; scarlet fever, 68; diphtheria, 59; chickenpox and whooping cough, each 19; typhoid fever, 23; tuberculosis, 33; smallpox, 1, and diseases of minor importance, 8.

Deaths of the Week.—During the week ended May 30 there were 578 deaths reported, 83 more than for the preceding week, but 65 fewer than for the corresponding week of 1907. Tuberculosis caused 72 deaths; pneumonia, 61; violence (including suicide) and heart diseases, each 50; nephritis, 40; diarrheal diseases, 39; cancer, 27; nervous diseases, 25; scarlet fever and measles, each 10; typhoid fever, 5; and whooping cough, 4. The annual death rate per 1,000 was 13.91.

Personal.—It is announced that Dr. William A. Evans has been named as major and surgeon, First Cavalry, Ill. N. G., vice Dr. Morton Snow, resigned.——Dr. Edward A. Fischkin has been chosen president, and Drs. Kate Levy, Benjamin H. Breakstone and Jacob Frank, directors of the Chicago Hebrew Institute.——Dr. Charles W. Espy is reported to be in a critical condition as the result of injuries suffered May 19, when he fell under the wheel of a street car while endeavoring to recover his hat, which had blown from his head. He sustained a compound fracture of the left leg, a fractured rib and serious internal and spinal injuries.——Dr. Ario L. Derdiger was robbed of a diamond stud on a street car, May 18.——The apartments of Dr. and Mrs. John E. Owens, in the Lexington Hotel, are said to have been entered May 15 and $500 worth of jewelry stolen.——Dr. George E. Fosberg sailed for Carlsbad June 2, by way of the Mediterranean, to recuperate from the effects of his recent illness.——Dr. Carl Wagner was elected a member of the German Society for Surgery at Berlin, April 25.

Northwestern University Faculty Changes.—Dr. William E. Casselberry has resigned as professor of rhinology and laryngology and has been made professor emeritus of rhinology.——Dr. Frederick Menge has been appointed professor of rhinology and laryngology and made head of that department.——Dr. J. M. Neff has been made associate professor of surgery and Drs. Frederic A. Besley, H. M. Richter and Allen Kanavel assistant professors of surgery.——Drs. W. R. Cubbins and Frank E. Pierce have been appointed assistants in surgery, and Drs. Charles Matter, John C. Hollister, F. G. Dyas and William C. Danforth, instructors in surgery.——Drs. George B. Dyche, Paul Chester, Charles A. Elliott and A. Davis have been promoted to the positions of assistant professors of medicine.——Dr. W. H. Buhlig has been appointed assistant professor of clinical pathology, Dr. Joseph Brenneman as assistant clinical professor of pediatrics, Dr. Robert T. Gillmore, assistant professor of gynecology, Dr. Prentiss of Harvard University assistant professor of anatomy, and Dr. S. Walter Ransom, associate in anatomy.

INDIANA.

Tuberculosis Hospital.—The state tuberculosis hospital commission has selected a 525-acre site at Rockville for the new proposed state tuberculosis hospital.

Hospital for Colored People of Indianapolis.—The Sisters of Charity at their state convention in Indianapolis, May 19, put on foot a project to build a hospital for colored people of Indianapolis to cost about $20,000.

Communicable Diseases.—The school at Williamsport has been temporarily closed on account of 6 cases of scarlet fever.——Landesville reports 12 cases of smallpox.——There are said to be 35 cases of smallpox in the eastern part of Carroll County.——Several cases of smallpox have developed near Fort Wayne.

April Disease and Death.—During April there were 2,954 deaths reported, equivalent to an annual death rate of 13.2 per 1,000. The death rate for April, 1907, was 12.7. Rheumatism was the most prevalent disease. Bronchitis, tonsillitis, influenza and pneumonia were not so prevalent as in the preceding month. There were 329 cases of smallpox in 35 counties, with 2 deaths. In the corresponding month of last year there were 91 cases in 20 counties, with one death. Ten deaths occurred from diphtheria, and 82 cases were reported. Consumption caused 411 deaths; pneumonia, 333, and violence, 154.

Personal.—Dr. Edward H. Kruse, interne at the Lutheran Hospital, Fort Wayne, will sail for Germany June 1.——Dr. Henry Jameson, Indianapolis, dean of Indiana Medical College, now consolidated with the Indiana University School of Medicine, has resigned.——Dr. Charles C. Terry and family, South Bend, expect to sail for Europe June 20.——At the meeting of the Kosciusko County Medical Society, held in Warsaw, Dr. C. Norman Howard was elected secretary to succeed Dr. Charles A. Underwood, removed from the county.——Dr. C. F. Fleming, Wabash, has been chosen secretary of the Wabash County board of health.——Dr. W. W. P. McMillen, Decatur, narrowly escaped drowning in a flooded creek while making a professional call, May 6.——Dr. Bayard G. Keeney has been appointed assistant medical director of Hord Sanitarium, Shelbyville.——Dr. Martin A. Freed has succeeded Dr. Charles B. Collins, resigned, as secretary of the Clay City board of health.——Dr. Calvin I. Fletcher, Indianapolis, has returned from a trip to South America.——Dr. Garrett Pigman has been appointed health officer of Liberty.

IOWA.

Society Changes Name.—At the annual meeting of Johnson County Medical Association, held in Iowa City, May 13, it was decided to adopt "society" instead of "association" to conform with other kindred organizations in the state.

Communicable Diseases.—Smallpox of a mild type is said to be epidemic in and around Climax, where about 20 cases have been reported.——Smallpox is said to be prevalent in Emerson and vicinity, where the disease was originally diagnosed as chickenpox.——Mason City reports 11 cases of smallpox from one focus.——A case of smallpox was discovered in the University of Iowa, Iowa City, May 20.

Personal.—Dr. E. O. Ficke, Davenport, has been appointed physician of Scott County.——Dr. G. A. Smith, Clinton, has been re-elected high court physician for Iowa by the Independent Order of Foresters.——Dr. Benjamin Courshon has succeeded Dr. Samuel B. Hoskins as physician of Sioux City.——Dr. Charles H. Bower has been elected health officer of Council Bluffs.——Dr. James E. Miller, formerly city physician of Des Moines, has been appointed surgeon in the Soldiers' Home in Tennessee.

State Society Meeting.—At the annual meeting of the Iowa State Medical Society, held in Des Moines, May 20-22, Dr. C. H. Wahrer, Fort Madison, was elected president; Dr. F. G. Murphy and N. C. Schlitz, Des Moines, vice-presidents; Dr. V. L. Treynor, Council Bluffs, secretary; and Dr. William B. Small, Waterloo, treasurer. The attendance reached nearly 500 and was the largest in the history of the society. The society adjourned to meet in 1909 in Dubuque.——The Rush Medical College Alumni of Iowa held a banquet at Chamberlain, May 20, in connection with the meeting of the state society. Dr. G. N. Ryan, Des Moines, was elected president; Dr. Charles W. Henry, Coon Rapids, vice-president; Dr. Lewis, Dubuque, secretary.——At the eleventh annual meeting of the State Society of Iowa Medical Women, held in Des Moines, May 19, the following officers were elected: Dr. Agnes Eichelberger, Sioux City, president; Dr. Lillie Kinnier, Dubuque, and Lena L. Means, Des Moines, vice-presidents; Dr. Evelyn F. Frisbie, Des Moines, treasurer; and Dr. Georgia Stewart, Des Moines, secretary.——At the meeting in Dubuque, May 12, a program of special interest was given, including a symposium on brain tumor and on muscular reflexes, and some unique abdominal suppurations.

LOUISIANA.

Society Meetings.—The Bi-Parish Medical Society, composed of physicians of Red River and Natchitoches Parishes, met at Coushatta, April 11, and elected the following officers: President, Dr. Z. T. Galion, Natchitoches; vice-presidents, Drs. C. E. Edgerton, Coushatta, and Paul Becht, Natchitoches; secretary and treasurer, Dr. E. W. Breazeale, Campti.——The La Fourche Parish Medical Association, after an interregnum of three years, reorganized April 10, and elected the following officers: President, Dr. Thomas Stark, Thibodaux; vice-president, Dr. Paul Tetreau Larose; secretary and treasurer, Dr. H. S. Smith.

Chaillé Anniversary.—The Alumni Association of Tulane University, New Orleans, Louisiana, on May 19, held exercises celebrating the fiftieth anniversary of the official connection of Dr. Stanford E. Chaillé with the medical department of the university. The new Richardson Memorial Medical building, on Tulane campus was dedicated at 3 o'clock, jubilee exercises were held in Tulane theater in the evening. The association proposes to raise fifteen or twenty thousand dollars as a Chaillé memorial fund to establish a chair of hygiene and physiology to be named after Professor Chaillé who delivered an eloquent address at the laying of the corner stone of the Richardson Memorial Building.

State Association Elects Officers.—At the annual meeting of the Louisiana State Medical Society, May 12-14, 1908, the following officers were elected: President, Dr. E. Denegre Martin, New Orleans; vice-presidents, Drs. J. B. Hargrove, Natchitoches, C. J. Gremillion, Alexandria, and John Callan, New Orleans; secretary, Dr. E. M. Hummel, New Orleans; treasurer, Dr. Charles C. Bass, New Orleans; councilors: First Congressional District, Dr. P. E. Archinard, New Orleans; Second, Dr. E. J. Graner, New Orleans; Third, Dr. Allan C. Eustis, Abbeville; Fourth, Dr. John L. Scales, Alden Bridge; Fifth, Dr. E. Dunbar Newell, St. Joseph; Sixth, Dr. C. M. Sitman, Greensburg; and Seventh Congressional District, Dr. R. O. Simmons, Alexandria. Date and place of next meeting, New Orleans, May 4-6, 1909.

NEW YORK.

Anti-Nostrum Resolutions.—At a special meeting of the Medical Society of the County of Saratoga resolutions were unanimously adopted opposing the use by members of the society of proprietary compounds not approved by the Council on Pharmacy and Chemistry, and urging the members to use their best efforts to secure the cooperation of pharmacists to suppress this evil. Each member of the society was requested to secure a copy of the Manual of the U. S. Pharmacopeia and National Formulary and to be guided by this and by the action of the Council on the use of pharmaceutical preparations.

Aids in Fight Against Tuberculosis.—The State Charities Aid Association, an unofficial organization, which aims to place needy children in families and to aid the State Department of Health, has undertaken active work in cooperation with this body in the treatment and prevention of tuberculosis in cities and rural communities of the state. The local authorities, according to the report just rendered, have maintained supervision over the almshouses and public hospitals in 43 counties in the state. They have also made frequent inspections of the large institutions of the Department of Charities of New York City. The state hospitals for the insane and the state charitable institutions have been visited and increased appropriations have been urged on county supervisors.

New York City.

Personal.—Dr. Peter F. Hughes of Brooklyn has been appointed medical examiner of the finance department, to succeed Dr. C. J. Pflug.——Dr. Francis J. Dudenhausen is said to have been convicted of practicing medicine under an assumed name and sentenced to serve six years and five months in Sing Sing. This is said not to be his first offense.

Osteopath Barred.—Dr. Charles F. Bandel, an osteopath who applied for and was granted a mandamus compelling the department of health to register him as a physician and recognize his certificate of death, gave permission to the department to appeal from the decision. As a result the Appellate Division will have to hand down a decision, and until this is done the appellant will be kept out.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended May 23, 1,555 cases of measles, with 33 deaths; 1,053 cases of scarlet fever, with 40 deaths; 420 cases of tuberculosis, with 201 deaths; 397 cases of diphtheria, with 37 deaths; 32 cases of typhoid fever, with 4 deaths; 24 cases of whooping cough, with 4 deaths; 12 cases of cerebrospinal meningitis, with 9 deaths, and 144 cases of varicella, a total of 3,137 cases and 328 deaths.

Scarlet Fever and Measles Still Prevalent.—Instead of abating, as was expected, these diseases were more prevalent for the week ended May 25 than during the previous week. Measles increased from 1,513 for the week ended May 16 to 1,573 for the following week. There was, however, a slight decrease in the number of cases of scarlet fever. This latter disease is not regarded as epidemic, although there are far more than the usual number of cases and it is unusually severe.

Green Cross for Bellevue Hospital.—The Red Cross Society has made a protest against the use of the red cross emblem on the sides of the Bellevue ambulances and those of the other allied hospitals. The ambulances are now being repainted and a green cross is substituted. The commissioner of public charities has devised a new emblem for the ambulances belonging to the hospitals under his charge, which consists of a set of shining white Mercury's wings traversed by the wands of Æsculapius rampant.

NORTH DAKOTA.

Personal.—Dr. I. N. Wear, a pioneer physician of Fargo, who has been in Italy for several years, has returned and will resume practice.——Dr. William T. Sprake was recently elected mayor of Casselton.——Dr. James P. Aylen, Sheldon, has resigned from the State Board of Health on account of removal from the state.

Medical Society Meetings.—The twenty-first annual meeting of the North Dakota State Medical Association was held in Grand Forks, May 12 and 13. A resolution was adopted endorsing Dr. Baldwin, superintendent of the State Insane Hospital, Jamestown. Fargo was selected as the meeting place for 1909. The following officers were elected: President, Dr. Henry A. Beaudoux, Fargo; vice-presidents, Drs. John E. Countryman, Grafton, John D. Taylor, Grand Forks, and R. Hudson Beak, Lakota; secretary, Dr. Hezekiah J. Rowe, Casselton; treasurer, Dr. John D. Taylor, Minot; and councilors, Drs. Henry M. Wheeler, Grand Forks, Francis R. Smyth, Bismarck, and George A. Carpenter, Fargo.——At the annual meeting of the Steele-Traill Medical Association, held in Mayville, May 11, Dr. Edward C. Haagensen, Hillsboro, was elected president; Dr. William E. White, Mayville, vice-president; Dr. Sigurd A. Berg, Mayville, secretary; Dr. Roberts, Portland, treasurer; and Dr. H. E. Canfield, Hatton, censor.

PENNSYLVANIA.

Philadelphia.

Commencement Exercises.—The sixtieth annual commencement exercises of Hahnemann Medical College were held in the Academy of Music, May 27. The annual address to the graduates was delivered by Rev. Dr. Ethelbert D. Warfield, and the diplomas were presented by Dr. H. L. Northrup, dean of the faculty. The graduating class was composed of 37 men.

Medical Inspectors Dine.—The annual dinner of the Assistant Medical Inspectors' Association of the Bureau of Health was held at Essington, May 28. The meeting was addressed by the director of the Department of Health and Charities, Dr. Joseph S. Neff; Assistant Director Baldwin; chief of the bureau of health, Dr. A. C. Abbot, and chief medical inspector, Dr. Charles A. Groff.

Internes Appointed.—Dr. Joseph S. Neff, director of health and public charities, has appointed the following 19 men to the resident staff of the Philadelphia General Hospital: Drs. J. A. Kolmer, H. J. Hartz, J. F. Dunn, J. D. Aronson, M. Bornstein, W. Ganter, W. H. Schmidt, S. Wexler, D. B. Robinson, C. Stimson, L. Breskman, G. F. Gracey, W. J. Carrington, J. S. Alford, J. M. Fruchter, S. E. Weiner, C. Mazer, T. A. Fortesque and E. H. Funk.

New Tuberculosis Dispensary.—The Germantown Hospital has opened a separate department for the prevention and treatment of tuberculosis and clinics are held every Tuesday and Saturday at noon. Milk and eggs are to be furnished to the needy at wholesale price and lectures on the prevention of the disease are to be given at the hospital every Tuesday and Saturday at 4 p. m. Dr. J. Clinton Foltz has been appointed chief physician to the department, and Dr. W. K. Muller has been selected as his assistant.

Prospective Legislation on Tuberculosis.—The legislative committee of the Pennsylvania Society for the Prevention of Tuberculosis proposes that immediate, concrete steps be taken to influence the proper Pennsylvania and Philadelphia & Reading Railroad officials to follow the example of the Philadelphia Rapid Transfer Company and replace all plush cushion backs and seats in their coaches with leather, pantasote, cane woven or similar coverings, and so abolish a common and unnecessary source of atmospheric contamination in the cars, and infection of the passengers' respiratory organs.

Vital Statistics Law to be Enforced.—Acts of assembly requiring the reporting to the bureau of health of all contagious diseases and the registration of all births and deaths are to be rigidly enforced by the bureau of health. Director of department of health, Dr. Joseph S. Neff, mailed a circular communication May 28, informing the physicians throughout the city of the importance of observing this law. In commenting on this subject, Dr. Neff declared that there are scores of children and grown persons who are officially not alive, and he further stated that not more than from 70 to 80 per cent. of births are registered.

Lowest Typhoid Record in Twelve Years.—According to the report of the health bureau for the week ending May 30, it was shown that the smallest number of cases of typhoid fever were reported for any previous May during the last twelve years, only 28 cases being recorded. There has been a steady decline in typhoid since February. In January the record was over 140 cases a week. In February it rose to 160; in March it fell to between 91 and 97, and in April the highest week had 96 cases. The record for May was as follows: Week ending May 1, 68 cases; May 8, 62; May 15, 36; May 22, 44, and May 29, 28.

Health Report.—The total number of deaths reported for the week ending May 30 aggregated 474, including 264 males and 210 females. This is an increase of 19 over the number reported in the previous week and an increase of 4 over the number reported in the corresponding week of last year. The principal causes of death were: Typhoid fever, 4; measles, 13; pertussis, 7; diphtheria, 7; meningitis, 2; consumption, 80; cancer, 30; diabetes, 4; apoplexy, 12; heart disease, 49; acute respiratory disease, 40; enteritis, 27; congenital debility, 4; suicide, 5; accidents, 19, and marasmus, 5. There were 134 cases of contagious disease reported, with 10 deaths, as compared with 173 cases and 19 deaths reported in the preceding week.

Personal.—Dr. Swithin Chandler is seriously ill in the Samaritan Hospital with typhoid fever.——Dr. J. W. Holland sailed for Europe on May 30.——Dr. John H. Girvin is critically ill with appendicitis in the Presbyterian Hospital.——Dr. Margaret F. Butler was elected to preside at the International Congress of Laryngology and Rhinology recently held in Vienna.——Dr. Herbert Norris, who has spent several months in Europe, has returned home.——Dr. M. Goldberg is in a serious condition as the result of a fall sustained May 26.——Dr. W. N. Bradley, in a paper read before the County Medical Society May 27, criticised the methods of the laboratory of the bureau of health and declared that the examinations of diphtheria cultures made by that department are not reliable and are often farcical.

TEXAS.

Powers and Duties of Boards of Health.—In reply to inquiry by State Health Officer Brumby, the assistant attorney general of the state summarizes as follows the powers and duties of boards of health for unincorporated towns and villages: "The powers are conferred and the duties enjoined on the board to secure the preservation and promotion of the public health by the enforcement of all necessary and proper sanitary regulations, and the suppression, amendment or removal of all conditions detrimental to the lives and health of the people, and in view of the importance of the interest confided to the care of such health boards, the laws conferring these powers receive a liberal construction in aid of the beneficial purposes of their enactment."

State Health Officers Organize.—At a meeting of the Association of Health Officers of Texas, held in Corpus Christi, May 14, the following officers were elected: President, Dr. William M. Brumby, Houston, state health officer; district vice-presidents—first district, Dr. Don J. Jenkins, Daingerfield; second district, Dr. Holman Taylor, Marshall; third district, Dr. Burrel J. Hubbard, Kaufman; fourth district, Dr. William C. Bryant, McKinney; fifth district, Dr. J. F. Florence, Dallas; sixth district, Dr. William C. Blalock, Kosse; seventh district, Dr. Edward B. Parsons, Palestine; eighth district, Dr. Joseph W. Scott, Houston; ninth district, Dr. Judson M. Andrews, Wharton; tenth district, Dr. Edward M. Thomas, Georgetown; eleventh district, Dr. Marcus P. Smartt, Eddy; twelfth district, Dr. Rufus B. West, Fort Worth; thirteenth district, Dr. J. F. Wilkins, Willington; fourteenth district, Dr. Louis G. Wille, New Braunfels; fifteenth district, Dr. William W. MacGregor, Laredo, and sixteenth district, K. W. Blazell, Ballinger. The society passed resolutions that the legislature should be asked to make an appropriation of not less than $100,000 for the construction, establishment and maintenance of a sanatorium for the care and treatment of tubercular patients residing in the state.

Society Meetings.—The Alumni Association of the Medical Department of the Southwestern University, Dallas, was organized April 30, with the following officers: President, Dr. Sessler Hoss, Muskogee, Okla.; vice-president, Dr. W. B. Carrell, Dallas; and secretary-treasurer, Dr. J. H. Black, Dallas.——The physicians of West have organized a medical society, with the following officers: President, Dr. A. L. Wilie; vice-president, Dr. Sevier E. Snodgrass; and secretary, Dr. G. A. Pazdral.——The physicians of Goliad County met in Goliad, April 27, and organized a county medical association, with the assistance of Dr. Walter Shropshire, Yoakum. The following officers were elected: Dr. Robert R. LeMaster, Goliad, president; Dr. Columbus L. O'Quinn, Weesatche, vice-president; Dr. R. Walter Smith, secretary-treasurer and delegate to the state association; and Drs. J. M. Yarborough, O'Quinn and Smith, censors.——At the semiannual meeting of the Frisco-Central Medical Society, held in Dublin, Dr. James H. Wysong, Hico, was elected president; Dr. W. E. Sturgis, Stephenville, vice-president; and Dr. Charles H. McCollum, Hico, secretary-treasurer (re-elected).——At the April meeting of the Williamson County Medical Society Dr. James C. Anderson, Granger, was elected delegate to the state association, and Dr. Joseph A. Holloway, Roundrock, alternate; and Drs. W. T. Jones, O. B. Atkinson and A. Nowlin were appointed a committee of public health and legislation.——At the April meeting of the Bexar County Medical Society, in San Antonio, Drs. Franklin E. Young and Byron F. Kingsley, San Antonio, were elected trustees to fill vacancies.——At the annual meeting of Denison Medical Association Dr. Edward L. Seay was elected president; Dr. Daniel Ross, vice-president; Dr. Addison A. Blassingame, secretary; and Dr. Elannus R. Birch, treasurer.

VERMONT.

Society Meeting.—At the annual meeting of Franklin County Medical Society at St. Albans, May 13, the following officers were elected: President, Dr. A. Lincoln Cross, Swanton; vice-president, Dr. Alan Davidson, St. Albans; secretary-treasurer, Dr. Edwin A. Hyatt, St. Albans; and delegates to the state medical society, Drs. George C. Berkley, St. Albans; J. Reynolds Patton, Fairfield; Fred S. Hutchinson, Enosburg Falls, and E. Merriman Brown, Sheldon.

Physician Found Guilty.—Dr. George B. Hunter, Brattleboro, charged on 311 counts, with issuing prescriptions for liquor when he had reason to believe that the liquor was not wanted for medicinal purposes, is said to have pleaded guilty and to have been fined $200 and costs.——In the suit for slander brought by Walter E. Howe against Dr. Stephen F. Dunn, Wilmington, in which damages of $5,000 were claimed, the jury is said to have returned a verdict for the plaintiff, May 13, with damages of $2,000.

VIRGINIA.

Society Meetings.—At the annual meeting of the Medical Society of Northern Virginia, held in Alexandria, May 15, Dr. Samuel W. Maphis, Warrenton, was elected president; Drs. Frederick M. Brooks, Swetnam, and Aurelius R. Shands, Washington, D. C., vice-presidents; and Dr. Llewellyn Powell, Alexandria, secretary-treasurer.——At the annual meeting of the Piedmont Medical Society, held in Fredericksburg, the following officers were elected: President, Dr. John W. Scott, Gordonsville; vice-presidents, Drs. Montie L. Rea, Charlottesville, and Hugh T. Chelf, Culpeper; secretary, Dr. Lewis Holladay, Orange; and treasurer, Dr. John T. Walker, Barboursville.

WASHINGTON.

Entertain Fleet Surgeons.—The surgeons of the Atlantic fleet were entertained by the physicians of Seattle at the Perry, May 25. Dr. William H. Shannon acted as toastmaster and Surgeon Charles F. Stokes, commander of the hospital ship *Relief*, replied for the visitors.

Alien Detention Hospital to be Established.—The application of the Japanese Humane Society, endorsed by the King County Humane Society, has been favorably acted on by the inspector in charge of the United States immigration service, and a detention hospital for aliens will be established at Seattle.

Personal.—Mr. L. M. Woodcock has resigned as milk inspector of Seattle after having filled that office for eight years, and Gus Henderson, formerly first assistant, has been appointed acting inspector.——Dr. F. M. Van Snyder has been arrested in North Yakima for obtaining money under false pretenses in Seattle.——Dr. Willis Hall has been appointed assistant health officer of Seattle.

GENERAL.

Gastroenterologists Elect Officers.—At the eleventh annual meeting of the American Gastroenterological Association, held at Chicago, June 1-2, 1908, the following officers were elected: President, Julius Friedenwald, Baltimore; first vice-president, David L. Edsall, Philadelphia; second vice-president, William Gerry Morgan, Washington, D. C.; councilor, John P. Sawyer, Cleveland.

Neurological Officers Elected.—At the annual meeting of the American Neurological Association, held in Philadelphia during the past week, the following officers were elected: President, Dr. S. Weir Mitchell, Philadelphia; vice-presidents, Drs. Pearce Bailey, New York and Frank W. Langdon, Cincinnati; secretary and treasurer, Dr. Graeme M. Hammond, New York

City; and councilors, Drs. Henry M. Thomas, Baltimore, and Charles W. Burr, Philadelphia.

American Academy of Medicine.—At the annual meeting of the Academy, May 30 and June 1, the following officers were elected: President, Dr. Helen C. Putnam, Providence, R. I.; vice-presidents, Drs. Charles S. Sheldon, Madison, Wis.; L. Harrison Mettler, Chicago; Joseph K. Weaver, Norristown, Pa., and Norman Bridge, Los Angeles, Cal.; secretary and treasurer, Dr. Charles McIntire, Easton, Pa., and assistant secretary, Dr. Alexander R. Craig, Philadelphia.

American Neurologic Society Elects Officers.—The Thirty-fourth annual meeting of this society was held at Philadelphia, May 20-22. The following officers were elected: President, Dr. S. Weir Mitchell, Philadelphia; first vice-president, Dr. Pearce Bailey, New York; second vice-president, Dr. F. W. Langdon, Cincinnati; secretary and treasurer, Dr. Graeme M. Hammond, New York; councilors, H. M. Thomas, Baltimore, and Charles W. Burr, Philadelphia. The next meeting will be held in New York, the date to be determined by the council.

American Gynecological Society Elects Officers.—At the thirty-third annual meeting of this society, held at Philadelphia, May 26-28, the following officers were elected: President, Dr. J. Riddle Goffe, New York; first vice-president, Dr. Howard A. Kelly, Baltimore; second vice-president, Dr. Malcolm McLean, New York; treasurer, Dr. J. Wesley Bovee, Washington, D. C.; secretary, Dr. Leroy Broun, New York; members of the council, Dr. George Tucker Harrison and Dr. J. Montgomery Baldy, Philadelphia. New York was selected as the next meeting place.

Railway Surgeons Meet.—At a meeting of the surgeons of the Norfolk and Western Railway, an organization known as the Railway Medical Society of Company Surgeons, Norfolk and Western Railway, was formed. The following officers were elected: President, Dr. Joseph A. Gale, Roanoke; vice-presidents, Drs. E. W. Cowan, Radford, Va.; Henry D. Hatfield, W. Va.; Stephen S. Halderman, Portsmouth, Ohio, and Charles L. Summers, Winston-Salem, N. C., and secretary-treasurer, Dr. Thompson M. Baird, Crewe, Va. A loving cup was presented to the president, who has been chief surgeon of the railway for many years.

Medical Interneship.—The United States Civil Service Commission announces that examinations will be held June 17, 1908, at a number of designated places in the United States, to secure eligibles from which to make certification to fill two and possibly three vacancies in the position of medical interne (male) and one vacancy in the position of medical interne (female), at $600 per annum each and maintenance in the Government Hospital for the Insane, Washington, D. C., and vacancies requiring similar qualifications as they may occur. The age limit is twenty years or over. Applicants must be graduates of more than eighteen months' standing of a reputable medical college, must be unmarried, and must be citizens of the United States. Applications should be made to the United States Civil Service Commission, Washington, D. C.

The International Tuberculosis Congress.—In accepting the presidency of the International Congress on Tuberculosis, to be held in Washington, Sept. 21 to Oct. 12, 1908, President Roosevelt assures the officers of the congress of his interest in making this the greatest and most fruitful congress which has yet been held. He calls attention to the great economic loss caused by tuberculosis and urges that improvement will be in ratio to the promptness with which instruction as to the curability of tuberculosis can be inculcated into the minds of the people and ingrafted on to our customs, habits and laws. Dr. Edward L. Trudeau has been elected honorary president of the congress, and the list of vice-presidents who have agreed to serve includes Vice-President Fairbanks, Speaker Cannon, Governors Gillet of California, Buchtel of Colorado, Woodruff of Connecticut, Deneen of Illinois, Hanly of Indiana, Cummins of Iowa, Hoch of Kansas, Wilson of Kentucky, Cobb of Maine, Crothers of Maryland, Warner of Michigan, Johnson of Minnesota, Noel of Mississippi, Folk of Missouri, Floyd of New Hampshire, Fort of New Jersey, Hughes of New York, Glenn of North Carolina, Burke of North Dakota, Harris of Ohio, Chamberlain of Oregon, Stuart of Pennsylvania, Ansel of South Carolina, Patterson of Tennessee, Cutler of Utah, Proctor of Vermont, Swanson of Virginia, and Dawson of West Virginia. The German committee of arrangements for the Congress has a membership of over one hundred and fifty. The list includes some of the highest dignitaries of the empire. Dr. von Bethmann-Hollweg, the president of the committee, is the Imperial Secretary of the Interior and the vice-president of the Prussian Ministry of State. The vice-presidents are Count von Lerchenfeld, royal Bavarian state counsellor and ambassador plenipotentiary, and Baron von Knesebeck, royal master of ceremonies and chamberlain to the empress; and the treasurer is Ernst von Mendelssohn Bartholdy, a member of the Prussian Diet. Another distinguished member of the committee is Victor, Prince of Hohenlohe and Corvey and Grand Duke of Ratibor. Drs. von Leyden, B. Fränkel, Orth, Baginsky, and Nietner constitute the central commission, and others named on the list include Dr. Robert Koch, Dr. Emil von Behring, Dr. A. Fränkel, Dr. Richard Neisser, Dr. Lydia Rabinowitsch-Kempner, Dr. G. Pannwitz, Dr. Schottelius, Dr. Abb, secretary of the civil cabinet of the emperor at Berlin; Dr. Bumm, president of the Imperial Board of Health; and Dr. Schjerning, general chief of the Army Sanitary Corps and of the medical division of the War Department. A committee of sixty-four members has been appointed to arrange for the part Belgium will take in the congress and in the exhibition to be held in connection with it. M. Beco, the governor of Brabant, is honorary president and Dr. Dewez, president of the Belgian Anti-Tuberculosis League is president of this committee. Other members of the committee are M. Velghe, director-general of the Ministry of Agriculture; Dr. Van Ryn, secretary-general of the Belgian Anti-Tuberculosis League; Dr. Bordet, director of the Pasteur Institute at Brussels; M. R. Waracqué, Dr. Cousot and Dr. Descamps, all of whom are members of the Chamber of Representatives; Dr. Devaux, inspector-general of the Department of Health and Hygiene; Dr. Courtoy, president of the Provincial Medical Commission of Namur; Dr. Dethier, director of the Anti-Tuberculosis Dispensary at Namur; and Dr. Wouters, director of the dispensary at Louvain.

FOREIGN.

Giemsa and Prowacek Go to Brazil.—The Brazilian government has contracted with Giemsa and Prowacek of Hamburg for a year's work at the Hygienic Institute at Rio de Janeiro.

Festival Meeting in Honor of the Foundation of the International Cancer Research Society.—On May 23 a festival meeting of the German Central Cancer Research Committee was held at Berlin, and papers were read by Borrel of the Pasteur Institute at Paris, Dollinger of Budapest, Jensen of Copenhagen, and Podwyssotzki of St. Petersburg, dealing with various phases of experimental and clinical cancer research and statistics.

Cholera in India.—Consul-General Michael reports from Calcutta that cholera periodically makes its appearance in the coal fields of Bengal, when the tanks from which the natives get their water for domestic purposes, and at which they perform their ablutions, are drying up. It also appears after the first fall of rain has commenced to fill the tanks. The water running over the surface of the earth carries all sorts of pollutions with it. The tanks in the neighborhood of one mine where nearly 600 natives are located became dry or were filled with small quantities of stagnant slimy water. The water pumped from the mines runs into ditches or over the surface of the soil, no effort being made to collect it. There are three wells, one at the manager's bungalow, and two at his assistants' bungalows. Cholera broke out and the natives died at the rate of 20 a day. They are not allowed to get water from the wells used by Europeans, hence the only alternative was to use the remaining water and die or run away. They chose the latter. A virulent outbreak of cholera is devastating the coal fields from Asansol to Jherria, and collieries are shutting down for want of labor, as the miners fly from the scourge. At one place 80 deaths were reported in three days.

Organization of a Colonial Institute at Hamburg.—The German authorities have organized a central institute at Hamburg to train officials for the German colonies and protectorates, and to centralize all the scientific and economic efforts on behalf of the colonies. In order to keep the institution in close touch with commercial interests, three members of the chamber of commerce are delegated to act as an advisory board in all questions that may arise, and as the intermediary between the institute and the senate commission. Chairs are to be organized for astronomy, botany, geography, geology, history, jurisprudence, tropical medicine, ethnology, political economy and zoology in their relations to the colonies, with all the practical branches of these sciences. The Imperial Colonial Office is to send to the institute at least 20 officials each year for an annual course of instruction, and pay for each about $45 the semester. The lectures are open to merchants and others, and a special diploma is given to all those who complete the course. The city of Hamburg at present bears the cost of maintenance, but state aid is guaranteed in case the scope of the institute is enlarged or it develops beyond the present facilities. The term commences Oct. 1, 1908. Further details are given in the *Deutsche med. Wchnschr.*, May 14.

The German Surgical Congress.—The thirty-seventh congress of the German Surgical Association was held at Berlin the last week in April. The results to date of the numerous innovations in the field of surgery presented during the last year—all of which have been duly chronicled in The Journal—were related by various speakers giving both experimental and clinical experiences. Trendelenburg suggests operative treatment of embolism of the pulmonary artery by removal of the embolus with dressing forceps after turning back a segment of two ribs. He has succeeded in doing this on calves. Fränkel ascribes embolism to infection, either from the wound or tonsils. Eiselsberg gives heart tonics before operating, for prevention of embolism, in the possibly predisposed. He has had 57 cases in 6,800 operations, including 23 of the pulmonary artery. Even in apparently hopeless embolism, he says, analeptics may yet do good service. The embolus was generally in the smaller branches of the pulmonary artery. Meinert ascribes thrombosis to the loss of water. He begins three days before the operation to have the patient drink large quantities of water, and keeps this up afterward, and has no thrombosis. Olshausen thinks that the vessels may be injured by the weight dragging on the knees in the Trendelenburg position, and now avoids this, using a support for the shoulders instead, and has had no embolism since introducing this modification, not even in the course of 118 myotomies. Kocher reported successful transplantation of thyroid in the bone marrow of the tibia, and Garré, of the parathyroid bodies. The combined scopolamin-morphin anesthesia received considerable favorable mention, but Neuber mentioned one case of fatal pneumonia which he attributed to the long scopolamin drowsiness. Bier described a new method of local anesthesia. After expelling the blood from the limb, he ligates it above and below the field of operation. In this field he then injects into some large superficial vein from 100 to 150 c.c. of the anesthetic solution and total analgesia follows almost at once. After the operation he removes the peripheral ligature, and loosens the central one until the arterial blood begins to flow, then tightens it again and sutures the wound. The anesthetic penetrates the walls of the vein or is bound and is only slowly absorbed. Motor paralysis sometimes occurs during the anesthesia. Dönitz said that by-effects can be avoided with spinal anesthesia, if the fluid is warmed to 30 or 40 C. (86 to 104 F.). Excellent results were reported from removal of a tumor in the hypophysis, acromegaly subsiding in a case reported by Hochenegg. The discussion showed that hypophysis tumors are generally malignant. Payr reported a case of hydrocephalus successfully treated by transplantation of a piece of the saphenous vein, draining the lateral ventricle into the longitudinal sinus. He found that blood vessels bear transplantation well. The passage thus provided, lined with endothelium, conveys the fluid back to the blood. The pressure in the blood in the sinus was no higher than the pressure in the effusion in the ventricle, in his case. Brauer reported success in 40 out of 65 cases of pulmonary embolism, gangrene or phthisis in which he induced an artificial pneumothorax. No difference from the physiologic standpoint between the effects of overpressure and underpressure in the pneumatic cabinet or otherwise induced could be discovered by experimental research, as reported by Dreyer and others. Lexer's success in transplanting entire joints attracted much attention, as also the lightning or fulguration treatment of cancer as adjuvant to the knife. Some of those who formerly advocated allowing the patients to get up early after laparotomies have now given up the practice and merely insist on respiratory exercises and massage of the extremities from the first day. Gilmer has enhanced the effect of spinal anesthesia by adding 3 per cent. of gum arabic. In an experiment on himself he thus induced total analgesia with a tenth of the usual dosage, but he suffered from severe headache that night.

LONDON LETTER.

(From Our Regular Correspondent.)

London, May 23, 1908.

A Bureau for the Study of Sleeping Sickness.

With the cooperation of the Sudanese government and the Royal Society, the British government has decided to establish a bureau in London for the collection and distribution of information with regard to sleeping sickness. The bureau will be under the direction of an honorary committee of management appointed by the secretary of state for the colonies and will be composed of the following: Sir J. West Ridgeway (chairman), Sir Patrick Manson, Sir Rupert Boyce, Dr. Rose Bradford, F.R.S. (representing the Royal Society), Col. D. Bruce, F.R.S., and others.. The publications of the bureau will be divided in two classes, scientific publications for the use of those engaged in research work, or in the medical administration of the infected districts and less technical publications for the use of government officials, missionaries, and others in the infected districts. An important work will be the making of a map of the whole of tropical Africa, showing the distribution of the disease and of the different species of blood-sucking insects capable of conveying it. For the present, the duties of the paid director will be undertaken by Dr. A. G. Bagshawe of the Uganda medical staff.

Honor for Sir A. E. Wright.

Amid the heartiest congratulations from the large number of physicians present at the annual *conversazione* of the Medical Society of London, Sir A. E. Wright was presented with the Fothergillian gold medal. This medal is awarded triennially to the man who has done exceptionally valuable work in some branch of practical medicine or surgery. In 1803 the first Fothergillian gold medal was presented to Edward Jenner, the discoverer of vaccination. It is, therefore, very appropriate that a century later the society should honor one who by his work on opsonins and vaccines has, more than any other man, extended Jenner's work.

Promotion of Uniformity in Hospital Statistics.

In the section on state medicine of the Royal Academy of Medicine in Ireland, R. F. Tobin, surgeon to St. Vincent's Hospital, has brought forward a valuable scheme for securing greater uniformity in hospital statistics. It is already in use in preparing the army medical service and has been found to work well. It is based on the "Nomenclature of Diseases," a work issued every ten years by the Royal College of Physicians and the standard authority on medical names. Mr. Tobin suggests that in the register of every hospital beside the column for the names of diseases there should be a column for the numbers appended to the diseases in the official nomenclature. This would afford a ready means of grouping the diseases in the preparation of the annual returns and would enable the latter to be compiled by clerks without any medical knowledge. The scheme has already been adopted by nine of the Dublin hospitals.

Medical Socialists.

In recent years socialism has made considerable progress in Great Britain and Ireland, but the number of its followers is still insignificant and there is little prospect of it becoming the danger to society which many alarmists assert it is. A novel phase in the movement is the formation of a medical organization. Drs. Cox of Gateshead, Davidson and Haden Guest of Llanfairfechan and Ferdinand Rees of Wigan have issued an appeal to the members of tne profession who are socialists to form a special organization. The objects to be promoted are the nationalization of the profession and the socialization of its education. The latter part of the program involves one much-needed reform of which there is not the slightest prospect in this very conservative country—the institution of a one-portal system of entry to the profession.

Illegal Cremation.

A physician has been prosecuted for illegal cremation and fined $50 and $26 costs under peculiar circumstances. His wife, while suffering from measles complicated by bronchitis, gave birth to a still-born child and died the same evening. Cremation took place on the basis of a certificate referring to only one body. When the sides of the coffin were burned away the superintendent of the cemetery saw that there were two bodies. The child had been placed in the coffin. There was no reason why the two bodies should not have been cremated together if there had been the necessary certificates.

British Town and Housing Bill.

Mr. John Burns, president of the local government board, has introduced a bill to provide domestic conditions which will improve the health, morals and social conditions of the working classes. It aims at securing "the home healthy, the house beautiful, the town pleasant, the city dignified and the suburb salubrious." There is great need for such a bill, as the British people are more and more becoming a race of town dwellers. The bill gives the local authorities power to appoint a local health officer with full powers over housing conditions. Owners of property who allow four or five acres to interfere with the development of from 500 to 1,000 acres, will have notice served on them of compulsory sale.

Therapeutics

[It is the purpose of this department to outline an up-to-date management of disease, to suggest scientific treatment for diseased conditions, and to present prescriptions that are simple, useful and palatable. Prescriptions are written in both the metric and apothecaries' systems, but the amounts of the ingredients are NOT exact translations of one system into the other, but quantities convenient for pharmacist and physician. It should be understood that solids are weighed in grams or fractions of grams, while liquids are measured in cubic centimeters; that a teaspoon holds five cubic centimeters, i. e., more than a fluid dram, hence a 100 cubic centimeter preparation will contain twenty doses.]

Rheum.

Rhubarb is officially the dried rhizome of a plant growing in China or Thibet. The rhubarb cultivated in this country does not seem to possess cathartic qualities. The root or powdered substance has a characteristic aromatic odor, and a bitter, astringent taste, and its cathartic principles may be extracted by water and alcohol. Rhubarb contains, according to Culbreth, about 5 per cent. of chrysophanic acid, emodin, which is the active principle of several vegetable cathartics, two other principles called rhein and rhabarberon, a glucosid, a tannic acid called rheotannic acid, resins, several coloring principles, and a varying quantity of rosette-shaped crystals of oxalate of calcium.

If taken into the mouth, although it is somewhat astringent, its bitter taste increases the flow of the saliva, and in small amounts, increases the appetite and improves digestion, acting as a stomachic. In larger doses it causes several loose movements of the bowels, probably due to irritation of the mucous membrane of the intestine, which directly or reflexly through irritation of the nerves increases peristalsis. This increased peristalsis causes the food to pass more rapidly through the intestine, and this carries with it a larger amount of bile than usual, and, therefore, the feces are soft and contain an increased quantity of bile. Rhubarb increases the secretion of the intestinal glands, and probably also of the glands of digestion, and this may also be a cause of the increased intestinal activity. It is a slow-acting drug, and may cause movement of the bowels anywhere from six to twelve hours after its ingestion, depending on the size of the dose, the preparation taken, and the amount of food in the stomach and intestines. If rhubarb is given alone (not combined with other drugs) it generally causes more or less griping. On account of the tannic acid which rhubarb contains, the catharsis from one dose is followed by sufficient astringent action in the intestines to cause future constipation. Hence, unless rhubarb is given to clean out the intestines when there is diarrhea, it is generally inadvisable to give it for constipation unless it is combined with some other laxative drug.

It is excreted with the feces; in the urine, which is slightly increased in amount; in the perspiration, and in the milk. The feces are yellowish-brown or dark brown in color, and the urine of patients taking rhubarb may be of a reddish color. Such urine becomes purplish-red if an alkali is added to it, which proves that the dark color is not due to bile. The milk of nursing mothers may be yellowish in color, have a bitter taste, and a laxative action; therefore, nursing mothers should rarely be given rhubarb. Occasionally after the administration of rhubarb there is an eruption on the skin which, if urticarial in type, is doubtless due to the irritation of the intestinal mucous membrane, but if macular or vesicular, as has at times been noted, is probably due to the irritation it causes during its excretion by the sweat glands.

The ability of rhubarb to cause catharsis and then stop its action and not continue to cause a diarrhea renders it useful to unload the intestines in gastrointestinal disturbances in children. In conditions of indigestion, with sluggishness of the bowels, loss of appetite and general debility, rhubarb is, perhaps, the best drug to use, as it is a bitter tonic, a stimulant to digestion, and a laxative to the bowels, with a general toning up of the intestines. If castor oil is deemed inadvisable, and the prostrating effect of a dose of calomel is not desirable, in the beginning of the treatment of diarrhea, especially in children, rhubarb makes an efficient cathartic. This drug is also often given in small doses three times a day, in various combinations, to improve digestion and to stimulate the intestines; for this purpose it is often combined with bicarbonate of sodium. As a laxative in the treatment of constipation it is much used, but perhaps best, as previously stated, in combination with other laxative drugs. When there is intestinal indigestion, with too frequent movements of the bowels, with a tendency to a loose movement directly after a meal, small doses of rhubarb, perhaps combined with ipecac and sodium bicarbonate, are effective in correcting the condition. If there is a condition of plethora, or if depletion is desired, or free watery movements, rhubarb is not the cathartic to use.

The rhubarb root is furnished in powdered form, and the cathartic dose is 1 gram, or 15 grains.

The official preparations are:

Extractum Rhei. Dose, 0.25 gram, or 4 grains.

Fluidextractum Rhei. Dose, 1 c.c., or 15 minims.

Mistura Rhei et Sodæ. This rhubarb and soda mixture contains 1.5 per cent of the fluidextract of rhubarb, 3.5 per cent. of sodium bicarbonate, 0.3 per cent. of fluidextract of ipecac, 35 per cent. of glycerin, and 3.5 per cent. of spirits of peppermint. The dose is 10 c.c., or 2 fluidrams. This is a valuable antacid, stomachic, and mildly laxative preparation.

Pilulæ Rhei Compositæ (compound rhubarb pills). Each pill contains 2 grains of powdered rhubarb, 1½ grains of aloes, 1 grain of myrrh, and 1/12 grain of oil of peppermint. The dose is one or two pills. This pill makes a good treatment for chronic constipation.

Pulvis Rhei Compositus (Gregory's powder). This contains 25 per cent. of powdered rhubarb, 65 per cent. of magnesium oxid, and 10 per cent. of ginger. The dose is 2 grams, or 30 grains.

Syrupus Rhei. This contains 10 per cent. of the fluidextract of rhubarb, 0.4 per cent. of the spirit of cinnamon, and 1 per cent. of potassium carbonate. The dose is 10 c.c., or 2 fluidrams.

Syrupus Rhei Aromaticus. This contains 15 per cent. of aromatic tincture of rhubarb and 1 per cent. of potassium carbonate. The dose is 10 c.c., or 2 fluidrams.

Tinctura Rhei. This contains, besides 20 per cent. of rhubarb, 4 per cent. of cardamom and 10 per cent. of glycerin. The dose is 5 c.c., or 1 fluidram.

Tinctura Rhei Aromatica. This contains, besides 20 per cent. of rhubarb, 4 per cent. of cinnamon, 4 per cent. of cloves, 2 per cent. of nutmeg, and 10 per cent. of glycerin. The dose is 2 c.c., or 30 minims.

The National Formulary recognizes the following:

Elixir Rhei.
Elixir Rhei et Magnesii Acetatis.
Mistura Rhei Composita.
Syrupus Rhei et Potassii Compositus.
Tinctura Rhei Aquosa.
Tinctura Rhei et Gentianæ.
Tinctura Rhei Vinosa.

The dose of any one of these elegant preparations is 5 c.c., or 1 fluidram, three times a day, after meals, or in larger dose, once a day, for laxative purposes.

Pulvis Rhei et Magnesii Anisatus. This powder is carminative and laxative, dose for an infant, 0.30 gram, 5 grains.

Syphilitic Mucous Patches in the Throat.

Dr. J. Philip Kanoky of Kansas City, Mo., recommends (by a private letter) the following treatment of the above condition, as the most successful that he has yet found:

He first mops the affected surfaces dry with cotton swabs and then thoroughly paints the plaques with the official tincture of iodin. Immediately afterward he applies, by means of a swab, a 2 or 3 per cent. solution of bichlorid of mercury in water. The patient is cautioned against swallowing his saliva at this time, and in about five minutes he should rinse out his mouth and throat with water. Kanoky finds that two or three such applications are generally sufficient to heal the lesions. He believes that this treatment is "more effective and reliable than applications with silver, methylene blue, chromic acid, lactic acid, and acid nitrate of mercury."

Falling of the Hair in Women.

The *New York Med. Jour.*, Jan. 4, 1908, quotes from an article by Dr. R. Sabouraud (*Gazette de Gynécologie*, December, 1907), on this subject.

This writer declares that a woman's general health has nothing whatever to do with her loss of hair, except when such loss follows an acute febrile disease. The trouble is due to an abnormal amount of oily secretion of the glands of the scalp, except when there is a specific cause. In women the loss of hair begins at the forehead and temples, and the first symptoms of this trouble usually start, according to Sabouraud, between the ages of 18 and 22. At first dry pellicles form on the scalp, which at times may be difficult to remove, and later these are followed by a yellowish, greasy accumulation on the skin, and then the hair begins to fall. For some time this loss of hair occurs mostly in the summertime when the oily secretion is greater than in winter.

Sabouraud says that the prime remedy to prevent this loss of hair is the frequent removal of the greasy accumulation by the vigorous use of soap, and the soap used should not contain enough potash to be irritating. It is not necessary to soap the whole length of the hair, but only about five inches from the roots. "After dry friction of the scalp, the hair should be separated into plaits and the roots of each plait in succession, and particularly the portion of scalp concerned, should be rubbed vigorously with a tooth brush wet with the soap and water." The solid cake of soap should not be applied to the hair, as it will leave undesirable particles of soap on the scalp. After the rubbing is completed "the hair and scalp should be rinsed with warm water and dried with a soft towel, with the aid of gentle heat, if necessary." No oil should be applied to the scalp. The author does not say how often this shampoo should be given.

He advises against the use of cantharides, but the substances which he thinks stimulate the growth of the hair are pilocarpin, quinin, caffein and camphor, and he suggests the following formula:

℞.	c.c.		
Pilocarpinæ hydrochloridi	20		gr. iii
Aquæ q. s. ad solutionem			
Spiritus lavandulæ	20	or	
Ætheris	20		āā, flʒv
Aquæ ammoniæ	2		flʒss
Alcoholis	ad 250		ad fl℥viii

M. et Sig.: Rub into the scalp as directed.

Spray to Disinfect Sick-room (Neff.)

℞.	gm. or c.c.		
Guaiacolis			
Eucalyptolis	10		āā, flʒii
Mentholis	5	or	ʒi
Thymolis	2		ʒss
Olei gaultheriæ	30		flʒvii
Olei menthæ piperitæ	ad 75		ad fl℥ii

M. et Sig.: Use in an atomizer.

For Sunburn (Hare).

℞.	gm. or c.c.		
Plumbi carbonatis	4		ʒi
Amyli	4	or	ʒi
Olei olivæ	10		flʒii
Unguenti aquæ rosæ	30		℥i

M. et Sig.: Use externally.

Pharmacology

THE BROADER AIMS OF THE COUNCIL ON PHARMACY AND CHEMISTRY.

TORALD SOLLMANN, M.D.
Members of the Council, Professor of Pharmacology and Materia Medica at the Medical Department of Western Reserve University.
CLEVELAND, OHIO.

(*Continued from page 1810.*)

XI. STOOL PIGEONS.

The reputable physician who will defend the practice of indiscriminate self-medication on the part of the public must be a *rara avis* indeed. Yet in prescribing many of the so-called "ethical proprietaries" he is furthering the cause of the very evil he deprecates. This point was so clearly brought out in the paper by Dr. Simmons[1] that I shall only take it up because some of the readers may have overlooked the paper. There is a quotation in the article which is so enlightening that the gist of it, at least, should be remembered by every physician:

THE PHYSICIAN AS A COMMERCIAL ASSET.

"Let me quote a paragraph that appeared in *Printers' Ink*, an advertising journal, some two or three years ago. The words are those of a 'patent medicine' man and, of course, were not directed to physicians.

"'But the "patent medicine" of the future is the one that will be advertised only to doctors. Some of the most profitable remedies of the present time are of this class. They are called proprietary remedies. The general public never hears of them through the daily press. All their publicity is secured through the medical press, by means of the manufacturer's literature, sometimes gotten out in the shape of a medical journal, and through samples to doctors. For one physician capable of prescribing the precise medicinal agents needed by each individual patient there are at least five who prescribe these proprietaries. They are the chief standby of the country practitioner. . . . Three-fourths of all the prescriptions received are for these proprietary remedies, and the pharmacist simply opens the package and writes a label, "A teaspoonful three times a day before meals." . . . The original bottle is given to the patient. He sees that the remedy does him good, and when he feels a trifle run down again he goes to the drug store and buys another bottle, not troubling the doctor. He meets a friend on the street who is not looking well. "I know exactly how you feel," he says. "Now, just go and buy a bottle of ———. Best thing in the world. My doctor prescribed it for me, so it isn't a 'patent medicine.'" In this way the name of the remedies advertised only to physicians get abroad to the general public. . . . The proprietary medicine of the future, though, will be advertised through these channels. The medical papers will reap the harvest, and the physician himself, always so loud in the denunciation of "patent medicines," will be the most important medium of advertising at the command of the proprietary manufacturer. In fact, he is that to-day.'

"Have you ever seen an arraignment of this evil by its enemies which equals this cynical statement of its friends?"

Printers' Ink evidently goes on the principle that "a word to the wise is sufficient," and assumes that the proprietors are "wise." It is also apparent that it does not hold a very high opinion of the perspicacity of our profession. From its standpoint it is doubtless right, but we may console our self-respect with the reflection that the general practitioner does not set himself up as a specialist in ferreting out the wiles of the "patent medicine" man.

It is scarcely necessary to detail the various steps by which the "ethical proprietary"—with its therapeutic vade-mecum on the label and the circulars—carries its message to the self-medicating public. That it accomplishes this purpose is patent to all who have given the matter even passing thought—and no one appreciates is possibilities more than those self-appointed medical teachers of the public,—the proprietaary manufacturers.

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[1] The Journal, May 18, 1907, 1645.

THE "ORIGINAL PACKAGE."

When the physician has prescribed an "original package," the patient greedily swallows it all—remedy, name, label and "literature"—the last with rather more zest than the first. If any physician does not know just what this means, let him take the trouble to examine a package of almost any product which has *not* been approved by the Council. Many things will become clear to him; among others, the real reason why advertisers ask us to specify the "original package," under the pretext: "To avoid substitution." The chances are that the package will contain a compact but comprehensive description of all possible ailments, and how to cure them at relatively small expense, by this unique medicine. The family physician has prescribed it, endorsed its efficiency, and placed the pamphlet in his patient's hand—and the patient does the rest.

Should anyone wish to study a specific instance of this means of disseminating medical knowledge let him read the description of phenol sodique that appeared in The Journal[2] last year.

There is also a better class of manufacturers—or a wiser—who would scorn these coarse methods. Some conscientious druggist might have the good sense to remove the wrapper! So the manufacturer leaves out the objectionable pamphlet and relies solely on the label, and "the name blown in the bottle for our protection only!" Now it is really astonishing how much solid advertising can be condensed into the space of a small label. One can not use as many words, but one can say as much, and suggest more. Besides, the bottle with its label or the name blown in the bottle, stays about the house even longer than the circular in which it was wrapped.

A respectable manufacturer will scorn to resort to such tactics. Of course he would! Just write to the eminent and long established firm of Pecksniff, Ditto & Co., about this little incident of their labels, and they will tell you so. "The therapeutic information is not placed on the label for the benefit of the patient—by no means; Pecksniff, Ditto & Co. are creditably informed that all patients are blind; and those who are not blind have not learned to read; and those who can read don't read; and those who do read do not know what 'cough' means. So you see, my dear Doctor, we could not possibly have intended the label for the patient. On the contrary, the information is all for your benefit. You may have forgotten some of the conditions in which Curallina-Pecksniff is indicated, and so, now all you have to do is to look at the bottle either at the drug store or at your patient's house."

THE "CATCHY" TRADE NAME.

There is another class which shows a distinct advance in craftsmanship. The label is quite free from advertisements. In a dignified and attractive form it presents the names of the preparation and of its manufacturer, perhaps its composition and dose—and nothing else. Can there be an Ethiopian in this woodpile? There may be. Notice the names: Migrainin, diabetin, liquor sedans, probilin, nephritin, etc. Does these suggest anything? Again a storm of righteous indignation. "We have adopted these names for the convenience of physicians; they have no meaning to patients, etc." No, the poor dispensary patient, who can not afford to buy them, does not know what they mean. He must confine himself to the free dispensary or to Kohler's headache powders. But there are some private patients who have the advantages of average intelligence and a high-school education. It is somewhat difficult to see how the term "diabetin" is any more convenient than "levulose," if it is more "catchy."

And this brings me to the last exhibit of the gallery, the "catchy" name, the "coined" name—convenient, easily remembered—by whom, if you please? Are physicians so ignorant or so lazy that they can not understand, remember or use a name indicating the origin or composition or other properties of a drug, but only those which imply its uses, or which imply nothing? Do they not know that antipyrin is used in migraine, bile salts in obstructive jaundice, or that chloral is a hypnotic, unless these are dubbed migrainin, chologestin and somnos? I concede that names should be reasonably convenient, and that sulphonethylmethanum is not a very useful synonym for trional, but there is a golden mean in all things.

Finally, I ask the reader to turn back to the sub-title of this paper, do some thinking, and then act on his conclusions.

(*To be continued.*)

Correspondence

Parallelism in Anatomic Description.

Cincinnati, May 23, 1908.

To the Editor:—In The Journal, May 16, page 1651, I note that you have called attention to the item in the *St. Louis Medical Review* of March last, which accuses me of plagiarizing the section on anatomy in my recent article on the hymen. The *Review* says that the entire section devoted to the anatomy is cribbed from a certain article which is mentioned. This is not true, as any one can see by comparing the articles. The *Review* proceeds to publish from the two articles a number of parallel sentences of more or less similarity. Some of these sentences are of the simplest anatomic facts which are found in any anatomy, especially the old German ones, as, for instance, Hyrtl, as to the position of the hymen, its minute anatomy, and the enumeration of the animals in which the hymen is found; matter which is copyrighted by no one, but is the general common property of the profession. The article which I am accused of pilfering was published in 1904 and mine in 1908. But this was my last article on the hymen. My first was published in 1884. My last was a revised edition of the former, both read before the Cincinnati Academy of Medicine. I have published a dozen articles on the hymen and, from my first to my last, I have not been able to change the anatomy very much. This is rather a fixed science and pretty generally known. Some of the selections paralleled in my paper occupy but half the space they do in the other. When I wrote my last paper I prepared a bibliography mentioning all the articles that I had consulted and intended publishing it. The paper became so long it was necessary to cut it out. If I quoted the other man without giving him credit it was entirely unintentional and was caused by the omission of my bibliography.

E. S. McKee.

A Liquid Splint Formula—A Warning.

Benton Harbor, Mich., May 20, 1908.

To the Editor:—A suave individual has been calling on physicians in this vicinity trying to sell a "formula" for a liquid splint material to take the place of plaster-of-Paris. He claims that the "formula" cost $28,000 to perfect, and that he has paid $7,000 for it himself and is selling it to physicians for $10, on the understanding that the physicians will keep it a secret! From the size of his "roll" and the diamonds he wears he evidently finds many "suckers." Dr. Charles H. Gallagher of Slaterville Springs, New York, exposed this man long ago and published the "formula" he used at that time. The formula was as follows: Powdered starch, one ounce; isinglass or gelatin, one ounce; solution of potassium silicate, one quart; pulverized boric acid, one-half ounce. Mix the starch with the solution of silicate of potash by shaking from a pepper box and stirring constantly; reduce the gelatin to the consistency of mucilage with boiling water and mix with the first two (better soften the gelatin with cold water first). Then put in jug of double the capacity and ferment at room temperature for three or four days; then add the boric acid, mix well and it is ready for use. If too thick after standing, thin it with boiling water; keep corked. Apply a silk stocking or a roller bandage and then apply a coat of this preparation with a brush and repeat until three or four layers have been applied or until the splint is thick enough. It may be cut after hardening and eyelets and laces put in. I hope that no member of the American Medical Association will be deceived by his game.

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[2] Nov. 9, 1907, 1617.

Fred R. Belknap, M.D.

Some Disadvantages of New Mexico in the Treatment of Consumption.

Carrizozo, New Mexico, May 25, 1908.

To the Editor:—There is still much ignorance in the East concerning the true conditions in New Mexico. Only a small percentage of physicians who come west for their health have any true idea of the relative advantages of this climate in comparison with that of the East. Thousands of people are sent to New Mexico every year with no other instruction from their physicians than "go west," and with the assurance that the climate is a sure cure for tuberculosis.

It is true that we have only about twelve rainy days a year, that the sun shines all the time and that the temperature is seldom too cold or too hot. But there are many disadvantages to which attention should be called. During the past four months the wind has blown two-thirds of the time so hard that my wife has not been able to stay outdoors, and during the entire year the wind and dust have kept her much more closely housed than the rain did in Virginia. Often for two months at a time we do not have enough rain to dampen the ground. In 1903 it did not rain for nine months. The dust is as fine as meal and very irritating on account of its excessive alkalinity. Four days at a time I have seen the wind raise so much of this dust that the view was obstructed as completely as in a fierce snowstorm. There are a few towns high up in the mountains or in small ravines where there is more rain or where the wind is not so bad, but I have described the condition prevailing in 75 per cent. of New Mexican towns. No patients with laryngeal tuberculosis or atrophic rhinitis should be sent here on account of this irritating dust.

Only a small percentage of the towns of New Mexico have pure water, many being supplied by open ditches in which cows may be seen drinking, pigs wallowing and Mexicans washing or wading. The wells in this limestone country, where the water does not filter, but runs in underground caverns, are even more dangerous than the ditches. Especially is this true when cesspools are dug nearly as deep as the wells and receive all the house waste water as well as the excrements, as is the custom in all small towns. In this town of about 1,500 inhabitants we had 23 cases of typhoid fever last summer, due, I believe, to infected well water. If the well or ditch water does not contain pathogenic organisms it is apt to be very injurious to a delicate person on account of the excessive amount of mineral matter it contains. I have often treated severe cases of cystitis and diarrhea that yielded to treatment only after the patient was taken off the alkaline water.

Then one needs to be careful to send patients to a first-class sanatorium and not to a third-class hotel. Many of these so-called sanatoria are not under the direct supervision of a competent physician, they give only the poorest accommodation and are hotbeds of infection. Pure dry air is a great help in the cure of tuberculosis, but rest, good food and the direct supervision of a competent physician are more essential. The person who has to work for a living will be much better off in the East, where wages for easy jobs are to be had and living is cheaper. All the positions requiring light work are greatly overcrowded in the Southwest.

With regard to women patients, it is to be especially remembered that housekeeping is very much harder in New Mexico than in the East. A smaller percentage of women than men recover here if they have to work. It is almost impossible to get competent servants. The dust is so bad that a neat woman has to be cleaning all the time; the water is so hard that soap can not be used, and sometimes so scarce that only one or two buckets a day can be had. Poor fuel and a tired body will keep her from properly preparing her food, and unless she has a good income the food will be poor in quality and insufficient in quantity.

More attention should be given to the altitude best suited to the patient's condition. No person in the third stage or with heart complication should be sent to an altitude above 4,000 feet. In the summer a patient will suffer from heat in Phenix, while Santa Fé is apt to be too cold in the winter. In coming to New Mexico every one should bring both summer and winter clothing. At an altitude of 6,000 feet a delicate person will need an overcoat in midsummer. I believe that all large towns are dangerous places on account of the promiscuous spitting. Often persons with mild infection become worse from infection by a more virulent organism. There are many sanatoria scattered over the Southwest under competent men where a patient can be comparatively free from dust, have good nourishing food, pure water and ideal climate. Physicians should see to it that their patients are sent only to such places. If they are not willing to spend at least one month in a first-class sanatorium do not let them come west.

B. B. Bagby, M.D.

Medical Economics

Legislative Work in New Jersey.

A communication recently received from Dr. L. M. Halsey, chairman of the Committee on Legislation of the Medical Society of New Jersey, gives an interesting summary of the work done by this committee during the past year. The county societies of New Jersey were requested, whenever possible, to nominate physicians for the legislature, with the result that two physicians were elected. Prominent leaders of both parties now recognize the need of medical men in the legislature and it is anticipated that in the future it will be less difficult to elect them.

Early in the last session an antivivisection bill was introduced. A campaign against this bill conducted by the committee, was reported in The Journal, March 21, p. 986. So effective was the opposition that the bill was not reported from the Committee. Early in March, the osteopaths introduced a bill almost identical with that of preceding years except that it gave them the same standing as physicians. A hearing was granted them on this bill without any notice being given to the physicians of the state. A large delegation called on the chairman of the committee and demanded an additional hearing which was finally granted and at which members from almost every county society in the state were present. Various substitutes and compromises were proposed, the final result being that no legislation on this subject was adopted.

A bill reorganizing the State Board of Health was passed by the legislature. On this board the governor appointed only a single physician, who takes the position of secretary. It remains to be seen what the results of this bill will be.

The medical practice act was amended so far as it applies to physicians resident of New Jersey who were in practice at the time the present law was passed, permitting them to come before the board for examination without regard to the requirements for preliminary training, as set forth in the present law.

Dr. Halsey reports that the committee found members of the legislature more willing to cooperate with the medical profession than ever before, and that Dr. McCormack's work in the state is beginning to bear fruit. Medical societies are earnestly taking up the tuberculosis problem, while the state exhibit is being sent all over the state. It is anticipated that a marked reduction in the death rate will follow these efforts.

New York Optometry Bill Now a Law.

Governor Hughes of New York has signed the optometry bill which now becomes chapter 460 of the laws of 1908. While it is to be regretted that the general principles underlying restrictive medical legislation should have been violated by the enactment of such a law in New York, yet there is probably no state in which it can do less harm, since the licensing power in New York lies with the Board of Regents of the State University which also holds all examinations. Such regulation is entirely different from that instituted by a board of optometrists appointed by a governor for political reasons and responsible to no one. The most unfortunate factor in the New York situation is that the passage of this bill in the Empire State will be used as an argument for its adoption in other states which have not the safeguard of a board of regents. It is to be hoped that the state association of opticians, which so ably opposed the passage of this bill will be able in a short time to secure its repeal.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES.

DR. JOHN H. BLACKBURN, DIRECTOR.
Bowling Green, Kentucky.

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Ninth Month.

Third Weekly Meeting.

Acute Gastroenteric Infection.

Etiology and Pathology.

Etiology: Season, age, surroundings, constitution, food. Bacteriology of dairy milk, bacteria found, toxins, possibility of direct contagion. Researches of Booker.

Pathology. Macroscopic Changes: Contents of stomach and bowels, change in mucous membrane, lymphoid tissue. Severe cases, cholera infantum, intestinal contents, mucous membrane and Peyer's patches.

Microscopic Changes: Immediate autopsy important. Changes in epithelium. Bacteria found, lymphoid tissue. Associated pathology of cholera infantum.

Symptomatology.

Simple Gastroenteric Infection.

Mild Cases: Onset gradual, fever, gastric disturbances, diarrhea, character of stools, general symptoms. Course and duration. Tendency to relapses. Terminations.

More Severe Cases: Sudden onset, restlessness, pain, fever, vomiting, stupor, prostration, diarrhea, flatus. Character and number of stools. Course and terminations of disease. Effect of age and constitution on prognosis.

Cholera Infantum.

Preceding intestinal disorder frequent. Sudden onset, prostration, increasing fever, vomiting and purging. Character of vomited matter, of stools. Loss of fluids, relaxed sphincter, loss of weight, course of temperature and pulse. Condition in fatal cases. Spurious hydrocephalus. In patients who recover.

Queries and Minor Notes

Anonymous Communications will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

INTESTINAL PUTREFACTION.

Curtice, Ohio, May 11, 1908.

To the Editor: Several of my patients are using tablets said to possess the power of arresting intestinal putrefaction, and to be composed of various lactic ferments. In every way they appear to be a fake; or, rather simply a duplicate of the ordinary digestive tablet, so-called, pancreatin, pepsin, etc. Please give an opinion as to their value.
Fred L. Ingraham.

Answer: The result of much work on intestinal putrefaction shows that the action of foreign putrefactive organisms is held in check to a large extent or completely by the *Bacillus coli communis* which is a normal inhabitant of the intestine. The *B. coli communis*, however, may produce putrefaction if its natural pabulum, sugar, usually introduced in the form of milk sugar, is deficient or lacking. Hence it was long ago learned that a milk diet is a good dietetic remedy for intestinal putrefaction. It was further learned that the acid of sour milk, lactic acid, has a powerful influence in inhibiting the action of putrefactive bacteria. This discovery explained the good effects of buttermilk, sour milk, etc., in infant feeding and in the treatment of intestinal disorders. As ordinary milk often contains pathogenic bacteria or those capable of producing putrefaction, great care should be exercised to secure buttermilk from a pure source or else a patient in taking ordinary buttermilk may be adding a sufficient dose of putrefactive organisms to overcome any good effect from the acid present. In case a pure buttermilk can not be obtained it would be better to use an artificially prepared buttermilk and this can be made by adding to fresh or pasteurized milk a pure culture of lactic acid bacilli. These produce the acid desired and are carried with the buttermilk into the intestinal canal to continue the work of protecting the food against the action of the putrefactive bacteria. The amount of proteid food should be reduced at the same time. This practice is founded on well-established facts and has a wide range of applicability.

ECHINACEA AND ECHAFOLTA.

Morristown, Ind., May 18, 1908.

To the Editor:—Please inform me as to the real merits of echinacea or echafolta, both names being used. I understand to designate the same drug.
V. C. Patten.

Answer.—*Echinacea angustifólia* is one of a host of plant drugs for which no scientific investigation of their chemical composition or their pharmacologic effects has been recorded, but for which most extravagant virtues have been claimed. Certain eclectic practitioners have credited echinacea with the power to counteract septic infection and "to correct fluid depravation, bad blood, tendency to sepsis and malignancy." It is needless to say that these claims have received no confirmation from recognized authorities.

Echafolta is a proprietary preparation; it is said to represent the therapeutic qualities of echinacea, grain for grain. Its manufacturers say: "It is echinacea with the dirt removed."

USE OF MAGNESIUM PHOSPHATE.

Stanley, Wis., May 20, 1908.

To the Editor:—For what purpose and how is magnesium phosphate used in medicine?
F. W. Starr.

Answer.—Magnesium phosphate, $MgHPO_4+3H_2O$ has been used as a mild laxative in doses of 1 to 4 grams (15 to 60 grains) three times a day.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending May 30, 1908:

Chamberlain, W. P., captain Medical corps, granted an extension of 20 days to his leave of absence.

Raymond, T. U., major Medical corps, ordered to perform the duties of chief surgeon, Department of Colorado, during the absence on leave of Lieutenant Colonel L. A. LaGarde, Medical corps, in addition to duty as surgeon, Ft. Logan, Colo.

Church, J. R., captain Medical corps, granted leave of absence for one month, about June 1.

Grubbs, R. B., captain Medical corps, ordered at the expiration of his present leave of absence, to Fort McIntosh, Texas, for duty.

Powell, W. A., captain Medical corps, relieved from duty at Jefferson Barracks, Mo., in time to sail July 5 from San Francisco, Cal., for Philippine service.

Siler, J. F., captain Medical corps, relieved from duty at Fort Des Moines, Iowa, and ordered to Fort Slocum, N. Y., for duty.

Vose, W. E., captain Medical corps, when relieved from duty at Fort Slocum, N. Y., ordered to Fort Des Moines, Iowa, for duty.

Harvey, P. F., colonel Medical corps, and Munson, E. L., major Medical corps, detailed to represent the Medical Department of the Army, at meeting of American Medical Association, Chicago, Ill., June 2-5.

Russell, F. F., captain Medical corps, ordered to London, Eng., for a course of study in the British Army Medical School on treatment of typhoid fever.

These officers of the Medical corps are detailed as chief surgeons at the respective maneuver camps:

The chief surgeon, Department of California, at Atascadero Ranch, Cal.

The chief surgeon, Department of Colorado, at American Lake, Wash.

The chief surgeon, Department of East, at Pine Camp, Jefferson county, N. Y.

The chief surgeon, Department of Gulf, at Chickamauga Park, Ga.

The chief surgeon, Department of Lakes, at Fort Benjamin Harrison, Ind.

Lieutenant Colonel J. M. Banister, at Fort Riley, Kan.

Lieutenant Colonel A. H. Appel, at Fort D. A. Russell, Wyo.

The chief surgeon, Department of Texas, at Leon Springs, Texas.

These officers of the Medical corps and contract surgeons are ordered to accompany troops from their respective posts to duty at the maneuver camp, Pine Camp, Jefferson County, N. Y., June 15 to July 15, 1908:

Kendall, W. P., major Medical corps, Fort Ethan Allen, Vt.

Weston, H. R., contract surgeon, Fort Ethan Allen, Vt.

Barney, F. M., contract surgeon, Fort Myer, Va.

Weed, F. W., captain Medical corps, Plattsburg Barracks, N. Y.

Card, D. P., contract surgeon, Fort Jay, N. Y.

Tyler, G. T., contract surgeon, Fort Porter, N. Y.

Pierson, R. H., captain Medical corps, Fort Niagara N. Y.

Peed, G. P., captain Medical corps, Fort Ontario, N. Y.

Wheat, J. M., contract surgeon, granted leave of absence for 12 days.

Casaday, G. H., dental surgeon, granted leave of absence for one month and fifteen days.

Anderson, E. A., contract surgeon, ordered, at the expiration of his present leave of absence from Fort Wingate, N. M., to Fort Sam Houston, Texas, for temporary duty with troops in the field.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended May 29, 1908:

SMALLPOX—UNITED STATES.

California: Los Angeles, May 2-9, 7 cases; San Francisco, 6 cases.

District of Columbia: Washington, May 9-16, 8 cases.

Illinois: Chicago, May 9-16, 1 case; Danville, May 10-17, 1 case.

Indiana: Fort Wayne, May 9-16, 2 cases; Indianapolis, May 10-17, 3 cases; Lafayette, May 11-18, 2 cases.

Iowa: Cass county, to May 16, 12 cases; Ottumwa, May 9-16, 1 case.

Kansas: Kansas City, May 9-16, 4 cases; Topeka, May 9-16, 3 cases.

Kentucky: Covington, May 9-16, 2 cases.

Louisiana: Minden, to May 11, 19 cases; New Orleans, May 9-16, 7 cases.

Michigan: Grand Rapids, May 9-16, 1 case; Port Huron, May 2-16, 5 cases; Saginaw, May 9-16, 3 cases, 1 death.

Minnesota: Winona, May 2-9, 1 case.

Missouri: Kansas City, May 2-16, 18 cases.

Montana: Butte, May 5-12, 3 cases.

Nebraska: South Omaha, May 9-16, 1 case.

New York: New York, May 9-16, 1 case.

North Carolina: Charlotte, May 9-16, 1 case.

Ohio: Bowerston, May 25-April 23, 1 case; Cincinnati, May 8-15, 9 cases; Dayton, May 9-16, 1 case; Newark, May 2-9, 1 case; Sherrodsville, Feb. 21-May 18, 90 cases.

Tennessee: Knoxville, May 9-16, 1 case.

Texas: Galveston, May 8-15, 1 case.

Washington: Spokane, May 2-9, 7 cases.

West Virginia: Parkersburg, May 1-18, 3 cases.

Wisconsin: LaCrosse, May 9-16, 6 cases; Milwaukee, 2 cases.

SMALLPOX—FOREIGN.

Arabia: Aden, April 13-27, 3 deaths.

Brazil: Manaos, April 11-18, 1 case; Rio de Janeiro, April 12-19, 136 cases, 43 deaths.

Canada: Halifax, May 9-16, 3 cases; Montreal, Feb. 22-29, 1 case; Winnipeg, May 9-16, 1 case.

Cape Colony: Cape Town, April 4-11, 1 case.

China: Hongkong, March 28-April 11, 53 cases, 39 deaths.

France: Paris, April 24-May 2, 4 cases.

Germany: General, April 26-May 2, 22 cases.

Great Britain: London, April 18-25, 1 case, 1 death.

India: Bombay, April 14-21, 52 deaths; Calcutta, April 4-11, 24 deaths; Madras, April 11-17, 1 death; Rangoon, April 4-11, 1 death.

Italy: Catania, April 30-May 7, 1 death.

Japan: Kobe, April 4-11, 2 cases, 2 deaths; Osaka, April 11-18, 126 cases, 114 deaths; Yokahama, April 11-25, 4 cases.

Mexico: City of Mexico, March 21-April 4, 12 deaths.

Portugal: Lisbon, April 25-May 1, 7 cases.

Russia: Moscow, April 11-18, 39 cases, 10 deaths.

Spain: Denia, April 25-May 2, 4 cases; Valencia, 22 cases, 1 death; Vigo, 2 deaths.

Straits Settlements: Singapore, March 28-April 4, 2 deaths.

Venezuela: La Guaira, May 7, present.

YELLOW FEVER—FOREIGN.

Brazil: Manaos, April 11-18, 1 case, 1 death; Para, April 19-26, 3 cases, 3 deaths.

Mexico: Laguna, May 18, 1 death.

CHOLERA—FOREIGN.

French Indo-China: Cholen, March 28-April 12, 26 cases, 26 deaths.

India: Bombay, April 14-21, 3 deaths; Calcutta, April 4-11, 221 deaths; Madras, April 11-17, 3 deaths; Rangoon, April 4-11, 1 death.

PLAGUE—INSULAR.

Philippine Islands: Manila, April 4-11, 4 cases.

PLAGUE—FOREIGN.

Brazil: Rio de Janeiro, April 12-19, 1 death.

Chile: Antofagasta, April 11-18, 20 cases, 3 deaths; Arica, present; Iquique, 12 cases, 4 deaths.

China: Hongkong, March 28-April 11, 19 cases, 18 deaths.

India: General, April 4 11, 10,099 cases, 8,490 deaths; Bombay, April 14-21, 379 deaths; Calcutta, April 4-11, 142 deaths; Rangoon, 16 deaths.

Japan: Osaka, April 4-18, 5 cases, 4 deaths.

Peru: General, April 11-18, 87 cases, 30 deaths.

Venezuela: La Guaira, March 1-May 7, 80 deaths.

Marriages

Captain John Braiden Huggins, Medical Corps, U. S. Army, to Mrs. Rose Loretto Colladay of Washington, D. C., May 14.

William P. Kaner, M.D., of Solvay, N. Y., to Miss Margaret Edythe Ryder of Syracuse, N. Y., May 20.

Charles R. Garraway, M.D., of Shipman, Miss., to Miss Mary Belle Ramey of Leitchfield, Ky., May 25.

Frank Brown Hines, M.D., of Chestertown, Md., to Miss Miriam Louise Jessop, at Baltimore, May 20.

George Mason Astley, M.D., to Clara Melvia Casselberry, M.D., both of Philadelphia, May 16.

Thomas Everett Graham, M.D., to Miss Julia Eunice Hacker, both of St. Louis, Mo., May 6.

Newton H. Stein, M.D., Middleport, Pa., to Miss Anna E. Conrad of Port Carbon, Pa., recently.

John B. Thomas, M.D., of Midland, Texas, to Miss Read Hurt of Big Springs, Texas, May 28.

John Fletcher Massey, M.D., to Miss Cora May Schaeffer, both of Westminster, Md., June 3.

George Henry Stephens, M.D., to Miss Bertha H. Lucas, both of Syracuse, N. Y., May 20.

Walter Linsey Niles, M.D., of New York City, to Miss Louise Vesin of Yonkers, N. Y., May 20.

William Kenney Dudley, M.D., to Miss Hattie Hill Mann, both of Paris, Ky., May 19.

Wade A. Martin, M.D., to Miss Mary Alice Little, both of Avondale, Ala., April 21.

Thomas Ragan, M.D., to Miss Martha Hunter, both of Ruston, La., May 24.

Deaths

Grosvenor R. Trowbridge, M.D. University of Buffalo (N. Y.) Medical Department, 1887; a member of the medical societies of the State of New York and County of Erie; the American Academy of Medicine; once president of the Lehigh Valley Railroad Surgeons' Association; senior surgeon at the Rochester General Hospital and later staff physician at the State Hospital for the Insane, Danville, Pa.; local surgeon for the Delaware, Lackawanna & Western and Lehigh Valley railroads; a member of the board of trustees of the Buffalo Children's Aid Society; died at his home in Buffalo, May 20, from heart disease following influenza, after an illness of several weeks, aged 44.

Raphael O. Marcour, M.D. Medical Department of the Tulane University of Louisiana, New Orleans, 1897; of New Orleans; assistant surgeon U. S. Navy from 1898 to 1904, and representative of the medical corps of the Navy at the third Pan-American Medical Congress in Havana in 1900; a member of the American Medical Association; president of the New Orleans College of Midwifery; died in the Cosmopolitan Hotel, New Orleans, May 17, from acute gastritis, aged 32.

William Lloyd Smith, M.D. Rush Medical College, Chicago, 1878; for 20 years surgeon, with rank of major, in the Illinois National Guard; division surgeon for all railroads entering Streator, Ill., and attending surgeon to the Chicago & Alton Railroad for 18 years; president of the local board of health, and twice deputy coroner of La Salle County; died in the Streator Hospital, May 22, from spinal disease due to an injury sustained in 1906, aged 54.

David H. Lando, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1897; a member of the American Medical Association; instructor in internal medicine in the University of Minnesota and attending physician to the St. Paul Free Dispensary; died in a hospital in Vienna, Austria, May 19, after an operation for gallstone disease, aged 32.

Edgar Dudley Lewis, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1878; a member of the Michigan State and Genesee County medical societies; for more than 10 years a member and president of the board of pension examining surgeons; died at his home in Otisville, May 16, from acute gastritis, after a short illness, aged 60.

Robert B. Struthers, M.D. McGill University, Montreal, 1883; local physician for the Canadian Pacific Railway, and coroner of Sudbury County, Ont.; for a number of years a member of the public school board and town councilor; died at his home in Sudbury, May 14, from heart disease, after an illness of four hours, aged 49.

James Gorrell Phillips, M.D. Medical Department of Missouri, University of St. Louis (Missouri Medical College), 1855; formerly a member of the Linn County (Mo.) Medical Society; died in Oklahoma City, Okla., April 18, from malignant ulcers and hemorrhoids, after an illness of ten months, aged 81.

Frank W. Gerecke, M.D. Bellevue Hospital Medical College, New York City, 1892; a member of the medical societies of the State of New York and County of Orange; of Newburgh, N. Y.; died in the Metropolitan Hotel in that city, May 18, from pneumonia, after a short illness, aged 39.

Adoniram Judson Pettis, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1903; of West Branch, Mich.; a member of the American Medical Association; died in Harper Hospital, Detroit, May 18, from hip disease, after a long illness, aged 37.

Charles Carrington, M.D. College of Physicians and Surgeons in the City of New York, 1860; a member of the American Medical Association, and a lifelong resident of Farmington, Conn.; died at his home in that city, May 20, after an illness of about a year, aged 68.

Thomas K. Keller, M.D. Medical College of the State of South Carolina, Charleston, 1860; surgeon in the Confederate service during the Civil War; died at his home near Creston, S. C., January 10, from pneumonia, after an illness of one week, aged 71.

Albert Joseph Back, M.D. Keokuk (Iowa) Medical College, 1898; a member of the Ohio State and Williams County medical societies; died at his home in Montpelier, Ohio, May 18, from fatty degeneration of the heart, after an illness of one hour, aged 46.

Martha Rose Stillman, M.D. Woman's Medical College of the New York Infirmary for Women and Children, New York City, 1896; of Plainfield, N. J.; died in the home of her mother in New London, Conn., May 20, after an illness of two months, aged 38.

Kinji Ugai, M. D. University and Bellevue Hospital Medical College, New York City, 1899; a member of the American Medical Association, and one of the most prominent Japanese of Sacramento, died in the California Hospital in that city, May 20.

E. A. G. Saleman, M.D. University of Leipsic, Germany, 1897; formerly of Buffalo, N. Y.; died May 18, in the North Hudson Hospital, Union Hill, N. J., from the effect of morphin and strangulation with suicidal intent, aged 39.

Georgiana Fulton, M.D. Cleveland (Ohio) University of Medicine and Surgery, 1890; of Steubenville, Ohio; died in a sanitarium in Columbus, May 17, from nervous collapse, after an illness of several months, aged 44.

William L. Liscomb, M.D. Medical Department of the Tulane University of Louisiana, New Orleans, 1850; a pioneer citizen of Columbus, Miss.; died at his home in that place, May 22, from senile debility, aged 88.

Benjamin Franklin Pearson, M.D. Medical Faculty of Queen's University, Kingston, Ont., 1867; of Queensville, Ont.; died at the home of his daughter in Toronto, May 17, after an illness of one year, aged 68.

William A. Cravens, M.D. Barnes Medical College, St. Louis, 1897; a member of the Missouri State Medical Association and Newton County Medical Society; died suddenly at his home in Granby, May 18.

Daniel H. Johnson, M.D. College of Physicians and Surgeons in the City of New York, 1897; of Parkersburg, W. Va.; died at the home of his parents in that city, May 16, after an illness of several months.

Ernest Walsworth Bennett, M.D. University of Vermont, College of Medicine, Burlington, 1897; of Worcester, Mass.; died in the Worcester City Hospital, May 19, from morphin poisoning, aged 40.

Gilbert A. Ferguson, M.D. Jefferson Medical College, Philadelphia, 1905; of Lost Creek, Pa.; died at the home of his parents in Philadelphia, May 21, after an illness of several months, aged 29.

Ellen Lyon Hancock, M.D. Hahnemann Medical College and Hospital of Chicago, 1892; of Chicago; died at her home in Wheaton, Ill., May 24, from cancer, after an illness of two years, aged 38.

Oliver Jarvis Beach, M.D. Jefferson Medical College, Philadelphia, 1900; of Bristol and Granby, Conn.; died at the home of his parents in Granby, May 15, after an illness of several weeks, aged 35.

Daniel Wolfe Gans, M.D. Western Reserve University Medical College, Cleveland, 1897; a member of the American Medical Association; died at his home in Massillon, Ohio, May 17, aged 35.

James Henry Hazard, M.D. Medical College of Ohio, Medical Department, University of Cincinnati, 1867; of Cincinnati; died at his home in Terrace Park, Ohio, May 24, aged 61.

Marion S. Gressett, M.D. Medical College of the State of South Carolina, Charleston, 1869; a Confederate veteran; died at his home in Grantsville, S. C., May 19, aged 70.

Stanley Gatch, M.D. University of Kansas School of Medicine, Kansas City and Lawrence, 1905; of Coyle, Okla.; died at his home in Tucson, Arizona, May 3, aged 25.

J. H. Watkins, M.D. University of Nashville (Tenn.) Medical Department, 1858; died at his home in Goodes, near Palmetto, Ga., May 21, aged 71.

Richard Ritter Bomar, M.D. Southern University Medical Department, Greensboro, Ala., 1885; died at his home near Center, Ala., May 14.

Paul Emile Prevost (Examination, Quebec), of Montreal; died in Ottawa, Ont., May 19, after an illness of two weeks, aged 44.

Deaths Abroad.

O. Langendorff, M.D., professor of physiology and director of the Physiologic Institute at Rostock, died May 10, aged 55. He made important contributions to physiology by his studies of the isolated, still living heart of cats and other animals, having constructed an apparatus which simulated the natural circulation for the heart and allowed its survival for hours after the apparent death of the animal.

A. Riche, M.D., professor of analytic chemistry at the University of Paris, died April 26, aged 79. He was president of the Academy of Medicine in 1902, and always took a prominent part in matters affecting the public health, pure foods and industrial hygiene.

Charles James Cullingworth, M.D., D.C.L., LL.D., F.R.C.P., consulting obstetric physician to St. Thomas' Hospital; formerly professor of obstetric medicine and gynecology, Victoria University, Manchester, died of angina pectoris, May 11, aged 67.

Francis Fowke, M.D., from 1871 to 1902 general secretary of the British Medical Association; died at Torquay, May 19, from malignant disease of the esophagus, aged 68.

Book Notices

Diseases of Children. Edited by M. Pfaundler, Director of Children's Clinic at the University of Munich, and A. Schlossmann, Director of Children's Clinic at the Medical Academy in Dusseldorf, with an Introduction by L. Emmett Holt, M.D., New York, Professor of Pediatrics, Columbia University. In Four Volumes, Illustrated. Cloth. Price, $20.00 per set. Philadelphia and London; J. B. Lippincott Co.

This work published in four volumes containing about 2,000 pages presents the experience of a number of German clinicians, most of them specialists on the subjects on which they write. The work is translated by American authors, specially interested in pediatrics. The method by which this work has been produced insures a treatise of value, both from the wide experience of the authors and the intrinsic importance of the subject and also from the fact that, being a foreign work, it presents the subject from a different point of view from that to which the American physician is accustomed. The first volume deals with general topics, while the succeeding ones are devoted to special diseases; general constitutional and infectious diseases occupy one volume, while the remaining two deal with the diseases of the various systems, digestive, circulatory, nervous, etc. Two hundred pages are are devoted to general symptomatology, individual symptoms being taken up and analyzed with reference to the diseases in which they may occur. This part of the work ought to form a very useful diagnostic aid. General prophylaxis gives a wide range of measures intended to secure the proper development of the child as well as to avoid disease. Not only is the hygiene of infancy described, but the prevention of anomalies which show themselves more commonly as adult life is approached is given a due share of attention. It is gratifying to see attention called to the danger of the development of gastroptosis with the graphic evidence that this condition can be cured if proper measures are adopted in its incipiency. The regulation of school life and the delicate functions of the physician in respect to the moral and spiritual development of the child are briefly but appropriately considered. Under general therapeutics important details of the care of sick children, the use of physical remedies, the adaptation of drug administration to children, etc., are considered.

A chapter is devoted to milk. The work is thorough and includes the physical and chemical properties of milk, the method of production, chemical, microscopic and bacteriologic testing. More tests are given than the practicing physician will be likely to use or to understand, and it must be said that in some places the meaning is not clear. Thus on page 334, we read:

"Titrate 50 c.c. in a flask, adding 2 c.c. of a 2 per cent. alcoholic solution of phenolphthalein with one-fourth normal sodic hydrate solution (Soxhlet-Henkel), using at the same time the opposite test, with the same quantity of phenolphthalein, in a flask of the same shape, without water, and on a white bottom." Just what is meant by the "opposite test" is left to inference and may tax the imagination of more than one reader.

While the inconveniences and disadvantages of the composite text-book have not been altogether avoided, the specialist and the general practitioner who appreciate the immense importance of the subject of pediatrics, will find in these volumes a mine of information of which he will find frequent occasion to avail himself.

Arterial Hypertonus, Sclerosis and Blood Pressure. By William Russell, M.D., F.R.C.P., Edin., Physician to and Lecturer on Clinical Medicine in the Royal Infirmary, Edinburgh. Cloth. Pp. 194, with illustrations. Price, $2.50. Philadelphia: J. B. Lippincott Co., 1908.

The first chapter of this interesting and instructive book deals with the structure and movements of arteries and with blood pressure and its relation to contraction of vessels and power of the heart. The author's discussion of methods of measuring blood pressure or rather as he rightly contends vessel compressibility is excellent. He recognizes the following anatomical changes in arteries: Atheroma, obliterative endarteritis, calcareous infiltration and arteriosclerosis, limiting the last to generalized arterial thickening without the degeneration of atheroma. But his interest centers in the changes in the wall of arteries produced by contraction of them and called by him hypertonus. This condition he shows is quite as often manifest in arteries which are structurally diseased as in those that are normal. The hypertonus may be due to the influence of the nervous system but oftener to the condition of the blood, i. e., to toxic matter in it. The toxic substances of commonest occurrence, as our author thinks, are the products of fermentation in the gastro-intestinal tract. Therefore stress is laid upon errors in eating and digesting and eliminating waste. He believes that the arterial contraction is protective to prevent the escape of these toxins from the vessels. Moreover, he makes the generalization that hypertonus indicates the presence of deleterious substances in the blood. Hypertonus is by no means always generalized. The fact that it may be focal is particularly dwelt on in the chapter on contraction of cerebral arteries. Hypertonus is believed to be the first step toward the production of arteriosclerosis. Sclerosed vessels often become very sensitive to the causes of hypertonus and exhibit varying grades of hypertonus from time to time. If this full and interesting discussion of hypertonus and allied troubles is to be criticized at all it must be said that the chapters are of unequal value. Some of them contain clinical descriptions which are not well analyzed or fully blended with the substance of the book. One can not but feel that the various chapters have been written at considerable intervals and that therefore they do not possess the continuity of thought and argument which is desirable.

The Common Sense of the Milk Question. By John Spargo. Cloth. Pp. 351. Illustrated. Price, $1.50. New York: The Macmillan Co., 1908.

This work is addressed to the intelligent laity and considers the question of milk from the standpoint of the infant mortality that depends to so large an extent on the use of impure milk as an infant food. The reasons for the modern increased interest in the welfare of the child the author finds largely in the economic importance of children in consequence of the diminishing birth rate. The essential argument of society is seen to be that since an insufficient number of children are born it is necessary to take better care of those we have, and in this idea is seen an interesting explanation of the fact that in France, where the birth rate is lowest, there is the greatest solicitude and the most advanced methods of caring for the children. The author finds the reason for the lessened birth rate not in the voluntary devotion to fashion, but in an actual lessening of fertility in consequence of the development of the intellectual nature. A similar biologic law he thinks brings about the inability of the mothers to nourish their offspring from their own breasts. The reasons for the selection of the cow for the supply of milk for infant feeding he regards as purely economic and suggests the desirability of a wider diffusion of knowledge as to the value of the goat for this purpose. He seems to be unaware of the dangers from Malta fever to which the goat may render a community liable. The insanitary conditions under which much of the milk is produced and the disastrous effect of impure milk on infant life are vividly portrayed. He discusses the remedies proposed, giving a detailed account of the "*gouttes de lait*," and other foreign attempts to solve the problem as well as the American methods of milk commissions, etc. The value of inspection is shown, but Spargo thinks that it is a matter which should be placed under national supervision since the milk supply of a large city is often drawn from outside the state and an unfair burden is placed on the city by requiring it to inspect dairies in several states. The author endeavors to reconcile the proposed measures of the "radicals" and the "opportunists" and believes that while the effort should be made to obtain clean milk for all consumers, the day is still far distant when such a general supply will satisfy the requirements of safety for infants and that while endeavoring to reach the ideal it is necessary for the present to pasteurize the milk which is to be given to the children.

The book shows a remarkably clear grasp of the milk problem and the presentation is such as to appeal especially to the lay reader. It is, however, well worth the perusal of the physician who aside from the professional interest has the same interest in the matter as a sociologic problem that the layman has.

The Mother's Year-Book. By Marion Foster Washburne, Author of "Family Secrets," etc. Pp. 259. Cloth. Price, $1.25. New York: The MacMillan Co., 1908.

This is in no sense a medical work, but one that deals with the daily life of the child from its birth till the end of the first year. The author has evidently studied children closely and her remarks are on the whole practical. She wisely emphasizes the importance of breast feeding and lays stress on the duty of the mother to nurse her child, describing the difference between the healthy, happy, breast-fed infant and the pale, weak, bottle-fed child with its tendency to intestinal disturbances. The child's first attempts to express pleasure or pain are described and the mental and physical development are discussed at length. The book is one which could be read by all young mothers with profit; it will aid them in studying the development of the child and in understanding it.

School Reports and School Efficiency. By David S. Snedden, Ph.D., and William H. Allen, Ph.D., for the New York Committee on Physical Welfare of School Children. Cloth. Pp. 183. Price, $1.50. New York: The MacMillan Company, 1908.

This volume presents the need of uniformity in school reports, gives the efforts of the National Educational Association to secure such uniformity and gives examples of tables and other forms of presenting school facts, used in typical city school reports. This book will interest those concerned in the medical inspection of schools and in the efforts to secure proper physical surroundings of children while at school.

PROCEEDINGS OF THE CHICAGO SESSION.

MINUTES OF THE FIFTY-NINTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT CHICAGO, JUNE 2-5, 1908.

House of Delegates

First Meeting—Monday Morning, June 1

The House of Delegates convened in the Board of Officers' Rooms, First Regiment Armory, and was called to order at 10:20 a. m., Monday, June 1, by the President, Dr. Joseph D. Bryant, New York.

Dr. H. Bert Ellis, California, presented the preliminary report of the Committee on Credentials as chairman, giving the names of delegates who had thus far presented their credentials, and stated that the committee would make a further report later.

Dr. Alexander R. Craig, Pennsylvania, moved that the minutes of the previous annual session be adopted as printed, which motion was duly seconded by Dr. C. E. Cantrell, Texas, and carried.

President Bryant then delivered his address.

President's Address.

Gentlemen:—The period of my official connection with the high station to which I was chosen is drawing to a close, and in a few hours what yet remains will become a part of that already passed, when the whole will have been registered in the annals of the affairs of the organization, there to remain as evidence in the estimate of my official deserts. For the expression of confidence and respect so generously bestowed I again bow in most humble acknowledgment.

The practical wisdom of those who conceived and gave birth to the system of government of the Association did not seriously contemplate that the transient advent of a President need much disturb the ordinary tide of its concerns. Whether or not this conception of presidential utility be wise or otherwise can not yet be considered as settled. And, whether it be wise or not, can better be determined by a broad spirit of statesmanship than by one of restricted policy. It might safely be regarded as possible that a transient judicious executive would exercise a wholesome influence in the control of affairs. Be this as it may, the comparative differences of the governing affairs of the Association and those of the government on which they are fashioned, become less apparent as one reaches the sources of authority, and they practically disappear at the port of the official head of this organization.

I am not finding fault because of this anomaly, but am simply pointing out what is recognized and gravely regarded by many thoughtful and devoted men, whose views are not limited by the horizon of the present time. In my judgment, the well-being of the Association would be more securely fixed and correspondingly enhanced by requiring that the President cooperate with his colleagues in official labors, the same as is done in other corporate bodies of established significance.

The problem which for long has periodically perplexed our federal government and its gracious and sympathetic people, viz., "What to do with the former presidents" now appears to be knocking at the door of expediency of our organization, and inquiring "What to do with the former presidents" of its own? In this connection, I would say that the degree of wisdom which our former presidents have acquired because of established official contact with their colleagues in the control of affairs, can not be seriously regarded as profoundly fitting them for much special consideration. With this important feature thus qualified, I am inclined to caution you to think carefully and act slowly in a matter which, while disturbing the equilibrium of constituted state representation, seems not to contribute a commensurate gain.

I am aware it is often thought wise or expedient by some persons that the coordinating requirements of an organization be not too explicitly stated in its constitution and by-laws, but I am none the less of the opinion that these of ours could be improved in forms of expression and in scope and requirement, by comparatively brief efforts of judicious character.

The fact of whether or not the provision relating to the calling of meetings is sufficiently amplified for the purposes of duly authorized action, might well be determined.

The clause of the Constitution providing that "no member of the House of Delegates shall be eligible to the office of President or Vice-President" is a wise and healthy measure, for men thus disposed should not be active constituents of a legislative body vested with the power of conferring official station, nor should one be thus connected, whose remuneration for special services can come before the legislative body for consideration, for plainly obvious reasons.

The selection of the members constituting the special and reference committees of the session have been made, as far as practicable, in accordance with the numerical representation in the Association of the respective parts of the country, and, as estimated for the purpose of selection by Mr. Hoffman of Newark, a distinguished statistician and actuary. Therefore, if any disappointment should happen because of less representation than before, the difference is due more to the verdict of impartial figures than to the exercise of individual desire.

I have thus far on all occasions taken pleasure in commending the purpose and the work of the Council on Pharmacy and Chemistry. I again wish to renew this approval, and also to express the self-evident fact that, if medical therapy is to be of reliable worth, then, indeed, the constructive purity of its agents and their physiologic action must be scrupulously guarded.

I have been not a little disturbed by the assertions of persons who are engaged in the enterprises of pharmacy, relating to certain wrongs which they claim to have sustained because of unfair and ungentlemanly treatment at the hands of responsible officials of the Association. In one instance it was asserted that oppressive and illegal hardship had been inflicted, which resulted in mental distress and in pecuniary loss. In this instance I expressed the belief to the complainant that he was in error, and predicted that the courts would so determine, were a test made, and advised that it be made at once. The complainant declined to accept this advice, saying that were his contentions well founded, and even sustained by the courts, still his business would be destroyed by retaliatory cooperative action of the members of the American Medical Association! Was ever an upright and independent body of men more misjudged than this? Could one impelled by childish imaginings be more mistaken than he? It were better far for the honor of the medical profession that this Association resolve into thin air or into the sediment of a stagnant pool than thus attempt to smother established justice with the fumes of revengeful disorder. Already too much of this kind of spirit is abroad in the land, for the comfort and security of law-abiding people. And we, the members of a learned profession, should be ever actuated by the spirit of citizenship, which promotes good order in all things and invites the infliction of the penalties that foster obedience.

Bitter complaints have come to my notice which appear to embrace the practical question of whether or not those who are opposed to the policy of government which stands for the securing of trustworthy medicinal agents, are entitled to the same consideration as are those who approve of and support the purpose. And, as a corollary of the preceding, whether or not those who actively give, or passively lend support, to a policy impairing or making uncertain the curative virtues of medicinal measures, or lowering in other ways the station of scientific medicine, are entitled for long to patient consideration at the hands of those who, in this regard, are striving for the best of things? I do not understand how it is that this question can be answered in the affirmative. However, the unusual and novel questions which readily come to the front in these circumstances, should be kindly though firmly met, and with a spirit which, though striving for higher thought and action, soothes instead of needlessly provoking opposition.

I am convinced of the need, and commend to your approval the importance of the work being done by Dr. McCormack in elevating the tone and the standard of the medical profession. A service of this kind is in order, and will enhance the station of medicine accordingly as the facts are wisely selected and judiciously expressed.

Some of the discreditable vagaries of thought and action that are noted in business relations are threatening to enter much into professional relations as well. In fact, tangible evidence is not lacking that practices of unethical reciprocal nature too frequently exist for the credit and honor of our calling. I regard it of special importance that students in medicine should have their ideas of professional conduct carefully molded aright, while yet in the plastic state of development. The principles of moral philosophy as related to medicine are not apt to be decidedly catching in the instances of physicians whose thoughts and habits of action are already quite well established. And also, the active and passive obstruction to coordinating within decent bounds certain questionable and convenient products of pharmaceutical skill, are an earnest of the need for a proper bending of those who may be regarded as the "twigs" of our profession, so that as "trees" they later may be rightfully "inclined."

It would seem to me as wise that a standing committee on principles of moral philosophy as applied to medicine be constituted, with the view of elaborating still further ethical principles, and so far as practical establishing in this respect uniformity between the medical profession of this and other countries. Also, I would suggest that undergraduate and postgraduate general instruction in ethical medicine be a part of the requirements of institutions engaged in medical teaching. I would expect greater, earlier and more durable results, and without friction, from this plan, than can come from any quasi-insistent method of endeavor. The incident of the insistent master, the abundant trough and the unwilling horse well typifies the present situation in many instances. In any event, it would be well properly to develop the roots of our profession while busily trimming the branches.

I would signally fail in my duty at this time were I to omit telling you that plausible measures directed to the regulation of animal experimentation are abroad in the land, which are drawn so adroitly and presented so cleverly, as to conceal, on confiding inspection, special factors of grave possibilities. Consequently, medical men who are loyal to the spirit of scientific endeavor are thoughtlessly giving strength to the stealthy foes of scientific medicine. It should not be possible to thus easily introduce into the ranks of our calling a wedge, which, when driven home, would split our organization asunder on the policy of animal experimentation. Medical men should refuse to give assent to strange policies of a professional kind until after thoughtful and judicious consideration shall have determined the wisdom of the propositions. If organization in medicine stands for aught, it should stand for unity of purpose in all scientific matters relating to it. Since "forewarned is forearmed," each of you should keep in mind the possibility of besetting dangers, and in no instance fail to sound the alarm long in advance of parley or of impossible capitulation.

I would respectfully urge that the House of Delegates take decided and far-reaching action in this important matter.

Whether the constitution or the flag should take precedence in the outlying parts of our country need not concern this Association as much as how soon can the medical profession of these accessions properly become integral parts of the organization. It seems to me that this question should be answered at the earliest practical moment. The claim of the medical profession of Alaska for similar action is one of substantial moment, and may be of superior importance to those of recent birth and of less development. The moral effect on the tone of the profession of these communities, of the sympathy, approval and support of this Association, in the furtherance of proper methods of control of their affairs, would be encouraging to them and creditable to the organization. And no doubt the sooner the supporting hand is extended the easier and more complete will be their task.

In as brief manner as possible I have called your attention to certain things relating to matters of the organization, which, in my judgment, should be better adjusted in order to comport more nearly with the conduct of the affairs of organizations whose wisdom of government one can not gainsay. The question before the house is not how best to please a few, but how best to satisfy the many. Therefore, the policy of government should be broad and uniform, and in conformity with the judgment of the majority. Its conduct should be characterized by the inherent power of discriminating justice, patiently and temperately dispensed. The official servants of the organization should regard themselves as such, and not the masters of it. They should exercise discretion and patience, and consequently should be vigilant and gracious under all circumstances. And in this connection it should be remembered that our country is broad, and that its people are independent and honest; also that those of different parts of the country do not always think and judge alike in similar matters, and what is of special significance at this time is that the medical profession is an influential part of the people, and, therefore, of significant importance in its respective environments. I earnestly utter these words and without bias, because of the known recognized temptations to inconsistency of thought and action which the exercise of power so often begets. I would remind you that the wise exercise of power oftener requires greater skill and courage than does the achieving of power. And also that the absence of wisdom in control not infrequently destroys the highest governing conception of men.

Although it has been said "that those who think must govern those who toil," it should not be overlooked that, in a profession those who toil must also think, and because of thought, are competent to govern while yet they toil. That too much government is apt to be harmful is an accepted fact, and, therefore, that those who govern least may govern best, can not be gainsaid.

I would regard it as a misfortune were the duties of the House of Delegates of this Association to become so onerous and perplexing as to eliminate from its councils men whose ceaseless toil makes for higher station in medicine. Consequently, I regard it as very important that the duties of this body be abridged and simplified as much as possible, and that judicious expedition in the conduct of its affairs be promoted and that hindering cavil be abrogated. When it shall appear that the uncertain products of legislative desire are of more concern than those of positive scientific endeavor, then the ennobling functions of the Association will have been mortally hurt.

That "death has many doors to let life out" is the history of all bodies of men. And, it is a matter of profound congratulation to us that, of the many doors in this organization but few, indeed, came ajar during the last year. Through one, however, out into the unknown has recently passed a conspicuous member of the Association and the profession. One whose indefatigable energy and ceaseless activity contributed enduring abundance to the honor and glory of our calling. In his profession, the paths which he hewed with consummate wisdom and patient care, often through obstacles akin to those of pious endeavor, still lead onward, and upward, and toward the terrestrial Mecca of cure and comfort of the human race. In other undertakings his footsteps were firm, consecutive and direct, and his successes are indelibly impressed on the fields of his toil. And, as an example for emulation in all that relates to breadth of effort, and height of success in the paths to which he clung, the memory of the late Dr. Nicholas Senn should be revered and ever regarded as a precious heritage of our profession.

An unprecedented incident of unusual significance and full of beneficent possibilities happened, when, on March last, the President of the United States extended an invitation to the medical profession to take part in the conference on the conservation of natural resources. The President in this regard expressed himself as follows: "I wish to invite the coöperation of the American Medical Association in bringing this matter before the people; and it gives me added pleasure to invite you, as President of the Association, to take part in the conference." It should not be necessary to say that I was present and that, on behalf of the American Medical Association, I thanked the President profoundly for the invitation, and pledged to his support in the conservation, not only the members of the American Medical Association, but the entire profession of the land. I would urge that prompt, appropriate and decided action be taken by this body, thus showing appreciation of the invitation and determination to aid in every possible manner.

I would be negligent of a plain duty and the promptings of a keen sense of satisfaction, were I to omit on this occasion to express my appreciation of the uniform courtesy which has been shown me by the members of this body and by the officers of the organization. The charm of official association is greatly enhanced by the unanimity of purpose and the attention to duty which characterize those invested with responsibility. In this connection it can be truly said that criticisms visited on the officers of the Association rarely include those of delay or indifference in the conduct of official business. And to have to do with the activity of an organization blessed with the chance of bringing the medical profession of this country into judicial unity, for the promotion of wise and beneficent purposes, is the distinction of a lifetime, and one which those who are thus favored should honor, as long as opportunity and effort can add to the glory and station of medicine.

Finally, the comforting optimism of my nature leads me to regard as certain the final success of all our contentions, which are based on the capacity to gladden, and to cure the afflicted of our kind.

On motion of Dr. Albert Vander Veer, New York, seconded by several delegates, a vote of thanks was extended to President Bryant for his clear, instructive and inspiring address.

Reference Committees Appointed.

The Secretary then read the following list of reference committees, appointed by the President:

COMMITTEE ON MEDICAL EDUCATION.

H. D. Arnold, Massachusetts, Chairman.
Frank Billings, Illinois. A. Vander Veer, New York.
W. M. L. Coplin, Pennsylvania. L. S. McMurtry, Kentucky.
(Members of the Council on Medical Education are members ex-officio of this committee.)

COMMITTEE ON AMENDMENT TO CONSTITUTION AND BY-LAWS.

George W. Guthrie, Pennsylvania, Chairman.
Charles E. Cantrell, Texas. C. H. Cook, Massachusetts.
G. L. Taneyhill, Maryland. G. L. Strader, Wyoming.

COMMITTEE ON SECTION AND SECTION WORK.

Leartus Connor, Michigan, Chairman.
S. W. Woodyard, Tennessee. Julius Bierwirth, New York.
Michael Hoke, Georgia. Charles McVea, Louisiana.

COMMITTEE ON RULES AND ORDER OF BUSINESS.

W. H. Sanders, Alabama, Chairman.
Victor H. Stickney, North Dakota. J. N. Jenne, Vermont.
J. F. Highsmith, North Carolina. Hugh F. Lorimer, Ohio.

COMMITTEE ON LEGISLATION AND POLITICAL ACTION.

C. S. Bacon, Illinois, Chairman.
J. N. Hall, Colorado. Colonel H. G. Beyer, U. S. Navy.
S. Bailey, Iowa. Major W. W. Ireland, U. S. Army.
(Committee on Medical Legislation ex-officio.)

COMMITTEE ON MISCELLANEOUS BUSINESS.

Stuart McGuire, Virginia, Chairman.
J. B. McGaughey, Minnesota. S. T. Turner, Texas.
H. H. McCarthy, Washington. J. H. Pierpont, Florida.

JUDICIAL COUNCIL.

C. E. Cantrell, Texas, Chairman.
Charles J. Kipp, New Jersey. George Dock, Michigan.
J. F. Percy, Illinois. H. L. Alkire, Kansas.

COMMITTEE ON REPORTS OF OFFICERS.

Wisner R. Townsend, New York, Chairman.
Donald Campbell, Montana. W. T. Sarles, Wisconsin.
W. T. Williamson, Oregon. Frank Paschal, Texas.

COMMITTEE ON HYGIENE AND PUBLIC HEALTH.

W. N. Wishard, Indiana, Chairman.
A. R. Craig, Pennsylvania. G. B. Young, U. S. Public Health and Marine-Hospital Service.
J. D. Griffith, Missouri.

COMMITTEE ON CREDENTIALS.

H. B. Ellis, California, Chairman.
Horace Bonner, Ohio. D. C. Brown, Connecticut.
C. M. Nicholson, Missouri. Adam Guthrie, Arkansas.

On motion of Dr. Alexander R. Craig, Pennsylvania, seconded by Dr. C. E. Cantrell, Texas, the President was authorized to fill vacancies on reference committees.

Report of the General Secretary.

On motion of Dr. Wisner R. Townsend, New York, the Report of the General Secretary was accepted as printed in The Journal, May 23, page 1731, and referred to the Reference Committee on Reports of Officers.

Report of Board of Trustees.

Dr. Philip Mills Jones, California, moved that the Report of the Board of Trustees be accepted as printed in The Journal, May 23, and that it be referred to the Reference Committee on Reports of Officers. This was seconded and carried.

Report of Council on Medical Education.

REPORT POSTPONED.

The report of the Council on Medical Education was called for and postponed until the afternoon session.

Report of Committee on Medical Legislation.

On motion of Dr. Wisner R. Townsend, New York, duly seconded, the report of the Committee on Medical Legislation was accepted as printed in The Journal, May 23, and referred to the Reference Committee on Legislation and Political Action.

Report of Board of Public Instruction.

On motion of Dr. Philip Mills Jones, California, the report of the Board of Public Instruction was accepted as printed in The Journal, May 23, and referred to the Reference Committee on Hygiene and Public Health.

New Business.

New business being in order, Dr. Philip Mills Jones, California, presented the following resolution:

Resolved, That the first, third and fourth sentences of the report of the Board of Trustees, page 42 of official pamphlet, under head "National Organizer," be stricken from the report.

The resolution was discussed by Drs. T. J. Happel and Lewis S. McMurtry, after which Dr. Alexander R. Craig moved to amend that the explanation given by Dr. Happel be referred with the resolution to the Reference Committee on Reports of Officers, which amendment was accepted. The motion for the adoption of the resolution was then carried.

The Secretary read a commmunication from Congressman H. R. Burton regretting his inability to attend the meeting.

Supplementary Report by Board of Trustees.

Dr. T. J. Happel, Tennessee, presented a supplementary report on behalf of the Board of Trustees, which was referred to the Reference Committee on Reports of Officers.

On motion, the House of Delegates then adjourned until 2 p. m.

Second Meeting—Monday Afternoon, June 1

The House of Delegates reconvened at 2:10 p. m. and was called to order by the First Vice-President, Dr. Edwin Walker, Indiana.

The minutes of the previous meeting were read and approved.

Dr. H. Bert Ellis, Chairman, presented a further report of the Committee on Credentials.

Report of Committee on Organization.

Dr. J. N. McCormack, Kentucky, read the report of the Committee on Organization, which was referred to the Reference Committee on Reports of Officers.

Having made the official request at Atlantic City to be relieved of the arduous duties of my position at this meeting of the Association, the year's work was carefully planned in an effort to make it more profitable than any which had preceded it, and a fitting culmination of a labor which appeared to have been as highly appreciated by my friends everywhere as it has been congenial to me.

Attaching first importance to county society work, recognized early as the foundation for everything in the organization, and yet by far the most difficult part to keep vitalized, the most pressing need was for the completion of the postgraduate course of study. Dr. Blackburn already had this well on the way and the weekly outline soon running in The Journal was received with such favor that arrangements were made for its introduction into a number of societies. It is the only tangible, coherent plan which has ever been proposed for maintaining the interest in county societies, and the needs and possibilities for it are so great that no pains or expense should be spared for continuing and extending it. The director will cover all of this in his report so fully that I will only bear testimony to the time, labor and fidelity he has given to the work, and say that the small appropriation has only about met the actual expense he has incurred in conducting it.

My active field work began with an address before the American Pharmaceutical Association, which met in New York during the first week in September. In the spirit in which the invitation was extended, kindly, but frankly and fearlessly, I discussed the grave evils which had grown up in and between both professions, and which seriously threatened such a complete divorcement of the two as had already occurred in most of the European countries, a result which it was insisted, ought to be avoided in their own interests, and still more for the welfare of the people. Speaking for this Association, after urging in no uncertain terms that duplication, substitution, counter prescribing, and especially the treatment of venereal diseases, and consequent debauching of boys and young men and infection of pure women, and the traffic habit-producing nostrums of the dangerous and dishonest kinds should be eliminated as conditions of the good will and patronage so important to them and so convenient to us, and after explaining the propaganda we are conducting for universal return to the U. S. Pharmacopeia and National Formulary as a guide in prescription writing, I held out the olive branch to all pharmacists in this country, a growing class, who conduct their business with an honest regard for the public welfare.

As a means of fostering relations so much to be desired between vocations existing for a common purpose, the prevention and treatment of human ills, I suggested the appointment of standing committees from the two associations for conference and cooperation in hastening and guiding these reforms, and for the consideration of any other matters of mutual interest. For instance, I raised the question as to the practicability of such a joint committee, indicating, probably from official formulæ already well known, as substitutes for the insidious narcotic and alcoholic nostrums so dangerous to the public, standardized domestic remedies, which any pharmacist could prepare from pure chemicals and sell for much less than is now paid for these habit-producing things and still at a legitimate profit to himself.

These suggestions were received with much favor by the leading members, and I was told by many that it ought to mark the dawn of a new day for both of these professions and the people. The nostrum interests were as prompt to recognize the danger to them from such a coordination of these scientific forces as we were to see its advantages and, through the low-grade drug and medical journals, public press and by private pamphlets and circulars, the flood-gates were again opened on the Association and its work, and especially on me. Their main purpose seemed to be to arouse the antagonism of the retail druggists all over the country, so long the dupes of these manufacturers with so little profit to themselves, but no pains, expense or falsehood were spared to reach the public also. In advance of my meetings at every point, professional and other prominent people had their mails burdened with circulars misrepresenting the purposes of the meetings and slanders of me. I am sure that many honest druggists were misled, especially of the narrow stay-at-home class, of which we have an abundant counterpart in our own profession, but the effect on the public was excellent. It aroused an interest in the meetings and excited a curiosity about my personality which greatly increased both the attendance and the enthusiasm. I have treated these attacks with the contempt they deserved, feeling sure that in their own time and way the reputable pharmaceutical journals and organizations would set matters right with all of their following for whose opinion one would care. In concluding this part of my report I desire to emphasize the desirability of creating a strong conference committee from this Association for the purposes above indicated.

On the way back from New York an extended itinerary was made in West Virginia, reaching nearly every important place in the state, during which I spoke twice or thrice daily to medical and popular audiences, often traveling long distances between appointments. I spent four weeks in Indiana in the same way, then spoke by special invitation on the nostrum question before the National Woman's Christian Temperance Union at Nashville, which could not have been more of an inspiration to them than it was to me. A little later I spoke at Yale before the faculty and the Civic Federation of Connecticut, and then before the American Health League in New York. Then followed comprehensive itineraries in Maryland and Delaware, addresses before the legislatures of Virginia and Kentucky, and at special meetings in the latter state, Indiana and Ohio. The last three months have been given to similar itineraries in Louisiana, Mississippi and Pennsylvania, speaking two or three times every day, special invitation being often accepted for me to speak at the state universities, normal, industrial and high schools. Such full accounts of all this from the pens of others have appeared in The Journal that any detailed report of them here is unnecessary.

The interest and the enthusiasm of both the profession and the people in this movement, when its methods and purposes are made clear to them, have amply compensated me for the labor and privation incident to it. Governors, legislators, judges, bishops and other clergymen, the chancellors and teachers in universities and colleges, editors, club women, labor leaders, business men and others prominent in all the walks of life have taken an active part in the discussions and promised support for all the reforms proposed. Even my descriptions of the poverty which so cripples the usefulness of a large element of the profession in most sections of the country often appeared to excite a more sympathetic interest among laymen than with the prosperous members of the profession, as was true of many other features of the work.

In fact, the chief difficulty confronting us in all this reform is that most of our medical schools, always representing the least progressive activity of the profession, although their faculties have been composed of its leaders, have utterly failed to grasp the importance of teaching their students the fundamental principles involved in real medical organization. How the physician may legitimately obtain practice when his location has been selected, how he should conduct himself in relation to other physicians, how and when he should collect his accounts, why he should join the organization and keep up his studies, the evils and dangers to both him and the public of lodge and contract practice, the downright dishonesty of commissions and divisions of fees—these and similar problems, will at once confront him in the complex life which he is entering, as they did his teachers before they became prosperous, and on their proper determination his success and usefulness as a physician and citizen will depend, and yet in all the past students have been turned out without instruction on these subjects. Next to the campaign for a higher standard of entrance requirements this is the most important duty imposed by this House on the Council on Medical Education, and by far the most practical question which now confronts the profession.

I have been able to make a study of these matters in a way and to an extent which has never before been possible to any other man. These things should always have been so ground into every student who entered a medical school in the past as to have made them an essential part of his very being. Because it was not done a large part of the profession has always been not only in poverty, but in such discord as to make it impossible for it to secure or enforce effective legislation against quackery in most states, or adequately to protect the public health. Because of this neglect of duty on the part of the schools, or rather their failure to recognize it as a duty, I have been sent from state to state and from county to county to corral such doctors as might be induced to attend, after they had been molded and baked wrong, and have tried to teach the new gospel of harmony and cooperation as a substitute for the old methods of suspicion, evil speaking and ostracism.

Appeals have been made to me to drop this part of the campaign, that I would arouse antagonism from those high in authority of the Association by persisting in it. Knowing the reproach that this neglect has brought to the profession, and the disasters it has brought on the people of my country, one-third of the sickness and one-third of the deaths every year being due to diseases from which they ought to be protected, and from which they could and would be protected by a properly trained and harmonious profession, I would be false to myself and recreant to the confidence you have so long and generously reposed in me if I did not lift my voice in daily protest against the outrage done to every student, and to the people who are to depend on him in all of his after life, who does not have full opportunity for such a course in the future.

In the fierce struggle for existence only a few of our medical schools have ever adopted any reforms not forced on them by authority of law. Yale, Bellevue and a few other leading schools have recently made this course prominent. Many have as yet given no indication of an intention to do so. The Kentucky board, of which I am the executive officer, has already made a regulation to go into effect after this school year that no school whatever will be recognized which does not give this course. It is my purpose to take up this matter with other boards in such a way as may ultimately make such a regulation universal. In addition, retiring from active work, as is my purpose, I desire here and now to serve notice on my school friends, and most of them are my warm personal friends, that in the leisure which is before me it is my purpose to reach every student body and student in this country with iterated and reiterated advice to keep out of every medical college which does not provide for this instruction, asking them to throw off some of the frills of the course, if necessary, to make room for it.

It only remains for me to tell you that when I leave this platform my official connection with the Association is ended.

for eight years I have been almost a stranger to my home and my family that I might serve you. My constant regret has been that my capacity for service was not greater. I want to urge on you that this work is in its infancy, and that it must be continued year by year until the new generation of students, educated as I am pleading they shall be in these matters, have taken our places, if the profession is ever to obtain the full measure of its usefulness to itself and the people. As a business proposition, on a very conservative estimate, I am convinced that my work has added indirectly hundreds of thousands of dollars to your revenues, but this is the smallest part of it, as will one day be known. At least two carefully selected men should be put in the field, and others should be added from year to year until the benefactions of this work are felt, not only by every doctor, but at every hearthstone in this great country—that is, until the profession is really organized.

In conclusion I want to urge you to stand by your great file leader, Dr. Simmons, while he is conducting this reform work to its conclusion. After standing by his side for eight years ,often when the result was in doubt, I have been able to know him as no other man ever can. He will make mistakes of the head in the future as he has in the past, but no one will ever be so ready to recognize and right them as he will. I know him, and you can trust him. And to each of you, my co-laborers, and the thousands of my friends you represent in cities, towns and country districts, may I now paraphrase the lines of the Scottish bard and say:

"The monarch may forget the crown,
So lately placed upon his brow;
The bridegroom may forget the bride,
To whom so late he made his vow;
The mother may forget the babe,
So lately fondled on her knee;
But I remember thee, my friend,
And all that thou hast done for me."

Reports of Other Committees.

OPHTHALMIA NEONATORUM.

The report of the Committee on Ophthalmia Neonatorum was called for, and on motion of Dr. Wisner R. Townsend, New York, the report was accepted as printed in THE JOURNAL, May 23, and referred to the Reference Committee on Hygiene and Public Health.

COMMITTEE ON TROPICAL MEDICINE.

The Secretary read the report of the committee on the organization of a Section on Tropical Medicine, as printed in THE JOURNAL, May 23, and on motion the recommendation of the committee was accepted and the committee discharged.

COMMITTEE ON SCIENTIFIC RESEARCH.

The report of the Committee on Scientific Research (Dr. Alfred Stengel, Chairman), was called for, and on motion the report was accepted as printed in THE JOURNAL, May 23, and referred to the Board of Trustees.

COMMITTEE ON NOMENCLATURE AND CLASSIFICATION OF DISEASES.

On motion, the report of the Committee on Nomenclature and Classification of Diseases was accepted as printed in THE JOURNAL, May 23, and referred to the Reference Committee on Hygiene and Public Health.

COMMITTEE ON DAVIS MEMORIAL.

The report of the Committee on Davis Memorial was called for, and on motion was accepted as printed in THE JOURNAL, May 23, and referred to the Reference Committee on Miscellaneous Business.

Resolutions on Medical Practice Laws.

Under the head of "New Business," Dr. G. Wythe Cook, District of Columbia, presented the following preambles and resolution, which were referred to the Reference Committee on Medical Legislation:

WHEREAS, The time has arrived when a medical practice law applicable to all the states and territories both as to qualification and reciprocity is urgently needed; and,

WHEREAS, The endorsement of such a law by the American Medical Association will be a potent factor in securing its universal adoption; therefore be it

Resolved, By the House of Delegates of the American Medical Association that the Committee on Medical Legislation or a special committee of five be instructed to formulate a general medical practice law such as will be applicable alike to all the states and territories of the United States, the provisions of which shall be such that licenses granted in one state or territory will be recognized in any other state or territory and that the American Medical Association recommends such law when approved by the House of Delegates to the constituent associations.

Report of Council on Medical Education.

On motion of Dr. Wisner R. Townsend, New York, the report of the Council on Medical Education was accepted as printed in THE JOURNAL, May 9, page 1543, May 16, page 1637, and May 23, page 1728, and referred to the Reference Committee on Medical Education.

Postgraduate Study.

Dr. John H. Blackburn, Kentucky, Chairman, presented the Report on Course of Postgraduate Study (THE JOURNAL, May 23).

On motion, the report was referred to the Reference Committee on Reports of Officers.

On motion, the House of Delegates adjourned until Tuesday, 2 p. m.

First General Meeting—Tuesday, June 2

The Association met at the Auditorium at 10:30 a. m., and was called to order by the President, Dr. Joseph D. Bryant, New York.

President Bryant introduced Rev. Charles Edward Cheney, who offered the following invocation:

Oh, Almighty God, whose love is infinite, and whose mercy is everlasting, we bless thy holy name, that in thy compassion thou hast provided not only for the salvation of sinful souls, but for the relief of bodies suffering with disease and pain. On this great assembly of men, consecrated to the tender ministries of their fellows, we humbly pray that thy richest blessing may be sent. Give them, we beseech thee, hearts that are softened by patient love like thine and minds enlightened with wisdom, quick to discern and skilful to help in every hour of need. May all their counseling together be ordered by thy grace, that the cause of science may be advanced, that the noble vocation to which thou hast called them may be honored even more in the future than it has been in the past, and that generations yet to come may rise up to call thee blessed. We ask this and every needed gift of thy bounty in the name and for the sake of Jesus Christ, our Savior. Amen.

Address by President Bryant.

Dr. Joseph D. Bryant then addressed the meeting as follows:

I have the honor of welcoming you to the fifty-ninth annual session of the American Medical Association. It may be of interest for you to know that this organization, which but a few years ago numbered scarcely 5,000 members, now numbers 30,000 members and is rapidly increasing in number. When it is recalled that the entire medical profession of the country numbers about 120,000, then, indeed, you will realize the great significance of this body of medical men and the power for public good which lies in its possession.

The objects of the Association, as set forth in its Constitution, are as follows:

> The object of this Association shall be to promote the science and art of medicine. Contributing to this end, the Association shall endeavor to unite into one compact organization the medical profession of the United States for the purpose of fostering the growth and diffusion of medical knowledge, of promoting friendly intercourse among American physicians, of safeguarding the material interests of the medical profession, of elevating the standard of medical education, of securing the enactment and the enforcement of just medical laws, of enlightening and directing public opinion in regard to the broad problems of hygiene, and of representing to the world the practical accomplishments of scientific medicine.

All of these several things are being rapidly accomplished and the end thereof seems to be near at hand.

In conclusion, may I not request that in all public questions which relate to the enhancement of the public health and welfare the public shall implicitly trust us, we pledging ourselves to fulfil in all respects our obligations as citizens and professional men, which properly can be charged to our account.

Address of Welcome by Governor Deneen.

President Bryant then introduced the Hon. Charles S. Deneen, Governor of the State of Illinois, who was received with applause. He said:

Mr. President, Members of the American Medical Association, Ladies and Gentlemen:

The medical profession is, without doubt, of all professions, the one on which mankind comes nearest attaining unanimity of opinion. Everywhere health is deemed the greatest of earthly blessings. There is no profession in which men have displayed greater devotion to the general welfare of mankind. One of the typical illustrations of this devotion, which has passed into a proverb, has been illustrated in art and made the theme of poetry and fiction—that of the country physician, braving the midnight storm over the lonely country road to carry succor to some distant patient—and the interval lying between the devotion of this solitary rural practitioner and the organized effort which has built great hospitals, established and administered free dispensaries and waged combined warfare on the ills that flesh is heir to, is filled with illustrations of self-sacrifice of the members of your profession. I do not profess any unusual familiarity with the details of the progress of the science of medicine, but its triumphs have been so conspicuously the triumphs of mankind at large over its most inveterate enemy, disease, that all men join in the recognition of universal indebtedness to your profession.

The American Medical Association has been one of the most active agents in the advancement of the science of medicine and in the establishment and maintenance of the high code of ethics to which the members of the medical profession conform. The members of your profession are ever ready to protect the public against every form of professional deception. Your reward has come from the universal confidence in which the members of your profession are regarded in all parts of the country. No other man enjoys this confidence to the same degree as the family doctor. Moreover, we are indebted to you for the cultivation of the fraternal spirit which is essential to the attainment of the best results in any intellectual or scientific calling.

The professional literature which has been issued directly or indirectly by your Association, through its influence, has been one of the chief means of bringing the practitioner in the remote parts of the country into close touch with the achievements of the more favored brethren in the great cities and medical centers; and in that way has extended the good influence of your Association to every nook and corner of the country. The benefits which are conferred by the central association on outlying members of the profession and their communities have, in their turn, been reflected back on the Association and strengthened it in numbers and widened the field for the circulation of its literature, and brought it in touch with new conditions and new problems. No profession has entered with greater zeal into the working out of plans for the general good—work which has been in a private mercenary sense without reward, but which in a larger social sense has earned a just reward and is an ornament to your profession, which is famed for its devotion to the public welfare. With this phase of the work of the medical profession I have been brought into close contact during the administration of the office of governor of this state. The zeal displayed by the physicians who have accepted duties and responsibilities which they could not have been induced to assume on any other consideration than a public-spirited desire of serving their fellow-citizens has been one of the pleasantest incidents of my official experience. Nothing could exceed the care and thoroughness with which work of this character has been prosecuted. The assumption by the state of a wider range of responsibilities has furnished a larger field of usefulness to this branch of medical work. It has made large contributions toward the improvement of the administration of our hospitals for the insane and our institutions for the feeble-minded. It has steadfastly championed projects for the erection by the state of public sanatoria for the treatment of tuberculosis and the establishment of colonies for epileptics. The work of your profession has extended beyond the combating of disease namely, to its provisions for the maintenance of sanitary conditions and the dissemination of information respecting helpful and healthful modes of living. On your profession society has depended in its great crises when plague and pestilence have invaded populous communities. All over the world this has been the case. In Illinois we have made a concerted defense which has been organized and successfully maintained by the medical profession against threatened invasions of yellow fever. To administer to the sick, to ameliorate and assuage suffering, to narrow the domain of disease and extend the boundaries of life—such is the noble work to which your profession and your organization is devoted. It is a high compliment to the city of Chicago that a gathering of the American Medical Association in this city constitutes the home-coming of the organization. This, I am informed, is the permanent abiding place of your Association—where the active work of the society is carried on. The keenest interest, therefore, is felt in this city and state in the work and growth of your Association. That interest takes on a personal quality from the fact that the man to whom, more than to any other person, the early success of this Association is due, who has been styled the "father of the American Medical Association," was for many years a resident of this city.

I trust that your present labors may be as fruitful as those of the past would justify us in anticipating. In these times, when such great achievements in science are chronicled almost daily, the public interest has been aroused to an unusual degree in the work of gatherings like this. Your reports will be read by thousands of persons unlearned in your profession, who are profoundly interested in the benefits which its achievements are calculated to bestow on mankind. I trust, therefore, that your stay here may be pleasant as well as profitable; that along with the substantial professional benefits which this convention may confer on you, you may retain a pleasant remembrance of your stay in our great metropolis and our state.

Address of Welcome by Chicago Commissioner of Health.

The Mayor, the Hon. Frederick Busse, not being able to be present, he was represented by Dr. William A. Evans, whom President Bryant introduced. Dr. Evans said:

Mr. President, Members of the American Medical Association, Ladies and Gentlemen:

In welcoming you to Chicago I speak for its Mayor. In selecting one of your number to extend his welcome he would not have you infer that he and the people are not interested in your deliberations. It is a custom from which he does not vary to delegate these privileges to members of his cabinet. His recognition of the organization in medicine is probably known to most of you, and behind the welcome that he feels and for which he stands is the interest of more than 2,000,000 people. They are glad to have you here for many reasons.

In thousands of our homes there sit consumptives, hopefully watching investigations and deliberations which some day will mean life to them and their kind, praying God it may so speed that succor shall reach them before they sink. The victims of cancer add to this prayer. The mother, whose child has scarlet fever, is praying that you may make his scarlet fever go the way that diphtheria has gone. No discussion can do its best until there is rhythm with its surroundings. The laws of harmony are the laws of God. They apply to all things.

As you came to this city you traversed miles of marsh. Some of you may not know that this building stands on a once reed-covered marsh, and that the waters of Lake Michigan lapped its eastern border. I need not tell you that Death stalked the streets of the city, and disaster sat at its fireside. The people learned their lesson. They raised the city level; they blasted a $30,000,000 channel for drainage. They, the people, made this in health the Queen City of America, and I say that they are in harmony with you.

Our citizens will watch your deliberations with interest. Your history is rich with achievements, and your purposes are larger still. In the full white heat of fierce discussion you pour the raw, crude oil of thought; you burn out all dross that the truth may live and that men may be blessed.

Our people are interested in your ambitions, because they are potential for human happiness. They understand that you contemplate asking for Cabinet provision; that you appreciate and would have the government appreciate the economics of health as well as the economics of agriculture and of trade. They understand the basic relations of agriculture and of commerce to prosperity; but they still further understand that there can be no individual or national wealth without proper regard for national health. They know that this is the work of education and stimulation of public interest, and the vantage ground which is demanded for the proper appreciation of these economic factors is in the cabinet of the President of these United States.

And, now, gentlemen of the American Medical Association, and ladies of the same organization, having told you these things, I am sure that you appreciate that at the hands of the people of Chicago your welcome is assured.

Address by President of Illinois State Medical Society.

President Bryant introduced Dr. J. W. Pettit, President of the Illinois State Medical Society.

Mr. President, members of the American Medical Association, Ladies and Gentlemen:

When it was suggested that the American Medical Association be invited to meet in this city, the Illinois State Medical

Society asked the Chicago Medical Society for the privilege and honor of joining in that invitation and assisting in your entertainment; hence you are the guests of the medical profession of the State of Illinois, as well as that of the City of Chicago. In this great West we are men of action rather than words, as witness this great city, the growth of a lifetime of one man, and that man still living within its precincts, which, in addition to the evidence of material prosperity which is about you, has some of the best medical colleges, hospitals, medical teachers and practitioners to be found anywhere in the world.

We welcome you to this great city, an empire in itself, whose development has been no less marvelous than this great state in which it is located. Without further formality, as the official representative of more than 5,000 members of the Illinois State Medical Society, I bid you a cordial welcome and invite you to partake of our hospitality.

Address by President of Chicago Medical Society.

President Bryant introduced Dr. Henry B. Favill, President of the Chicago Medical Society.

Mr. President, Ladies and Gentlemen:

In the twenty-one years that have elapsed since the American Medical Association met in this city, that Association has undergone an astonishing development. Numerically it has become comprehensive and imposing; organically it has become efficient and powerful. Its strength lies in the unanimity of its composition, one coherent, connected body of co-operating units. It is an organization of high reciprocal service. The main body is maintained and made up of its individual units, but these units are energized and made potent by the influence and power of the central organization. It is an institution that invites loyalty, and loyalty dominates the organization.

The Chicago Medical Society is one of its component units which make up the grand body. In that space of time, twenty-one years, this organization has become a remarkable body; nearly 2,400 members, varied in interests and in conditions, heterogeneous, cosmopolitan, it is yet a united and aggressive body. The Chicago Medical Society takes a proper pride in its own being, but in its relation to the American Medical Association it takes a greater pride. It realizes that with respect to its own interests and activities its salvation lies within itself. But it realizes further that the fullest measure of power and usefulness for it is dependent on the national organization. The Chicago Medical Society is anxious to fulfil its entire function. Among other things, it is proud and gratified to be permitted this year to be the host of the American Medical Association. It realizes that for every effort put forth, that for all the plans taken to make this meeting a success, it will be rewarded tenfold in interest and spirit and comprehension of the magnificent purposes to which this organization is consecrated. We have another touch of feeling here in Chicago on this subject that is purely sentimental. Chicago is the home, and the Chicago Medical Society the seat of the daily activities of the man who struck the first blow toward the organization of the American Medical Association—our beloved, revered N. S. Davis. Nothing that we can say locally is adequate to express our feelings toward him, nor of his relation to the medical profession in its highest and broadest and deepest aspects.

Mr. President, Trustees, members of the American Medical Association, in behalf of the Chicago Medical Society it is my privilege to cordially and appreciatively extend to you its warmest welcome.

Announcement by Dr. M. L. Harris.

President Bryant introduced the Chairman of the Committee of Arrangements, Dr. M. L. Harris, who said:

It has been necessary to make one slight change in the program as printed, to this effect, that the Oration on Medicine by Dr. William S. Thayer, of Baltimore, and the Oration on State Medicine by Dr. Charles Harrington, of Boston, both of which are semi-public in character, and to which you are all invited, will be held this evening at Orchestra Hall at 7:30 o'clock.

The Oration on Surgery by Dr. George W. Crile of Cleveland, will be delivered this afternoon at 2 o'clock in the same hall.

The various entertainments which have been provided, and which have been announced in the little booklets, have been arranged with the expressed hope and expectation that you will all avail yourselves of them, and that there may be no hesitation in your going and coming and in your enjoyment of these entertainments, the committee has made a special arrangement to have this beautiful weather continue throughout the week.

President Burrell's Address.

Dr. Joseph D. Bryant then said:

It is now my great pleasure to introduce to you one whose constructive ability and discreet foresight make for higher rank and higher station of medicine—Dr. Herbert L. Burrell, of Boston, President-elect of the American Medical Association.

President Burrell then delivered his address, which appears on the first page of this issue of THE JOURNAL.

Society Proceedings

COMING MEETINGS.

Massachusetts Medical Society, Boston, June 9-10.
American Climatological Association, Boston, June 9-11.
Maine Medical Association, Bangor, June 10-11.
Indiana State Medical Association, French Lick, June 18-19.
Medical Society of New Jersey, Cape May, June 18-20.
Medical Society of State of North Carolina, Winston, June 16-19.
Michigan State Medical Society, Manistee, June 24-25.
State Medical Society of Wisconsin, Milwaukee, June 24-26.

ASSOCIATION OF AMERICAN PHYSICIANS.

Twenty-third Annual Meeting, held in Washington, D. C., May 12-13, 1908.

(Continued from page 1820.)

Physical Therapeutics.

DR. R. TAIT MCKENZIE, Philadelphia, said that exercise as a therapeutic agent should include all means by which the body may be acted on by movements, active or passive, performed by the patient himself, with or without the aid of apparatus; by the hand of an operator or by a machine devised to replace it. Active exercises include games, which preserve and cultivate the old co-ordinations of throwing, catching, striking, climbing, running and leaping, necessary for the complete development of the individual, difficult to get naturally under city conditions. These are subdivided into exercises of effort and of endurance. Contraindications to exercises of effort are arteriosclerosis and advanced age; valvular heart disease; active tuberculosis of lungs. Contraindications to exercises of endurance are anemia or cachexia from any cause. In sound young men exercises combining both, like boat racing, show no evil effects. He discussed active and passive movements, mechanotherapy. Under posture he called attention to the faults seen in the spine and arch of the foot, treatment consisting in stretching of contracted parts and development of normal muscular control. Under the division of heart and circulation he referred to Oertel's demonstration on himself and the possibility of climbing exercises accompanied by limitation of fluids and the drying out treatment for heart and obesity cases; also to the Schott treatment by carbonated baths. In obesity reduction the course is best undertaken up to the age of 40. Exercises should be trunk flexions and rotations, thigh abductions, flexions, etc., using the large muscle masses; hill climbing is useful when possible. Dr. McKenzie also considered the proper exercises for constipation, hernia, diseases of the nervous system, as neuralgia, headache, neurasthenia, infantile paralysis, stammering and tabes dorsalis. Exercise in its application to pathologic conditions must depend for success on accuracy of dose, persistence in following out course of treatment and careful observation during the progress of such a course.

Discussion on Therapeutics.

DR. HARE, Philadelphia, said that there is still a wide difference between experimental pharmacology and bedside practice; a large amount of success depends still on empiricism and the success of the older man over the younger one depends on his wider experience in empiricism. The extraordinary ability of the body to recover from the onslaughts of disease is hardly more than the ability to recover from the onslaughts of medication against disease. There is no doubt that psychotherapy is of great value in practice, but the danger is that it may be used to the exclusion of other remedial measures and he thinks that the paper on the phychic treatment of constipation illustrates this. It is more rational to use psychotherapy in connection with other remedial measure. It would be wrong to give up some of the methods of treatment that have proved good in the hands of our forbears until we can prove that others are worthy of replacing them.

Clinical Value of the Tests of von Pirquet and Calmette.

DRS. CHARLES L. GREENE and FRANK E. BURCH, St. Paul, reported experiments confined almost entirely to individuals about the age of eight years. In 21 of 83 patients in whom tuberculosis was known to be present they obtained one or both reactions. In 15 suspected tuberculosis cases eight gave positive reactions to one or both tests. They conclude that the reaction runs parallel to the old injection test inasmuch as the percentage of reactions closely approximates those found by the old method. The more vigorous reaction seemed to indicate more vigorous resistance. Late reaction was more common in arrested tuberculosis. Advanced cases of low resisting power gave slight reaction or none at all. Positive reactions in general clinical cases were so numerous as often times to be merely suggestive.

Comparison of the von Pirquet, Calmette and Moro Tuberculin Tests.

DRS. S. McC. HAMILL, HOWARD CHILDS CARPENTER and THOMAS A. COPE, Philadelphia, reviewed the technic pursued in the carrying out of the various tests, gave a description of the class of cases in which they are used, the results as applied to each class, a statement as to the relative merits of the three tests, a report on some experimental work on rabbits and a review of some points of interests from the literature of the subject. Practically all the patients were under eight years of age.

THE OCULAR TUBERCULIN REACTION—A WARNING.

DRS. M. J. ROSENAU and JOHN F. ANDERSON, Washington, D. C., called attention to some experiments made with this reaction—the facts being in brief, that the normal conjunctiva of the non-tuberculous individual may be sensitized by the instillation of the tuberculin. The reaction was marked by the rapidity with which it came on and the severity that characterized it. The lesson to be drawn was that such a reaction has no clinical significance; the tissue is able to respond so quickly to a poison or organism and shows how Nature's immunizing forces may be concentrated at the point most needed.

Tronchin.—A Sketch of His Life.

DR. F. C. SHATTUCK, Boston, read this paper, which would not admit of abstraction, but should be read in full.

Fatigue in School Children as Tested by the Ergograph.

DR. R. G. FREEMAN, New York, gave a description of different forms of the ergograph which have been used, and a review of previous work with the ergograph to test fatigue. He reviewed the work done some years ago by Dr. Christopher in Chicago, showing the fatigue coming on up to the noon hour; return after the noon recess, and increasing to the end of the school day. He thinks that the school day should be so modified that such fatigue should not result. He is of the opinion that the Crampton method—taking the blood pressure and pulse rapidity—is of no value in these tests. The ergograph is valuable in testing for fatigue, but in the public schools of New York he has not found such fatigue as described by Dr. Christopher in Chicago.

Ascitic Exudate in Typhoid Fever.

DR. ALEXANDER MCPHEDRAN, Toronto, said that the condition was first observed in 1905. He cited but the case of a woman, extremely ill, temperature 105 F., with marked bronchitis, who had had asthma for some years. The diagnosis was not cleared up for several days, when the disease proved to be typhoid fever, typical in every feature. The third week the abdomen became distended; remained soft, however, and was non-resistant, but fluid could be demonstrated in both flanks. The fluid persisted for three or four weeks and then the abdomen assumed the position of retraction. It represented one of a type of four cases seen since 1905. There was nothing to indicate any inflammatory process in the abdominal cavity. In one case there was considerable tension of the abdominal wall with much tenderness.

Pleural Reflexes.

DRS. JOSEPH A. CAPPS and D. D. LEWIS, Chicago, reported a comparative study of the effect on blood pressure of irrigating with various antiseptics the pleural cavities of healthy dogs and dogs with pleurisy, and a series of experiments to determine the effect on blood pressure of various irritants applied to the parietal pleura. They pointed out a year ago that certain irritants applied to the cavity cause fall in blood pressure and in the past year carried on a group of experiments in which irrigation was used. They took a series of dogs and washed out the pleural cavity with various fluids and antiseptic solutions and noted the effect on blood pressure. The amount of fluid generally used was about 50 cm. When an irritating fluid was employed it was washed out soon after with water. They conclude that even in the normal pleural cavity such irrigations may cause fall of blood pressure; in the case of pleurisy the reaction is more marked. The average fall of pressure was decidedly more marked in the case of pleurisy than in the normal animal. They believe that it is not altogether safe to use the solutions in the pleural cavity.

DISCUSSION.

DR. F. C. SHATTUCK, Boston, thinks that if Dr. Capps pursues further his interesting experiments perhaps he will determine the influence on the blood pressure of a solution of chlorinated soda, which has been used for many years by A. T. Cabot as an irrigant in operative cases of empyema and with admirable clinical results.

DR. S. J. MELTZER, New York, said stimulation of most sensory areas produces rise in blood pressure and he was a little surprised at the uniform fall in blood pressure that the writers report. In pleurisy one would expect the surface to be covered with fibrin so that it might not be stimulated. It would be interesting if this were true of the pleural cavity alone.

DR. J. A. CAPPS said that the method of tabulating and the limitation of time had prevented discussing the other phenomena. It is not true that the charts show a uniform fall of blood pressure; there are rises a number of times. It was intended only to show the possible danger of using the solution.

Splenic Anemia, Splenectomy, Recovery.

DR. MORRIS J. LEWIS, Philadelphia, reported the studies of the blood covering a period of seven years; four before and three following the operation. Slight enlargement of the spleen was first detected in 1900, with gradual subsequent increase in size, until 1904, the year of operation. There was moderate anemia of four years duration, followed by profuse hematemesis, and by melena, which occurred shortly after an examination that proved the blood to be practically normal, viz.: hemoglobin 90 per cent., red blood count, 5,000,000; white, 6,100. There was rapid fall in hemoglobin to 18 per cent. and red blood count to 1,100,000. There was history of indigestion of long standing. Gastroenterostomy was performed on the theory of possible gastric or duodenal ulcer, followed by a gradual gain in health, and practical cessation of melena. The question arose as to whether this gain was due to an accidentally performed Talma's operation brought about by adhesions, or to the enforced quiet of the stomach. Splenectomy was done in 1904, four months later. Accurate study of the effects of splenectomy on the blood changes were interfered with by inflammatory complications, viz.: pleural effusion, pericarditis and abscess in wound. High total leucocyte count immediately after operation, and during time of complications, reached 24,000 per cm. and rapidly fell during convalescence to average of 10,000, which average is still maintained. Eosinophilia immediately after operation was apparently modified by the complications, but reached its highest point, 1,300 per cm., two months later. Eosinophilia still persists three years after operation, viz.: 570 per cm. and with little change in the lymphocytes.

Dr. J. B. Herrick, Chicago, reported a case seen two years ago of a young man suffering from pneumonia in whom he noticed a large scar over the abdomen and asked the cause and was told that a surgeon had operated for tumor of the spleen. Dr. Ochsner, who did the operation, said that the organ had been removed with considerable difficulty because of adhesion and measured 22x16x8 cm. The diagnosis was primary splenomegalia. It added one to the list of patients who had survived the operation in splenic anemia.

Dr. A. D. Blackadder, Montreal, reported a similar case of splenic tumor in which the size of the spleen prevented the patient from taking much food because of pressure on the stomach. The case went to operation and a peculiarity of it was dense adhesions to the transverse colon. The patient made an uninterrupted recovery and several examinations after the operation showed the condition stated by the essayist.

Relation of Urobilinuria to Bile Pigment in Blood.

Drs. L. A. Conner and J. C. Roper, New York, attempted to throw some light on the source of the urinary urobilin. By the use in a large number of pathologic cases of a clinical method of determining the presence and amount of bile pigment in the blood serum they have been able to demonstrate that, in most cases at least, the existence of urobilin and its chromogen in the urine bears a direct and quantitative relation to the presence of bilirubin in the blood; and that in such cases no urobilin is demonstrable in the blood. An exception to this general rule has been found in certain pneumonias in which, although no bile pigment could be detected in the blood, urobilin was present in both the blood and urine. A possible explanation of this peculiarity is that there might be some relation between the pneumococcus and the production of the urobilin, or that it might come from the reduction of the pigment by the pneumococcus. They considered this of prognostic value if nothing else.

DISCUSSION.

Dr. James Ewing, New York, said in eclampsia there is marked increase of urobilin in the blood which, of course, could not be attributed to such origin; it had been attributed by some to disorder of the hepatic function.

Relapsing Fever With Demonstration of the Spirochete.

Dr. John W. Hunter and Dr. Thomas A. Cope, Philadelphia, presented a historical review of the disease; a résumé of the recent work done on the subject, including serum studies; means of transmission and recognition of different varieties; and the histories of their two cases. The first case was imported from Europe, and the second patient, who had lived in this country for over a year, acquired the disease through sleeping with the first patient after he had developed the fever. The organisms were demonstrated under the microscope.

Action of Purgatin on the Kidneys.

Dr. Franz Pfaff, Boston, described his results, positive and negative, in a series of experiments with the action of purgatin on animals. He also tried it on a parturient woman and she voided urine containing casts. In two others the quantity of albumin was increased; he warned strongly against using it in parturient women or patients with kidney disease. He had used it with dogs, cats and guinea-pigs; in rabbits it did not purge, but the urine contained albumin and the intestines and internal organs showed discoloration Two cats lost appetite, became weak and died from exhaustion; the urine showed but slight traces of albumin, but autopsy showed acute nephritis. In ten experiments on rabbits there was marked nephritis in nine with desquamation of epithelial cells; guinea-pigs showed the same effect. Three dogs did not show any deleterious smyptoms. The writer concludes that purgatin in certain animals does cause acute Bright's disease and death, and that in human beings it may cause kidney trouble and that it has no advantage over other purgatives and should not be used in clinical therapeutics.

(To be continued.)

ILLINOIS STATE MEDICAL SOCIETY.

Fifty-eighth Annual Meeting, held at Peoria, May 19-21, 1908.

The President, Dr. William L. Baum, Chicago, in the Chair.

An address of welcome was delivered by Hon. Thomas O'Connor, mayor of Peoria, which was responded to by President Baum.

The election of officers was reported in The Journal last week under Illinois News.

Psychopathology of Hysteria.

Dr. S. T. Robinson, Edwardsville, reviewed the two ideas generally held, (a) that of the entity or dominating soul of the plain man's belief, and (b) the coordination of the experimental psychologists. Mentioning some of the conclusions of psychic research investigators, he argued that the late evidence justifies the presumptive view that both elements enter into the personality. Thus he considers the controversy largely reconciled. There is, accordingly, a union which is both a great colonial empire, with many apparently independent centers, and an empire which is dominated by an indwelling soul. Next, he outlined the further division of this complex personality into the supraliminal and the subliminal spheres. These he discusses with special reference to the subliminal self and the threshold of consciousness. To these elements of the healthy mind he adds those of potential memorability, whereby facts are assimilated and stored in the subliminal self; selection, whereby the necessities of the moment are satisfied, and, finally, the law of psychic cohesiveness, the psychic analogue of gravity in the physical world.

Out of these psychologic elements, when they become unhealthy, he deduces the four main factors which underlie hysteria: (1) Psychic poverty; (2) lack of cohesiveness; (3) morbid selection; (4) undue permeability, or instability of the threshold. First, the author reviews the morbid subliminal life in a personality suffering from psychic poverty and lack of cohesiveness, which may let go of the life above, with, for instance, the production of anesthesias, and then he shows how the narrowed life above may be disastrously influenced from below with, for instance, evolution of the fixed idea. Suggestibility, absent-mindedness, alternation, and anesthesia, he mentions as the chief stigmata, so lucidly described by Janet, and concludes that as hypnotic suggestion is to the subliminal life, so hysteria is to the ordinary consciousnes. Genius and hysteria are set down as the two far-distant poles of human personality, the one produced by healthy cooperation of the subliminal and supraliminal faculties, while the other is due to the incoordinated uprush of subliminal impulse in a retracted field of supraliminal consciousness.

Arteriosclerosis.

Dr. Thomas J. Pitner, Jacksonville said that in considering this disease we are approaching the origin of many diseases. The study of this process throughout the body tends to broaden our views of the nature and causes of local diseases by showing how largely they are due to antecedent widespread arterial changes. Arteriosclerosis is a primary pathologic process. There are no morbid anatomic changes preceding it. The principal element of the disease is the fibrous proliferation of the internal coat. The other coats are involved, but not so generally and constantly. The artery becomes thickened and hardened with narrowing of the lumen and subsequent degeneration.

DISCUSSION.

Dr. F. Engelbrectson, Chicago, referred to the deposit of salts in the development of the osseous system, and asked what becomes of these salts after the bones are started. The system is not ready to eliminate them; they must be deposited somewhere; and he thinks the non-elimination of these salts produces many conditions, including arteriosclerosis.

Dr. William J. Butler, Chicago, thinks that cardiovascular disease dependent on syphilis, whether it be aortitis or arteriosclerosis, or a myocarditis in conjunction with it, is benefited by the use of potassium iodid or calomel.

Dr. Robert Preble, Chicago, referred to the uncertainty of prognosis in these cases. No matter what the manifestations may be, whether renal, cardiac, cerebrospinal, or gastrointestinal, the clinical picture is susceptible to sudden variations in character, and in advanced cases of arteriosclerosis, cerebral hemorrhage or thrombosis may suddenly develop. There may be some severe circulatory or gastrointestinal disturbance, thrombosis or embolism, and hence the great liability of these patients to sudden death.

Dr. Joseph L. Miller, Chicago, said that many of these cases are benefited by the use of iodids where the cause or causes are not of syphilitic origin.

Dr. C. D. Westcott, Chicago, said that the oculist not infrequently sees changes in the retinal vessels of these patients in the course of routine examinations for refraction. These changes are noted most commonly in middle life, in those who do not suspect any constitutional condition. When the oculist observes these changes in the retinal vessels, the patients should be referred to a good internist.

Diabetes.

Dr. James B. Herrick, Chicago, emphasized the importance of differentiating the clinical types of diabetes, and spoke of the value of other factors than the mere estimation of the amount of sugar in the urine in determining the severity of a given case. Reference was made to the principle of tolerance of carbohydrates and the practical application of the same treatment. He spoke of the necessity for carbohydrates and their place in warding off impending coma. He detailed the oatmeal diet of von Noorden, described the technic of its administration, and its importance when properly used as a therapeutic agent.

DISCUSSION.

Dr. Frank Billings, Chicago, from his experience with the oatmeal treatment of von Noorden, unreservedly agreed with all that Dr. Herrick said. Until more is known about the cause of diabetes, the management of patients suffering with the disease must be along lines that are thought best.

Dr. Herrick said that exercise, as a rule, does not harm a patient with diabetes. In fact, moderate exercise is rather beneficial, and in putting patients on this diet he has never restricted them as to exercise unless there has been some special reason for it. The oatmeal diet is a valuable therapeutic agent, yet he is firmly convinced that it is also attended with danger. He does not wish to convey the impression that it cures diabetes. He has, however, seen what he regards as very favorable results in children. He mentioned a little girl of twelve, whose life was prolonged a year and a half by this treatment with only traces of sugar in the urine at any time.

Food Values in the Nutrition of Children.

Dr. Josephine Milligan, Jacksonville, described the practical application of food values in every day practice in the nutrition of children from the age of nine months to puberty. In chronic disease the nutrients and calories should be kept at the full standard or slightly above. In convalescents the nutrients and calories should be increased. A convalescent child may demand even as much as an adult. When as much study and attention have been paid to the diet of children over nine months of age as have been expended on children under nine months, another great advance will have been accomplished, not only in life saving for children, but in better development and healthier bodies and mind for the adult.

Drug Treatment of Cardiovascular Conditions.

Dr. Joseph L. Miller, Chicago, emphasized the importance of an accurate knowledge of the action of drugs. Reference was made to drug nihilism. Our knowledge of pharmacology is based on the action of drugs on normal animals, and he pointed out the fallacies in applying this to the treatment of diseased conditions, using such agents as vasoconstrictors, digitalis, strophanthus, caffein, camphor, adrenalin. He pointed out the indications and dangers of using vasodilators, nitroglycerin, nitrites, amyl nitrite, etc.

Study of Diagnosis and Pathology Should Not Lessen Our Confidence in the Intelligent Use of Drugs.

Dr. Thomas W. Bath, Bloomington, as regards the routine drug treatment in diseases not specifically influenced by drugs, believed that many patients are over-drugged, especially by physicians who are somewhat too credulous in the claims of materia medica and drug circulars. Until the riddle has been solved with reference to those diseases which are still treated expectantly, physicians will best serve their patients not by giving placebos or suggestions or Eddyism, but by taking a sensible view of the case and in offering nature a helping hand when she desires support.

(To be continued.)

MONTANA STATE MEDICAL ASSOCIATION.

Thirtieth Annual Meeting, held at Butte, May 13-14, 1908.

The President, **Dr. W. W. Taylor**, Kalispell, in the Chair.

The association met in the council chamber of the city hall. The address of welcome was delivered by Joseph Corby, mayor of Butte.

The attendance was the largest in the history of the association, 72 registering out of a membership of 156, which, compared with the total of less than four hundred physicians in the state, offers a creditable percentage. It was decided to print a bulletin containing the minutes of the meeting so that those not in attendance would be informed as to what took place at the meeting.

Officers Elected.

The following officers were elected: President, Dr. I. D. Freund, Butte; vice-presidents, Drs. Rudolph Horsky, Helena; C. W. Jump, Bozeman, and E. F. Dodds, Missoula; secretary, Dr. Grace Wilson Cahoon, Butte; treasurer, Dr. C. T. Pigot, Butte; delegate to the American Medical Association, Dr. Donald Campbell, Butte; new councilors, Drs. M. D. Hoyt, Glasgow; J. F. Blair, Bozeman, and W. F. Cogswell, Livingston; old councilors retained, Drs. T. J. Murray, Butte; George W. King, Helena; E. W. Spottswood, Missoula; A. E. Williams, Havre; C. F. Tidyman, Ennis, and F. M. Flinn, Libby.

Missoula was chosen as the next place of meeting.

President's Address.

Dr. W. W. Taylor, Kalispell, said that the Montana State Medical Association is thirty years old, only fourteen years younger than is Montana itself, and about five years ago adopted the general plan of organization then established in most other states. All but a few of the counties of Montana are now represented in the county organizations and nearly one-half of the licensed physicians in the state are members of the state association. In a state with an area of more than 145,000 square miles and less than four hundred physicians it is a matter for congratulation that so many were able to attend the annual meeting; but the association, in order to justify its existence, must extend its benefits to those unable to attend. Among the objects for which the association should work are the enactment by the various states of a uniform medical practice act establishing a single examining board, in line with the recommendations of the Council on Legislation of the American Medical Association; the abolition of competitive bidding for the contract to furnish medical services to the poor, and the publication by the association of an annual bulletin.

Thrombophlebitis.

Dr. H. D. Kistler, Butte, considered the etiologic factors of thrombophlebitis under three heads: blood changes affecting coagulability; structural changes of the vessel wall, and simple retardation or stoppage of the blood current.

Spotted Fever.

Drs. H. T. Ricketts, Chicago, and **W. M. Chowning**, Minneapolis, who are investigating the spotted fever of the Bitter Root Valley, gave interesting talks of work they are doing.

Anencephalic Monster—Chorionepithelioma of the Testicle.

Dr. Samuel T. Orton, Anaconda, presented a specimen of an anencephalic monster, and gave a brief clinical history of a case of chorionepithelioma of the testicle.

Drainage of the Peritoneum in General Peritonitis.

DR. T. C. WITHERSPOON, Butte, described three cases in which a drain placed in the pelvic basin, through a lateral incision in the abdomen, such as is made for operation for appendicitis, caused obstruction of the bowel because of tight adhesions to the lateral pelvic wall in the route of the drain. Operation revealed, in each case, the peritoneum free from inflammation except at the point where the local purulent drain passed out of the pelvis. Dr. Witherspoon called attention to the fact that a glass tube, placed through a suprapubic puncture, amply drains the entire peritoneum when the patient is placed in the Fowler position, and that drains about the appendix stump should extend only to the head of the cecum and not below the pelvic brim.

Anatomy of the Nose and Its Accessory Sinuses.

DR. PETER POTTER, Butte, demonstrated, by means of drawings and specimens hardened in formalin, the anatomic relations of the nose and its accessory sinuses. He also gave a summary of the chief symptoms of diseases of the sinuses, indicated the differential points and outlined treatment methods.

Goiter.

DR. G. T. MCCULLOUGH, Missoula, described the treatment of goiter by parenchymatous injections of a solution of iodoform in sulphuric ether and olive oil, and reported three cases

New Method for Resecting the Liver.

DR. JACOB FRANK, Chicago, described an operation which he first performed in 1902, in experiments on sixteen dogs. For laceration of the liver or growth in a transverse direction, he incises the liver tissue on the upper surface, beginning at the healthy border on the hypochondriac side of the growth or injury, carrying the knife around the part to be removed to the border of the viscus on the epigastric side, in such manner that the incisions on the upper and under surfaces meet exactly, removing a wedge-shaped section, and leaving the liver with two flaps forming a trough. These two flaps are cut so as to fall into perfect coaptation and, after the hemorrhage is checked, are sutured together so as to re-establish the continuity of the liver surface. If a portion of the liver is to be removed in a longitudinal direction to the viscus, a wedge-shaped portion of the entire thickness of the liver is first cut out. The two broad raw surfaces left by the excision of wedge-shaped pieces are converted into troughs, each having two flaps to be approximated. When the operation is completed, the raw surfaces of the original V left are transformed into smooth, continuous liver tissue, assuming the form of liver borders, while the V space persists as a notch. This method facilitates suturing and makes the arrest of hemorrhage easy. Not enough blood was lost to produce shock or anemia in any of the dogs. The operation has been performed on five patients, of whom four recovered and one died.

Mistaken Conclusions from Blood Examinations in Children.

DR. E. B. PATTERSON, Phillipsburg, reported two cases in children, one of which presented many of the symptoms of acute lymphatic leukemia, while the other was originally diagnosed as an intussusception. Both proved to be cases of acute otitis media. Dr. Patterson recommended the examination of the ears in all doubtful or obscure cases in which children are patients.

Asexualization for the Prevention of Idiocy.

DR. AUSTIN L. WARD, Boulder, presented a paper advocating the asexualization of idiots and imbeciles under supervision of a medical board chosen for the purpose from among those who are peculiarly qualified as judges. He said that this, like vaccination, should be authorized by legislative action and enforced by those in authority.

Chart of Optotypes.

DR. CARL SCHULIN, Billings, demonstrated a new chart of optotypes. He believes that anomalies of refraction do not produce, but only aggravate, disease.

Perverted Metabolism.

DR. C. E. RIGGS, St. Paul, read a paper on "Perverted Metabolism, Its Relation to Certain Neuroses and Psychoses."

WEST VIRGINIA STATE MEDICAL ASSOCIATION.

Forty-first Annual Meeting, held at Clarksburg, May 13-15, 1908.

The President, DR. WILLIAM W. GOLDEN, Elkins, in the Chair.

The House of Delegates met at 8 p. m. May 12. The reports of the various committees and delegates to state and national associations were received.

The Committee on Medical Defense made an elaborate report, recommending that the association adopt, for protection of its members from malpractice suits, measures similar to those of New York, Pennsylvania, and other societies. After much discussion, it was decided to postpone definite action on this until next year.

A committee was appointed to revise the constitution and by-laws, as recommended by the secretary.

The eye, ear, nose and throat men were granted permission to organize a section to hold separate meetings during the session of the state association.

Officers Elected.

The following officers were elected: President, Dr. V. T. Churchman, Charleston; vice-presidents, Drs. R. J. Reed, Wheeling, R. H. Powell, Grafton, and H. D. Hatfield, Eckman; secretary, Dr. T. W. Moore, Huntington; treasurer, Dr. T. L. Barber, Charleston. Council: First District, Dr. H. P. Linsz, Wheeling; Second District, Dr. R. E. Venning, Charles Town; Third District, Dr. P. A. Haley, Charleston; Fourth District, Dr. T. P. McGuire, Parkersburg; Fifth District, Dr. J. B. Kirk, Elkhorn; Sixth District, Dr. J. E. Rader, Huntington.

The time of meeting was changed to October. Elkins was selected as the next place of meeting.

The general meeting was called to order Wednesday, May 13, 10 a. m., by Dr. W. W. Golden.

The addresses of welcome were delivered by Hon. E. J. Wood, mayor of Clarksburg, and Dr. D. P. Morgan, Clarksburg. Response by Dr. W. C. McGuire, Huntington.

The president-elect, Dr. Fleming Howell, Clarksburg, delivered the annual presidential address and took the chair.

The Mission of the Physician—Oration in Medicine.

DR. G. D. LIND, New Richmond, reviewed the history of medicine, showing that progress in medical science has been greater than in any other line except general science and invention; in fact, the physician has in these days become a scientist and an inventor. There is yet much to be accomplished. The physician needs government aid and financial help. When this is forthcoming it will be only a question of time till all infectious diseases will be under complete control. The millionaire was appealed to for aid in medical research, and the younger men in the profession for the consecration of their energies to medical progress. More special writers in the laboratory are needed. The physician should be better educated and all physicians should be teachers. Instruction in business methods should be a part of the curriculum of colleges. Many great men have accomplished much important work after the age of 70. If physicians could, and in many cases they do, prolong life for only a year or two, the sum total of human achievement would be inestimable.

Complication and Sequelæ of Nervous System in Influenza.

DR. J. R. BLOSS, Huntington, called attention to the relative frequency of nervous complications, especially the minor ones. He stated that they are due to the disturbances of nutrition, high fever, and toxic changes in the blood brought about by the invading bacteria. He enumerated the minor complications and sequelæ; called attention particularly to the paralysis of nuclei and nerves, giving "grouped paralyses"; believed that special care should be exercised in giving anesthetics soon after influenzal infection, because of the impairment of the cardiac, respiratory and vasomotor nerves; stated that while influenza may initiate neurasthenia, it will generally be found that there have been previous symptoms; the types do not differ from the ordinary ones. His experience in a state asylum has been that patients suffering with psychoses of the depressed types are more apt to relapse or have their existing disease exaggerated by influenza than are the agitated cases. The prognosis is favorable in the majority of cases.

Protection from Malpractice Suits.

Dr. H. G. Nicholson, Charleston, advocated raising the standard of the profession, both morally and educationally, thus eliminating one cause of these suits. He also advocated the same in regard to the lawyer, thus eliminating the shyster, who is probably indirectly at the bottom of 80 per cent. of these suits. As a material aid, he advocates the adoption by the society of some such plan as has been adopted by New York, Pennsylvania, Wisconsin, and other states, assessing each member, say, $1.00. The county society should investigate each suit, and if, in their opinion, the suit should be defended by the society the latter should take the proper steps to do so.

Rheumatism in Children.

Dr. S. L. Jepson, Wheeling, spoke of advances in our knowledge of joint affections. Several are now differentiated which were formerly classed as rheumatic. He discussed briefly the etiology of acute rheumatism, regarding it as probably of germ origin, but not yet traceable to a particular germ; it is also dependent on heredity, climatic changes, bad hygiene, exposure, etc., as contributing factors in causation. He showed that rheumatism in children differs in many respects from that in the adult. Its slower invasion, lower temperature, absence of perspiration, mildness or absence of joint involvement, more frequent cardiac disease, skin eruptions, nodules on joints and tendons, early and serious anemia, mark the difference. He spoke of the relation of tonsillitis and chorea to rheumatism, and thought that in many cases there may be a common cause. Favors full doses of salicylates early as possible, with alkalies, small blisters or other application to the joint, with fixation; the use of iron early in convalescence; iodid, etc., for a long period in endocarditis, in the hope of preventing chronic valvular disease. He emphasized the importance of absolute rest, both in the acute stage and during convalescence, and if cardiac disease exists, for weeks after all fever has gone. He referred to constriction hyperemia and to the serum treatment.

Translocation of the Testicles.

Dr. W. W. Golden, Elkins, reported a case of a young man who lost his entire scrotum by an injury. The testicles and cords were uninjured. By an operation similar to that of herniotomy Golden made a permanent lodging place for the testicles within the pelvis outside of the peritoneum. Months after the operation the patient reported perfect erections and emissions and freedom from all discomfort on account of the new location of the testicles.

The following papers were also read:

"Diabetes Mellitus," by Dr. A. J. Kemper, West Milford; "Treatment of Typhoid Fever," by Dr. C. F. Arnett, Clarksburg; "A Tubercular Sanitarium for West Virginia," by Dr. C. A. MacQueen, Charleston; "Pathology, Symptomatology, Diagnosis and General Treatment of Influenza," by Dr. J. W. Moore, Charleston; "Complication and Sequelæ of Nose, Throat and Ear, Including Sinuses, in Influenza," by Dr. T. W. Moore, Huntington; "Functions of the Internal Secretions," by Dr. John N. Simpson, Morgantown; "Dyspnea and Cyanosis," by Dr. L. D. Wilson, Wheeling; oration in surgery, "Some of the Achievements of Modern Surgery," by Dr. Frank LeMoyne Hupp, Wheeling; "The Diagnosis and Treatment of Acute Suppurative Peritonitis," by Dr. Richard E. Venning, Charles Town; "Treatment of General Septic Peritonitis," by Dr. Robert J. Reed, Wheeling; "A Plea for Liberal Drainage in Abdominal and Pelvic Operations," by Dr. C. R. Ogden, Clarksburg; "Non-surgical Management of Gallstone Disease," by Dr. C. R. Enslow, Huntington; Surgical Treatment of Gallstone Disease," by Dr. J. E. Cannaday, Charleston; "Surgical Treatment of Goiter," by Dr. J. Schwinn, Wheeling; "Clinical Significance of Disease of Thymus," by Dr. J. R. Hersey, Wheeling; "The Medical Profession Losing Faith in the Supposed Virtues of Alcohol," by Dr. A. S. Grimm, St. Marys; "Penalty of Death," by Dr. C. H. Maxwell, Morgantown; "Report of Two Cases of Erythromelalgia," by Dr. Wm. Neill, Charles Town; "Experiences of a Mine Physician," by Dr. T. S. Nutter, Clarksburg; "Fractures," by Dr. A. P. Butt, Albert; "A Case of Sarcoma of the Uterus in a 12-Year-Old Girl," by Dr. John T. Thornton, Wheeling.

Dr. C. A. Wingerter, Wheeling, delivered the public address on the subject, "The Mutual Relations of Physician an People."

A Society of County Secretaries was organized, with Dr. C A. Wingerter, chairman, and Dr. F. T. Haught, Morgantown, secretary.

Medical Education and State Boards of Registration

COMING EXAMINATIONS.

Ohio State Board of Medical Registration and Examination, Columbus, June 8-10. Secretary, Dr. George H. Matson, State House, Columbus.

Michigan State Board of Registration in Medicine, University Bldg., Ann Arbor, June 9. Secretary, Dr. B. D. Harison, 504 Washington Arcade, Detroit.

South Carolina Homeopathic Medical Examining Board, Columbia, June 9. Secretary, Dr. J. A. Whitman, Beaufort.

Kansas State Board of Medical Registration and Examination, Kansas City, June 9. Secretary, Dr. F. P. Cook, Clay Center.

South Carolina State Board of Medical Examiners, Columbia, June 9-11. Secretary, Dr. W. M. Lester, Columbia.

Minnesota State Board of Medical Examiners, Old Capitol, St. Paul, June 10-12. Secretary, Dr. W. S. Fullerton, 217 American National Bank Bldg., St. Paul.

Wyoming Board of Medical Examiners, State Capitol, Cheyenne, June 10-12. Secretary, Dr. S. B. Miller, Laramie, Wyo.

Oklahoma State Board of Health, Oklahoma City, June 16-18. Secretary, Dr. J. C. Mahr, Shawnee.

Texas State Board of Medical Examiners, Waco, June 16. Secretary, Dr. G. B. Foscue, Waco.

Maryland Homeopathic Board of Medical Examiners, Baltimore, June 16. Secretary, Dr. Joseph S. Garrison, 848 W. North Ave., Baltimore.

New Jersey State Board of Medical Examiners, State House, Trenton, June 16-17. Secretary, Dr. J. W. Bennett, Long Branch.

Delaware State Medical Examining Board, Dover, June 16-18, and by the Homeopathic Board at Wilmington on same date. Secretary of the Medical Council, Dr. P. W. Tomlinson, Wilmington.

Maryland Board of Medical Examiners, Lehman's Hall, Baltimore, June 16-19. Secretary, Dr. J. McP. Scott, Hagerstown, Md.

Virginia State Medical Examining Board, Richmond, June 23-26. Secretary, Dr. R. S. Martin, Stuart.

Pennsylvania State Medical Examining Boards, June 23-26. The Regular Board meets at Philadelphia and Pittsburg; the Homeopathic at Philadelphia, and the Eclectic at Harrisburg. All applications must be filed with Dr. N. C. Schaeffer, Secrtary of Medical Council, Harrisburg.

New York State Board of Medical Examiners, Albany, June 23-26. Chief of Examinations Division, Charles F. Wheelock, Albany.

COUNCIL ON MEDICAL EDUCATION OF THE AMERICAN MEDICAL ASSOCIATION.

Fourth Annual Conference, held at Chicago, April 13 1908.

(Continued from page 1838.)

Character of the Medical License Examination.

Dr. J. W. Bennett, secretary of the State Board of Medical Examiners of New Jersey, Long Branch.—This is an important subject at the present time, and one that should be fully considered, as many state boards seem to have lost sight of the original reason for their establishment.

The various states all have boards of medical examiners, the majority of which were created since 1890. The creation of these boards of medical examiners was made necessary by the character of the medical colleges which were rapidly springing up throughout the country, most of which were poorly equipped, gave virtually no course of instruction, had no laboratory facilities and graduated the students after two courses of lectures of five months or less each.

Some of these colleges were established solely for the pecuniary advantage of those connected with them, and little regard was paid to the actual teaching of medicine. Finally, the licensing power was placed in the hands of boards of medical examiners, who were to examine all applicants before granting them licenses to practice medicine.

Unfortunately, the multiplicity of states resulted in a great variety of laws. If there was a uniformity of practice acts there would be less difficulty in arranging for reciprocity, although even where the laws are virtually the same, there are wide differences in the enforcement of them.

In many states the boards were given authority also to determine what medical colleges were reputable. For that reason many colleges have been compelled to elevate their standards, to lengthen their sessions and to give four years of instruction. Others were compelled to quit business.

To my mind the examination of the applicant is of less importance than the examination of the college which he attended. Again, the questions asked should be such as to compel the applicant to use his reasoning powers and not such as could be answered after a short course of cramming from quiz-compends. The examination should be of such character as to bring out what real knowledge the applicant has of the human economy and of the science of medicine rather than what superficial knowledge he can obtain from a mere conning of questions and answers.

My own state, New Jersey, has, I believe, an excellent medical law, and it is the aim of our board to see that it is well administered. We admit no applicant to the licensing examination unless he first presents certificates of good moral character from two physicians or from his county medical society, and a letter from physicians regularly licensed in the state of New Jersey, recommending that a license be granted him. He must have a certificate from the state superintendent of public instruction certifying that his academic qualifications are at least the equivalent of a four-year graded high school course, and must show evidence of attendance of at least four years of seven months each in an approved medical college. He must, with his application, send in a recent photograph of himself, on the reverse side of which must appear his signature and the seal of the notary public, or other officer authorized to take acknowledgments, who certifies that the applicant's signature was written in his presence and that the photograph is a reasonable likeness of the applicant.

No medical college is approved by the New Jersey board unless it requires of every matriculant the preliminary training required by the New Jersey law. It must have a sufficient teaching force, give the required hours of teaching and have proper laboratory and hospital facilities. It must be located in a city sufficiently large to furnish ample clinical facilities, and finally, must adhere strictly to published requirements.

Let me repeat, to my mind the proper supervision and inspection of the medical college is of greater importance than the examination of the graduate by means of a necessarily limited number of questions, the ability to answer which may have been acquired by a system of quizzing and which do not necessarily prove the applicant's actual knowledge of the science of medicine.

Character of the Medical License Examination.

W. T. Councilman, M.D., Professor of Pathology, Harvard Medical School, Boston.—The state examining board stands between the medical schools and the public. It determines whether a candidate is a sufficiently trained man and whether fit to practice medicine. It should determine the fitness of medical schools and whether the training there is of the best character. It is concerned indirectly with preliminary medical education, because the efficiency of medical schools depends to a great extent on the character and preliminary training of the men whom the schools attempt to train further. It seems to me that the requirements of training preliminary to the study of medicine which are being demanded now everywhere by the medical schools are essentially for the protection of the individual who is entering on the study of medicine. We know that the untrained man who attempts to pass through the best of the modern medical schools is very seriously handicapped. Even among the A.B. men who come to us at Harvard, those who have not had a training in the methods of science are so seriously handicapped that they sometimes fail. The examining board determines the fitness of the candidate by an examination. Let us review briefly the demands of modern medicine and see how adequate the examinations now given are for this purpose.

ADVANCES IN THIRTY YEARS.

In the last thirty years the advance in medical knowledge and medical art has been phenomenal. Thirty years seems to be a convenient period in marking the change between the old medicine and the new. Thirty years ago I received a diploma which enabled me to offer my professional services to the public after hearing a five months' course of medical lectures twice repeated. Thirty years ago there was given the first definite demonstration that a micro-organism was the cause of an infectious disease. Bacteriology as a definite branch of medical science may be said to have begun at this period. This advance has been due mainly to the recognition of the importance of the methods of science in medicine. Medicine has now advanced far on the path followed by the sciences, and the art of medicine is now based on knowledge, which in many cases enables us to predict, instead of on conjecture. This advance in medicine has been followed all over the world, and more strikingly in America than elsewhere, by an advance in medical teaching. The change in the character of the medical schools has been due largely to the work of the examining boards, but it would be wrong to say that this pressure exerted from without has been the chief agency.

COLLEGES SHOULD HAVE MUCH CREDIT FOR ADVANCES.

I firmly believe that the development has been due more to the forces acting from within the school than to pressure from without, and it should make us proud that the medical schools throughout the land have responded so nobly to the advance in medicine, and have striven to raise the standard in education in spite of the fact that in many cases this has involved very serious pecuniary loss to the schools. Not only has the sum of knowledge which is to be imparted to the students become much greater, but it has been recognized that the students must know the methods by which knowledge is acquired and must be exercised in the use of these methods. To this end laboratories have been erected, and laboratory instruction has been so advanced that now it may be said that except in a very few schools the laboratory instruction, formerly so far behind, is now ahead of the clinical teaching. With this there has also come a closer union between the clinic and the laboratory. It is recognized that the clinical teaching must be of essentially the same character as the laboratory teaching. In both the clinic and the laboratory the student must acquire and must constantly practice the methods of acquiring knowledge.

MORE METHODS OF ACQUIRING KNOWLEDGE.

As one looks over the situation the most striking thing in medicine and in surgery is the multiplication of these methods and the reliance on them. There is no longer conjecture as to whether the patient has a certain infectious disease, or whether there is a certain condition of the blood, or whether digestion is taking place in a proper manner, but the problem thus presented by the sick individual can be definitely solved. That the clinics in the medical schools have not advanced in medical teaching in equal ratio with the laboratories is due not to the failure of the recognition of the essentials of teaching, but to the peculiarities of the situation in that the medical schools, as a rule, have no control over the hospital clinics. They can not place men who are especially fitted for the work in clinical positions, but must accept men who hold these positions whether or no these men are capable. I think that the assertion which I have made of the importance of methods in medical practice and that the power to relieve in medicine must be founded on the knowledge of the processes of disease which are obtained by the skilful use of our senses and by methods which represent an extension of the senses will be accepted by everyone. It is this reliance on knowledge which places medicine in the domain of science.

TESTS OF EXAMINING BOARDS.

How is this knowledge tested by the Examining Boards? I have just looked through the character of the examinations given by the examining boards, and the rules which govern the examination. The multiplicity of the rules to avoid cheating on the part of the candidates and to avoid the exercise of favoritism on the part of the examining boards themselves would lead one to take a very pessimistic view of human nature, and a view which it seems to me is hardly justifiable, but on that point I am not qualified to speak. The examinations themselves are not adequate. They are adequate probably as far as purely written examinations can be made so. The questions as a rule are well selected and the proper answering of the questions demands the possession of a good deal of information on the part of the candidate.

LIMITATIONS OF THE WRITTEN EXAMINATION.

It is very difficult, however, to frame questions so that the answers will show not only information but knowledge on the part of the candidate. I find, on giving the questions for the written part of my examination year after year, that there are a comparatively small number of questions which can be asked. Certain branches of a subject impress one as being of greater importance and the tendency is, in succeeding years, to give certainly some questions on these branches. There is further a great difficulty in correctly estimating the value of an answer. After going over a number of examination books one acquires a rather vague idea as to the correct answer of almost any question. The information which a student must possess to pass a written examination can be easily acquired. I believe that it could be possible by the study of quiz compends made from the questions given by the state examining boards for a candidate in the course of six months of directed study to pass practically any examination of this character. The success of certain medical schools in which the instruction is only in the framing of suitable answers to certain questions has demonstrated this.

WHAT THE EXAMINATION SHOULD REVEAL.

The examination should reveal very much more than information. It should reveal that the student is capable of acquiring knowledge by methods and that he has the power of using the knowledge which he has so acquired. To this end the main part of the examination should be made practical. I know that at first consideration of this certain difficulties in the way of a practical examination of the candidates will present themselves. In the first place it will be seen that the examinations must cover a greater period of time. Not a day, but possibly a week must be devoted to the examination. This is the first difficulty. The second difficulty is that the examination can not be so impersonal as the written examination. I believe, however, that this is an advantage instead of a disadvantage. I can not think so badly of human nature as to believe that any considerable degree of favoritism towards a certain candidate would be exerted on the part of the examiners.

PRACTICAL METHODS SIMPLE.

It is perfectly simple to give a practical examination in anatomy, physiology, bacteriology, pathology, medical chemistry, and in clinical laboratory methods. In any city where examinations are held there are laboratories which at proper times would be gladly placed at the service of the medical examiners. It is a very easy matter to have a student show what he really knows in anatomy by having him make dissections or have him describe dissections and preparations which are given him. It is perfectly possible to have him show that he is capable of making simple demonstrations in physiology. In pathology, bacteriology, in pharmacology, and in medical chemistry the practical examination can be easily arranged. In pathology the candidate could be required to recognize the lesions in the organs and the microscopical changes to which the gross lesions are due. I do not think that a man should be allowed to practice medicine unless he can demonstrate the tubercle bacillus in a suspected fluid, and make the Widal reaction for typhoid fever. He should demonstrate that he is capable of making a blood examination, of counting the corpuscles, differentiating them, etc.

THE PRACTICAL CLINICAL EXAMINATION.

The practical clinical examination could also be made without difficulty. In every city there are sufficient ambulant patients connected with the dispensaries who could be used for the physical examination of the thorax, heart, abdomen, etc. In certain branches such as obstetrics and gynecology it would hardly be possible to have a practical examination, except possibly on the manikin for obstetrics. With the inception of the practical examination methods of conducting it in the best way will undoubtedly be found. The examination should not involve complicated or unusual methods. It should in short be no more than we are warranted in believing the student to be proficient in from the catalogues of the various schools. All school catalogues state with more or less definiteness their ability to give and that they do give the training which such an examination demands.

BENEFITS OF THE PRACTICAL EXAMINATION.

In addition to the better protection of the public and the elimination of unfit men the practical examination would force medical schools to the use of practical and laboratory methods of teaching in the clinic. It would moreover do away with the troubles which arise from the presence of the various sects in medicine. I believe that any man who is skilled in the methods of medical science will know the importance of knowledge derived from such methods; that he will base his procedures on the knowledge of disease which he acquires from the investigation of the patient, and that he is a man to be trusted no matter what he conceives it to his advantage to call himself. It would probably not be possible or desirable to have the practical examination the sole test, but it should count for at least 75 per cent.

PRACTICAL EXAMINATION NOT AN EXPERIMENT.

There is nothing new in the idea. It is this form of examination essentially to which the candidate for license to practice is subjected in England and on the continent and no difficulties in the way of carrying it out have been found there. The first state which substitutes this character of examination for the one now in vogue, no matter what its rules as to the stated requirements of the candidate, will take the first place, and will do most in the promotion of medical knowledge and medical education.

Character of the Medical License Examination.

F. F. Wesbrook, M.D., Dean of the College of Medicine and Surgery in the University of Minnesota, Minneapolis.—I was glad to know that the character of the state medical license examination was to receive discussion to-day because I had the feeling that much could be done in the way of improving present methods and am optimistic of the success of any efforts made by this Council in that direction.

THIS THE DAY OF LABORATORY METHODS.

Referring to the "laboratory method" President Eliot stated that about ninety per cent. of the teaching done at the present day in University life is by the laboratory method, which, of course, includes hospital teaching. This indicates that didactic or lecture methods are things of the past and leads one to ask whether the methods of examination usually employed by state boards are as up-to-date as the teaching methods employed by the colleges.

The first speaker stated that the examination of credentials is one of the most important functions of the various examining boards. When teaching throughout the United States is brought up to the standard suggested by this Council and yearly reports are published showing the standard in each institution, the work of the state boards in regard to credentials will be much lightened.

HIGHER PRELIMINARY CREDENTIALS.

If the function of examining boards is to include the judging of higher preliminary education, it might be wise for each board to arrange for an advisory committee to consist of men not engaged in the teaching or practice of medicine, but who are authorities in general education. If it is wise to insist upon two years of collegiate training before entry into the study of medicine, then it is wise, in my opinion, that the judgment on that premedical work be given by men not connected with any medical institution.

Again in judging medical qualifications methods of state board examinations will doubtless need improving just as carefully as methods of teaching. Doubtless, all of us who are teachers, realize the truth of what Professor Councilman has said, namely, that it is difficult to find out what a man knows by the method of written examinations. I take it that what is desired by an examining board is not to find out how little but how much a man knows, and the examinations are not so much for the protection of the profession as for the protection of the public.

PRACTICAL LICENSE EXAMINATIONS.

If one has a supply of microscopes and materials for macroscopic and microscopic examination, as pus, specimens of tumors, dissections, bacteriologic cultures, chemical reactions in test tubes, and other apparatus and materials used in instruction in the primary branches, it will be easy to determine whether the applicant has been coached by the "question and answer" method or has actually been trained in practical work. It will be easy to differentiate quickly between the man who really knows and the man who has been merely told or who has read. This same principle could also be applied to clinical medicine. If the applicant were required to examine a patient he would get an opportunity to show his knowledge of methods, his powers of observation and his ability to draw logical conclusions.

These are suggestions for the future and are not made to criticise state boards, for in many localities these boards have been and are still the leaders in furthering medical education. This is especially the case in Minnesota where the Board was the first to require a three-year's graded course in medicine and at a time, too, when such a course was provided by only one institution in the country.

COMPETENT EXAMINERS NEEDED.

Examiners are often at a disadvantage, through the fact that most of them have had no initial training as professional examiners and yet they are called upon to determine a man's qualifications to practice medicine. Many by service on the Board become skilled professional examiners, but in Minnesota the difficulty is that they can not hold office for more than six years when they must be replaced by others. In order to become competent, examiners must be trained in teaching institutions where they have to examine students from time to time, or they must receive their training by prolonged experience on examining boards, or they must be born such, as I suppose may be the case. The provision which obtains in many states that no member of an examining board can have connection with any of the teaching institutions makes it difficult to obtain competent professional examiners.

EXAMINERS SHOULD BE BETTER PAID.

In Minnesota, the expenses of the board including the secretary's salary, must be paid out of the fees taken in by the board. These fees amount to $10 for each examination, half being returned if the applicant does not pass the examination. Under such circumstances, there is not sufficient income to carry the work forward in a way satisfactory to the board, since for the best work more time is necessary than they can afford to give. We can not expect to provide a severe and prolonged examination without paying the examiners. These matters are difficulties which stand in the way of the introduction of supplemental practical and oral examinations and the securing and retaining of competent examiners. Oral examinations should be used in combination with practical and written, since many people do not seem to be able to write readily. Evidence is desired not of literary ability, but of the applicant's practical knowledge of medicine; at the same time the doctorate degree, the highest which a university can give, should be granted only to the candidate who is able to express himself in writing as well as orally.

THREE EXAMINATIONS SUGGESTED.

For the purpose of discussion I would suggest that the examinations for license be divided into three parts:

1. That which determines the preliminary qualifications. Such examinations should be conducted not by medical men, but by professional educators.

2. An examination in the basis branches of medicine, such as physiology, physiological chemistry, histology, human anatomy, pathology, bacteriology and pharmacology. There has been expressed to-day some doubt about the propriety of including materia medica and pharmacology in state board examinations, although it does seem rather absurd to eliminate in our state examinations the "do something" for the patient, after we have spent so much time in finding out what is the matter with him.

3. The third portion of the examination should cover the actual work in medicine, surgery, obstetrics and the specialties. In this examination the candidate should be required to demonstrate his ability to observe and to make the necessary deductions. It is very important to secure men who are capable of logical thinking, to turn out which the better grade of medical colleges are being run. It is important in order to secure better trained men to enter the practice of medicine as well as to encourage better methods of teaching medicine.

The three portions of the examination might be taken separately or at one time by proper arrangements of the dates and subjects of examination. The examination of the premedical might not be necessary if there was a satisfactory arrangement in the state for determining such qualifications. The examination in the basic branches of medicine might be taken at the end of the first two years' instruction in medicine, or with the clinical part of the examination.

FAIR QUESTIONS AND FAIR RATING.

I often have much difficulty in arriving at an estimate of what students know, although we think we have good methods in our own department in the college where five or six of us examine in different parts of the subject. After each examiner has independently arrived at his own conclusions, a departmental meeting is called, each student is discussed and his general average fixed. Again after each has formulated his questions, we "try it on the dog," that is, the other members of the staff are asked to answer the question under consideration. Some one is very likely to say, "Do you mean so and so as the reply to that question," and when the examiner says, "No," he is asked, "Then why do you put it in that way?" We thus find out whether the question as asked may be answered in different ways. If one is anxious to know how many different constructions may be put on a question, some idea may be obtained by giving it to a class of fifty or one hundred students. The multitudinous viewpoints presented are amazing at times and shows how uncertain may be the percentages based on written examinations. Therefore, if fairness is to be exercised, the questions must be very carefully put and the grade limits for passing or failure rather widely separated. A much more accurate estimate can be had of the candidate by supplementing the written examinations with oral questions and the giving of an opportunity to show what is available in the way of practical experience and the knowledge which has been obtained as to technical methods.

The same principle might be adopted by examining boards in arriving at a final estimate of the candidate for license. After the examiner in any individual subject has arrived at a definite conclusion regarding the candidate, he should meet with the other examiners. At this conference of the examiners, each individual candidate could be discussed and his general average recorded which would avoid the danger of drawing the lines too hard and fast. This plan would result, not in too much leniency, but in more fairness to the student. It could easily be seen, in such a conference, whether a candidate was on the border line in all subjects or not.

As we approach a uniform standard in all states a more satisfactory system of reciprocity will doubtless result and boards will not have to examine those who have been practicing a long time and who may wish to move for good reasons to another state. Under the system of examinations which I have just suggested, the man fresh from college could be held closely on all three parts of the examination. He could be thoroughly examined in the matter of the basic medical subjects as well as on laboratory technique. On the other hand, the man who has graduated several years before and who has been in the practice of medicine, should be tested chiefly in regard to the handling and examination of patients.

Without an extension and the bringing up-to-date of the present methods of examination, it will be difficult to get any foot rule which will measure the candidate with justice and at the same time afford the needed protection to the public.

(To be continued.)

Medicolegal

Violation of Medical Practice Act by Agent of "Patent Medicine" Company.

The Supreme Court of New Mexico says that the information in the case of Territory vs. Lotspeich charged that, on a certain date, the defendant did unlawfully attempt to practice medicine without first complying with the provisions of an act of the Legislative Assembly of the territory of New Mexico entitled "An act to regulate the practice of medicine in New Mexico," which became a law on the 12th day of March, 1903, and without being the holder of a certificate entitling him to practice medicine in the said territory of New Mexico, and in so practicing medicine and attempting to practice medicine the said C. F. Lotspeich did then and there unlawfully open an office for such purpose, and announce to the public a desire and willingness and readiness to treat the sick and afflicted and to investigate and diagnose the physical ailment and disease known as tuberculosis and consumption, and to suggest, recommend, prescribe and direct for the use of persons certain drugs, medicines and appliances for the cure, relief and palliation of said ailment and disease, with the intent of receiving compensation therefor from the maker and owner of a certain drug, medicine and ointment called "Pulmoline," of whom the said C. F. Lotspeich was then and there an agent and employé, and whose name, on information and belief, was alleged to be the Pulmoline Company.

Was the court below right in holding that this information, when measured by the act of 1903, stated no offense? That act subjects to punishment any person who shall practice or attempt to practice medicine without first complying with its provisions, and without being the holder of a certificate from the Territorial Board of Health entitling him to practice. There was no contention that the information failed to state a lack of this certificate, but the point urged and sustained by the court below was that the information failed to allege facts showing that Lotspeich was engaged in the practice of medicine within the meaning of the act.

The Supreme Court says that it is of opinion that under this act, to constitute practice of medicine, it is only necessary to do some one of the three following things: Either, first, to open an office for the practice of medicine; or, second, to announce to the public or to any individual in any way a desire or willingness or readiness to treat the sick or afflicted, or investigate or diagnose, or offer to investigate or diagnose, any physical or medical ailment or disease of any person; or, third, to suggest, recommend, prescribe or direct for the use of any person any drug, medicine, appliance or other agency, whether material or not material, for the cure, relief or palliation of any ailment or disease of the mind or body, or for the cure or relief of any wound, fracture or bodily injury or deformity, after having received, or with intent of receiving therefor, directly or indirectly, any bonus, gift or compensation.

Under the first two subdivisions the essence of the act is the public announcement of a general readiness and willingness to treat the sick, in the first subdivision the announcement being made by the act of opening an office, in the second by advertisement or other public statement. Under neither of them is any actual treatment of a patient necessary, and therefore the question of compensation is immaterial to a prosecution thereunder.

The third subdivision deals with the actual treatment of or prescription for the sick, and provides that such attention, even to only one person, and even without previous opening of an office or advertisement or announcement, shall constitute the practice of medicine, provided it be for pay, either present or prospective. Under this last clause the court is of opinion that it is immaterial from whom compensation was received, or from whom it was intended that it should be received.

By the terms of this act an unlicensed person has no more right to treat patients on a general undertaking from another, as, for instance, the city or some philanthropic person, that all such persons will be paid for by such city or philanthropist, than he has to treat such persons on the latter's personal payment or undertaking to pay. It must, however, be compensation for services rendered the patient, not for services rendered the third party paying for the same and to which the treatment of the person is purely an incident.

On the argument in the Supreme Court, and apparently in the court below, the sufficiency of the information under the third subdivision was the principal matter of controversy, and the particular criticism was that the information failed to allege payment or expectation of payment from the party treated. The Supreme Court concurs with the court below in holding the information as to the third subdivision of the statute insufficient, not, however, for the reason urged (for, as we have seen, it is immaterial from whom the compensation comes), but because there was no allegation of the treatment of any specified person, or any person at all, which is a necessary element under this branch of the statute. The Supreme Court is of opinion, however, that the information was sufficient under the first two subdivisions in that it alleged both the opening of an office for the practice of medicine and an announcement to the public of a desire, willingness and readiness to treat the sick.

The Supreme Court holds, therefore, that the trial court erred in holding the information generally insufficient, and in discharging the defendant thereon.

Must be Treated as Partners.

The Supreme Court of North Carolina says that it appeared in the record in the case of Manning and another vs. Interstate Telephone and Telegraph Company, that the fees which the defendant company was authorized to charge to copartnerships for the use of one phone was $3.50 per month. It also appeared that the plaintiffs were copartners in "minor surgery" (whatever that may be), and occupied connecting offices used in the business, and as such used one phone in common. The fact that they had private practice not embraced by their copartnership did not make them any the less copartners, and the court thinks that as such they came within the schedule of the defendant's rates, and must be charged as copartners.

Who May Testify to Physical Conditions.

The Supreme Court of Nebraska holds, in the case of Young vs. Beveridge, that the ability of a person to perform manual labor is not a matter so exclusively within the domain of medical science that witnesses, who were acquainted with him, and had opportunity to observe his ability, can not testify with reference thereto. The rule is said to be that the actual condition of a person's health must be proven by expert witnesses, but that the apparent physical condition of any person where that fact is an issue may be established by other witnesses who have had occasion to observe such condition.

Non-Experts Not Permitted to Give Opinions as to Sanity.

The Supreme Judicial Court of Massachusetts says, in the will case of Gorham vs. Moor, that it was early established as the law of that commonwealth that witnesses not experts are not permitted to give their opinion in regard to the sanity of one whose mental condition is drawn in question. This court, although repeatedly asked, has always refused to change this rule, and it is not now open to discussion. The difficulty in its application lies in keeping distinct the line between statements of facts, from which the jury can draw an inference as to the mental capacity of the person under inquiry, and an expression of opinion as to what the facts show. Many statements of fact involve to a greater or less extent an exercise of judgment, and they generally require observation and attention. Frequently a deduction from certain facts must be made in order to determine the fact directly in issue. To determine whether one is intoxicated or not, when nicely analyzed, demands an observation of certain facts or conditions, and an inference as to the cause of these manifestations. But the result is not a matter of opinion; it is a statement of fact. And in this case the court does not think questions were open to objection where several witnesses were asked, in substance, the question whether they ever saw the testatrix do, or heard her say anything that indicated anything singular or unusual respecting her mental condition.

Current Medical Literature

Boston Medical and Surgical Journal.

May 21.

1 *Social Legislation in Germany and Its Relation to the Practice of Medicine. F. Mueller.
2 *Common Disorders Frequently Misinterpreted. G. L. Walton, Boston.
3 *Medical Notes on Northern Alaska. G. P. Howe, Lawrence, Mass.
4 Varicose Veins of the Papilla of the Kidney; Cause of Persistent Hematuria. W. F. Whitney, Boston.

1. **Social Legislation in Germany.**—Mueller describes in great detail the social legislation in Germany, initiated by Emperor William I in 1881. He points out the necessity for bearing in mind before instigating such legislation that a benefit once given to the people can never be taken back. The German legislation comprises these branches: (1) Insurance against illness; (2) insurance against old age and invalidism; (3) insurance for accidents. All branches are obligatory, and as they all comprise large classes of the population they are relatively cheap. Insurance against illness includes every man or woman working as an employé or servant at a salary less than $750 a year. The premium varies in proportion with the salary from 3 to 30 cents a week, and is paid, two-thirds by the employé, and one-third by the employer. The benefits assured are free medical attendance, free medicine and certain medical supplies, and a sum of money during incapacity for work. A female member who is confined receives a grant of money for four weeks to enable her to take proper care of herself and her child during the initial period of its life. Mueller describes the various struggles for adjustment of method with regard to physicians' attendance. At present the patient is allowed the choice of any physician, the assurance society paying the fee according to a fixed scale. The insurance against invalidism and old age includes every paid workman or workwoman whose income is less than $500 a year. This carries an annuity on disablement, from protracted illness, or at 70 years of age. The premiums are paid, half by the employer, and half by the employé. The government makes a small grant toward each annuity. (3) The insurance against accident includes all workers at dangerous trades. The law is formed on the principle that the employer is responsible for every accident which occurs in his establishment, without regard to whether the employé is at fault or not, so that the entire premium is paid by the employer. The three social laws are found not only to have brought help to already existing illness and injury, but to have prevented illness and misfortune.

2. **Misinterpreted Disorders.**—Walton discusses facial neuralgia in relation to various conditions, particularly dental irritation and facial spasm, or tic; destruction to movement, paralysis, occupation neurosis—including pain as well as cramp—in relation to neuritis; and disorders of the lower extremity, especially sciatica and flatfoot, and their symptoms. The trouble in diagnosis lies not usually in lack of familiarity with the fact, for instance, that neuralgia may come from the teeth or pain in the knee from flatfoot, etc., but in lack of readiness in the application of the knowledge to the particular case.

3. **Northern Alaska.**—Howe describes the dwellings, food, clothing, and diseases of the Eskimo of Alaska. Tuberculosis is a plague, and was present when white men first came. Venereal diseases have practically disappeared, only a few tertiary cases remaining. Imaginary diseases are common and are attributed to diabolic possession. For snow blindness, the natives use a wooden eye shade blackened on the inside and with a narrow slit to look through. It is very efficient. Crude amputation is practiced for frozen hands and feet. Liability to sepsis is slight. The Eskimo appears free from all kinds of tumor. Howe describes a disease called "mollycolly" affecting dogs. He is sure that, notwithstanding its resemblance to rabies, it is not identical therewith. Records taken by him of the hemoglobin of six white men from September to March, while the sun is away, show that the hemoglobin is unaffected by the absence of sunlight. In frost bites, he cautions against rubbing with snow. Snow or ice may be used to allay thirst without the ill effects attributed to them, if the ice or snow is melted in the warm hand before being put into the mouth.

Medical Record, New York.

May 23.

5 *Clinical Study of a Case of Brain Tumor; Operation; Complete Recovery. W. W. Graves, St. Louis.
6 *Pneumothorax and Posture; Importance of Abdominal Posture in Operations on the Pleura and Lungs. C. A. Elsberg, New York.
7 Thirty-one Cases of Congenital Dislocation of the Hip Joint Reduced by Manipulation. E. G. Abbott, Portland, Me.
8 *Sources of Error in Gastric Diagnosis. C. S. Fischer, New York.
9 Prevention and Treatment of Cystitis. P. Pilcher, Brooklyn, N. Y.

5. **Brain Tumor.**—Graves says that the surgeon and the neurologist are indispensable to each other, at present, in surgery of the nervous system. The ideal would be a surgeon who is at the same time a neurologist. He gives an elaborate study of a case of brain tumor in which the joint labor of the surgeon and the neurologist resulted, not only in relief of distressing symptoms, but in complete restoration of function. The case was that of a woman, aged 50, who for some time had had motor weakness of the right extremities and a peculiar speech defect. While under observation a convulsion began in the right hand, involving the arm, face, and leg, lasting for three hours, and causing complete loss of consciousness. Consciousness returned early, but there was complete paralysis of the right side, with inability to speak, though she was cognizant of her surroundings and understood what was said to her. Graves goes at great detail into the examination of the patient, and describes the process of reasoning whereby a diagnosis of exhaustive paralysis following a Jacksonian attack was arrived at by exclusion. The preceding symptoms, together with the seizure and its consequences, led to the further diagnosis of an essential lesion involving the left cerebrum and having its location in the Rolandic area; involving particularly the ascending frontal convolution and, to a less extent, the ascending parietal convolution. As to its nature, on the solution of which depended the determination as to the aim and character at efforts for relief, all forms of growth were excluded, except such as those which, while constantly irritative and variable, could nevertheless progress for three years without entirely destroying any part of the Rolandic area. These comprised only a cavernous angioma and an arachnoidal cyst. The patient was operated on by Dr. Witherspoon in the left fronto-parietal region, and a clear, thin-walled cyst, of the dimensions and configuration of a small hen's egg was exposed immediately under the bone flap. The upper portion of the cyst was removed. Surgically, the subsequent course was uneventful; but the postoperative phenomena were remarkable, consisting of a succession of Jacksonian attacks, lasting for several hours. Complete aphasia set in forty-eight hours after operation and the woman could not understand what was said. Communication was entirely by pantomime. This condition was found to be due to oozing under the flap, which was removed with entire disappearance of aphasic symptoms. The patient, when seen twelve months after the operation, was well-nourished, contented and happy; gait was normal, every vestige of former hemiplegia was gone. Synergic energy on the right side was perfect. The case is reported to show the possibilities of neurologic diagnosis and surgery, in opposition to the prevailing pessimism regarding surgery of the nervous system.

6. **Pneumothorax in Posture.**—Elsberg reports experiments on dogs which led him to the conclusion that pneumothorax is better borne when the animal is on its belly than in any other posture; also when it is deeply under an anesthetic. These results have been applied at Mount Sinai Hospital, so that all patients on whom operations requiring the opening of the pleura were performed, were operated on while lying flat on the abdomen. These patients included a large number with empyema, 2 with abscess of the liver, 3 with subphrenic abscess, and 1 with a bronchiectatic cavity in the left lung. The patients in whom a normal pleura had to be opened showed

unusually few untoward symptoms when the opening was made and air was allowed to enter the pleural cavity. In the patients in whom an operation for empyema was done, it was noted that with only one exception the coughing and interference with breathing regularly observed when the opening in the pleura is made for this affection, were entirely absent. Elsberg believes that those who try this simple procedure will soon appreciate its manifest advantages.

8. **Gastric Diagnosis.**—Fischer points out that the usual classic signs and symptoms and the most approved diagnostic methods given in books will fail us in a goodly number of cases. In carcinoma of the stomach loss of body weight may be absent: it depends on the involvement of the pylorus. The craving for food may be normal. On the other hand, a sudden disinclination to take a particular variety of food, notwithstanding that it causes no distress, may appear early in the disease. Loss of strength is of greater diagnostic importance than loss of weight; often, it is not so much general weakness as disinclination to activity. A parallel condition may occur in the mind. Most sources of error in gastric diagnosis involve questions of the pylorus. Tenderness in this region is a doubtful sign of malignancy. Pyloric tumors occasionally induce great muscular irritability of the esophagus. Slowness of growth is not always an evidence of benignity. When infiltration has resolved the pylorus into a rigid tube with a patent lumen, confusion may arise, for there may be no dilatation and no retention of food. Among remoter influences which may affect the pylorus and direct attention to it as the seat of some organic lesion are sudden atmospheric changes, sudden mental irritation, and hysteria. Distention of the hepatic flexure of the colon and a reflex from the slightly loose right kidney are also deceiving elements. The author discusses atony and chronic catarrh of the stomach.

New York Medical Journal.

May 23.

10 *The Sigmoidal Factor in Pelvic Diseases. J. R. Pennington, Chicago.
11 *Restoration of the Normal Balance of the Foot. E. G. Abbott and H. A. Pingree, Portland, Me.
12 Mucomembranous Enterocolitis, Its Causes and Mechanism. H. Nepper, Paris.
13 Plea for Systematic Use of Bronchoscopy in Routine Work, with Description of a Modified Bronchoscope. W. Freudenthal, New York.
14 Malnutrition. M. Korshet, Baltimore.
15 *Rôle of the Sphenopalatine (or Meckle's) Ganglion in Nasal Headaches. G. Sluder, St. Louis.
16 Middle-Ear Deafness. W. S. Bryant, New York.
17 *New Method of Anatomy Study. F. Griffith, Rome, Italy.

10. **The Sigmoid and Pelvic Diseases.**—Pennington believes that an adherent, extra long, overfilled or loaded sigmoid, especially if it has a long mesentery, is a potent factor in producing pelvic diseases; hence in many cases of utero-ovarian diseases, treatment should be directed first to the sigmoid and rectum. Over 75 per cent. of women whom he has examined for sigmoid or rectal trouble have had more or less uterine disorder. In young girls with leucorrhea, etc., frequently he has found the rectum and sigmoid more or less filled with feces an hour or two after defecation. Relief of the uterine symptoms frequently accompanies relief of the sigmoid trouble. There is a reciprocal relation between the condition of the sigmoid and that of the uterus, so that if the former is in a pathologic or anomalous condition, it has a detrimental effect on the uterus. Adhesions of the sigmoid are very common. These and a loaded organ interfere with the mobility of the uterus. The symptoms complained of are usually ascribed primarily not to the sigmoid region, but to the uterus and its adnexa. The physician often overlooks the bowel factor in such symptoms, because he forgets the anatomic and physiologic relations and rarely examines the rectum and sigmoid in seemingly utero-ovarian cases. Pennington reports cases showing the relation between bowel trouble and uterine symptoms, and urges early diagnosis and treatment. There is probably a period in many of these cases when they could be easily and successfully managed without operation. If not dealt with then, surgical intervention is indicated, to break up adhesions, straighten kinks, especially that so frequently occurring at the rectosigmoidal junction, and shorten or hitch up the mesentery; or sigmoidopexy, "short circuiting" the bowel current by lateral anastomosis, and, if need be, resection of the sigmoid, should be done, in the hope of preserving the genitalia and womanhood. Should all these measures fail, then, as a *dernier ressort*, hysterectomy, salpingectomy, etc., may have to be performed.

11. **Normal Balance of the Foot.**—Abbott and Pingree discuss in their second article the application to flat-foot of the principles laid down in their first (*N. Y. Med. Jour.*, May 9, 1908; abstracted in THE JOURNAL, May 23, p. 1754). A plate constructed to lift the arch and keep it in position only results in atrophy of the soft tissues and increased weakness. A proper plate should be so constructed as to be simply an agent to bring the foot to a normal condition; it must be of such a shape that it makes little or no pressure when the foot is in activity, acting as a reminder to the patient to hold the arch in proper position when the foot is passive, but supporting it when he is no longer able to do so. It should resemble in shape the section of a dome, with the exception of the slight extension which controls the scaphoid bone. The authors describe the various plates in use, and discuss the qualities and detail the method of making a plate which shall fulfil the requirements laid down by them.

15. **The Sphenopalatine Ganglion and Nasal Headache.**—Sluder considers the secondary involvement of the sphenopalatine ganglion in nasal inflammation to be the probable cause of nasal headaches. He describes its anatomic relations. Acting on this theory, he tried in several cases the effect of anesthetizing the ganglion with a pledget of cotton, moistened with one drop of 20 per cent. cocain solution, and applied by an applicator just posteriorly to the posterior tip of the middle turbinate. In many cases it relieved all the symptoms instantly. Silver, 2 per cent. solution, or formaldehyd, 0.5 per cent., applied to the same region, also gave either cure or relief.

17. **Anatomy Study.**—Griffith describes a synthetic method of studying anatomy, as a complement to the analytic method of dissection. The necessary materials are a skeleton and modelling material; of the latter he describes several forms, plastilina, ordinary modelling clay, Norwegian "classical clay." He then describes the method of reconstructing the head, the thorax, the abdomen, and the upper and lower extremities.

Journal of Experimental Medicine, New York.

May.

18 *So-Called Rhythms of Growth Energy in Mouse Cancer. G. N. Calkins, New York.
19 *Pathology of Myasthenia Gravis; Report of Case with Unusual Form of Thymic Tumor. F. S. Mandlebaum and H. L. Celler, New York.
20 *Effect of Pilocarpin on the Output of Lymphocytes through the Thoracic Duct. F. P. Rous, Ann Arbor, Mich.
21 *Enzymes of Fibrin. B. I. Barker, New York.
22 *Bone Formation in Sclerotic Arteries. L. Buerger and A. Oppenheimer, New York.
23 *Angiomata in Valves of Heart of a New-Born Child. J. L. Nichols, Baltimore.
24 *General Conditions Affecting Resuscitation and the Resuscitation of the Blood and the Heart. F. H. Pike, C. C. Guthrie and G. N. Stewart.
25 *Effect of Injected Leucocytes on the Development of a Tuberculous Lesion. E. L. Opie, New York.

18. **Growth Energy in Mouse Cancer.**—From a study of the course of events in mice inoculated with transplantable cancer. Calkins concludes that cancer cells possess the power of indefinitely continued division, as well as the property that he calls infectivity. The power of infectivity of cancer cells is said to be subject to a more or less regular rhythm. It is distinct from rhythms of growth energy, which probably occur in the individual animal inoculated. The cause of the infectivity lies within the cell or is constantly associated with it. While the cells of many tumors, such as benign ones, have the power of division they have no infectivity. It appears necessary to assume, either that the cancer cells themselves are the equivalent of parasites, or else that parasites are contained within them or associated with them. Calkins is inclined to the belief that some micro-organism, perhaps ultramicroscopic, may underlie the infectivity of cancer cells and provide the stimulus for their continued proliferation. He thinks that possibly the spirochetes found in mice cancer may have intracellular stages in their life history, which are

oo minute to be seen, and be the cause of the rhythms of nfectivity.

19. Myasthenia Gravis.—Mandlebaum and Celler describe he changes in a case of myasthenia gravis in a man of 52. n addition to the usual degenerative changes in the muscles and lymphocytic infiltrations there was present a tumor of he thymus, of the type of a perilymphatic endothelioma. On account of the percentage (20) of cases in which tumors of the thymus have been observed in this disease, the authors believe that such tumors may play a causative rôle in a certain proportion of cases. The disease is regarded as the result of a toxemia of unknown cause, the toxic substance affecting not only the muscular system, but other tissues as well, as is shown by the widespread lymphocytic infiltrations. In this particular case there were lymphocytic infiltrations in the medulla. The lymphoid cells are traced to the perivascular lymph spaces.

20. Pilocarpin and the Lymphocyte Output.—Rous finds that intravenous injections of pilocarpin nitrate in the dog causes a rapid increase in the output of lymphocytes through the thoracic duct, and it is believed that the lymphocytosis of the blood is the result of this increased output. While the real cause of the quickened lymph flow is not clear, it is believed that it may result from contraction of smooth muscles. The rôle claimed for mechanical factors in the production of rapidly appearing lymphocytosis receives support from these observations.

21. Enzymes of Fibrin.—Fibrin contains an enzyme, active in neutral and slightly more so in alkaline media, in which respect it resembles the enzyme found in polynuclear phagocytes. The enzyme acts, not only on fibrin, but also on foreign proteid. Fibrin, furthermore, contains a proteolytic enzyme, active in weak acid media and probably identical with the similar enzyme in the large mononuclear cells of inflammatory exudates.

22. Bone Formation.—From their study of bone formation in sclerotic arteries, Buerger and Oppenheimer hold that, as a result of some stimulus, perhaps an organizing thrombus or vascularization in the course of intimal obliteration, or owing to the presence in the diseased media of lime salts, a penetration of the media with phosphates takes place. There ensues then proliferation of young connective tissue, which at the points of contact with the lime produces the ground substance of bone.

23. Cardiac Angiomata in a Child.—Nichols describes minute angiomata strung along the upper surfaces of the tricuspid and mitral valves in a newborn child. The blood-containing globules were lined with a single endothelial layer. There were three similar, but larger, growths under the epithelium of the urinary bladder. Nichols believes that these angiomata differ only in situation from the familiar angiomata of the lip and elsewhere. Angiomas in the heart are rare.

24. Resuscitation.—The authors find that defibrinated blood soon loses its power to maintain the activity of the higher nervous centers as well as to nourish the various tissues. As a substitute for blood, artificial fluids are not satisfactory, and the proper oxygenation of the blood is indispensable in resuscitation of an animal. Resuscitation of the heart after it has ceased to respond to a manometer may sometimes be accomplished by extra thoracic massage and artificial respiration, but only during the period that the heart continues to beat. Direct massage of the heart is the most certain method at hand for resuscitation, and proper blood pressure is necessary for its continued activity. Anesthetics, hemorrhage, and induced currents applied to the heart, make resuscitation more difficult than asphyxia alone.

25. Leucocytes and Tuberculous Lesions.—Opie finds that in dogs experimental tuberculosis of the pleura is inhibited to a greater or less extent by the injection of dog leucocytes, obtained by the use of intrapleural injections of a sterile irritant. The experiments indicate that only living leucocytes can accomplish this inhibition. While the injected leucocytes may exercise a readily demonstrable inhibitory effect on the local pleural lesions, no evidence was obtained that the injected leucocytes have any effect on the dissemination of tuberculosis, as, for instance, to the liver.

Lancet-Clinic, Cincinnati.

May 16.

26 *X*-Rays and Their Application to Dentistry. S. Lange, Cincinnati.
27 The Fetal Heart. M. A. Tate, Cincinnati.
28 Treatment of Epilepsy. D. R. Brower, Chicago.
29 Support of the Honest Pharmacist. L. A. Clary, Winfield, Kan.
30 The Mulatto and the Morbid Proclivities and Retrogressive Tendencies of His Offspring. A. N. Ellis, Maysville, Ky.

Medical Fortnightly, St. Louis.

May 11.

31 *Deformity of Penis Producing Impotency Due to Arteriosclerosis. G. F. Lydston, Chicago.
32 Gastric Artery; Proximal Concentric Gastric Circle. B. Robinson, Chicago.
33 Origin of Life. A. S. Ashmead, New York.
34 Puerperal Pyemia. A. Bode, St. Louis.
35 Syphilitic Lobar Pneumonia. J. A. Henske, St. Louis.

31. Impotency from Arteriosclerosis.—Lydston discusses a form of impotentia coeundi due to cavernositis chronica, sclerosing inflammation of the corpora cavernosa, which, though not generally so recognized, he considers dependent on a general systemic condition. The patient above middle age complains of curvature of the penis during erection until coitus becomes impossible. Syphilis, alcohol, rheumatism and gout, are the chief etiologic factors, though it is difficult to explain why the pathologic process should localize itself in the penis. Whatever the primary etiologic factor may be, the penile process is merely the local expression of general arterial disease. In these cases cardiovascular changes are found, arcus senilis may be present, or the marked signs of hypervascular tension. The prognosis is unfavorable so far as disappearance of the deformity is concerned, but the condition is painless and not dangerous to life. He reports a case.

University of Pennsylvania Medical Bulletin, Philadelphia.

April.

36 *Injuries of the Spinal Cord. A. R. Allen, Philadelphia.
37 *Pathologic Physiology of Blood Pressure. G. W. Norris, Philadelphia.
38 Typhoid Meningitis without other Lesions. R. S. Lavenson, Philadelphia.
39 Increase of the Osmotic Pressure of Venous Blood After the Closure of the Afferent Artery. H. Wolf, New York.

36. This article was published in The Journal, Mar. 28, 1908, page 941.

37. Blood Pressure.—Norris discusses the physioloy of blood pressure and shows that pathologically much greater fluctuations are common than the normal. Hypotension occurring in various infectious diseases has not received the attention it deserves. In discussing a rise of pressure, particularly with relation to emotional factors, Norris says that it is little realized by the profession how great an influence aberrance of local blood supply has on the mood, the mental poise, apathy and physical *bienfaisance* of the individual. In chronic melancholia there is frequently subnormal vascular tension. Concentrated psychic effort requires increased cerebral blood supply, hence too great warmth, especially of the lower extremities, is inimical to thought. With organic lesions of myocardium or blood vessels, objective findings are more marked and subjective disturbances more intense than with normal individuals. Localized or peripheral angiospasm may bear a more important relation to angina pectoris than has been supposed. Hypotension produces pulse exhilaration through stimulation of the cardioaccelerator nerve by cerebral anemia. Some cases of tachycardia from heart weakness may result from hypotension. It occurs also in advanced arteriosclerosis, shock, and after large dosage of alcohol, chloral, or veratrum viride, and has the result of toxemia in typhoid and tuberculosis. The effect of pain, fright, or mental excitement, in producing increased tension must always be borne in mind when making blood-pressure observations. That some cases of arteriosclerosis have hypertension while the majority of cases have relatively normal pressures is to be explained by the location of the arterial thickening. In some cases only diastolic pressure is indicated. In uremia one encounters some of the most extreme grades of hypertension, suggesting a definite relation between it and such symptoms as amaurosis, headaches, vomiting, and coma; presumably because both conditions depend on toxemia as an underlying basis. As to the conservative mechanism of vascular hypertension in chronic interstitial nephritis, it is justifiable to attempt to lower tension in these cases only by dietary methods and not by employment of direct treatment. The old mechanical theories as to the cause of hypertension in nephritis are no longer tenable. Loeb's investigations have shown that hypertension is generally commensurate with the extent of glomerular involvement, so that the process is a conservative one. We must not lose sight of the effect which the breathing of rarefied air has on this factor both in health and disease. Instability of the blood pressure, alternate hypertension and hypotension of abnormal degree and without cause, occurs notably at the menopause and in exophthalmic goiter, and is probably due to perverted internal secretion. The diastolic pressure has been too much overlooked in the past. The manner in which the circulatory functions are carried out depends on the mean pressure, as represented by the diastolic pressure plus one-third of the pulse pressure—i. e., the difference between systolic and diastolic tension.

Bulletin of the Lying-in Hospital of the City of New York.

December.

40 Case of Phlebothrombosis. J. E. Welch, New York.
41 Two Cases of Pyelonephritis Complicating Pregnancy. J. W. Markoe, New York.
42 *Two Hundred and Fifty Cases of Placenta Prævia. R. McPherson, New York.
43 Case of Scorbutus. E. L. Coolidge, New York.
44 Case of Hereditary Syphilis. Id.
45 One Hundred Cases of Cesarean Section with Special Attention to the Indications, Surgical Technic and Results. E. S. Gushee, New York.
46 Application of Bier's Method in Treatment of Puerperal Mastitis. J. W. Markoe, New York.

42. **Placenta Prævia.**—McPherson discusses the variations, theories of causation, relative frequency, month of gestation at delivery, and mortality as regards mothers and children, in placenta prævia. A tabular analysis is given of 250 cases drawn from the records of 52,000 births at the New York Lying-In Hospital. In these cases delivery was accomplished in 176 cases by internal podalic version, in 29 cases by breech extraction, 5 cases by forceps, 2 cases by Cesarean section, 15 children were born spontaneously, 1 child by embryotomy, and 6 children by craniotomy, while in 16 cases the method of delivery was not noted. Although Cesarean section was performed twice in this series for a deformed pelvis, a living mother and child resulting in both cases, the author does not consider it desirable as a general thing. Given a woman in good condition, a normal pelvis, and a viable fetus, nearly as good results can be obtained by packing and rapid version. Cesarean section, however, may offer a better chance in a primipara with rigid cervix and slightly undersized pelvis or in a multipara with cervix rigid from scar tissue or otherwise undilatable or with deformed pelvis.

Yale Medical Journal, New Haven.

April.

47 *Postnasal Inflammation as a Cause of Febrile Attacks in Young Children. H. L. Swain, New Haven, Conn.
48 Case of Rabies. C. J. Bartlett, New Haven, Conn.
49 Gastroenterostomy. S. G. West, Chicago.
50 Treatment of Hemorrhoids. E. P. Pitman, New Haven, Conn.

47. **Postnasal Inflammation and Febrile Attacks.**—Swain points out that many febrile attacks of children formerly termed simple fever were probably such as we now find today associated with acute inflammation of lymphoid tissue in the nasopharynx. He discusses the embryology, histology, and physiology of the pharyngeal and faucial tonsil, and points out that the phagocytes in the deeper layers act as custom house officers in regard to germs and other foreign particles entering the system through them as a port of entry. The tonsils, viewed as integral parts of the lymphatic system, are influenced by the general condition of the organism. When the system demands white cells, or if the individual is below par, the leucocytes of all the tonsils go into the system to answer the general call to arms, leaving many less to guard the outworks of the fort. Then the pathogenic germs, which are ever with us, seize the opportunity and force the outworks, giving rise to streptococcus or staphylococcus throat, diphtheria, grip, etc. It is therefore easy to understand the great systemic disturbance that may follow a morbid condition of the lymphoid tissue in the postnasal space, where it is difficult to cleanse, and where abundant mucus is retained, forming an excellent breeding ground for germs, the same tissue being also an excellent absorber for the system. As to treatment of these cases when diagnosed, we have a safe and effective helper in preparations of the suprarenal gland, sprayed or dropped from a medicine dropper through the nostrils with the child lying on its back, after cleansing the space with some alkalin medium. The insufflation of boric acid, with or without sugar, through the mouth into the nasopharynx, by causing a free secretion of fluid mucus lessens the engorgement and stimulates the tissue to healthy action. Concomitant enlargement of the faucial tonsils should also be treated. In removing this nasopharyngeal tissue he urges the necessity of making parents understand that all lymphoid tissue never can be removed, so that enlargement may recur and a recurrence of inflammation is possible.

Chicago Medical Recorder.

April.

51 Imperforate Anus. C. J. Drueck, Chicago.
52 Investigation into the Causes of 27 Cases of Typhoid Occurring in October, 1907, in Oak Park. A. F. Storke, Oak Park, Ill.
53 Treatment of Gonorrhea. J. W. Koehn, Chicago.
54 Control of the Sexual Instinct. D. Lewis, Chicago.
55 The Cystoscopic Aspect in Prostatic Hypertrophy. G. Kolischer, Chicago.
56 Delayed Menopause. C. J. Whalen, Chicago.
57 *The Crime of Gynecology. C. W. Barrett, Chicago.
58 Hereditary Syphilis. V. F. Masilko, Chicago.
59 Plea for the Early Climatic Treatment of Pulmonary Tuberculosis. F. E. Waxham, Denver.

57. **The Crime of Gynecology.**—Barrett's paper is devoted to insisting on the importance of special gynecologic surgeons to perform the gynecologic work in hospitals. All gynecology is not surgery, but some gynecology is surgery and it is up to the standard of surgery, whereas some surgery is gynecology, but it is not usually up to the standard of gynecology.

Maryland Medical Journal, Baltimore.

April.

60 *Use of Nitrous Oxid and Oxygen Alone and in Combination with Ether as Anesthetics in General Surgery. H. W. Buckler, Baltimore.
61 Bacteriologic Examination of Milk. W. R. Stokes, Baltimore.
62 *Acute Pyelitis Due to Acute Appendicitis. G. L. Hunner, Baltimore.
63 Operative Treatment of Cancer of the Stomach, with Report of Six Partial Gastrectomies. J. H. Branham, Baltimore.
64 Psychotherapy in Treatment of the Functional Neuroses. A. P. Herring, Baltimore.
65 Should Prisoners Deficient Either Mentally or Physically Be Tried in Our Courts of Justice? T. Cooke, Jr., Baltimore.

60. **Anesthetics.**—Buckler describes a method using nitrous oxid and ether, alone or in combination, and oxygen. He describes and illustrates his apparatus, which is constructed on the same principles as the Hewitt inhaler with certain simplifications. The following advantages are claimed for this method: First, a more even anesthesia, with a minimum risk to the patient as we know approximately the strength of the vapor inhaled at each inspiration. Second, the ether vapor, being warmed, little or no mucus forms in the mouth or throat, and the patient does not swallow or inspire a lot of ether-saturated saliva or mucus; consequently the amount of postoperative vomiting is decreased to a minimum and the risk of postoperative pneumonia is reduced. Third, the warmed ether vapor is taken up by the blood almost immediately, and therefore the effect of the anesthetic is more rapid. When cold ether vapor is taken into the lungs, as in administration by the drop method, a large amount remains in the reserve air of the lungs, to be warmed over before it is capable of being absorbed in the blood, and such an amount of unabsorbed ether vapor being suddenly taken up by the circulation is a menace to the life of the patient. Fourth, the saving of ether is tremendous when giving by this vapor method, as he finds that he needs only from one-quarter to one-half the amount used in the drop method. The greatest advantage of all is the marked lessening of all unpleasant after-effects of ether when this form of administration is used.

62. This article was published in The Journal, April 25, 1908, page 1328.

Wisconsin Medical Journal, Milwaukee.

April.

66 *Removal of Gallstones from the Second and Third Portions of the Common Bile Duct. F. G. Connell, Oshkosh.
67 Treatment of Consumptives from a Sanatorium Viewpoint. T. H. Hay, Stevens Point.
68 Injury to the Kidneys. W. E. Fairfield. Green Bay.
69 Diagnosis and Clinical History of Puerperal Sepsis. G. Saunders, Superior.
70 *Surgical Treatment of Puerperal Sepsis. J. M. Dodd, Ashland.
71 *Medical Treatment of Puerperal Sepsis. H. L. Rosenbery, Wausau.

66. **Gallstones.**—Connell describes the anatomy of the region, the signs, symptoms, and diagnosis, as well as the nature of concretions, and describes retroduodenal and transduodenal choledochotomy. He gives a synopsis of a case and analyzes seventy-seven instances in which the common duct was opened through the duodenum with ten deaths, as reported in the literature. The mortality is higher than that following simple supraduodenal choledochotomy, which is between two and three per cent., but the transduodenal operation is always a method of necessity and never of election.

70 and 71. Abstracted in The Journal, Aug. 31, 1907, p. 796.

Pennsylvania Medical Journal, Athens.

April.

72 *Factors in Diagnosis of Urinary Inadequacy in Surgical Kidneys. J. H. Anderson, Pittsburg.
73 *Disorders of Sleep. T. Diller, Pittsburg.
74 *Do We Hear Ourselves as Others Hear Us? G. Hudson-Makuen, Philadelphia.
75 Review of the Epidemic of Typhoid Fever in Scranton. W. E. Keller, Scranton.
76 Kefir; An Experiment in Typhoid Feeding. L. Litchfield, Pittsburg.
77 What Stand Should the United Pennsylvania Medical Profession Take on the Reduction of Fees by Life Insurance Companies? J. N. Hunsberger. Skippack.
78 *Lodge Practice. G. E. Holtzapple, York.
79 Pennsylvania Plan of State Aid to Local Hospitals. J. Price, Philadelphia.
80 Newspaper Publicity a Necessary Element in the Movement for Medical Reform Legislation. E. Stirling, Philadelphia.
81 Consolidation of Multiple Medical Examining Boards into a Union or One-Board Plan Required to Give Full Satisfaction. Success of Latter Arrangement in Forty-four Other States and Territories. Revocation of License for Medical Criminals. A. Eichholz, Philadelphia.
82 The Family Physician and the Modern Specialist. A. S. Harshberger, Lewistown.

72. **Urinary Inadequacy in Surgical Kidneys.**—Anderson, in his oration on genitourinary surgery, summarizes a comparison of the older clinical methods of investigating the urinary condition with the newer methods, by stating that the older clinical method gives us a more accurate knowledge of the effect of renal inadequacy on the patient's constitution, a more accurate prognosis of an operation than cryoscopic index, quantitative analysis, or elimination tests. On the other hand, segregation and catheterization give a more accurate comparison between the kidneys and a more accurate diagnosis of the kind of lesion and the operation required.

73. **Sleep Disorders.**—Diller discusses the sleep numbness, nocturnal paresis or paralysis of Mitchell, night terrors, and sleep walking, "sleep jerks," a sleep aura, sleep pain, sensory shock, tonic spasm and respiratory failure in sleep, and gives illustrative cases of his own observation under several of these heads.

74. **How We Hear Ourselves.**—Makuen points out the existence of physical difference between subjective and objective hearing; an illustration of which, one can obtain by listening to a reproduction of one's own voice in the phonograph. He relates a clinical instance of a boy past fifteen, with a falsetto voice, who was easily trained to produce single tones having a normal chest resonance, but who objected to speaking that way as it sounded to him harsh and disagreeable. Hundreds of people have defects of speech and voice of which they are absolutely unconscious. Hearing in its finality is a mental process, and like all mental processes is susceptible of training.

78. **Lodge Practice.**—Holtzapple tabulates the replies to a circular letter, addressed to 231 physicians living in as many municipalities, asking for information concerning the conditions of lodge practice in their districts. He discusses the ethics of the question, with special reference to the Principles of Ethics of the American Medical Association, and considers the motives that lead to the adoption of lodge practice by physicians. He urges the creation of a sentiment against this pernicious practice in the profession.

New Orleans Medical and Surgical Journal.

April.

83 *Non-Gonorrheal Prostatic Disease in Young Men and Its Reflexes. C. W. Allen, New Orleans.
84 Excision of Shoulder in Old Unreduced Dislocation. H. B. Gessner, New Orleans.
85 Ten Cases of Gunshot Wound of the Abdomen Treated Without Operation. E. D. Martin, New Orleans.
86 Cause and Management of Infection of the Extremities. L. Sexton, New Orleans.
87 Surgery of the Kidney, with Special Reference to the Use of the Gauze Sling in Fixation of the Kidney. J. A. Danna, New Orleans.
88 Early Diagnosis and Radical Treatment of Uterine Carcinoma. S. M. D. Clark, New Orleans.
89 Treatment of Abortion. R. W. O'Donnell, Monroe, La.
90 Treatment of Uterine Prolapse and Cystocele. C. J. Miller, New Orleans.

83. **Prostatic Disease.**—Allen holds that serious prostatic disturbance can occur in individuals entirely free from any past gonorrheal taint or other specific infection, though this fact is not generally known. He reports cases in support of his conviction. He is inclined to compare men with prostatic disease with women with uterine affections. The prostate is capable of giving rise to all that train of reflex and nervous symptoms seen in cases of chronic uterine disease. Massage of the organ is frequently productive of shock. A neurotic element in the individual greatly favors the development and persistence of reflex nervous symptoms.

Albany Medical Annals.

April.

91 *The Insanity Defense for Crime. J. B. Chapin, Philadelphia.
92 Early Diagnosis of Pulmonary Tuberculosis. L. Brown, Saranac Lake, N. Y.
93 Treatment of Pulmonary Tuberculosis. A. H. Garvin, Ray Brook, N. Y.
94 Personal Experiences of a Patient in a Hospital for the Insane.

91. **Insanity and Crime.**—Chapin points out that the important changes made in the trial of persons charged with crime and alleged to be insane have occurred practically within a century. The "right and wrong test," formulated in 1843 in England, has been changed as the result of more careful clinical observation, since, although the majority of insane persons certainly know generally what is right or wrong, yet in certain instances the controlling will-power is destroyed. He summarizes a series of celebrated cases, and refers to the defense of mania transitoria, a sudden and instantaneous development of insanity with an equally sudden return to sanity. Such cases may be called an irresistible impulse, but they may really be cases where an impulse was not resisted. He offers as the consensus of opinion of managers who are in frequent contact with the insane, that they do not find this class of cases in their institutions, and speaking for himself he has not met them in his practice. He feels like entering a strong protest against the result of the "insanity dodge." Clinical experience or observation demonstrates clearly that insanity does not come and disappear instantly with the commission of a criminal act. It is the result of long operating causes or degeneration, whether observed or not. He suggests the importance of differentiating the degree of criminality, rather than of finding a verdict of absolute acquittal.

Texas State Journal of Medicine, Fort Worth.

April.

95 *Cause of Insanity in Women. R. B. Sellers, Comanche.
96 Anesthesia and Anesthetics. E. F. Cooke, Houston.
97 Relation of Suicide to Insanity. W. L. Allison, Dallas.
98 Carcinoma of the Lip. H. M. Doolittle, Dallas.
99 Dengue. F. B. King, Houston.

95. **Insanity in Women.**—Sellers insists on the fact that there are many forms of mental disease, such as melancholia, due to abnormal conditions in the pelvic organs. He refers to four cases, in each of which early operation relieved both the mental and the pelvic trouble. The crowded condition of insane asylums is responsible for the fact that more surgical and gynecologic work is not done there. Sellers thinks that 10 per cent. of such patients could be cured by surgical methods.

Journal of the Arkansas Medical Society, Little Rock.

March.

100 *Nitrogenous Constituents of Human Urine; Acidity and Acidosis. C. H. Hoffman, Little Rock.

100. **Nitrogenous Constituents of Urine.**—Hoffman says that the determination of urea and total nitrogen, unless performed with the painstaking accuracy of a metabolic experiment, and covering a considerable period of time, is of small value. Performed in the proper manner, it is of inestimable value, but the results must at all times be interpreted with care and conservatism, particularly in drawing conclusions as to renal insufficiency. The ordinary urea determinations, as performed by some practitioners and in some clinical laboratories with the Doremus apparatus (a method which by itself carries more than 7 per cent. of error, and the employment of which is nothing short of ceremonious delusion), are often worse than valueless, for they may give rise to serious misinterpretation on the one hand, causing alarm when there is no danger, and on the other lulling the physician into a false state of security when serious danger is impending. Combined with the crude ideas of underfeeding the poor nephritic (exclusive milk diet, withdrawal of meat, etc.) that are largely employed, he thinks this kind of urea determinations is the chief reason why so many nephritics are starved to death.

Detroit Medical Journal.

April.

101 Manic Depressive Insanity. A. M. Barrett, Ann Arbor.
102 *Acute Poliomyelitis. G. Connor, Detroit.
103 Vaginal Cesarean Section. M. Stamm, Fremont, Ohio.

102. **Acute Poliomyelitis.**—Connor tabulates the literature of epidemics from 1843 to 1907, and summarizes the symptomatology, the distribution of the permanent paralysis, and the treatment.

Annals of Otology, Rhinology and Laryngology, St. Louis.

March.

104 *The Optic Nerve and the Accessory Cavities of the Nose. A. Onodi, Budapest, Hungary.
105 Ten Cases of Intracranial Complications of Middle-Ear Disease. S. J. Kopetzky, New York.
106 Ocular Symptoms of Intracranial Complications in Otitic Disease. P. Fridenberg, New York.
107 Thrombosis of the Posterior Cerebral Veins and Artery Encephalitis, Purulent Leptomeningitis, Lateral Sinus Phlebitis and Parietal Thrombosis Following Mastoiditis. W. S. Bryant, New York.
108 Plea for Conservatism in Treatment of Certain Affections of the Nose and Ear. H. L. Myers, Norfolk, Va.
109 *Primary Nasal Diphtheria. T. Hubbard, Toledo, Ohio.
110 Plea for Local Anesthesia in Operations on the Maxillary Sinus. G. King, New Orleans.

104. **Canalicular Neuritis.**—Onodi considers at great length the relations between the accessory cavities of the nose and atrophy of the optic nerves. His considerations lead him to conclude that a causal connection is probable between a one-sided, double-sided, or contralateral sight impairment and blindness and disease of the accessory cavities, particularly those of the posterior ethmoid cells and the sphenoidal sinus, and that he has been able to establish an anatomic foundation for this theory. An exact pathologic-anatomic foundation yet remains to be established. The article is elaborately illustrated.

109. **Primary Nasal Diphtheria.**—Hubbard says that we are less careful in diagnosis now than in the pre-antitoxin period. Primary nasal diphtheria differs from ordinary faucial diphtheria in being a subacute or chronic process, and of slight toxicity; but these cases harbor the bacilli longer than those of the faucial type, so that isolation should be prolonged. There are two types. In one there is a formation of false membrane, sometimes completely filling one or both nasal fossæ with casts, and a watery, acrid, mucopurulent discharge. The other is merely a diphtheritic inflammation of the mucosa with a copious watery discharge of acid mucopus. The fibrinous type is commoner in older children, the catarrhal type in infants. There is a tendency to reinfection and relapse. Extension from nares to fauces is rare, though it is said to have taken place. He discusses the symptomatology and reports cases. Antiseptic irrigation and douching are futile, and may be dangerous. A mild detergent solution dropped into the nares with a medicine dropper is sufficient.

Mississippi Medical Monthly, Vicksburg.

May.

111 *Home Treatment of Pulmonary Tuberculosis. J. B. Elliott New Orleans.

111. Abstracted in The Journal, May 30, 1908, p. 1821.

St. Louis Medical Review.

April.

112 Pathology and Diagnosis of Hydrophobia. D. L. Harris, St. Louis.
113 *Impotency the Result of Deformity of the Penis Due to Arteriosclerosis. G. F. Lydston, Chicago.
114 Unusual Case of Gonorrheal Ophthalmia. E. H. Higbee, St. Louis.
115 Surgery of the Ureter. B. M. Ricketts, Cincinnati.

113. See abstract No. 31.

American Practitioner and News, Louisville.

May.

116 Cancer of the Breast. F. W. Samuel, Louisville, Ky.
117 Celiac Axis. B. Robinson, Chicago.
118 Eyestrain. W. J. Leach, New Albany, Ind.

Vermont Medical Monthly, Burlington.

May.

119 Diagnosis and Treatment of Syphilis. J. Pedersen, New York.
120 Etiology, Symptoms and Treatment of Melancholia. W. D. Berry, Burlington.
121 Treatment of Litigation Neuroses. C. S. Calverly, Rutland.

Louisville Monthly Journal of Medicine and Surgery.

May.

122 Postoperative Abdominal Adhesions C. W. Hibbit, Louisville.
123 Exophthalmic Goiter. J. R. Wathen, Louisville.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London.

May 9.

1 *Influence of Pregnancy on Certain Medical Diseases and of Certain Medical Diseases on Pregnancy. H. French.
2 *The School and Its Part in the Prevention of Tuberculosis. J. Hay.
3 *Experimental Production of Gastric Ulceration by Injection of Gastrotoxin. C. Bolton.
4 Leprosy: Its Causation, Symptoms and Treatment Based on and Experience of 152 Lepers in the Leper Jail of the United Provinces, India. T. Hunter.
5 Aortic Aneurisms; Sudden Deaths: Capacity of the Pericardium. H. A. Smith.
6 *Precipitin Reaction in Hydatid Disease. D. A. Welsh and H. G. Chapman.
7 Operative Surgery of Labyrinthitis. C. E. West and S. Scott.
8 The Nursing Difficulty in France.

1. **Pregnancy and Medical Diseases.**—In his second Goulstonian lecture French deals with suppurative lesions other than those dealt with in his first lecture in relation to pregnancy, with tuberculous and calcareous diseases, non-suppurative renal affections—the cause of pregnancy nephritis, albuminuric retinitis, the effect of twin pregnancy on the kidneys and of nephritis on the child—pregnancy in patients who have only one kidney, tetany and pregnancy and appendicitis in association with pregnancy.

2. **The School and Tuberculosis.**—Hay summarizes his conclusions as follows: Without infection there is no tuberculosis. Pulmonary tuberculosis is either open, in which case the patients are infectious, or closed, then the patients are not dangerous to others. School-going children as a class are healthy; only 0.5 per cent show definite signs of pulmonary tuberculosis. From 10 to 15 per cent. approximately are predisposed to consumption and in all probability suffer from latent tuberculosis; special care should be given to these children. The periodical medical examination of the scholars, teachers and caretakers is essential. School hygiene can not be divorced from home hygiene. The active cooperation of the school medical officer and the medical officer of health is most desirable and tends to efficiency and economy of administration. Tuberculosis of infants and children is almost always due to human infection, and that infection generally occurs at home. The segregation of incurable and dangerous consumptives in union infirmaries and elsewhere will greatly diminish the incidence of infection among infants and young children.

The children must be utilized to educate their parents. The schools should be centers for the dissemination of accurate information concerning consumption and thus help to form public opinion.

3. **Gastric Ulcer.**—Bolton conceived the idea of preparing a gastrotoxic serum active against gastric cells, with a view of throwing light not only on the phenomena of cytotoxic action, but also on the obscure problem of gastric ulceration. He describes the mode of preparation of such a serum and the results of its injection in the living animal. Analysis of the serum *in vitro* shows it to be hemolytic and to contain several precipitins. The results of his experiments seem to him to open up new lines along which to prosecute further research in regard to gastric ulcer. It is possible that not only certain endogenous but also certain exogenous poisons may be capable of initiating self-digestion through the blood stream, and that the production of such lesions may be facilitated not only by hyperacidity of the gastric juice, but also by other bodies introduced with the food. It seems that all ulcers produced by digestion of dead or devitalized tissue are essentially acute, and, since human gastric ulcer is commonly a chronic malady, it is not so much the actual mode of production which it is necessary to explain, as the fact that the ulcer so persistently refuses to heal. It is possible that this chronicity may depend on a secondary bacterial infection of the ulcer largely owing to muscular insufficiency, but on the latter point he hopes to be able to speak more definitely at a future date.

6. **Hydatid Disease.**—Welsh and Chapman, as a result of experiment in hydatid cases prior to operation, state that interaction between selected hydatid fluids and a sufficiency of the serum of a patient affected with hydatid disease, in their experience of nine cases, has never failed to give a positive precipitin reaction when tested before operation. Not all hydatid fluids are capable of eliciting this reaction and their failure is not associated with any noticeable diminution of their protein content. Persistence of a marked reaction some weeks after operation probably indicates the continued presence of the parasite, but the disappearance of the reaction does not necessarily indicate complete removal of the cysts. A positive reaction is independent of the site of the hydatid cyst (hepatic, peritoneal, muscular), and independent also of the nature of its contents, whether clear, turbid or purulent.

British Medical Journal, London.

May 9.

9 Diagnosis and Operative Treatment of Diseases of the Stomach. B. Dawson.
10 *Gastroenterostomy and After. B. G. A. Moynihan.
11 Erythrocythemia and Cyanosis. W. P. Herringham.
12 Recognition and Training of Congenital Mental Defectives. W. A. Potts.
13 Outbreak of Beriberi on Board a Merchant Vessel. S. Roach.
14 *Treatment of Bronchial Catarrh by Alkalies. A. Haig.
15 *Influence of Pregnancy on Certain Medical Diseases and of Certain Medical Diseases on Pregnancy. H. French.

10. **Gastroenterostomy.**—Moynihan considers the after results of his cases in four groups, as follows: 1, Perforation of the stomach or duodenum, 27 cases; 2, acute hemorrhage, 23 cases; 3, chronic gastric or duodenal ulcer, 205 patients with 214 operations; 4, hour-glass stomach. 15 cases of gastroenterostomy, combined in 6 of them with gastroplasty or gastrogastrostomy. He gives the result of an inquiry into the after-history of these cases, which represent those operated on from the beginning of his experience to the end of 1905. He concludes as follows: Gastroenterostomy is a short-circuiting operation, and, like all such procedures, acts best when a gross mechanical obstruction exists in the normal path of the intestinal contents. Experimental work shows that when the pylorus is normal, and there is no impediment to the passage of food through it, the opening made in the operation of gastroenterostomy does not allow of the escape of any of the gastric contents into the intestine. The operation, therefore, gives the best results in cases in which there is organic disease in the prepyloric or pyloric regions of the stomach or duodenum, or when performed on the cardiac side of a stenosis in the body of the stomach. When an ulcer is found on the lesser curvature near the cardia it should be excised, if possible; gastroenterostomy is not necessary, and if performed is either almost useless or entirely harmful. When there is a suspicion of malignancy in an ulcer or ulcers in the pyloric region, Rodman's operation should be performed. Under no circumstances, and in compliance with no persuasion, however insistent, is gastroenterostomy to be done in the absence of demonstrable organic disease. Regurgitant vomiting, formerly the most troublesome of all complications, is dependent on faults in the operation which result in some mechanical obstruction to the intestine. These faults are chiefly dependent on the presence of a loop in the jejunum, but may also be caused by a twist in the intestine around its longitudinal axis at the time of its application to the stomach. The posterior no-loop operation with the vertical application of the bowel to the stomach is the best procedure.

14. **Bronchial Catarrh.**—Haig endorses the recommendations of Buckler (*American Journal Medical Sciences*, July, 1882), as to the value of salicylates in certain cases of bronchial inflammation accompanied by high acidity of the urine. He differentiates, however, a class in which dyspnea is accompanied by a falling acidity of the urine. In this class he has found it necessary only to give an alkali almost alone, say sodium bicarbonate, grains 20 (1.30 gm.) to 60 (3.90 gm.) for a child, or 90 (4.95 gm.) to 120 (7.80 gm.) for an adult, in the twenty-four hours. On no account should ammonia or any drug tending to raise the acidity of the urine be given with it, and even such flavoring matters as orange and sugar are best left out. The alkali must be given in sufficient quantity to make the urine alkaline. When that is effected, the alkali is reduced to a small dose and a little belladonna is added to dry up the secretions.

15. See Abstract No. 1.

Clinical Journal, London.

May 6.

16 *Diagnosis of Medical Diseases of Joints. W. H. White.
17 Mortality Statistics During the Last Half Century. S. Phillips.
18 Abdominal Suppuration of Obscure Origin. C. A. Morton.

16. **Diseases of Joints.**—White discusses rheumatoid arthritis at length. It may be acute or chronic. In the acute form a noticeable feature is that the pulse rate is usually much higher than the temperature would lead us to expect. It is much the same night and morning, and remains high after the temperature has fallen. This is a constant feature, and is not associated with any evidence of valvular disease of the heart. Many joints are affected in quick succession. Pain is prominent from the first. It differs from the maladies with which it is most likely to be confounded by the fact that the temporomaxillary joints and the spine are likely to be severely implicated. The *x*-ray shows that no bony outgrowths or alterations in the bones occur. From osteoarthritis the chronic form is distinguishable by the younger age of the patient, the involvement of the temporomaxillary joints, and the fact that the terminal phalanges of the fingers escape. From rheumatic fever it is differentiated by the fact that in the latter arthritis soon leaves one joint and appears in another. The phalangeal joints and those of the spine and jaw are rarely affected in rheumatic fever. The sweating is all over the body, pigmentation is not common, wasting not extreme. Cardiac trouble is common in rheumatic fever, rare in rheumatoid arthritis. Great rapidity of pulse, apart from cardiac disease, is uncommon in rheumatic fever, which disease does not cause the spindle-shaped swelling of the joints common in rheumatoid arthritis, or leave behind a permanent defect of the joints. In gonorrheal rheumatism the knees are most often affected; we rarely see the spindle-shaped swelling of the fingers, but the sheaths of the tendons and bursæ are often affected. Also there is commonly pain at the back part of the sole of the foot. White believes that the diagnosis of rheumatic fever should always be withheld so long as only one joint is affected. Even if only one joint is affected early, a second will be affected within twenty-four hours. The diagnosis between pyemic arthritis and rheumatic fever is most important, for if pyemia is called rheumatic fever, failure to adopt surgical treatment may end life in a few days after a

favorable prognosis has been given. The diagnosis is likely to be especially difficult if the pyemia takes the form of malignant endocarditis. Syphilis with effusion into the joints has been mistaken for rheumatic fever. Pyrexia with pain and effusion in the joints is common as an early symptom of cerebrospinal meningitis. In countries where dysentery is common the accompanying arthritis may cause difficulty, as also may that of glanders. Pneumococcal arthritis has been thought to be rheumatic. In scarlatinal rheumatism, so-called, it can not be definitely settled whether or not the arthritic symptoms are due to true rheumatic fever as a complication.

Medical Press and Circular, London.

May 6.

19 Early Diagnosis in Surgical Diseases of the Kidney, with Special Reference to Physical Methods of Examination. D. Newman.
20 Five Cases Illustrating Diseases of the Gall Bladder. G. Reinhardt-Anderson.
21 Painless Hematuria. A. Fullerton.
22 Bacteriology as It Affects General Practice. S. J. Ross.

Journal of Obstetrics and Gynecology of the British Empire, London.

April.

23 Frozen Sections of Bumm and Blumreich and Zangmeister. Is There a Lower Uterine Segment (to be continued)? A. H. F. Barbour.
24 *Case of Difficult Labor, with Observations on the Retraction Ring and the Postmaturity of the Fetus. H. R. Andrews and R. D. Maxwell.
25 Two Cases of Multilocular Retroperitoneal Cysts in Women. A. Doran.
26 *Early Tubal Gestation. A. C. H. Suhr.
27 *Ovarian Tumors in Sisters. Record of Three Instances in Which Two Sisters Were Successfully Operated on for Removal of Ovarian Tumors. A. C. Butler-Smythe.

24. **Retraction Ring and Postmaturity of Fetus.**—Andrews and Maxwell report a case of difficult labor in which the fetus, which was already dead, was, after every conceivable method of delivery had been tried, delivered by abdominal panhysterectomy. The uterus and its contents were at once frozen and sections made. From the findings the authors say: "A consideration of these points would lead us to modify the historical view of the contraction ring which explains its site purely by reference to the musculature of the uterus and certain anatomic relations therein, and without taking into consideration the disposition of the fetal parts conveys the impression that the uterine muscle can without any *point d'appui* suddenly undergo such a sharp transition in bulk as to present the clinical signs of a contraction ring. This specimen suggests that its causation is dependent entirely on the position and the relation of fetal parts occupying the lower uterine pole, and that by firm and rigid molding the ring is formed. The actual ring itself would appear to be due to a contraction of the circular fibers fitting tightly into a groove, as all specimens show that there is no sudden change of thickness. The case was clinically one of forty-four weeks' gestation, and the examination of the epiphysis at the upper end of the tibia confirmed that opinion." The authors discuss the question of postmaturity, and say: "We still remain in ignorance of the cause, or many interacting causes, that determine the onset of labor, but all the evidence at our disposal points to the fact that labor will set in at such a time as the placenta becomes inadequate to maintain the nutrition of the fetus. May it not be possible, indeed more than probable, that no essential difference should exist between the normal placenta and its postmature fellow, since the degenerative changes which determine the onset of normal full-time labor in the former case will in the latter be delayed and only precipitate labor when they have approximated to those of the normal full-time placenta?"

26. **Tubal Gestation.**—Suhr submits a series of recent cases and attempts to show that: 1. The tendency toward more frequent operation is justified and the results are much improved. 2. The risk of abdominal section is not greater than the risk of leaving patients without operation. 3. We are at present unqualified to select with safety cases for expectant treatment.

27. **Ovarian Tumors in Sisters.**—Butler-Smythe points out that while the association of uterine fibroids in sisters is not uncommon, such an association is much less so in the case of ovarian tumors. He reports a series of cases and notes the following coincidences: The patients were operated on by the same surgeon. In each instance one sister was single, the other married. In the first the unmarried sister had two large multilocular cysts, the other a multilocular cyst and a large cystic ovary. In the second, each sister had a dermoid tumor of the left ovary. In the third, each sister had a multilocular tumor of the right ovary, and both patients were said to be pregnant. In all three instances the sisters from each family were operated on consecutively. All the patients came under notice within the period of sexual maturity.

Australasian Medical Gazette, Sydney.

March

28 *Operative Treatment of Retrodisplacements of the Uterus. F. Barrington.
29 British and Foreign Clinics. R. Worrall.
30 Infantile Paralysis Simulating Meningitis; Tendon Transplantation. A. J. Turner.
31 *Notes from North Queensland. R. A. O'Brien.
32 Ring Cancer of the Sigmoid Flexure. W. A. Giles.

28. **Retrodisplacements of Uterus.**—Barrington lays down as preliminaries to operative rectification, curettement in all cases; repair, if necessary, of cervix, and of any marked defect in the musculo-fascial framework of the sacral segment of the pelvic floor. In choosing an operation attention must be paid to: 1. The previous history, especially as to infection following abortion, labor or gonorrhea. 2. Condition on bimanual examination, whether (a) uncomplicated, (b) complicated by intrapelvic abdominal changes, minor or major. 3. The prospects of future pregnancy. When the displacement is uncomplicated inguinal shortening of the round ligaments, the least dangerous of all operations, is best. Especially suitable cases are retroversio-flexion in nulliparous women, and parous women with uterus enlarged, retrodisplaced and freely movable, with deficient pelvic floor. Care must be taken that the ligaments are efficiently shortened, that they are fixed in their normal course with hernia-proof closure of the inguinal canals, effected by interrupted absorbable sutures, and that the loop representing the slack of each ligament is preserved and sutured to the skin external to the aponeurosis above the upper end of the incision, with fixation knot on skin surface. In complicated cases of minor character, i. e., without fixation, as in light pelvic adhesions, small ovarian cysts, hydrosalpinx, etc., he recommends opening the abdomen and shortening the round ligaments in the inguinal canals through a single transverse incision (Reuben Peterson). Other intra-abdominal operations suitable in different classes of more complicated cases, after mesial section, are grouped by the author as follows: 1. A loop of each round ligament is secured by temporary ligature in the abdomen and pulled (a) obliquely through the abdominal wall and fixed to the aponeurosis; (b) sub-aponeurotically through each internal abdominal ring to the middle line and there fixed to the aponeurosis and to one another. 2. By following each round ligament in various ways. 3. By carrying a loop of each round ligament through the broad ligament and securing the loop to the uterine wall. Any method of shortening the round ligaments is preferable to direct uterine suspension when pregnancy is a possibility. In extensive pelvic disease ventrosuspension and ventrofixation are justifiable only when natural age or morbid sterility exists. In removal of the appendages for inflammatory disease when raw surfaces are left on the upper aspect of the pelvic floor, the uterus should always be ventrosuspended, whether previously displaced or not. In cases in which the uterus is much damaged in separation of appendages it should be removed with them. A healthy ovary should always be left if possible. It is also sound practice to remove the vermiform appendix when there is a solution of continuity of the peritoneum on the right side, unless the appendix is postcecal and normal. Otherwise it is prone to become adherent to the suture line.

31. **Notes from Queensland.**—O'Brien discusses malaria, ankylostomiasis, dengue, typhoid, sprue, filariasis, leprosy, yaws, amblyopia, pemphigus contagiosa, and ulcerating granuloma.

Dublin Journal of Medical Science.

May.

33 Clinical Examination of Urine. W. G. Smith.
34 Epidemic Diarrhea and Its Influence on Infantile Mortality. T. O. Graham.
35 Ocular Manifestations of Syphilis. T. J. T. Wilmot.

Journal of Laryngology, Rhinology and Otology, London.

May.

36 Surgical Treatment of Laryngeal Stenoses. E. v. Navratil.
37 Digital Examination of the Nose. D. McKenzie.

Annales de Gynécologie et d'Obstétrique, Paris.

April, XXXV, No. 4, pp. 193-256.

40 *Puerperal Staphylococcus and Colon Bacillus Sepsis. Marquis.

40. **Puerperal Staphylococcus and Colon Bacillus Sepsis.**—Marquis reports four cases of staphylococcus and three of colon bacillus septicemia and reviews a number from the literature. He says that puerperal septicemia is like any medical septicemia, and that the technic of treatment should be the same. His staphylococcus patients all recovered, the fever lasting from four to eleven days. In a fourth patient both the staphylococcus and the colon bacillus were found in the blood and the patient died in the fourth week. The staphylococcus agglutination test gave positive findings in each case. The colon bacillus sepsis dragged along for 50 and 100 days, but the patients finally recovered. Serum diagnosis, he asserts, is unreliable with the colon bacillus. If there are metastases the otherwise not very grave prognosis becomes serious. In the fatal case of symbiosis reported, a large laceration in the perineum had been left to take care of itself until fever developed. This, he states, is the first case of puerperal symbiosis on record without the streptococcus. Treatment was by intrauterine injection of an iodized solution every day, in the cases terminating in recovery.

Bulletin de l'Académie de Médecine, Paris.

April 21, LXXII, No. 16, pp. 477-488.

41 *Adenoid Vegetations in Adults. Chavasse.
42 *Antidiphtheria Serum in Ocular Infections. Darier.
43 *Injections of Alcohol in Neuralgia. Ostwalt.

41. **Adenoid Vegetations in Adults.**—Chavasse found 342 men with adenoid vegetations in 3,000 soldiers examined. Removal of the vegetations had a decided curative action on concomitant affections of the ear or nose. Heart disturbances were noted in 17; the nose was always much obstructed in these cases.

42. **Antidiphtheria Serum in Ocular Infections.**—Darier has been using antidiphtheria serum extensively in all kinds of ocular infections and his results have been encouraging except in the most virulent forms.

43. **Deep Injections of Alcohol for Neuralgia.**—Ostwalt has made about 2,000 injections of cocainized alcohol in neuralgia. All except 8 per cent. of the patients with facial neuralgia were cured. He has thus treated 152 patients with tic douloureux, 20 with facial spasm, and numbers of others with sciatica. He says that with the necessary prudence all accidents can be avoided, and that this treatment gives extremely satisfactory results and renders the greatest services to the patients. Only a brief summary is given of his memoir presented to the Academy, entitled "Four Years of Deep Injections of Cocainized Alcohol in Facial Neuralgia and Hemispasm."

Presse Médicale, Paris.

April 29, XVI, No. 35, pp. 273-280.

44 *Prophylaxis of Nervous Affections Based on Dietetic Measures. (Essai de prophylaxie des maladies nerveuses.) M. P. Londe.
45 Epidemic of Paratyphoid Fever. V. Collin and L. Fortineau.

May 2, No. 36, pp. 281-288.

46 Organic Reactions in Infection from the Trypanosoma of Dourine. H. Claude and M. Renaud.
47 The Principle of High-Frequency Currents. A. Zimmern.

44. **Dietetic Prophylaxis of Nervous Affections.**—Londe reviews the whole field of nervous affections to show the important part played by digestive disturbances and the curative action of restriction of the diet. Many a case of convulsions, encephalitis and meningitis in infancy could have been warded off by dietetic hygiene. The same is true of all neuroses, and especially the possibility of favorably influencing them by discontinuing the use of alcohol, meat and salt. What is most to be feared is a latent dyspepsia, the clogging of the digestive apparatus. Fortunate, he exclaims, is the patient whose dyspepsia attracts attention in time for dietetic prophylaxis. The amount of labor imposed on the digestive apparatus should be reduced, its functions promoted and autointoxication combated. He gives a number of examples to show the benefit of such measures in keeping under control severe nervous affections, including tabes, general paralysis, palsy, spinal cord sclerosis and the nervous symptoms tributary to visceral affections. Each person should regulate his life, he says, to accord with the resisting powers of his weakest organ, as a chain is only as strong as its weakest link. Especially must one keep pace with his digestive canal. If not, some lesion will surprise him, and the mere predisposition develops into actual organic trouble.

Archiv für Gynäkologie, Berlin.

LXXXV, No. 1, pp. 1-250. Last indexed, May 9, p. 1571.

48 Leucocytosis in Defense of the Body Against Infection. W. Busse.
49 Congenital Absence of Heart. (Herzlose Missgeburten.) E. Kehrer.
50 Case of Pulsation in Primitive Heart Tube in Human Embryo of Two Weeks. W. F. Armann.
51 Embryoma of the Ovary. (Solide Teratome des Eierstocks.) F. Bukojemsky.
52 *Clinical and Bacteriologic Study of Puerperal Fever. F. Fromme.
53 Tubal Menstruation. A. Czyzewicz.
54 Experimental Research on Action of Encapsulated Aërogenic Bacillus on the Mucosa of the Uterus and Vagina. (Einwirkung des Bacillus perfringens auf die Schleimhaut der Gebärmutter und der Scheide.) G. Heinricius.

52. **Puerperal Fever.**—Fromme advocates bacteriologic examination in every case of puerperal fever. When even all kinds of saprophytes can be cultivated from the uterus, but the blood is still sterile, the prognosis is favorable. It is not so favorable when streptococci predominate or display hemolytic properties. He gives the particulars of 12 cases.

Archiv für Verdauungs-Krankheiten, Berlin.

April, XIV, No. 2, pp. 107-240.

55 *Gastric Hemorrhages in Typhoid Fever. (Magenblutungen im Verlaufe des Typhus abdominalis.) H. Schlesinger.
56 *Arteriosclerosis of the Stomach. (Arteriosklerose des Magens.) A. M. v. Lewin.
57 *Primary Sarcoma of the Stomach. (Magensarkom.) A. Staehelin.
58 *Systematic Treatment of Obesity. (Methodik der Entfettungskuren.) I. Boas.
59 Action of Adrenalin on the Gastric Glands. (Adrenalinwirkung auf die Magendrüsen.) G. Yukawa.

55. **Gastric Hemorrhage in Typhoid.**—Schlesinger encountered recently two cases of this rare complication of typhoid and a third case was observed by another about the same time, also in Vienna. He says that a febrile affection commencing with hematemesis should suggest the possibility of typhoid.

56. **Arteriosclerosis of the Stomach.**—Lewin reports two cases and reviews the scanty literature on the subject. This affection may occur in the young; it may cause fatal hematemesis or merely prolonged melena, and it may occur independently of general arteriosclerosis. The diagnosis is generally difficult.

57. **Primary Sarcoma of the Stomach.**—Staehelin's patient was a woman of 51 whose grandfather died of gastric cancer, and her three sisters have also certain or probable cancer of the stomach. He reviews from the literature 82 cases of various forms of gastric sarcoma. It develops earlier than carcinoma, but displays a pronounced tendency to metastasis. Operative treatment gives excellent results, the resection of up to two-thirds of the stomach curing the patient permanently. Resection proved curative in nearly every case of lymphosarcoma. A preceding ulcer is rare. The course may be rapid or prolonged. Vomiting of blood was scarcely ever observed in the early stages, but pain was always an early symptom.

58. **Treatment of Obesity.**—Boas presents data to show that gradual reduction of the obesity may follow slight but persistent limitation of the amount of food, especially of nitrogen-free substances, with moderate but regular exercise. This reduction of obesity can be accomplished without essential

changes in the mode of life and without interfering with business. This slow but infinitely more effectual method of treating obesity is preferable for the milder and uncomplicated cases. It is immaterial whether the proportion of carbohydrates or—as he prefers—of fats is reduced. It is important, however, to maintain the albumin in due proportions. He never goes below 90 gm. a day. The conditions are different with complicated and constitutional obesity. In the latter case the organism resists all dietetic restrictions. To avoid weakening the patient. treatment must be cautious. It is enough to reduce carbohydrates and fats to keep from further increase in weight. In obesity complicated with heart disturbances the aim must be to reduce the weight rapidly. He does not advise restriction of water. After completing the acute course of treatment he begins chronic reduction, controlled by the patient's subjective well-being. The diet suitable to-day may be inappropriate a month later. He advises interposition of an occasional day of fasting, allowing only tea with lemon and saccharin, a little graham bread, two or three hard-boiled eggs, a plate of broth and a few tart apples —a total of 417 calories. The patients are generally soon convinced of the favorable influence of this fast day. He cites examples which show the rapid decline in weight in the weeks with one fast day. The aim on this day is to eliminate every kind of fat and to restrict the carbohydrates to the lowest point, while yet filling the stomach and allowing plenty of water. In this way he found it possible to effect a cure in numerous cases of moderate obesity in which other methods had failed or had been carried out only with great difficulty. In mild cases fast days are superfluous, and in the very severe cases of constitutional obesity the outcome even with this is dubious.

Berliner klinische Wochenschrift.

May 4, XLV, No. 18, pp. 861-904.

60 *Stokes-Adams' Disease. E. de Renzi.
61 *Pains in Sternum. (Sternalschmerzen.) P. Hampeln.
62 *Idiopathic Osteopsathyrosis. A. Lipschütz.
63 Specificity of Precipitin Reaction in Syphilis and General Paralysis. W. Fornet and J. Schereschewsky.
64 Reliability of Serum Diagnosis of Syphilis in Ophthalmology. C. Cohn.
65 Hemolytic Reaction of Blood Serum with Cancer. (Hämolytische Reaktion des Blutserums bei malignen Geschwülsten.) W. Fischel.
66 The Guaiac Test for Occult Blood. (Guajakblutprobe.) J. Rothschild.
67 Ocular Tuberculin Reaction. (Conjunctivalreaktion.) F. Rosenbach.
68 Histologic Determination of Acidosis in Infants. (Acidose des Säuglings.) G. Tugendreich.
69 Reliability of Mollière's Methyl-Violet Reaction, as Test for Free Hydrochloric Acid in the Stomach. (Nachweis von freier Salzsäure im Magen.) Wasserthal.
70 Telephone for the Very Deaf. (Hörtelephone für Schwerhörige.) P. Lebram.

60. **Adams-Stokes Disease.**—De Renzi reports a case in detail with the essential symptoms of bradycardia and nervous attacks of syncope or convulsions. The pulse is only apparently slow, for there can be no doubt, he says, that the number of pulse beats is actually the double of what is supposed. The contraction of the auricles alone is not enough to induce perceptible pulsation in the peripheral vessels. The alternation between a vigorous and a feeble pulsation can be detected by close examination. The sphygmograph shows a slight rise between the two curves of the radial pulse. The nervous attacks are generally preceded by an exceptionally intense bradycardia. The bradycardia is permanent, uninfluenced by emotions, muscular exercise, change of position or drugs. All the circumstances which physiologically increase the pulse caused in his patient considerable dyspnea. There was also much increase in the blood pressure. Pulsus bigeminus is often observed in these cases, probably the result of the sluggishness of the systoles. The contraction of the ventricles, apparently simple, is the result of several combined muscular contractions. Signs of renal sclerosis were evident in several cases on record. The whole syndrome, he thinks, is due to meiopragia of the myocardium. It may even be said that universal meiopragia corresponds to diffuse arteriosclerosis. All the symptoms are easily explained by the lesion of the myocardium resulting from arteriosclerosis. On account of these changes the refractory phases of the heart grow longer, and the peristaltic movement proceeding from the auricle is transmitted to the ventricle with longer and longer intervals. In conclusion de Renzi cites an Italian, G. Paladino, who described in 1876 the bundle of fibers which is generally called the bundle of His.

61. **Pain in the Sternum.**—Hampeln has encountered 12 cases of pains in the sternum, sometimes due to a congenital weakness or tenderness, or to gouty deposits, or they were purely neuralgic or ostealgic in character. Slight traumatic influences were a factor in some cases. Removal of opportunity for external injury, supplemented by tonic and soothing measures, generally brought relief. Repose, baths, bromids and a plaster may all be useful.

62. **Idiopathic Fragility of the Bones.**—Lipschütz describes a case in detail with the Roentgen findings, and discusses the relations between this osteopsathyrosis and fetal affections of the skeleton.

Correspondenz-Blatt für schweizer Aerzte, Basle.

March 1, XXXVIII, No. 5, pp. 137-168.

71 *Acetonuria in Diabetes mellitus. C. Stäubli.
72 Seasons and Moods. (Disposition und Gezeiten.) H. Brunner.
73 *Eczema an Infectious Process. Schwenter. Commenced in No. 4.
74 *Vibratory Massage in Ineffectual Labor. (Wehenschwäche und Vibrationsmassage.) W. Cubasch.

March 15, No. 6, pp. 169-200.

75 *Epidemic of Scarlet Fever in Home for Epileptics. A. Mæder.
76 Opsonins. S. Stocker.
77 Dangers of Cocain in Corneal Lesions. (Kokain bei Hornhautaffektionen.) A. Dutoit.

April 1, No. 7, pp. 201-232.

78 Simple Gymnastic Apparatus for the Knee. (Bewegungsapparat für das Kniegelenk.) A. Haslebacher.

April 15, No. 8, pp. 233-280.

79. Ocular Tuberculin Reaction. M. Burckhardt.
80 *Six Cases of Intestinal Invagination. (Darminvagination.) Hæberlin. Commenced in No. 7.

May 1, No. 9, pp. 281-312.

81 Cancer Fever. (Carcinomfieber.) R. Stierlin.
82 *Abdominal Purpura. E. Döbell. Commenced in No. 7.

71. **Acetonuria in Diabetes.**—Stäubli describes a few cases of diabetes with intense acidosis, to illustrate the benefits of reduction of carbohydrates. The better utilization of the sugar formed in the intermediate metabolism has a favorable influence on the acidosis, and the proportion of acidosis bodies in the urine grows less. Treatment of diabetes under constant control of the quantitative conditions of elimination requires tedious research and a well-equipped laboratory, but it decides the question as to the advisability of reduction of carbohydrates in severe cases without fear of evil consequences. The results in many cases will repay the effort made. All his patients took large doses of sodium bicarbonate and it seemed to promote the elimination of nitrogen.

73. **Eczema.**—Schwenter reviews the various measures in vogue for treatment of eczema, and remarks that the curative action of sulphur in certain forms and of tar preparations in others indicates that they act on the causal germ. Prolonged application of alcohol will destroy all the cocci on the skin, and alcohol sprays and alcohol dressings are, therefore, useful. The eradication of the eczema parasites in their remotest nooks is an important part of rational treatment, and is the only means of preventing relapses. Special attention must be paid to the hair follicles, the lanugo hairs, the crevices around the nails and all the folds of the skin and parts subject to friction. The previous sites of eczema must be cleansed daily; if dry, they should be rubbed with some mild disinfecting salve; if greasy, alcoholic solutions and soaps should be given the preference.

74. **Arrested Labor and Vibratory Massage.**—Cubasch reports three cases of protracted labor in which forceps seemed indicated at once, but before resorting to this he applied a small vibrator to the abdomen for one minute. The uterus at once responded with a weak contraction, followed soon by stronger ones. The vibrator was applied again a few times, each during a contraction, and the head emerged in from twenty to forty-five minutes. The hemorrhage was unusually slight and the uterus seemed particularly free from any tendency to flabbiness.

75. **Scarlet Fever in an Institution.**—Mæder observed twenty-four cases of scarlet fever in a home for epileptics where the course of the epidemic could be closely watched. This experience shows the importance of healthy germ carriers in transmission of the disease; and also that it is contagious in all stages, and that abortive forms play a large part in the spread of an epidemic. Every mild febrile affection, as well as every sore throat, is suspicious during an epidemic, and should be isolated.

80. **Intestinal Invagination.**—Hæberlin reports six cases, two in infants. Colic-like and vague pains, moderate meteorism and exaggerated peristalsis were the principal features. Blood was found in the stools in only one case; it is generally present in about three-fourths of the cases. Daily stools were the rule in some, and diarrhea was common. A tumor could be palpated in five cases; it was kidney-shaped in one. In the more chronic forms the palpation findings were less positive. Operative treatment should be based on the same principles as for hernia. In two of his cases surgical intervention came too late. One of the patients, a girl of 3, was operated on the fourteenth day after the first signs of illness, and the trouble was found to be invagination of Meckel's diverticulum. The child promptly recovered after excision of the diverticulum.

82. **Abdominal Purpura.**—Döbeli found that chronic intussusception of the sigmoid was the primary cause of a severe, chronic, typical case of Henoch's purpura in a boy of 8. He reviews the literature and his reasons for assuming that chronic obstipation was the cause of the invagination. He succeeded in curing the child by measures directed solely against obstipation. He introduced an ordinary stomach tube into the intestine for about twelve inches from the anus and poured in nearly a quart of warm oil. As the intestines were evacuated the swelling of the joints and back of the hand and foot and the patches of purpura vanished, as also the pains. No purgatives were given by the mouth, but small glycerin enemas were given daily thereafter. The diet was the ordinary nourishing mixed menu with exclusion of coarse vegetables and raw fruits. By these means the tendency to constipation was cured, and as the child increased in weight the tendency to reproduction of the invagination was also combated. If at every attack the invagination can be reduced by high injections of water, oil or air, as in this case, surgical intervention is unnecessary. As the patient takes on fat the relaxed mesentery becomes stronger. He does not advise forced feeding, for fear of overtaxing the intestines, but he warns not to keep the patient on gruels and milk alone, from dread of starting an attack of purpura and colic. The debility must be cured before conditions will change for the better. He summarizes from the literature twenty-two cases, which sustain his assumption that abdominal purpura is merely a symptom-complex secondary to some affection of the stomach or intestines in predisposed individuals. The prognosis depends on the curability of the underlying affection and the congenital disposition to ready hemorrhage. The purpura generally vanishes spontaneously when the primary trouble is cured, but gelatin may be needed in some cases.

Deutsche medizinische Wochenschrift, Berlin.

April 30, XXXIV, No. 18, pp. 769-808.

83 Appendicitis. (Epityphlitis.) D. v. Hansemann. Id. Sonnenburg. Id. Kraus.
84 *Renal Diabetes. (Nierendiabetes.) M. Bönniger.
85 Physiology of Suprarenals and Pupil-dilating Substances in the Blood, etc. (Physiologie der Nebennieren.) R. Ehrmann.
86 Fracture of Base of Skull. (Nachweis der Basisfraktur.) A. Peyser.
87 Means for Roentgen Dosage. (Die Gaiffe-Waltersche Milliampère-Methode als Mass der Bestrahlungsenergie.) C. Schindler.
88 Unreliability of Ocular Tuberculin Reaction. (Ophthalmoreaktion.) C. Klieneberger.

84. **Renal Diabetes.**—Bönniger reports the case of a man of 37, a hard drinker, with 2 per cent. sugar in his urine. The sugar disappeared from the urine during an attack of delirium tremens, but returned afterward. The glycosuria was not influenced in the least by refraining from carbohydrates nor by their copious intake. The proportion of sugar in the blood was always remarkably low. The glycosuria probably began about three years ago; the case has been under his observation for nine months; he classifies it as a typical specimen of renal diabetes.

Deutsche Zeitschrift für Chirurgie, Leipsic.

April, XCIII, No. 1, pp. 1-100.

89 *Conservative Methods of Operating for Sarcoma of the Long Bones. Borchard.
90 Injury of the Median Nerve as Complication of Typical Fracture of the Radius. Blecher.
91 *Constriction Hyperemia in Treatment of Gonorrheal Arthritis of the Large Joints. (Stauungshyperämie bei Arthritis gonorrhoica.). W. Baetzner.
92 *Postoperative Hemorrhage in Digestive Tract. (Postoperative Magen-Darmblutungen.) Thelemann.
93 *Subcutaneous Laceration of the Spleen and Its Treatment. (Subkutane Milzzerreissung.) Lotsch.

89. **Sarcoma of the Long Bones.**—Borchard's seven cases confirm the assumption that even decidedly malignant forms of sarcoma of the long bones can be cured by a conservative operation. The microscopic findings are of subordinate importance; the main point is the macroscopic extent of the growth. Only when the soft parts are so involved that the nutrition of the limb will suffer, is a mutilating operation indicated. The age is of little importance. He recommends a trial of conservative methods. By resecting far into sound tissue, applying plastic procedures, with sufficient patience, results can be obtained as good as after mutilating operations in respect to a permanent cure and surpassing them in the functional results. Another point in favor of conservative treatment is that patients will consent much earlier to intervention of this kind.

91. **Constriction Hyperemia in Gonorrheal Inflammation of the Large Joints.**—Baetzner reports from Bier's clinic forty cases of gonorrheal arthritis treated by passive hyperemia. He gives the details of each case and states that this simple, inexpensive method of treatment is an essential advance in the management of such cases. It is distinguished by the prompt relief of the pain, while it allows early mobilization of the affected joints, and the whole clinical course is comparatively much milder. The duration of the affection is abbreviated, and the functional results are better than with other technics. No ankylosis was observed in any instance. The best results were obtained in the most recent cases, but, unfortunately, the affection is seldom differentiated early, usually not until after the failure of salicylates.

92. **Postoperative Gastrointestinal Hemorrhage.**—Thelemann reports two cases of intestinal hemorrhage, both occurring the thirteenth day after the laparotomy. The loss of blood was successfully combated in each case by daily saline infusion, with styptics internally. The literature on the subject of postoperative thrombosis is reviewed.

93. **Subcutaneous Laceration of the Spleen.**—Lotsch describes a set of symptoms observed in four cases. Immediate laparotomy is the only rational treatment, and splenectomy is the preferable technic. Malarial and typhoid infection predispose to laceration. The principal signs are extreme anemia, rigidity of the abdominal walls and tympany, and in the spleen region and left upper quadrant there is a circumscribed area of intense dulness, the outlines of which do not alter with change of position. Vomiting does not belong to the pure symptom-complex and suggests injury of adjacent organs, of the intestines in particular.

Medizinische Klinik, Berlin.

May 3, IV, No. 18, pp. 649-692.

94 *Inflamed Hemorrhoids. (Der entzündete Hämorrhoidalknoten und seine Behandlung.) E. Payr.
95 *Climacteric Intestinal Disturbances. (Darmerkrankungen im Klimakterium.) G. Singer.
96 Neuroses in Children. (Angstneurose der Kinder.) W. Stekel.
97 Importance of Nasal Affections in Sympathetic Ophthalmia. C. Ziem.
98 Antitoxin Treatment of Hay Fever and Anaphylaxis. Albrecht.
99 Binding of Complement with Extracts of Syphilitic Organs in Non-syphilitic Affections. H. Much and F. Eichelberg.

94. **Treatment of Inflamed Hemorrhoids.**—Payr has found incarceration of internal hemorrhoids less frequent than primary inflammatory processes in the external and intermediate nodules. Thrombosis is frequently the first sign of

trouble, and the clot may decay or become organized and the nodule become transformed into a connective tissue mass, or there may be suppuration. Hot sitz baths three times a day, each twenty to thirty minutes long, may give relief; the water should be kept at a constant temperature of 40 C. (104 F.). Repose aids the cure. Intestinal catarrh favors recurrence. Operative treatment may be by excision or directed solely against the inflammatory thrombosis, slitting the nodule and evacuating the clot. He applies cocain and suprarenal extract on cotton to the adjoining sound mucous membrane, after which he injects into the central edge of the thrombosed nodule a little cocain solution. He then slits the nodule on a radial line or makes an incision around the outer base of the nodule. The contents of the nodule are then scooped out and he plugs the cavity with an iodoform-cocain powder. This filling is left for several days and he has never had any complaints of after pains. The results have been satisfactory during the last seven years with twelve patients thus treated.

95. **Intestinal Disturbances in the Menopause.**—Singer believes that intestinal disturbances form the main contingent of climacteric manifestations. Obstinate constipation is most frequent and the ordinary measures fail of effect. Pronounced meteorism is often observed and may simulate a pregnancy. The stools frequently contain blood and the mucosa of the rectum displays a tendency to capillary parenchymatous hemorrhage. There may be symptoms of irritable bladder. Other climacteric phenomena may give the clue to the puzzling intestinal disturbances. The combination of functional intestinal affections with severe disturbances in the vasomotor domain suggests that the homologous symptoms are the work of the sympathetic system. The loss of the internal secretion of the ovary is the primary cause, and ovarian therapy may be indicated. He has not observed any benefit from it, however, in respect to these intestinal manifestations.

Mitteilungen aus den Grenzgebieten der Med. und Chir., Jena.

XVIII, No. 5, pp. 745-898. Last indexed May 9, p. 1573.

100 *Fracture of the Foot as Initial Symptom in Tabes. Trömner and Preiser.
101 *Chronic Inflammatory Affection of Lachrymal and Salivary Glands. (Mikuliczsche Krankheit.) Külbs.
102 Comparative Research on Secretory Functioning of Both Kidneys in a Case of Exstrophy of the Bladder. (Sekretorische Leistungen beider Nieren.) E. Allard.
103 *Operative Treatment of Obesity. (Fettleibigkeit.) C. Schulz.
104 *Stone Formation in the Pancreas. (Steinbildung im Pankreas.) W. Rindfleisch.
105 *Operative Treatment of Cirrhosis of the Liver. (Klinische Beiträge zur Talma-Drummondschen Operation.) V. Lieblein.
106 When Is Operative Treatment Indicated in Chronic Affections of the Lungs? L. Hofbauer.
107 Chronic Polyarthritis in Children. Dreesmann.
108 *Treatment of Falling Blood Pressure in Peritonitis. (Behandlung der peritonitischen Blutdrucksenkung mit intravenösen Suprarenin-Kochsalzinfusionen.) L. Heidenhain.
109 Importance for Surgery of Partial Paralysis of the Abdominal Muscles. (Partielle Bauchmuskellähmungen.) H. Leischner.

100. **Fracture of the Foot as Initial Symptom of Tabes.**—A man of 39, denying syphilis, abuse of alcohol and trauma, except for a slight misstep recently, found that his foot swelled the fourth day after the misstep, and then severe pain developed but soon subsided. He used the foot as usual for weeks, but the swelling increased, and the fracture proved to be the first sign of oncoming tabes. The slight trauma would not have fractured a normal foot. The lack of sensitiveness allowed him to use the foot for months with the unreduced and unhealed fracture. The case also shows the favoring influence of traumatism on the nervous degenerative process. It warns of the possibility of tabes in the etiology of all cases of fracture from inadequate cause in persons between 35 and 50. The further course of the tabes in the case reported showed that certain symptoms later gravitated to the injured limb.

101. **Mikulicz' Disease.**—Külbs reports a typical case of symmetrical, chronic inflammation of the lachrymal and salivary glands, at first assumed to be mumps. The patient showed marked improvement under sodium iodid and innunction of mercurial ointment, although there was nothing to indicate syphilis. The autopsy findings after suicide showed typical Mikulicz's disease. In another case in a man of 45, his five brothers and two sisters, father and two grandchildren all showed more or less enlargement of both parotid glands, but it had never caused any disturbances.

103. **Operative Treatment of Obesity.**—Schulz has operated on two patients to relieve them of the excessive weight of fat in the pendent abdominal walls. He qualifies the operation as simple and harmless, and says that it deserves wide application. The wound is, of course, much longer than a laparotomy wound, but it is not deep, and the cushion of fat is shelled out readily. The weight of the flap of skin and fat removed was about seven and ten pounds in his cases. The only drawback to this operative treatment of obesity is the painfulness of the extensive abdominal wound at first.

104. **Calculi in the Pancreas.**—Rindfleisch has encountered three cases of stone formation in the pancreas at 2,000 autopsies; one case was diagnosed during life. In one case the pancreolithiasis accompanied cholelithiasis and cholecystitis; in another the primary trouble was arteriosclerotic cirrhosis of the pancreas, entailing severe diabetes. The presence of stones was unsuspected. He was unable to detect any special characteristic signs of pancreolithiasis.

105. **Talma-Drummond Operation.**—Lieblein reports three cases of cirrhosis of the liver with ascites in which he made an exploratory laparotomy and twelve others in which he performed the Talma operation. Three of the patients in the latter group were restored to health. The results are better, the earlier the operation is done. None of the patients was permanently cured whose ascites was due to peritonitis rather than to the cirrhosis. In peritonitis the fluid is an exudate; it is possible, he asserts, to determine by chemical tests whether the fluid obtained by puncture is an exudate or a transudate, and thus to differentiate the cases likely to be benefited. He thinks that the results to date of operative treatment in cirrhosis of the liver with ascites are not so brilliant as to justify complicated and dangerous operations. He operated successfully in one case with existing nephritis.

108. **Treatment of Impending Collapse in Peritonitis.**—Heidenhain seeks to prevent or arrest a fall in the blood pressure by intravenous infusion of about a quart of salt solution, to which a few drops of a 1 to 1,000 solution of suprarenal extract have been added; he repeats this infusion once or twice as needed. He describes his experimental research and clinical experience in this line with twenty cases of severe peritonitis and one of pneumonia. His aim is to combat the vasomotor paralysis responsible for the decreasing blood pressure. He does not regard the heart as responsible for the lower blood pressure, but only the vasomotor center in the medulla oblongata. He ascribes to the suprarenal-saline infusion before and after the operation the favorable outcome in a number of otherwise desperate cases. He gives a series of pulse tracings, taken before and after the infusions, showing the benefit derived, the tonometer not having been moved in the interim. His experience to date with this technic includes 1 case of pneumonia, 14 of appendicitic peritonitis, 2 of diffuse traumatic peritonitis, 1 of puerperal, and 2 of gastric peritonitis. The peritonitis was so severe that enterostomy was necessary in 8 out of the 20 cases, but 13 of the patients recovered. The infusions are effectual when the vasomotor center is injured and weak, but not completely paralyzed. In the latter case the center is unable to react to any stimuli. In some of the cases the apparently moribund patient improved under the infusion to such an extent that an operation then first became possible. One or two more infusions later sustained the patient and recovery followed.

Münchener medizinische Wochenschrift.

April 28, LV, No. 17, pp. 889-944.

110 Physiologic Parallel Research on Man and Animals. (Physiologische Parallelversuche an Mensch und Tier.) E. Weber.
111 *New Viewpoints for Treatment of Suppurating Processes. (Neue Gesichtspunkte bei der Behandlung eitriger Prozesse.) E. Müller and A. Peiser.
112 Improvement in Technic of Disinfection of Skin. (Verbesserung und Vereinfachung der Hautdesinfektion.) M. Brunn.

113 Artificial Foods and the Specific Precipitin Tests. Diätetische Nährpräparate vor dem Forum der spezifischen Präzipitation.) T. Horiuchi.
114 Alleged Meat Juice Preparations. (Fleischsaft "Puro.") L. Geret.
115 Treatment of Appendicitis. (Perityphilitis-Therapie.) A. Albu.
116 *Dietetic Treatment of Heart Disease and Obesity according to Karell's technic. (Bedeutung der Karellkur.) L. Jacob. Commenced in No. 16.
117 Direct Visual Inspection of Stomach. (Direkte Besichtigung der Magenschleimhaut.) M. Riehl.
118 Dosage of Actinic Rays. (Neues Prüfungsverfahren zum Vergleich aktinischer Strahlenquellen.) H. Axmann.
119 Technic of Roentgen Photography. F. Davidsohn.
120 Obstetric Bandage to Promote Delivery. (Zur Erleichterung der Geburten.) S. Herzberg.
121 Improved Hypodermic Syringe. (Verbesserung der Injektionsspritzen mit eingeschliffenem Glaskolben.) Faulhaber.

111. **New Viewpoints for Treatment of Suppurating Processes.**—Müller proposes a method of treating suppurating processes by supplying from without an antiferment to counteract the ferment naturally in the suppurating focus. When a drop of pus from an active abscess is placed on solidified serum it eats out a hole while nothing of the kind occurs with pus from a cold abscess. This is the proteolytic test for differentiation of tuberculous pus. The artificial increase of the supply of antiferment is one of the factors in hyperemic treatment, but far more extensive action can be obtained by direct irrigation of the pus cavity with fluids containing large quantities of antiferment. Pre-eminent among such fluids are human blood serum and fluids obtained by puncture from the thoracic and abdominal cavities. Such fluids can be sterilized by filtering and they contain, besides, nourishing and protecting substances and they attract phagocytes to the spot. Peiser has been trying this antiferment treatment in the clinic and he found in 100 cases that the theoretical premises were realized in practice. All acute processes leading to abscess formation proved amenable to this method of treatment. The best results were obtained with smooth-walled cavities, as the antiferment acts only by direct contact. He prefers to obtain the antiferment by venesection, thus using the patient's own blood serum; less than 200 c.c. of blood is ample. This physiologic method of treatment may be combined with constriction hyperemia. He gives a number of case reports to show the prompt curative effect of this method of treatment.

116. **Dietetic Treatment of Severe Heart Disease and Obesity.**—Jacob is assistant at Lenhartz's clinic at Hamburg, and he here reports in detail the experiences with twenty cardiac patients put on the Karell diet. The results were encouraging. When this failed, there were usually severe disturbances which rendered it impossible for the heart to recuperate, even under the most favorable conditions. Autopsy always explained the reasons for the failure of the Karell course in such cases. Administration of digitalis first may enhance its effect, or this first may enhance the effect of digitalis, and calomel may supplement the Karell course to advantage by its action on kidneys and intestines, the ascites vanishing and the liver subsiding to normal size. T. Karell published the technic of this course of dieting in 1868 (*Arch. gén. de méd.*) and Lenhartz has been using it for fifteen years in treatment of chronic bronchitis and emphysema and of heart affections causing symptoms of congestion, especially in the obese. Jacob declares that the results have been remarkable in many instances. The first 6 days the patient is given nothing but 200 c.c. (7 ounces) of milk, boiled or raw, hot or cold, at 8 and 12 a. m. and 4 and 8 p. m. No other fluids or food are allowed during this first week. During the following 2 to 6 days one egg is allowed also at 10 a. m., and a little zwieback at 6 p. m., then two eggs and bread, then a little chopped meat, vegetables or rice pudding, until by the end of the twelfth day the ordinary diet can be resumed, retaining the milk, or tea as its substitute, without allowing the total amount of fluids a day to surpass 800 c.c. (28 ounces) during the entire month. The bowels must be kept open.

Wiener klinische Wochenschrift.

April 30, XXI, No. 18, pp. 641-674.

122 *Spasm of the Larynx of Parathyroid Origin. (Parathyreogener Laryngospasmus.) F. Pineles.
123 Anaphylactic Phenomena During Immunization with Toxins of Typhoid and Paratyphoid Bacilli. R. Kraus and R. v. Stenitzer.
124 Research on Serum Diagnosis of Syphilis. S. Gross and R. Volk.
125 Antibodies in Cases of Tumors. (Antikörper bei Tumoren.) E. Weil and H. Braun.
126 Specific Nature of Wassermann Syphilis Reaction. H. Elias and others.
127 Care of the Umbilicus. (Nabelversorgung.) A. Feitler.

122. **Spasm of the Larynx of Parathyroid Origin.**—Pineles has observed four cases of postoperative tetany and spasm of the larynx after goiter operations. He knows of only two such cases on record. One of his patients has been free from all symptoms except the spasmodic contraction of the vocal cords for several months. The Erb and Chvostek signs were prominent in all his cases. He has observed four others in which the spasm of the larynx accompanied idiopathic tetany, out of nineteen cases of idiopathic tetany. Two infants suffered from the vocal cord spasm, both mothers having tetany. The younger the individual, the greater the tendency in tetany to laryngeal spasm. He encountered it in adults only in the above eight out of one hundred and twenty-two cases of tetany.

Zentralblatt für Chirurgie, Leipsic.

April 25 XXXV, No. 17, pp. 521-552.

128 *Rovsing's Symptom. A. Hoffmann. Id. T. Rovsing.

May 2, No. 18, pp. 553-576.

129 History of Technic of "First Insensibility to Ether." (Geschichte des Aetherrausches.) M. Hirsch.
130 Diagnosis and Treatment of Fistulous Passages. E. G. Beck.
131 Supporting Apparatus for Bandaging Leg without Assistance. P. Manasse.
132 Automatic Suction Syringe. (Selbsttätige Saugspritze.) Neuhaus.
133 Trauma and Carcinoma. Lanz.

128. See abstract in THE JOURNAL, Nov. 30, 1907, page 1882.

Zentralblatt für Gynäkologie, Leipsic.

May 2, XXXII, No. 18, pp. 577-594.

134 *Modified Operation for Rectovaginal Fistula. (Neue Modifikation in der operativen Behandlung einiger Mastdarm-Scheidenfisteln.) D. v. Ott.
135 Determination of Pale Spirochete in Congenital Syphilis. C. Grouven.
136 Diagnosis of Ovarian Teratoma from Material Passed Through the Anus. E. Unterberger.
137 *Serum of Thyroidectomized Sheep in Osteomalacia. (Antithyreoidin Moebius bei Osteomalakie.) R. Hoffmann.

134. **Treatment of Rectovaginal Fistula.**—A case is described by von Ott in which he first drew down the upper lip of the fistula of the rectum and sutured it to the freshened lower lip, thus shutting off the rectum with a suture with two tiers. The freshened edges of a vesicovaginal fistula were then sutured in the same way. The space left by the repair of the rectal wall left an opening into the pouch of Douglas which was not closed, but drained with gauze. This opening into the peritoneum allowed the edges of the rectal fistula to be mobilized and contributed to the success of the operation, as none of the ordinary technics was applicable on account of extensive cicatricial contracture.

137. **Serum Treatment of Osteomalacia.**—Hoffmann comments on the manifold analogies between osteomalacia and exophthalmic goiter. In the former the ovary, in the latter the thyroid, is functioning to excess. In the former ovariotomy, in the latter strumectomy, has a curative action. Both are pre-eminently affections of the female sex, and their effect on the phosphorus metabolism seems to be identical. The secretory activity of the ovary seems to rise and fall with that of the thyroid. The thyroid seems to be predominant, probably on account of its influence on the blood pressure. He knows of no case of osteomalacia with exophthalmic goiter developing later, but many cases are on record in which osteomalacia or a tendency thereto developed in the course of exophthalmic goiter. For these and other reasons he thinks that the serum of thyroidectomized sheep is theoretically indicated in osteomalacia, and he reports a case in which it was given with striking success. His patient was a x-para of 45 with osteomalacia of about six years' standing, able to walk only a few steps with two canes. In less than two months under the serum treatment she was restored to comparative health.

Gazzetta degli Ospedali, Milan.

April 5, XXIX, No. 41, pp. 425-440.

138 Albuminous and Fatty Granulations of the Leucocytes in Tuberculosis. M. V. Carletti.
139 Congestion of the Apex Simulating Tuberculosis. S. Lavagna.
140 Leucocytosis and Iodiphilia in Scarlet Fever. A. Magi.
141 Pathogenesis of Adiposis. G. Mondin.
142 Hematuria Constant in Epidemic of Measles. (Ematuria come complicazione della rosolia.) F. Bambace.

April 12, No. 44, pp. 457-472.

143 Ocular Tuberculin Reaction. (Oftalmoreazione.) G. Finzi.
144 Three Cases of Appendix in Hernia. M. Pavesi.

April 19, No. 47, pp. 489-504.

145 *Hospital Organization and Hygiene. (Organizzazione technica degli ospedali in rapporto coll'igiene ospitaliera.) L. Baldassari.
146 *Intravenous Injections of Magnesium Chlorid in Chorea. E. Calcaterra.
147 Inguinal Hernia in Front of the Peritoneum. (Ernia inguinoproperitoneale.) G. Negroni.
148 Constriction Hyperemia after Resection of Knee. (Cura iperemizzante alla Bier negli operati di resezione del ginocchio.) G. Polini.

April 26, No. 50, pp. 521-536.

149 *Thermostable Substances. Soluble in Alcohol, in Extracts of Organs, and Their Significance. A. Barlocco.
150 Diplococcus Precipitins in the Blood in Pneumonia. A. Barlocco.
151 *Local Action of Bile and Sodium Glycocholate on the Blood Vessels. A. Berti.

145. **Hospital Management and Hygiene.**—Baldassari concludes his article with the wish that a journal could be published entirely devoted to questions relating to the administration, construction and management of hospitals. He states that in Italy there is an average of one hospital, with an average of 60 beds, to 25,177 inhabitants, but in certain departments only one to 70,000 or more.

146. **Intravenous Injections of Magnesium Chlorid in Chorea.**—Calcaterra reports excellent results in two cases of chorea from intravenous injections of 1 or 2 c.c. of a 60 per cent. aqueous solution of magnesium chlorid.

149. **Research on Serum Hemolysis.**—Barlocco has been studying the thermostable and soluble substances found in extracts of organs, both normal and under the influence of toxins, and has obtained interesting results that may throw light on the hemolytic blood test, etc.

151. **Local Action of Bile and Sodium Glycocholate on the Blood Vessels.**—Berti's experimental research has demonstrated that these two substances have an analogous action on the blood vessels. Small doses cause a moderate dilatation of a certain duration, but in large doses they induce intense vasoconstriction.

Policlinico, Rome.

April 26, XV, Practical Section, No. 17, pp. 517-548.

152 Cytologic Research on the Exudate in the Ocular Tuberculin Reaction. P. Gallenga and P. Ciuffini. Id. G. Baglioni.

April, Surgical Section, No. 4, pp. 145-192.

153 *Transplantation of Muscles. (Trapianti muscolari.) R. Caminiti and G. Carere.
154 Effects of Ablation of the Muscular Tunic of the Small Intestine in the Dog. (Ablazione delle tuniche muscolari dell' intestino tenue nel cane.) V. Nicoletti.

153. **Transplantation of Muscles.**—When it is impossible to treat paralysis by transplantation of tendons, it may be practicable to transplant a muscle, and the experiments related by Caminiti and Carere prove the feasibility of implanting a stretch of muscle taken from another animal. In experiments on 20 dogs the results were positive in 11, even to restoration of normal function. The conditions for success seem to be careful hemostasis, the use of fresh pieces of muscles and respecting the vessels and nerves of the muscle on which the transplantation is made as the vitality of the piece depends on the rapid re-establishment of the circulation through it. Another important point is to increase the area of surface contact. This can be done by cutting the muscle obliquely, or better still, by cutting it in steps. Their experience demonstrates that there is never complete regeneration of striated muscular tissue; traumatic defects are always repaired with connective tissue.

Sei-i-kwai Medical Journal, Tokyo.

January, XXX, No. 1, pp. 243-250.

155 Carcinoma of Colon and Fever in Cancer. T. Kanamori.

March, No. 3, pp. 261-272.

156 Changes in the Jaw from Adenoid Vegetations Among the Japanese. K. Sakai. Commenced in No. 2.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

THE DEVELOPMENT OF THE LEISHMAN-DONOVAN PARASITE IN CIMEX ROTUNDATUS. Second Report. By Captain W. S. Patton, M.B., I.M.S. (on Special Duty). Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. Pp. 25, with illustrations. Cardboard. Price, 38 cents. Calcutta: Superintendent of Government Printing, India, 1907.

GENERAL MEDICINE. Vol I, of the Practical Medicine Series. Edited by Frank Billings, M.S., M.D., Head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago, and J. H. Salisbury, A.M., M.D., Professor of Medicine, Chicago Clinical School. Pp. 408, with illustrations. Cloth. Price, $1.50. Series 1908. Chicago: The Year Book Publishers.

THE SANITATION OF RECREATION CAMPS AND PARKS. By Dr. Harvey B. Bashore, Medical Inspector for Pennsylvania Department of Health. First Edition. Pp. 109, with illustrations. Cloth. Price, $1.00. New York: John Wiley & Sons. London: Chapman & Hall, 1908.

GENERAL SURGERY. Vol. II, of the Practical Medicine Series. Edited by John B. Murphy, A.M., M.D., LL.D., Professor of Surgery in Rush Medical College. Pp. 614, with illustrations. Cloth. Price, $2.00. Series 1908. Chicago: The Year Book Publishers.

TASCHENBUCH DER PHYSIOLOGIE. By Prof. Dr. Med. H. Boruttau, Berlin. Vols. I and II. Paper. Price, $6.00 per set. Leipzig: Dr. Werner Klinkhardt, 1908.

THE AMERICAN ASSOCIATION OF MEDICAL MILK COMMISSIONS. Proceedings of First Annual Session Atlantic City, June 3, 1907. Pp. 117. Paper.

THIRTEENTH ANNUAL REPORT OF THE SETON HOSPITAL. Spuyten Duyvill Parkway, New York City, 1907. Pp. 58, with illustrations. Paper.

SCIENTIFIC NUTRITION SIMPLIFIED. By Goodwin Brown, A.M. Cloth. Pp. 200. Price, 75 cts. New York: Frederick A. Stokes Co.

ANNUAL REPORT of J. M. Rush Jermon, Coroner of the County of Philadelphia, Pennsylvania, for the Year 1907. Pp. 16. Paper.

DOCUMENTS IN MATTER OF QUARANTINE AGAINST YELLOW FEVER IN CUBA. Pp. 43. Paper.

NEW PATENTS.

Recently granted patents of interest to physicians.

885435. Disinfecting apparatus. T. A. Clayton, Paris, France.
885444. Mixing spoon. A. W. Cram, Haverhill, Mass.
885027. Atomizer. W. von Dohn, Berlin, Schoneberg, Germany.
885454. Feed-bag. F. A. Donnelly, Bayonne, N. J., and J. E. Blanthorn, Brooklyn.
885329. Invalid hammock lift and turner. J. J. Ellis, Portland, Oregon.
885243. Orthopedic operating table. G. W. Haas, Los Angeles.
885339. Adjustable crutch. A. S. Hargrove, Memphis, Tenn.
885048. Box or holder for sticking plaster. C. Hoffmann-Pinther, Hameln-on-the-Weser, Germany.
885073. Hair tonic. A. and J. Newcom, Terrell, Texas.
885388. Invalid support. F. D. Sickles, Maumee, Ohio.
885196. Antisnoring shield. C. P. Steil, Milwaukee.
885307. Invalid appliance. G. H. Whaley, Maysville, Ky.
886209. Eye shield. G. E. Henry, Philadelphia.
885999. Urethral syringe. J. H. Hoseason, Manchester, Eng.
885763. Physical laboratory apparatus. L. E. Knott, Boston.
886075. Device for cleaning capsules. J. P. Remington, Philadelphia.
887032. Ophthalmoscope. H. L. De Zeng, Philadelphia.
886772. Apparatus for testing eyes. R. Dodge, Middletown, Conn.
886599. Truss. J. Habenicht, Hanover, Germany.
886512. Retinoscope, ophthalmoscope and the like. C. C. Inskeep, Ottumwa, Iowa, and E. and C. S. Gowlland, Croydon, Eng.
886984. Massaging device. K. C. Jopling, Memphis, Tenn.
886522. Mouth speculum. N. W. Kyle, Colfax, Ill.
886881. Soda fountain. H. K. Smith, Union, S. C.
886443. Vibrator. E. M. Tormin, Newton, Mass.
887074. Surgical screw-bolt. A. Depage, Brussels, Belgium.
887389. Flexible corrective brace and brace-frame. G. W. Haas, Los Angeles, Cal.
887328. Electric vibrating massage machine. A. T. Hoevet, New York.
887645. Antiseptic lining of talking and hearing tubes for telephones. H. Jankelowitz, Gera, Germany.
887200. Abdominal supporter and truss. B. F. Lacy, Pekin, Ill.
887482. Electrocosmetic face-mask. G. C. Lammers, Oakland, and S. Bennett, Alameda, Cal.
887666. Electric water-purifier. J. F. Lester, New York.
887130. Sterilized catgut thread. H. Schmidt, Bande, Germany.
887707. Disinfectant. M. Souvielle, Paris, France.
887563. Artificial ear-drum. G. H. Wilson, Louisville, Ky.
887450. Shirt-suspensory. W. S. Wootton, Roanoke, Va.
888144. Ear-trumpet. G. W. Cline, Amalie, Cal.
888393. Vaporizer. E. L. Dunning, Providence, R. I.
888397. Instrument for treating gonorrhea. J. A. Gault, Lancaster, Wis.
888398. Instrument for medicating the middle ear. J. A. Gault, Lancaster, Wis.
888104. Physicians' cabinet. C. H. Lind, Canton, Ohio.
887856. Chemical spraying nozzle. H. Sieben, Kansas City.
12794. Reissue, device for repairing fractured jaws. P. Stukey, Auburn, Ind.
887886. Surgical bandage. M. A. Willot, Roubaix, France.

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Addresses

STATES' RIGHTS AND THE NATIONAL HEALTH.

ORATION ON STATE MEDICINE AT THE FIFTY-NINTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION AT CHICAGO, JUNE 2-5, 1908.

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The movement now in progress for the establishment of national control of the public health is no new thing: it may properly be designated as an acute manifestation of a disturbance of long standing, the prognosis of which, while doubtful at times, has some few hopeful signs. It began so long ago as 1871, when, at the annual session of this Association, resolutions were presented to the effect that, on the establishment of state boards of health by at least six states, steps should be taken to form a national health council, auxiliary to the Association as a section on hygiene. At the next meeting, suggestion of an appeal to the government to establish a national department of health to be supervised by the Association met with objection, but the committee to which the resolutions presented at the previous meeting had been referred was continued as the Section on State Medicine and Public Hygiene.

A year later the establishment of a National Sanitary Bureau was again urged, and the motion was referred to a committee; and there the matter rested for another year (1874), when a resolution was passed in the Section on State Medicine, providing for an appeal to Congress, and a committee was appointed to report the next year a draft of a bill to establish a National Department of Health. When this draft was due, interest in the centralization of public health supervision by state authorities was so little developed that but seven states had followed the example, set by Massachusetts, in 1869, of establishing a State Board of Health. These were California, Georgia, Louisiana, Maryland, Michigan, Minnesota and Virginia. Since that time, every state in the Union has established either a board or a commissionership, the latest to do so being Idaho, in 1907, and the newly-admitted Oklahoma, early in the present year. At intervals, during all the years that have elapsed since the desirability of a central control of public health was first broached, bills have been offered in Congress to the attainment of that end and have been duly pigeon-holed.

The nearest approximation to a successful outcome of the agitation was reached in 1879, when, after the country had been aroused by the extensive epidemic of yellow fever which occurred in 1878, a National Board of Health was established, authorized to investigate all questions concerning the public health, to give especial attention to the subject of quarantine, and to concern itself with the project of establishing a permanent national health organization. During the years of its official life, this body, which consisted of seven members appointed by the president and four representing respectively the Department of Justice, the Army, the Navy and the Marine-Hospital Service, made a number of important researches and inquiries, but in 1882 its duties were restricted to the investigation of cholera, smallpox and yellow fever, and then the appropriations for its necessary expenses began to be withheld; and eventually, in 1893, its official existence was terminated. Although in legal existence fourteen years, the period of its real activity was, through lack of funds, but four. Since 1893, the nearest approach to a national health authority has been the Marine-Hospital Service, which in 1902 was by act of Congress changed in name to the United States Public Health and Marine-Hospital Service. This organization had its original inception in 1798, when 20 cents per month was deducted by law from the pay of all seamen on American vessels entering from foreign ports, to be collected by the customs authorities and expended in the districts where collected, for the relief of invalid seamen in hospitals or elsewhere. Hospitals were established, beginning in 1800, at Norfolk, Boston, Newport and Charleston, then in New Orleans, up the Mississippi at various points, Cleveland, San Francisco, Detroit and elsewhere. In 1870, the position of supervising surgeon was created; later, this title was changed to supervising surgeon general and still later to surgeon general. In 1884, the tax, which had been doubled in 1870, was abolished, and the expense of maintenance was taken from the tonnage tax. The Act of 1902, creating the Bureau of Public Health and Marine-Hospital Service, was preceded by one which provided for the establishment of the Hygienic Laboratory, for the investigation of contagious diseases and matters pertaining to the public health.

The duties and activities of the Bureau of Public Health are many and varied. In addition to the work for the performance of which it originally was established, it has general supervision of marine and interstate quarantine, it inspects vessels and immigrants, conducts physical examinations for a number of branches of the government, collects data concerning the incidence of the various diseases dangerous to the public health in all parts of the world and publishes reports thereon, assists the states in controlling, suppressing and preventing epidemics, examines all establishments engaged in interstate commerce in vaccines, serums and antitoxins, conducts researches in medical zoology, biologic chemistry, pharmacology, bacteriology and other fields of sanitary science, and engages in other miscellaneous investigations.

Once each year, and oftener if requested by not less than five state health authorities, the surgeon general is required by law to call the Conference of State and Territorial Boards of Health for the consideration of matters pertaining to the public health, but the government assumes none of the expenses of these annual conferences, either for travel or for subsistence.

Every attempt thus far made to confer on the national government any real power to supervise the national public health has found the Constitution in the way; for when that instrument was perfected at the first session of the first Congress and our wise forefathers decided that all powers not delegated to the United States nor prohibited by the Constitution to the states should be reserved to the states; in an age which knew not steam and electric power and rapid transportation, which knew nothing of the causes of disease and the methods of their spread, which could not foresee the boundless possibilities of the growth and development of the medical sciences, and which could have no conception of the relation of public health to national prosperity, there was not a phrase of any sort contained therein which by any ingenuity of man can be construed as delegating to the nation any public health authority whatsoever.

The very first attempt made by the United States to enact a quarantine law met with opposition, and a section to empower the president to enforce quarantine was rejected by a two-thirds vote, as an interference with the states' police powers; but the provision to authorize the government to assist the states in excluding yellow fever —for it was in consequence of an outbreak of that disease that the bill was introduced—was accepted. From 1700, when Pennsylvania adopted "An act to prevent sick vessels coming into this government," the several colonies had at various intervals adopted their own laws relative to quarantine, and were not in 1796, nor later, willing to allow interference with their foreign commerce; for in addition to their jealous regard for states' rights, there existed then that same spirit of commercialism which seems to outweigh all consideration of individual and collective health. By lax enforcement of quarantine restrictions, a port could attract trade that otherwise would have gone to another, where the laws were enforced with strictness, just as within very recent times we have seen local authorities so mindful of the destructive influence of quarantine on trade that the existence of pestilential diseases has been denied, in the hope that the outbreak would die out before attracting outside attention.

The law of 1796 was repealed in three years in favor of another, which, while providing for assisting the states in enforcing their own laws, empowered the Treasury Department to make rules and regulations concerning the unloading of cargoes of infected vessels at places other than ports of entry, and provided for the storage of cargoes in government storehouses, in accordance with the health laws of any state. This law, it will be noted, related to commerce rather than to public health. From time to time, outbreaks or threatened outbreaks of exotic diseases caused Congress to enact laws conferring on the Treasury Department the right to assist state and city authorities in preventing the introduction of infections, but always with the proviso that the local regulations should not be modified or superseded. Repeated outbreaks of yellow fever led to repeated demands for a national quarantine, but they were always foredoomed to failure, on account of the jealous regard for states' rights; and even after the widespread, disastrous and enormously costly epidemic of yellow fever, of 1878, a most reasonable bill to empower the government to act in emergencies beyond the ability of the states to control failed of passage. It was then that the National Board of Health, so shortly to be starved out of existence, was established. Later in the same year (1879) a quarantine law was passed, which read very well until the usual proviso appeared, concerning the impairment or supersession of state quarantine laws and regulations.

The law of 1879 was superseded by the Act of Feb. 15, 1893, entitled "An act granting additional quarantine powers and imposing additional duties on the Marine-Hospital Service," which, while establishing a national system of quarantine, interferes in no way with the right of state and municipal authorities to prescribe and enforce measures additional to the minimum requirements of the national law. At last a way was discovered to control the entrance into United States ports of vessels from foreign ports, without infringing local rights. It provided for the uniform operation of all rules and regulations made by national authority; and only in the event of failure on the part of local authorities to enforce them adequately, is the government empowered to act in their stead. It is an interesting commentary that whereas, until 1893, no adequate national quarantine regulations were possible on account of the right of the states to impair their own health if they chose so to do by admitting exotic diseases, the delegated authority to regulate interstate commerce enabled the national government lawfully to encroach on this same prerogative by establishing three years earlier (1890) an interstate quarantine law without regard to local laws, but without in any way impairing the right of states and municipalities to deal with infected persons and things in their own way so soon as these are within their respective jurisdictions.

In view of the difficulties which for a century were in the path of a reasonable and necessary safeguarding of the public health by national quarantine, it is small wonder that the movement for a central health authority has made so little real progress, in spite of the fact that, except in certain matters which clearly cannot be taken over by the national government without constitutional amendment, it has never been proposed that the nation should meddle in affairs which affect only the states or that it should undertake to assume in any state any function concerning health matters that the state is willing and able to carry out itself.

The doctrine of states' rights is an outgrowth of the ancient principle that an Englishman's house is his castle. The individual has rights that can not be infringed by his neighbors, just as he has obligations for their good; the municipality of which he is a member has rights which can not be abridged by the aggregation of communities which make a state; in its turn, the state has its rights as against the nation, and finally the nation has its rights and its obligations in respect to other nations. The individual has no right so to conduct himself and his house as to be a nuisance to his neighbors, and in no way can he become a greater nuisance to them than by imperilling their health; hence when he or his household becomes a menace to the health of his fellows, the community steps in and restrains him in various ways. If he or a member of his household has smallpox or other communicable disease or has been exposed to contagion, the house is placed in quarantine or the victim is removed, forcibly if necessary, to a place of detention and treatment, for both his own good and the public welfare. By becoming a menace to the public health he loses certain individual rights, just as by becoming a menace to public morals he may, by due process of law, be restrained of his liberty. Again, while it is the right of the individual to marry and reproduce his kind, he may not deny his family the necessaries of life or keep his children from school, for if he attempts so to do the community interposes and restrains him.

Similarly, a municipality which by neglect of sanitary observance becomes a menace to the health of its neighbors is taken in hand by the authorities of the state and compelled to pay due regard to the rights of its citizens as a whole. Why should the parallel end here, as it does? Should a state neglect the health interests of its citizens and permit epidemic disease to rage without restriction, to the peril of the health of its neighbors, should not the community of states have the right to interpose and say: "If you can't or won't exercise your police rights so as to protect your own citizens, we will at least prevent you from becoming a menace to the national health"? No; the regulation of the national public health was not delegated to Congress, and hence the right to be a national nuisance was reserved to the states.

The individual must give up many rights to insure communal happiness and prosperity and an advanced civilization, for submission to the claims of the majority rights is a fundamental principle of civil government; and just as individuals and municipalities must be subordinate to the general welfare of municipalities and states, so should states' rights as to matters of national public health be subordinate to the rights of the nation. The health interests of the individual and the municipality are mutual, and so are those of the municipality and state, and of state and nation; and just as the alleged rights of the individual may constitute a menace to the municipality, so may those of a state become a national evil. If a parent's authority over his children may be interfered with by the state for the common good, why should not the right extend to the nation, of which he is equally a citizen and subject? In case of pandemic disease, should not the nation have the same right as a state in case of epidemic outbreaks within its borders? If United States troops can be called on to suppress riots and violence in mining camps, as lately has been done in one of the far western states, should not national sanitary police be called on to suppress the rioting of epidemics and pandemics when a state is powerless or neglectful to act? The power to wage war to protect the country from hostile invasion rests with the Congress, but the right to wage war against the invasion of the country by pandemic disease is vested in the state and can not be abridged except by constitutional amendment. It is true that there appears to be no present danger, but there exists always the possibility that bubonic plague, for example, may gain a foothold in some of our ports and get beyond the control of local authorities, especially if initial cases are concealed through commercial considerations. In such an event, should a state neglect or be powerless to cope with the situation, the nation ought to have the right to take it in charge without waiting for a formal invitation. If war is hell, what is a pestilence such as has raged for years in India? If the nation can wage war to defend the national honor, if our humanitarian instincts can lead us to sacrifice thousands of valuable lives in battle and in typhoid-infected camps and millions of treasure to give freedom to the colony of another nation, ought not the union of states to have the right to defend the national health, if through the neglect of one or more of them the country at large should be threatened with pestilence? Far be it from me to advocate national meddling with the internal health affairs of a state that is willing and able to assume its own burdens, but it seems not unreasonable to suggest that the right of a state to be a national health nuisance might properly be abridged by a constitutional amendment giving the central government authority to act for the common good when local neglect or inability make it imperatively necessary, but only then.

In respect of states' rights it is remarkable what a difference may exist under conditions which fundamentally are alike. States' rights prevented national quarantine for about a century, for it was the right of a state to say whether it would import infection from abroad to be spread among its people; but if the act of Aug. 30, 1890, prohibiting the importation of adulterated foods and beverages, the act of March 3, 1903, authorizing the Treasury Department to deliver to the Department of Agriculture samples of consignments of foods for the purpose of analysis, or the act of March 2, 1897, relative to tea were objected to as encroachments on the police powers of a state to protect the health of its people, the objections were not very loudly expressed. The Food and Drugs Act of June 30, 1906, often called the national pure food law, is not a health law, but a regulation of interstate commerce, for in the sacred name of commerce we can enact laws called for by the public as a means of protection of the public health. For years the country suffered from areal fermentations set up by the public apprehension that it was slowly being put to death by a dangerously adulterated food supply, and the excitement finally spread to such an extent that Congress had to listen respectfully to the demand that the great public be protected from this living death. Having, however, no authority to encroach on the states' police powers, it could not enact health laws, but under its delegated right to legislate concerning commerce, the desired law was passed as one relating to interstate commerce, and the troubled minds were calmed. The pure food law was and is essentially a law against commercial fraud and only incidentally and to an insignificant extent is it a health law. In so far as it is a health law, it is, according to the old contentions concerning quarantine, an encroachment on states' rights. Under the benevolent plea that certain preservative substances are dangerous to health, states which do not so believe can be protected by the national authorities from their own folly so far as that folly can be counteracted by interstate commerce laws, but not when the means of catering to this folly can be applied within the states' boundaries. Thus, a manufacturer of jams and preserves, through a shortage of small fruits is forced to draw on Canada for a supply to fill domestic orders, and in order to insure good condition on arrival directs that a certain small amount of a preservative substance, the use of which is expressly permitted by the laws of his state, shall be applied before shipment. On arrival at the custom house, the goods are denied entrance, because of the presence of the preservative, and neither the offer to file a bond that the manufactured article would not be shipped out of the state, nor a statement from the one charged with the enforcement of the state food laws that the use of the preservative is recognized as legitimate by the state law on the subject, can cause a reversal of the ruling. Such was the experience of a Massachusetts house in good business standing. The fruits could have been admitted without the preservative and the latter could have been applied immediately after their removal without transgressing any state law; and so far as the Massachusetts consumer was concerned the result would have been the same whether the application occurred in Canada or in Boston. Is not such a governmental interference an encroachment on states' rights?

The national Food and Drugs Act, I repeat, is not primarily a health law and from the standpoint of health it was not needed. It is rather a law against misbranding and fraud, but those who clamored for it thought they were saving their lives when they succeeded in forcing its passage. I repeat that from the standpoint of health it was not needed, and I will go farther and assert that from the standpoint of commerce it could have been dispensed with, if all the states had done their duty to themselves. As a fact, the national government was begged and besought and urged and driven and compelled to do for the states what it was the duty of each to do for itself. The movement in its favor was strongest in those states which had either no general food laws or inadequate ones, and which spent not a dollar annually on the purity of their food supply. The movement was a successful one to load on the national government work which should have been done at home. Massachusetts had been enforcing its general food law for nearly 25 years when the national law went into effect, and not yet has it appeared that the latter has had any appreciable influence on what was already a healthy condition of affairs. Had every state done its full duty to its citizens, there would have been no necessity for national legislation, no need of large annual appropriations for laboratories, chemists and inspectors. In only one particular has Massachusetts needed any assistance from outside, and then to control a matter which the states expressly delegated to the Congress, namely the exclusion from interstate trade of practically the only food that can be unwholesome on a large scale. I refer to that food which may be pure and clean to the eye and palate and so far as chemical analysis can determine, and yet be dangerous, and which is of so perishable a nature that it can not be held up in quarantine until proved to be pure and wholesome and then released into the market. Of course, I refer to stale, dirty and infected milk. A state can exclude any merchandise that is designed to corrupt the morals, and it can, as decided by the United States Supreme Court, exclude infected material and diseased animals and anything calculated to endanger morals, health or life. But how can one tell whether or not a given package of milk is infected unless something is known of the circumstances of its production? The health authorities of Massachusetts investigated the condition of the extra-state dairies from which milk was being shipped, and it appeared that under the established national standard a large proportion of the milk was adulterated in that it was stale and dirty, instead of fresh and clean, and from diseased rather than healthy cows. No state can forbid the citizens of another state doing that which is lawful within its own borders, but the national authorities can exclude from interstate commerce any adulterated article, and therefore they were requested to exclude the product of certain farms where the cows were diseased and the methods of handling were dirty, and where the milk was in part forty-eight hours old when shipped. I will not dwell on the details of a somewhat prolonged correspondence, which was barren of results, or attempt to give the reasons why interstate commerce in the causes of preventable waste of human infant life can not be restricted, but it appears that there is no provision for a large force to look after public milk supplies, although we can spend millions annually in the federal inspection of meats. But it must be remembered that we are a commercial nation, and that while meat is an important item in our export trade, milk is consumed at home and not exported. It is true that animals intended for slaughter and the resultant meats intended for interstate commerce are examined, though not with that thoroughness that characterizes the inspection of meats for export, and that all animals with any of eighteen or more specified diseases are condemned so far as interstate commerce is concerned: but not so with the milk supply, although it is of so vastly greater sanitary importance.

For a nation that is pre-eminently commercial, this country is singularly blind to the necessity of conserving that which has well been defined as our greatest national asset, namely the national health. It is useless to attempt to determine the pecuniary loss which the nation suffers annually through sickness and death from preventable diseases, for apart from the mathematical difficulties in the determination of the money value of human life—for human beings are cast in many moulds and from different materials, some being parasitic and of a negative economic importance, others of enormous value, and each according to his present and prospective capacities for usefulness—we have but a small proportion of the items necessary for our calculations, which even a moderately good system of sanitary bookkeeping could place at our disposal. The statutory value of five thousand dollars set on a single human life is no more than a guess, and even though it should be determined to be a fairly accurate one, based on the average of a large number of investigated individual cases, the lack of adequate mortality statistics in a large number of our states would render futile any attempt to express the nation's pecuniary loss during any given period from deaths alone. Equally futile, with absolutely nothing more in the line of morbidity statistics than the mere compilation in a minority of the states of the number of persons stricken with certain of the transmissible diseases, and even then with no data as to the number of days lost, would be any calculation of the national sickness account. We can say only that with our great and growing population the annual waste from avoidable diseases must be prodigious. It is true that, in a number of our states, the state and municipal authorities, fully alive to the importance of protecting the public health, spare no efforts to restrict this loss within their respective jurisdictions, though in many but little is attempted, and the nation as a central authority does practically nothing, states' rights or no states' rights, except in so far as it maintains quarantine and the service for saving lives from the perils of shipwreck. It spends not a dollar to check the ravages of the leading causes of death, excepting the amount used in salaries and running expenses of the Bureau of Public Health and the Hygienic Laboratory, which, in comparison with the older laboratories of some of the European governments is not yet of great importance, though growing. Nothing is spent, beyond the usual and necessary salaries and expenses of the officers of the Public

Health and Marine-Hospital Service when these are called on to aid in controlling an outbreak of yellow fever or of plague by any of the states. In 1905, for example, the nation contributed officers' services, but not one cent of the quarter million dollars spent by New Orleans and not one cent of the expenses incurred by Louisiana, Mississippi and Florida to wipe out yellow fever and prevent its spread to other infectible areas, although the insect that carries the infection disregards states' rights, state lines and interstate quarantine. Ought the Gulf states to bear the entire expense of protecting their northern neighbors from invasion by yellow fever, and ought Maine and the other states along the Canadian border to perform the same service with regard to smallpox, merely because they are frontier states? If cholera should become imported into New Jersey or New York through any possible breakdown of quarantine, should those states be put to the entire expense of protecting their neighbors and the country at large? Washington answers these questions affirmatively.

We are a commercial nation, and human life and freedom from the preventable diseases of mankind are no part of foreign or domestic trade. It is otherwise with the diseases of plants and of the lower animals, for the products of the fields and farms and cattle ranges bring us great wealth. Hence Washington spends millions annually on plant and animal physiology and pathology. It is good business to expend thousands and tens of thousands against sheep scab and swine cholera, but the eradication of human tuberculosis appears to be unworthy of national effort, if it entails national expenditure. The Department of Agriculture expends millions and millions annually to promote great crops and to aid the slaughtering industry; it experiments at great cost to devise means of gathering grapes of thorns and figs of thistles; but the government appropriates nothing to conserve the health of man. We are a commercial nation. Human health and human diseases are of minor commercial importance: swine erysipelas and chicken cholera are important, for they mean loss of money. Washington has no regard for Matthew vi, 26, "Behold the fowls of the air; for they sow not, neither do they reap nor gather into barns; yet your Heavenly Father feedeth them. Are ye not much better than they?" Changing the substantive of Matthew x, 31, might not Washington properly say: "Fear ye not therefore, ye are of more value than many swine"? Is the health of the people at large unimportant in comparison with that of wheat, cotton, poultry, swine, cattle and sheep? From a national point of view, as expressed by Washington indifference the answer appears to be, "Yes, we are a commercial nation." Contrast the outbreak of yellow fever in the gulf states, in 1905, and that of foot and mouth disease in New England, in 1902. For the eradication of the epidemic, Congress appropriated not a cent; to stamp out the epizootic it allowed five hundred thousand dollars, the greater part of which was paid to the owners of the cattle which it was necessary to slaughter and destroy.

Among the matters which it has been suggested should be placed under the control of a central health authority is the prevention of pollution of interstate waters. Any state can interfere with and prevent the pollution of water supplies within its boundaries, but neither one state nor the entire United States has power to prevent any state from pouring sewage into any stream flowing through it, even though that stream be used as a source of water supply for cities in another state. Massachusetts can not order New Hampshire and Vermont, nor can Connecticut direct Massachusetts, nor the United States any one or all of the four to cease discharging sewage into the Connecticut River, no matter how desirable it might be to draw on that stream as a source of drinking water and in spite of the fact that the pollution of an interstate body of water is more than of local importance. But the national government, while it has absolutely no sanitary supervision of inland water has complete control when it comes to questions of navigation. For an individual or a municipality or a state to interfere to the slightest extent with navigation of a stream would be a serious and even dangerous proceeding, but Washington has no authority to prevent interference with the purity of its water. The nation expends millions annually in deepening harbors and improving waterways for the promotion of commerce, but it can not, even if it would, without the consent of the states concerned, spend one cent to prevent them from becoming public sewers. The rights of the United States in respect to navigable streams and lakes are restricted to the control and regulation of commerce, and even then they are not sovereign or proprietary, for the supreme court has repeatedly determined that the individual states have the sovereign right to control the navigable waters within their respective boundaries. Purity of interstate waters can be conserved only by coöperation of the governments of the states concerned, and federal control can be granted only by constitutional amendment, and constitutional amendments are not the work of a day nor the outcome of the wishes of the few. The importance of undefiled water supplies is so great that it is not beyond the possibility of hope that some day we may see a strong movement for the protection of interstate waters, with public sentiment behind it.

Until very recently the movement for a central health organization has been promoted only by the medical men of the country, who, having never banded themselves into a political force, have never been able to secure that respectful attention of the law-making body that is so freely given to those in other lines of industry and usefulness, who back their demands with demonstrations of their voting strength. The dairy interests forced Congress to enact strict laws concerning the manufacture and sale of artificial butter and cheese and to impose revenue taxes on the manufacturers of and dealers therein. Organized labor has repeatedly succeeded in its demands for legislation favorable to its interests. The manufacturing, lumbering, mining, farming, fishing, grazing and other interests, secure the benefits of a protective tariff. But medical men, who, if they consulted only their own selfish pecuniary interests, would welcome an increase in the number of cases of disease to which they should be called, rather than measures to reduce the same and coincidently their pecuniary rewards, speak to deaf ears when they appeal for measures to protect the national health. Mindful of the dignity of their calling, they have not yet attempted, and never will attempt, to gain their ends through petty politics, but rather will they succeed through an aroused educated public sentiment. Public sentiment in health matters is commonly of discouragingly slow growth, but once started and established, the curve takes a sudden upward turn, as witness that of the universal interest in the eradication of tuberculosis, which knows not state nor national limits. And just as the tuberculosis movement has grown from a merely medical into an economic, sociologic, and universally practical question, so eventually must the movement for a proper and adequate recognition of the importance of the national health. It is well, therefore, that the laity has begun to show its interest in the subject, and it is now that we must foster this interest in every way. How is this to be done? The answer is simple, the work difficult: The education of the great public. The American public thinks for itself and needs much more than mere statements; it requires demonstration and proof. Being practical, it wants to know of the promoters of a change in existing conditions what good it will do. It is suspicious of anything that savors of mystery or that appears to be difficult of explanation in plain terms by those who ought to know. But it is willing and even eager to be taught, when once its interest is aroused. By whom should this instruction be offered? The obvious answer is that the medical profession is the natural teacher of the great public in matters pertaining to health, but this is not wholly true; for, in the first place, many of the most influential of the moulders of public opinion in reference to the great problems of tuberculosis, housing of the poor, public parks and playgrounds, occupational hygiene, the employment of women and minors in factories, not to mention many others, are laymen; and, in the second place, the profession itself needs much enlightenment as to the value of state medicine, before it can qualify as the sole teacher of the laity. It was a lay commission who paved the way to the establishment of the first state board of health in America, by pointing out that the average length of human life was too short, that the annual waste of life could be largely reduced, that much sickness was preventable and that the thousands of unnecessary deaths, the millions of days of unnecessary sickness and the vast amount of unnecessarily impaired health and physical debility meant an enormous pecuniary and social burden which might be avoided: in short, that preventive medicine is a most comprehensive social and economic problem. It is very largely to philanthropic laymen and to students of economics that the credit for the world-wide movement against tuberculosis belongs. To undervalue the importance of the lay leaders and teachers in creating a public sentiment in favor of state medicine, is as short-sighted as to overrate that of a medical man who may have no adequate conception of the real functions of a public health office. The average medical man has no very clear conception of the value of a good system of sanitary bookkeeping or of the methods of applying the knowledge obtained by studying a mass of statistical data, and yet it is upon the registration of vital statistics that we must depend to determine the actual results of public health measures. In order to become an effective part of the educational force, he should so acquaint himself with the importance of a great central registration office as to be able clearly to demonstrate it. In time of trouble, the great mass of the people where vital statistics are kept recognizes the importance of a central office, be it municipal or state, where the health conditions of the community are noted from day to day. It understands that, without returns to show the incidence of the diseases dangerous to the public health, there can be no intelligent supervision when these tend to become epidemic, nor steps taken in time to prevent this tendency, by limiting the spread of the infection. And yet, what a small proportion of the states have any exact knowledge of the health conditions of any considerable areas within their limits! The disregard of registration of vital statistics in the country at large is a serious reflection on the intelligence of the public and of the profession. In not a few states, no certificates of death, no burial permits, no returns of death are required, and as an evidence of the political value of organization it may be noted that in one of the proudest and most enlightened of them all the associated undertakers were sufficiently influential to secure the defeat, during the last legislative session, of a bill providing for proper death returns and burial permits. In some places the neglect of sanitary bookkeeping is largely a disease of politics, but in many the unsatisfactory condition is due to the apathy and indifference of medical men. Who has not heard this indifference expressed in terms of dollars and cents? The making of returns takes time, and the compensation is nothing or insignificant; but a proper public spirit would neither begrudge the time nor claim the insignificant fee. If municipal or state authorities may be called on for advice and assistance, for free vaccine and antitoxin, for free examination of sputum for diagnostic purposes, may they not receive this scanty return? If we as a great profession have not yet brought about registration of vital statistics in any more than a very small minority of the states, if we have not yet taught ourselves and the public the value of that which is at the very foundation of sanitary legislation, we are in no position to urge the necessity of a central health office, with any hope of immediate success. We have first to educate ourselves, and then with the aid of the economists and other trained laymen educate the public in this as well as in other matters.

In arousing the public to a proper appreciation of the importance of public hygiene, we have far more to fear from professional than from lay ignorance. Professional ignorance of public hygiene does harm in two ways: first, by promulgating untrue and unscientific statements which are taken at their face value and spread broadcast; and, second, by causing those who later become correctly informed to become avowedly and vociferously skeptical concerning professional knowledge and opinion on basic principles. It is a curious fact that, generally speaking, the dogmatic misstatements of the imperfectly educated concerning the causes and methods of spread of diseases carry far more weight than the cautious, conservative opinions of the well-read scientist. This is no doubt due to the fact that the former has the courage of his ignorance and the latter the apparent timidity of scientific regard for accuracy.

It is the unskilled man in the public eye who is the most dangerous of all. It is a reproach and a scandal that in America as nowhere else the interests of the public health are entrusted so largely to men whose sole recommendation to public favor is the number of votes that they can influence or the political wires that they are able to pull for the winning side. Whereas, in England, every community of any considerable size employs a health officer who has had special training in public medicine, and gives him practically unlimited tenure of office, without regard to any of the demands of petty politics, in America, we hand our health matters very largely into the keeping of unskilled men, who know that the period of their connection with the service will be short—so short as not to warrant much endeavor along educational lines. Can we conceive of a less flattering sidelight on our intelligence? Is it any wonder that so few are willing to prepare themselves for public service and venture into a field which shows so few signs of promise? And does the profession in general perform its whole duty to the community when it fails to show any concern about who shall be the representatives of preventive medicine? If the great public is to be called on to assist in securing adequate health legislation, it must be taught to recognize the importance of an efficient administration of local interests, of prompt application of all new knowledge relative to preventable disease, of the dangers incident to increasing density of population and increasing facilities of communication, and of other matters already touched on; and above all, it should be able to look with respect on those who, being placed in charge of the public health, should be qualified to give to the people intelligent opinions and advice thereon.

The creation of educated public interest in the national health is a duty which happily does not belong to any one class or calling. Each in his way can do his part, by precept and example. Of great value, as shown in the agitation for the law relative to foods, and here, there, and everywhere for the establishment of sanatoria and for ordinances against the spitting habit, are popular lectures, magazine articles and the sympathy of the press. Two years ago there was inaugurated at the Harvard Medical School a series of free public lectures, given on Saturday evenings and Sunday afternoons for four months, mainly on preventive medicine. The first series was a most gratifying success; the second so largely attended that at times more people were turned away than succeeded in securing places. The chief result is a widespread interest in public hygiene and a marked strengthening of the cordial relations which ought to exist everywhere between the profession and the public. The example set in Boston has been followed elsewhere with like results, and the more the habit spreads the sooner will the advocates of a federal health administration see a successful outcome.

Whether the proposed service shall take the form of a department represented in the Cabinet or of a division of an existing department with a commissioner for a chief, is of no very great importance, although there are some very obvious objections to the suggestion of a separate department, which can hardly apply to that of a division; but department or division, it could properly have as its nucleus the present Bureau of Public Health and Marine-Hospital Service, to which should be added various existing bureaus scattered about under different departments—some now duplicating the work of others—and additional bureaus to be created. Its head should be charged with advisory powers in relation to other departments and to the states, and with supervisory and executive powers in matters pertaining to his own bureaus. He should not attempt to meddle in local matters not of national concern, nor to encroach upon the duties of other branches of the government. While he should be entrusted with all affairs relating to public health, he should have no control whatever over the medical service of the Army and Navy either in peace or in war, as has sometimes been suggested he should.

He should not be restricted in the selection of those to whom he would entrust the investigation of large problems of sanitary importance, but should as occasion requires draw on the whole scientific world, if necessary, to secure experts who would not accept permanent government employment or be on regular salary. Without such freedom he could hardly expect to compete in experimental research with educational institutions and the various scientific foundations.

He should be empowered to call on other departments for statistical data and to cooperate with the states in carrying on inquiries of interest to any or all of them. He should give attention to the hygiene of occupation, to questions of woman and child labor, to the hygiene of infants, to the hygiene of schools, and to many other problems of general interest. He should collect the vital statistics of the entire country, enforce the laws relative to quarantine, food and drugs and meat inspection, and perform such other duties as properly belong to a great national health organization.

Inasmuch as no one man could be expected to conduct so great an establishment with only the advice of his bureau chiefs, and inasmuch as the cordial cooperation of all the states would be absolutely essential to satisfactory achievement, he should have a national council consisting of one delegate from each state, appointed by the governors or state boards of health for a term of years. Such a council should be composed of men of recognized standing in medicine, engineering or other branch of learning which would be of assistance. It should be called together at least once each year and as much oftener as might appear to be necessary, and the expenses of each such meeting should be borne by the government rather than, as now is the case with the annual conference of the state boards of health with the surgeon general of the Public Health and Marine-Hospital service, at the expense of the states or of the delegates themselves. At each meeting the subject of the national health should be discussed and proposals for future work should be made and considered. Even though at times the meetings might not appear to be of great scientific value, at least they would serve to promote the cordial feeling that the individual states form a part of the administration and exercise a proper influence.

INDOLACETURIA.

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In the course of investigations made on the urine of a child suffering from a chronic intestinal bacterial infection, it was noticed that the addition of concentrated hydrochloric acid to the urine led to the development of an intense rose color. The study of this color reaction showed it to be identical with the reaction described in 1882 by Nencki and Sieber as the urorosein reaction.[1] Although there has been considerable discussion as to the nature of this reaction, its exact nature has, up to the present, been left in obscurity. In the course of my study of the patient just mentioned it was determined that the mother substance or chromogen from which the urorosein is derived is a definite substance arising in the intestinal tract from the breakdown of tryptophan by bacteria. This substance is indolacetic acid. Further study has shown that the occurrence of indolacetic acid in the urine is not a rare occurrence and that it is usually associated with pathologic conditions of the intestinal tract. For this reason it has appeared to me worth while to bring together here such facts as have now come to light.

I have ventured to designate by the term indolaceturia the presence of indolacetic acid in the urine. The term is somewhat awkward and perhaps in other respects not without objection, but nevertheless I think it advantageous to make use of this term, as otherwise one is constantly confronted with the inconvenience of designating the condition by circumlocution.

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[1] Jour. f. prakt. Chem., 1882, xxvi. 333.

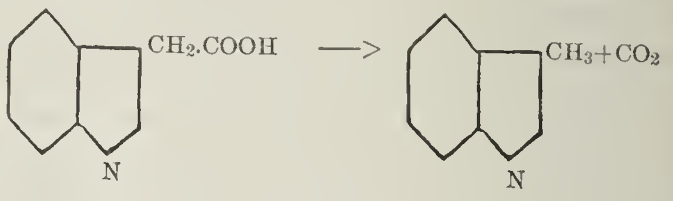
It is desirable to sketch at the outset the characteristics of a urine containing indolacetic acid, in appreciable quantity. If to such a urine there be added an equal volume of concentrated hydrochloric acid, one of two results may be looked for: either the urine develops promptly a fine rose-red color which deepens in intensity during the first few minutes, or there is no development whatever of the rose-red color. In making this statement it is assumed for the moment that the urine does not contain indoxyl potassium sulphate in sufficient concentration to give rise to the occurrence of an appreciable color reaction from the presence of indigo. Urines occur which, on addition of concentrated hydrochloric acid, do yield indigo in sufficient amount to distinctly obscure the rose-red reaction, and it is necessary in such cases to resort to a special procedure in order to make the distinction certain between the presence of indolacetic acid and an indoxyl compound. The explanation of the different behavior of urines containing indolacetic acid toward concentrated hydrochloric acid is simple. If we make a watery solution of indolacetic acid or one of its salts and add to it concentrated hydrochloric acid, there is no change in color; but if we now add to the mixture some suitable oxidizing agent, as, for example, one or two drops of a 0.1 per cent. solution of potassium nitrite, there is instantly developed the characteristic rose-red color. Experimental study has shown that those urines which yield the typical indolacetic acid color reaction on the addition of concentrated hydrochloric acid contain traces of nitrites. These nitrites are formed through the action of nitrifying bacteria in the urine,[2] possibly from the breakdown of urea, but more probably from the action of these bacteria on compounds of ammonia normally present in every urine. Since a mere trace of the nitrite is all that is necessary, in the presence of hydrochloric acid, to give rise to the rose-red or urorosein color, it may happen that the urine is not greatly clouded by the presence of nitrifying bacteria. It is noteworthy that the quite fresh urines from persons showing the urorosein reaction will not develop the color reaction without the addition of nitrites, whereas the same urines on standing in the laboratory for twelve or twenty-four or forty-eight hours will frequently give rise to the reaction, without the addition of a nitrite.[3]

It is possible that other oxidizing agents than nitrites at times play a part in the production of the color reaction. At present I know of no substance occurring naturally in the urine which will take the place of the nitrites in oxidizing the indolacetic acid chromogen with the typical resultant color reaction. The chief practical interest of the fact that nitrites are able to oxidize the indolacetic acid so as to yield the typical rose-red color lies in the circumstance that one may wholly overlook the presence of a considerable and significant amount of indolacetic acid in the urine simply by failing to add the necessary trace of a nitrite to the urine to be tested. Observers who in the past have found the urorosein reaction to be present in the urine have generally detected it simply by the addition of concentrated hydrochloric acid. In other words, the nitrites necessary for oxidation have happened to exist in the urine. I have found the indolacetic acid reaction many times present in urines which failed to give the reaction on the addition of hydrochloric acid alone, and its presence has been detected simply through the use of sodium nitrite or potassium nitrite.

It is worth while to consider briefly the chief properties of indolacetic acid as contrasted with the properties of the urorosein colored substance resulting from the oxidation of indolacetic acid through the action of hydrochloric acid and nitrous acids.

PROPERTIES OF INDOLACETIC ACID.

Well-purified indolacetic acid crystallizes from benzol as small, flat crystals with a melting point of 164° C. When heated a few degrees above the melting point it breaks down into carbon dioxid and skatol, a property of much value for the identification of the substance. This occurrence is indicated in the following equation:



Indolacetic Acid. Skatol.

Indolacetic acid is very slightly soluble in cold water, easily soluble in alcohol and in ether, less easily soluble in chloroform and only slightly soluble in benzol. A solution of indolacetic acid when acidified with hydrochloric acid develops a violet color on heating in the presence of a very small quantity of ferric chlorid. A solution of indolacetic acid of the strength of 1:10000 behaves in this way. This reaction was first described by Salkowski,[4] who regarded it as especially satisfactory for the recognition of indolacetic acid or, as it was formerly called, skatol-carboxylic acid. If to a watery solution of indolacetic acid (1:1000) there be added a few drops of nitric acid (specific gravity 1.2) and a few drops of a 1 per cent. solution of potassium nitrite be added, the solution develops a cherry or rose-red color, according to the concentration of the indolacetic acid. The coloring matter thus developed may be sufficiently abundant to separate out. It is the coloring matter known to Nencki and Sieber as urorosein. The gradual development of a purple-red may be obtained by adding to the watery solution of indolacetic acid (1:1000) an equal volume of hydrochloric acid (specific gravity 1.2), to which is then added a few drops of a 1 per cent. solution of chlorid of lime. If instead of using chlorid of lime one employs a 1/10 per cent. solution of potassium nitrite, there is a gradual development of the urorosein color, and this method is the most satisfactory for detecting the presence of indolacetic acid in the urine. A solution of indolacetic acid, when boiled with a solution of paradimethylamidobenzaldehyd (Ehrlich's aldehyd), dissolved in hydrochloric or sulphuric acid, gives rise to a red color differing from the color obtained by the action of this reagent on indol in being both far less sensitive and in presenting a less purplish tinge. On boiling a watery solution of indolacetic acid with Millon's reagent, a yellow color is obtained.

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[2] The relation of Nitrifying Bacteria to the Urorosein Reaction of Nencki and Sieber, Jour. Biol. Chem., 1908, iv, 239.

[3] There are occasional exceptions to this rule, due to the fact that the urine may contain a trace of a nitrite when freshly voided.

[4] Ueber das Verhalten der Skatolcarbonsaüre im Organismus. Ztschr. f. physiol. Chem., 1885, ix, 23.

PROPERTIES OF THE UROROSEIN COLORING MATTER.

The urorosein coloring matter as obtained by the action of strong hydrochloric acid and potassium nitrite on indolacetic acid is a rose-red or cherry colored substance which has the property of passing readily into amyl alcohol. It passes somewhat less readily into propyl alcohol, but can be satisfactorily extracted, especially if salted out. The spectroscopic examination of the red amyl alcohol solution shows the presence of a characteristic absorption band in the green portion of the spectrum, its location being somewhat nearer the sodium line D than the line E. On treating the urorosein coloring matter with zinc and hydrochloric acid, it is readily reduced to a colorless substance, but through a cautious use of oxidizing agents the original color may be partially restored. The chemical constitution of the urorosein coloring matter has not been established. It is possible that it is a nitroso-indolacetic acid analogous to the nitroso-indol formed by the action of nitrites on indol. As, however, a similar and possibly identical coloring matter may be obtained through careful oxidation of indolacetic acid by means of other oxidizing agents than nitrous acid, it is not clear that we are justified without further study in regarding the urorosein reaction as due to the formation of nitroso-indolacetic acid.

METHODS OF TESTING URINE FOR THE PRESENCE OF INDOLACETIC ACID.

When the urine contains a moderate quantity of indolacetic acid—say 0.001 to 0.01 of 1 per cent.—the addition of an equal volume of concentrated hydrochloric acid and the careful addition of a few drops of a 0.2 per cent. solution of potassium nitrite suffices to bring out the urorosein reaction in an unmistakable manner. When the quantity is smaller or where other coloring matters exist in the urine, it may be less easy to establish the presence of indolacetic acid. Whenever any doubt exists as to the nature of the reaction suspected to depend on indolacetic acid, the following procedure should be employed: One hundred cubic centimeters of the urine should be evaporated to a volume of 20 c.c. After cooling, this concentrated urine should be carefully filtered. The filtrate is acidified with 1 c.c. of a 10 per cent. solution of phosphoric acid. This acidified and concentrated urine is now placed in a separatory funnel and extracted with from 40 to 50 c.c. of ether. It is not necessary to shake the funnel for more than five minutes, as any indolacetic acid that may be present will promptly pass in large part into the ether. After allowing the contents of the funnel to stand until a good separation takes place between the urine and the ether, the ethereal extract is drawn off and evaporated on the water bath. The residue is taken up in 5 c.c. of water, and to this solution is now applied the test with concentrated hydrochloric acid and potassium nitrite. It frequently happens that urines which show only a moderate and obscure urorosein reaction, when the test is applied directly to them, yield an ethereal extract which gives a beautiful and typical reaction. With some urines there is difficulty in making a clean separation of the ethereal layer, owing to the formation of an emulsion, and in such cases a good separation can be brought about by the use of the centrifuge.

Urines which contain an abundance of indican develop enough indigo on oxidation with a nitrite to obscure the reaction dependent on indolacetic acid. The indigo that is separated may advantageously be removed from the solution by shaking with chloroform. The super-natant fluid then shows the characteristic rose color due to the oxidation of the indolacetic acid and, after decanting this colored urine, the color may be shaken out into amyl alcohol. Indigo red, as well as indigo blue, passes over into chloroform if the former happens to be present with the latter, and in all cases in which indoxyl derivatives are present in the urine it is best to concentrate the latter and extract with ether as above described.

It is necessary to use some care in employing the nitrites for the development of the urorosein reaction. Even urines which contain no indoxyl potassium sulphate (if one may judge by the inability to obtain indigo by means of the ordinary reagents, such as Obermeyer's) may develop a purple or violet color in place of the typical rose-red color. This variation in color from the typical rose-red has been found in some instances to be due wholly to the mode of oxidation with potassium nitrite. This is very clearly indicated when, through the cautious addition of nitrite, the typical rose-red color is developed in the upper portion of the test tube, whereas the violet color appears in the lower part where oxidation is less active, all transitional tints being observed between these two levels. As already stated, it is preferable to add the nitrites in very dilute solutions after strong hydrochloric acid has been added to the urine (or the extract of the urine) instead of previous to the addition of the hydrochloric acid.

I have observed a few instances in which the mere addition of concentrated hydrochloric acid to the urine has been followed by the appearance of an intense greenish-blue or blue color, due to the presence of indigo. This phenomenon has been observed by me only in urines obtained from children suffering from severe gastroenteritis, although I have occasionally seen slighter manifestations of the same phenomenon in the urines of adults. In the cases in which this development of indigo has occurred, the excess of hydrochloric acid employed has always been great. In such cases the indigo must be shaken out with chloroform before the addition of the nitrite or, preferably, the urine should be extracted with ether.

The quantitative estimation of indolacetic acid can only be made with considerable difficulty, and I shall not here discuss the technic to be employed in the endeavor to recover the greater part of the indolacetic acid present in the urine. The greater part may, however, be recovered by suitable methods of extraction. For practical purposes it suffices to dilute the urine in any case of marked indolaceturia to a point at which it no longer gives a trace of urorosein on the addition of hydrochloric acid and potassium nitrite. The dilution required to cause a disappearance of the reaction can then be compared with the dilution at which an indolacetic acid solution of known strength ceases to give the reaction. It has been found by experiment that indolacetic acid in a solution holding one part of the acid in one hundred thousand parts of water still gives a faint color reaction. The highest estimated percentage of indolacetic acid in any urine yet observed by us has been 0.05, or 0.5 gram to the liter.

CLINICAL STATES ASSOCIATED WITH THE PRESENCE OF INDOLACETURIA.

A thorough study of the clinical states associated with indolaceturia has not yet been made. The systematic search for the presence of indolacetic acid in the urine through the use of strong hydrochloric acid and potassium nitrite will certainly bring to light many instances of indolaceturia which would be overlooked where strong hydrochloric acid is alone employed. The most pronounced examples of indolaceturia that have come to my notice have been in urines from patients with diabetes, typhoid fever or chronic enteritis. I have observed a strong reaction for indolacetic acid in some cases of jaundice. Rosin found the urorosein reaction to be strong in many cases of pulmonary phthisis, and Garrod observed it in the urine of chlorotic patients. I believe that small quantities of indolacetic acid in the urine are common among chronic disorders of digestion. Various observers have noticed the occurrence of the urorosein reaction in osteomalacia, nephritis, carcinoma, ulcer of the stomach and perityphlitis. Dr. Baldwin has noted a strong reaction in the urine of a patient suffering from the vomiting of pregnancy.

For reasons which will appear in connection with the discussion of the pathologic significance of indolaceturia it is clearly desirable that in routine examinations of the urine, the tests for indolacetic acid should be applied. It is also desirable that a record should be kept of the relationship existing between the intensity of the reaction for indolacetic acid and the intensity of the reaction for indigo blue.

THE PHYSIOLOGIC AND PATHOLOGIC SIGNIFICANCE OF INDOLACETURIA.

An insight into the physiologic and pathologic significance of indolaceturia has been made possible by the researches of Hopkins and Cole[5] and of Ellinger[6] on the constitution of tryptophan. Tryptophan, which may with a high degree of probability be considered as indolamino-propionic acid rather than as skatolaminoacetic acid, is set free early in tryptic digestion of proteids. Normally, it is promptly absorbed from the intestine and either burned in the body with the formation of products not at present known, or appropriated in some synthetic process. Any obstacle or delay in the absorption of tryptophan favors decomposition by intestinal bacteria. *B. coli* certainly, and *B. bifidus* probably, are able to form indolacetic acid from tryptophan. It is certain also that many bacterial symbiotic combinations in the intestine are able to make indolacetic acid from tryptophan. It is noteworthy that indolacetic acid is liable to be absorbed as such when it has once been formed in the intestinal tract, and it is further noteworthy that this substance is relatively resistant to the ordinary biologic processes of oxidation. Hence it is not surprising that the decomposition of tryptophan in the intestinal tract should be followed by the appearance of indolacetic acid in the urine. The acid probably appears in the urine as the salt of some common base and does not undergo any pairing with sulphuric acid or glycuronic acid. At present, at least, there is no evidence that such pairing occurs.

As both indol and indolacetic acid are derived from tryptophan and from tryptophan only, it is plain that there must be a reciprocal relation between the formation of indolacetic acid and of indol. Thus if the indol production from tryptophan be large, the opportunity for the production of indolacetic acid will be less than would otherwise be the case, and, *vice versa*, if indolacetic acid be formed in large amount, there is less opportunity for the production of indol, since there is at the present time no evidence that indol is ever derived from indolacetic acid. Only when the tryptophan available is abundant in the intestine as the result of delayed absorption can we expect to get both indol and indolacetic acid in abundance. Clinical experience is wholly in harmony with this view. When indolaceturia is most marked, indicanuria is not apt to reach the high grades of intensity sometimes observed when indolaceturia is absent. On the other hand, indicanuria of the most intense type is not apt to be associated with the highest degree of indolaceturia.

In one patient whom I have long had under observation, there was at one time a persistent and extreme indicanuria. Very slowly, as the patient showed improvement in the digestive trouble to which he was subject, there developed an intense indolaceturia which was long persistent and appeared to be at the expense of the indicanuria, since the latter gradually disappeared wholly. This behavior is intelligible if we assume that the breakdown can occur only through two paths, either (1) by way of indolacetic acid or (2) by way of indolpropionic acid. There are reasons for thinking that the latter is the source of indol, while it is extremely doubtful if indolacetic acid ever breaks down with the production of indol. We do not yet know under what conditions and through what stages of decomposition indolpropionic acid yields indol. It is clear, however, that indolpropionic acid is much less stable than indolacetic acid and is more readily attacked by bacteria. I have made many experiments in order to see whether the bacterial breakdown of indolacetic acid will yield indol, and have never been successful in obtaining indol from this resistant substance, even when it has been exposed to the action of powerful indol producers. This fact strengthens me in the belief that indol is derived from indolpropionic acid and not from indolacetic acid.

Although there is no evidence that indolacetic acid yields indol through the action of bacteria, it is probable that under special conditions it does give rise to skatol. I have made numerous observations with culture media containing indolacetic acid, but no substance capable of yielding tryptophan, in the hope of obtaining skatol through the action of anaërobic skatol-producing bacteria. I have failed to obtain up to the present time any unequivocal evidence of the origin of skatol from indolacetic acid by means of bacteria. There remains, however, the important fact that through potash fusion and through the mere heating of indolacetic acid slightly above its melting point, this substance decomposes into skatol and carbon dioxid. For these reasons it is chemically reasonable that skatol should be derived from indolacetic acid.

It is thought by some investigators that the urorosein of the urine is identical with skatol-red, which is a coloring matter derivable by the addition of strong hydrochloric acid to the urine of animals or patients that have been fed on skatol. Thus Porchet and Hervieux[7] have recently maintained that urorosein and skatol-red are identical. They base this contention mainly on the fact that the skatol-red which appears after the administration of skatol to dogs gives the same typical spectroscopic band that is obtainable when the urorosein pigment is subjected to spectroscopic examination. I have elsewhere given in some detail the reasons which show that skatol-red and the uroroscin reaction do not depend on the presence of the same mother substance in the urine.[8] Since discussing this subject I have been able to demonstrate the dependence of the urorosein reaction on the presence of indolacetic acid in the urine. When this fact is realized by the writers who maintain that skatol-red and urorosein are identical it is evident that this contention will have to be abandoned.

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[5] The Constitution of Tryptophane and the Action of Bacteria on it, Jour. Physiol., 1903, xxix, 451.

[6] Ueber die Constitution der indol Gruppe im Eiweiss (Synthese der sogen. Skatolcarbonsaüre) und die Quelle der Kynurensaüre, Ber. d. deutsch. chem. Gesellsch, May 4, 1906; No. 7, p. 1802.

[7] Untersuchungen über das Skatol, Ztschr. f. physiol. Chem., 1905, xlv, 486

The view that indolacetic acid arises from the decomposition of proteids in the intestinal tract is supported by the fact that I have been able to obtain from the intestinal contents of a patient showing a marked indolaceturia a substance showing the reactions for indolacetic acid. I have not yet, however, had the time to prepare this substance from the intestinal tract in sufficient quantity to make melting-point determinations and to demonstrate the formation of skatol on subjecting the substance to a temperature in the neighborhood of 180° C., these being the criteria which serve positively to identify indolacetic acid. It is entirely in harmony with the view that indolacetic acid arises from tryptophan decomposition in the intestinal tract that I have been able to induce a strong urorosein reaction in the urines of two healthy subjects who during several days ate a large excess of beef—from 3,000 to 4,000 grams daily. Previous to the eating of the beef in excess, the urines from these subjects failed to show the presence of indolacetic acid. My explanation of this induced indolaceturia is that in both instances the presence of such large quantities of proteid in the intestine gave rise to a delay in the absorption of tryptophan formed through digestive proteolysis and that in consequence of this delay indolacetic acid was formed through the action of bacteria on tryptophan. This observation leads me to suspect that there are instances of pathologic conditions in which the excessive use of proteins is at least a factor in the development of indolaceturia. I would refer in this connection particularly to two types of cases, namely, diabetes and certain instances of chronic intestinal indigestion in children. In diabetes there is a tendency for patients to restrict themselves in carbohydrates and to compensate for that restriction by increasing the fat and protein intake. The protein intake under these conditions may be 50 or 100 per cent. greater than would be the case in health. The same thing is true of a group of cases of chronic intestinal indigestion in children in which it is impossible to take more than very small quantities of carbohydrates without excessive and detrimental fermentation. These patients, moreover, are frequently unable to tolerate fats in normal amounts. Under such conditions the physician tends to recommend a diet rich in protein.

It thus appears probable that the excessive feeding of proteins may be concerned with the development of indolaceturia. I do not maintain, however, that this is essentially the cause of the indolaceturia in the two classes of cases just mentioned. For I have seen the phenomenon in persons who are taking no excess of protein food. Moreover, in pathologic cases of indolaceturia, in which the protein food has been restricted, the indolaceturia may be still persistent. It is thus clear that, while the intake of a large amount of protein is a factor highly favorable to the development of indolaceturia, the occurrence of this condition must be regarded as depending rather on delayed absorption of tryptophan and suitable bacterial conditions than on mere overfeeding with proteins.

Assuming that the hypothesis set forth in this paper is correct and that both indolacetic acid and the indol formed in the intestinal tract are derived from tryptophan through the action of bacteria, the fact remains still to be accounted for that sometimes the decomposition of tryptophan yields mainly indolacetic acid and at other times mainly indol. I am at present unable to offer a satisfactory explanation for this selective breakdown of tryptophan. As is well known, bacteria of the *B. coli* group are capable of clearing tryptophan to indol and, as already mentioned, it was shown by Hopkins and Cole (an observation confirmed by Dr. Dakin and myself) that these organisms are able to form indolacetic acid from tryptophan. It is doubtless true that in the intestinal tract the bacteria associated with the colon bacilli play a part in determining the direction of the main cleavage of tryptophan, and I think it possible that through the careful study of the symbiotic action of bacteria on this substance it will be possible to gain an insight into the different bacterial conditions that determine the production of indolacetic acid rather than indol.

It is not my intention here to discuss the pathologic consequences of indolaceturia. I may point out the fact, however, that, since indolacetic acid is not paired in the organism like indol and skatol and phenol, it may have an opportunity to act directly on the nervous system when absorbed in considerable quantities. A comparison of the action of indolacetic acid, both on the muscle functions and the functions of the central nervous system with the effects produced by indol and skatol, is thus a distinct desideratum. Dr. Lee, who has interested himself in the effects of indol and skatol on muscle fatigue, has kindly offered to study the effects of indolacetic acid on the living muscular substances. I have not yet had sufficient experience in the therapeutic modification of indolaceturia to express any opinion as to the best method of ridding the organism of this condition, but in any scheme of treatment the diminution of protein food would have to be considered.

Original Articles

STREPTOCOCCIC INFECTIONS OF THE PHARYNGEAL ADENOID TISSUE IN ADULTS.*

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BOSTON.

This subject is of sufficient interest and practical importance to receive at the hands of the laryngologist much more careful consideration than it has in the past. I am not sure whether these streptococcic infections of the pharyngeal adenoid tissue in adults are thought of or even clearly recognized by the general practitioner. The basis of this paper consists of data collected in ten cases, occurring in my own private practice.

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[8] Indolacetic Acid as the Chromogen of the "Urorosein" of the Urine, Jour. Biol. Chem., 1908, iv, 253.

* Read in the Section on Laryngology and Otology of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908

There never was a period when, more than now, the laryngologist devoted time, ingenuity and skill to refining his instruments, extending his view of experimental and research work, and perfecting a multitude of operations. May not one think that we have been over-zealous in our activity to reconstruct the nose and to devise new ways to explore the nasal sinuses and cells, and to peer into remoter regions of the esophagus, stomach and bronchial tubes? Thereby, are we not peculiarly tempted to lose sight of the older and more familiar fields?

In 1868 W. Meyer first drew attention to the importance of the clinical aspects of the pharyngeal adenoid tissue. No subject in our line up to the present time has received more widespread attention. Next to no information can be gleaned from text-books. Though a careful research of the literature has been made, the scientific papers scattered throughout the medical journals offer but scanty material upon this topic.

Let us consider, for a moment, how sometimes the naso-pharyngeal condition may be overlooked or little importance may be attached to it. This statement may seem paradoxical, but it shows how easily we may be led astray when symptoms are misleading or simulate, perhaps, some general diseases, as pulmonary tuberculosis, malaria, typhoid fever or influenza, thus masking the original seat of the trouble. This is obviously true in cases of differential diagnoses.

It is hardly possible to overstate the importance of direct examination of the postnasal and nasal regions to settle any debated question where septic conditions are present that cannot be attributed clearly to some one definite region of the body. Another safe rule to follow is to have bacteriologic examinations made of these regions; and lastly, the thermometer might throw some light on many doubtful cases of general disturbance where the nasopharynx is the primary site of infection.

I will outline a case with obscure symptoms due to an unrecognized throat trouble.

Case 1.—*History.*—Miss A., authoress, aged 30, was sent to me in November, 1904. Three months previously she had had an attack of influenza. This passed off, and the patient reported herself as slowly regaining her usual state of health. But two weeks previous to her visit there had been a rise of temperature each evening, ranging from 100.5 F. to 101.5 F., with a slight elevation in the morning. She had been examined carefully on two or three occasions for a possible pulmonary involvement, but always with negative results. It was stated that the throat felt a little sore, with a slight increase in postnasal secretion, and for a day or so the voice had become slightly nasal and husky.

In addition, a cough developed, and masses of yellowish white, opaque material, a centimeter or less in diameter, were expelled freely. The patient had noticed no bad taste or disagreeable odor, nor was it necessary to use the handkerchief more frequently than usual. At no time during her convalescent period had she felt ill enough to go to bed.

Examination.—The larynx was examined. It appeared slightly reddened. The nasal membranes were inflamed, but no undue amount of secretion was present in the meatuses, and the maxillary sinuses were clearly illuminated. The soft palate and uvula and posterior pillars and pharyngeal walls showed marked swelling and redness. The tonsils were swollen, very slightly inflamed, with no exudate or membrane covering them. Posterior rhinoscopy brought into view the adenoid tissue covered with secretion of creamy consistency. This was cleared away by a saline spray. The adenoid tissue looked "rat-eaten," and only one-third of it remained, and this remnant finally came away with the slightest touch of the forceps.

The bacteriologic examination showed streptococci in abundance, and the masses that had been expelled were remains of adenoid tissue.

The constitutional symptoms disappeared, and the local signs cleared up promptly under appropriate treatment.

In the following case, the symptoms were not particularly misleading, but they were unusual in their severity and rapid onset:

Case 2.—*History.*—A physician unduly exposed to septic infection became ill May 5, 1907. The illness was ushered in by chilly sensations and a rise of temperature to 104 F. on the afternoon of the first day. General malaise, headache and anorexia soon followed, with indefinite pains about the postcervical region. For three or four days the temperature rose from 99.5 F., or thereabouts, in the morning to 102 F. or 102.5 F. by 6 p. m. The pulse meantime was irregular, soft and rapid, ranging from 85 to 115. The symptoms generally seemed to simulate an attack of influenza, for which it might have been taken. But at this time the soft palate was slightly painful, as were also the posterior pillars. In less than two days, the pain in the throat became very severe after using the voice or on deglutition. At night it was sufficiently severe to prevent sleep.

Examination showed the pharyngeal walls to be red and swollen. The uvula, soft palate and posterior pillars were markedly red, swollen and edematous. The laryngeal condition presented nothing beyond a general redness and the nasal condition was similar. It was only toward the end of the illness that the nose was secreting freely, which was traced to the postnasal condition. At the end of five days the pain in the throat became paroxysmal. It was slightly relieved by clearing the postnasal region, aided by very warm normal salt solution, in addition to a decided muscular effort. Later, the pain abated somewhat for half an hour, following the expulsion of pieces of soft friable tissue of a pinkish color. On the fifth, sixth and seventh days of the illness, three such pieces of tissue were expelled, varying in diameter from 2 to 3 centimeters. A fourth piece came away immediately after a postnasal application.

Postnasal examination showed intensely swollen pharyngeal walls with a small amount of adenoid tissue remaining. At a previous examination some four years ago this patient was known to have had only a small adenoid that in no way blocked the choanæ.

Bacteriologic examination gave a pure growth of streptococci, and the microscopic examination of the expelled tissue, as reported by Dr. Elizabeth Morse, showed several pieces of opaque white, firm material, composed largely of débris, fibrin network and dense collections of pus cells. In some areas there is a delicate reticulum containing in its meshes polymorphonuclear leucocytes and a few lymphoid cells. Except for the latter, no fixed cells are seen. No blood vessels.

This case yielded promptly in three weeks to nasal and postnasal applications and sprays and to appropriate general treatment.

In a third case where the symptoms pointed to the throat but the exact location was overlooked.

Case 3.—*History.*—Mr. C., a lawyer, consulted me in January, 1906. He had been exposed to a severe case of scarlet fever in his own family. He had never had influenza and gave no history of nose or throat trouble. However, he had had a sore throat for four days previous to his visit to me. There was general malaise and marked pain in his throat, and also at the back of his neck. There was slight soreness on swallowing, and more or less blocking of the posterior nares. The patient had become nervous and irritable. There was a rise of temperature, never reaching over 102 F. in the evening, with exacerbations each day. The respirations were not much above normal; the pulse beat was accelerated, but otherwise not abnormal. Prior to coming under my care he had been treated by incisions, first in one posterior pillar and then in the other. Finally, the tonsil was incised at its apex in the hope of finding deep-seated pus. This procedure proved fruitless and only increased his discomfort.

Examination.—I saw him a day later, when there was most extensive swelling of the uvula, soft palate and posterior pillars. The tonsils were only slightly reddened. Anterior rhinoscopy brought into view reddened mucous membrane. There was no secretion in the meatal recesses and the antra showed up well under illumination. An examination of the postnasal region showed a yellowish white mass in the region of the adenoid. A very warm saline spray was used, when friable pieces of material one-fifth of a centimeter in diameter came away freely, leaving the base of the adenoid very uneven in outline.

This case was treated similarly to the others, and within two weeks the throat symptoms had subsided. It may be well to note that I had seen this patient some three years ago, when he was referred to me for the removal of impacted cerumen. At this time, it was recorded that the adenoid tissue was small in size.

In presenting these cases I have reported a sufficient number to illustrate the points I desired to note; and these three cases were the most pronounced of all. I am convinced that such cases are likely to be comparatively rare. In addition to the above there are seven others on my records, but to detail them would be only a repetition of the foregoing, with symptoms very much less marked. I may mention that the ages ranged from 30 to 50 years. In no case were the ears involved, nor was there an enlargement of the cervical glands. All the patients recovered.

In this brief paper no attempt has been made to go into exhaustive details of the cases, or to approach the subject otherwise than as met with in adult life. To study this subject in infancy or in early years might well furnish material for special papers. However, incomplete as it is, it may further in other workers more searching and fruitful investigation.

It needs no homily to convince us of the value and importance of this subject in the rôle played by the streptococcic infections of the pharyngeal tissue, not only in their local, but also in their remoter effects, whether the symptoms are definite or obscure.

My best thanks are due my colleague, Dr. Katharine H. Law, who kindly looked over the literature of the last fifteen years.

DISCUSSION.

Dr. B. R. Shurly, Detroit, said that the serious sequelæ and complications of the infectious diseases, such as influenza, typhoid fever, diphtheria, scarlet fever, measles, tonsillitis, arthritis and others are in direct ratio to the absorption of toxin from the nasopharyngeal space. This pathologic and therapeutic principle is not sufficiently recognized by the average general practitioner. Acute infections of the lymphoid ring, especially those of the streptococcic variety attended by high temperature, myalgia and glandular swelling, naturally fall within the realm of bedside medicine. In private practice it is rare that in acute cases of this type the patients are subjected to rhinoscopic examination; unless throat trouble is evident on a simple inspection, other and more remote regions of the body are investigated. If complications arise, the internist or pediatrist is called, as the laryngologist of the last decade is usually a surgeon and not a clinician. Dr Bryant's plea for a return to the older and more finished field is a plea for more laryngologists who have been trained in the hard and fascinating school of general practice. To carry out this examination satisfactorily at the bedside, as a routine measure requires more inconvenience than the busy internist will suffer. From the view point of the rhinologist, however, no examination could be complete without posterior rhinoscopy. The three cases reported are types of acute infections that occur in enormous numbers through the winter and early spring of our northern climate. They are classified popularly as influenza. Depending on innumerable factors such as the variety of bacteria, virulence, age, resistance of the patient and area of lymphoid tissue infected, these epidemics are attended by a train of similar symptoms. The clinical picture changes in relation to the bacteriologic findings. Streptococcus and pneumococcus in pure culture rank second only to influenza as serious complication. Dr. Bryant reports no involvement of the middle ear in her series of cases, although this particular variety of infection is extremely liable to extension. The cases described gave evidence of acute inflammation in the throat as well as the adenoid involvement. There was streptococcus infection while the individuals were in a state of so-called lowered resistance from various causes. Case 1 illustrates a type that is frequently classified as recurrent influenza by the general observer and which may be scientifically classified as chronic influenza in many cases. This condition is a distinct entity as a pulmonary disease, and is differentiated with great difficulty by physical signs and symptoms until a special stain reveals the influenza bacillus. Acute inflammations or chronic inflammations of the lymphoid ring due to this bacillus lead to marked susceptibility of the mucous membrane to mixed infection with pyogenic micro-organisms. A chronic influenza of an adenoid may exist for weeks after an attack that is looked on as a simple nasopharyngitis. Cases 2 and 3 illustrate frequent types of acute infection that follow work in the postmortem room or among septic wards of hospitals. Those who have served at length in the contagious departments, especially among scarlet fever patients, can recall many cases among physicians and nurses of streptococcus infection. They are usually of attenuated forms and respond readily to treatment. Dr. Shurly agreed with Dr. Bryant that in acute infections of the type under discussion, the old time spray of Seiler's or Dobell's solution or warm boric acid solution is exceedingly grateful and beneficial to the patient. Gentle irrigations of salt solution or compound antiseptic powder U. S. P. with a post-nasal syringe are useful. While many cases respond promptly to irrigation, sprays and internal medications, a few persistent cases of streptococcic infection of the pharyngeal adenoid and adjacent structures may require the aid of bacterial vaccines. In Dr. Shurly's experience it has proved of value in several threatening cases of erysipeloid variety. Stock vaccine may be used when time or inadequate laboratory facilities will not permit the more successful opsonins to be prepared for the individual, and the proper treatment of acute infection in this region will limit the complications and therefore the surgery of the sinuses. Prevention of acute adenoiditis by the removal of the diseased gland or other prophylactic measures demand more universal attention. Dr. Shurly asked Dr. Bryant if these cases had been investigated by culture methods, especially for the Pfeiffer bacillus.

Dr. Emil Mayer, New York, said that adenoid vegetations in adults are far too frequently neglected. He emphasized not only that this infection occurs in the adult, but also that the adenoid vegetations should be more frequently recognized than they are. We have not only this class of infections in the adenoid tissue, but also a direct inflammatory affection which physicians have been treating for years as ordinary coryza, ordinary pharyngitis, or an ordinary tonsillitis, perhaps only treating the pharynx and neglecting far too frequently the presence of adenoid vegetations. He has a number of adult patients with adenoid tissue quite as large as that found in young children.

Dr. J. E. Logan, Kansas City, declared that there is no doubt in his mind that physicians have failed signally to consider seriously the adenoid in the adult, that may of itself appear absolutely innocuous. It may be so small in size that it may readily pass unnoticed. For that reason operative procedures that will reach those conditions that are so manifest in the vault of the pharynx, and so manifest in all the infectious diseases of the nasopharynx and of the tonsillar cavity are neglected. His experience shows that most cases of otosclerosis that have been so particularly obnoxious to the practitioner, to the laryngologist or to the otologist have originated in this neglected condition. He believes that in many of these cases that have resisted all medical treatment previously, and in which there is the slightest evidence of any vegetations on casual examination, those little creases and sulci and pharyngeal recesses that are so prevalent in all of these adults can be found in the vault. This little remaining fibrous condition is of the greatest importance in the relief of all conditions in the middle ear, chronic catarrhal conditions, and the many infectious diseases found in the nasopharynx. The crises, as suggested by Dr. Mayer, are likely to recur, and this tissue is a ground for the culture of all infectious material. Dr. Logan has been able to make numerous investigations along the line of the vault of the pharynx in these apparently indifferent cases of all classes of bacteriologic and pathologic manifestations, and has found the Klebs-Loeffler bacillus, streptococci and staphylococci.

Dr. Alice G. Bryant, Boston, in reply to Dr. Shurly said that these ten cases were not investigated for Pfeiffer's bacillus.

LARYNGEAL MANIFESTATIONS IN LOCOMOTOR ATAXIA AND MULTIPLE SCLEROSIS.*

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The astonishing findings of Dr. W. B. G. Harland in cases of locomotor ataxia caused me, after reading last year's preliminary report of the Section on Laryngology and Otology, to examine all such cases at my disposal at the Montefiore Home, with the view of presenting the results in the subsequent discussion of Dr. Harland's paper. Unfortunately I was prevented from attending that meeting, but the investigations were not abandoned; on the contrary, they were repeated. Afterward, all the cases of multiple sclerosis were also examined, with the view of clearing up some pending questions, especially in regard to paralysis of the abductors, the modifications of the voice, the ataxic movements of the cords, etc. Finally, a visit was made to the City Hospital on Blackwell's Island, and fourteen cases of tabes were examined. But I do not consider these last findings of absolute statistical or scientific value, for the reason that the patients were examined only once, which can not be considered a sufficient basis on which to pass final judgment in locomotor ataxia.

The statements of Dr. Harland that "the larynx is very seldom seriously affected in locomotor ataxia," and that he was unable to find a tabetic case with laryngeal crises, were so much at variance with my own experience and all that I had read on the subject, that I naturally devoted especial attention to these points.

In order to make it easier to understand these cases, their histories should have been given in full, but they had to be abridged or this paper would have been too lengthy. The histories of the cases examined only once at the City Hospital were purposely omitted. The same has been done, to a large extent, with the cases of multiple sclerosis, as in this connection they are of secondary importance, although highly interesting in themselves.

Case 1.—*History.*—Samuel W., aged 50, admitted June 6, 1907. Chancre at age of 20; used tobacco in excess. Present illness began twenty-five years ago, with shooting pains in both legs. One year later right arm suddenly became paralyzed. For past fifteen years has had trouble with his bladder and rectum; three and a half years ago fell and fractured left patella. June 18, 1907, fractured left tibia from a very trifling cause.

Examination.—Jan. 30, 1908. When patient speaks has to stop often on account of tickling in his throat. Has a marked postnasal catarrh with a good deal of secretion. Right vocal cord fixed in the median line. Left vocal cord moves about 2 mm. on inspiration. Secretion on the right vocal cord. False vocal cord thickened. No dyspnea. February 13: Right vocal cord fixed in median line, border straight; left vocal cord moves very little; voice gives out easily.

Diagnosis.—Paralysis of both postici, with secondary contraction of adductors of right side.

Case 2.—*History.*—Harry S., aged 43, admitted March 23, 1903. Present illness began five years ago, with dizziness and shooting pains. Three years ago a general eruption appeared; was given a thorough course of inunctions, lasting four months. Girdle pains then developed; patient had to be catheterized and began to have difficulty in walking. Vision failed and paresthesias in the feet appeared. Developed a perinephritic abscess, which had to be opened at Montefiore Home. Has frequent gastric crises. No laryngeal crisis.

Examination.—April 15, 1907: Larynx normal. Jan. 27, 1908: Can speak in a loud voice; right vocal cord almost immovable in median line; left vocal cord moves to "cadaveric" position on deep inspiration.

Diagnosis.—Complete paralysis of posticus on right side; partial paralysis of left. The progressive character of tabes was noticed in this case. In April, 1907, the larynx appeared normal, while a year later there were marked lesions of the motor apparatus.

Case 3.—*History.*—Mrs. R. G., aged 49, admitted April 1, 1903. Married and had four children, of which the first born was marasmic; then a number of abortions; only one child is living. Had cataract at age of 26, since which time she has had trouble with her vision, until finally she became blind. About ten years ago had shooting pains in the lower extremities; two years later paresthesias in the soles of the feet. About this time locomotion became impaired. April 5, 1899: Was attacked by dyspnea, cough and severe hiccough which lasted about ten minutes. She then became cyanotic and artificial respiration was resorted to. Oct. 11, 1904: Again had laryngeal crisis; cyanotic for about ten minutes.

April 29, 1907: For three days patient has had severe shooting pains in her left loin. Yesterday uncontrollable vomiting and retching. Just at noon to-day patient suddenly became cyanotic after coughing for a time, breathing very stertorously and in gasps; she soon became unconscious, frothing at the mouth, and then livid and almost cadaveric. Except for an occasional gasp, breathing ceased. Venesection was performed and eight ounces of blood abstracted; meanwhile artificial respiration was kept up. In about ten minutes she regained consciousness; following this she had hiccoughs for four hours. Larynx normal.

Diagnosis.—We have here an exceptionally severe example of laryngeal crisis, which reminded the writer of a case reported by Cherchevsky. The attack observed by him was very similar to the one described above and lasted forty-eight hours (!). The patient recovered, but died suddenly of a similar seizure several years later.

Case 4.—*History.*—Mrs. R., aged 61, admitted Aug. 30, 1904. Husband died of dementia paralytica. Twenty years ago had attacks of severe vomiting of obscure origin, at times accompanied with diarrhea and fainting; sixteen years ago shooting pains and paresthesias. Soon after, patient experienced difficulty in walking. Had diplopia ten years ago. Had frequent gastric and, at times, rectal crises; no laryngeal crises; deglutition normal.

June 21, 1907: Partial paralysis of right vocal cord.

Examination.—Jan. 24, 1908: On phonation, vocal cords do not close in median line, a straight narrow slit of about 2 mm. being left between them. On inspiration vocal cords do not open to their full extent.

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* Read in the Section on Laryngology and Otology of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

February 13: Incoordinate movements on phonation and inspiration. Vocal cords open only to cadaveric position.

Diagnosis.—Partial paralysis of both postici.

Case 5.—*History.*—Herman D., aged 27, admitted Jan. 2, 1907. Had typhoid at 23; chancre two years ago; also several attacks of gonorrhea; alcoholic and dissipated. Present illness began four years ago, with headaches; in October, 1905, lightning pains and weakness in the legs; then girdle pains and occasional bladder disturbances; at times diplopia; no gastrointestinal or laryngeal crises.

Examination.—April 15, 1907: Chronic laryngitis; both vocal cords move normally. May 27: Vocal cords functionate well, but there is paresis of the transversus. June 4: Slight paresis of the transversus.

Jan. 24, 1908: Left vocal cord normal; right vocal cord on phonation leaves an elliptical interspace. February 13: Larynx normal; elliptical interspace hardly visible.

Case 6.—*History.*—Mrs. G. O., aged 48, admitted Aug. 30, 1905. Parents related; insanity in the family. Since childhood has had epileptic attacks. Numerous abortions. Husband died of dropsy from alcoholism. Present illness began fifteen years ago with weakness in the legs and a perforating ulcer on right sole; epileptic attacks then appeared more frequently and walking became difficult; later gastric crises occurred, and two years ago Charcot's knee. Pharyngeal reflex stronger on right side.

Examination.—April 15, 1907: Has queer attacks of fainting, with retching and hiccough; left pharyngeal arch lower than right; left side of fauces and tonsil anesthetic; larynx could not be examined.

June 4: Left vocal cord paralyzed (?).

Jan. 2, 1908: Could not be examined; therefore, no positive diagnosis could be made.

Case 7.—*History.*—A. K., aged 30, admitted May, 1907. Married at 20; wife had one miscarriage and four children; denies venereal disease. Present illness began in 1905 with severe pains in the legs, shooting in character; soon legs became weak and patient had to walk with a cane; at this time had incontinence of urine; had ataxic walk and loss of tactile sense in feet.

Examination.—Jan. 30, 1908: Vocal cords injected, thickened, and of a brownish red color; close perfectly, but open only half way, i. e., about to cadaveric position on deep inspiration.

February 13: Vocal cords open only about 3 mm., but close in median line. Posteriorly there is a triangular opening on phonation.

Diagnosis.—Paresis of postici and of transversus.

Case 8.—*History.*—Mamie B., aged 38, admitted June 5, 1903. Family and previous history negative. Present illness began two years ago with pains and twitchings in legs; then trouble with walking; received mixed treatment, after which gait improved, but afterward grew worse again. Sensation disturbed from below waist line; hyperesthesias and hypalgesia.

Examination.—May 27, 1907: Larynx normal. Feb. 13, 1908: On inspiration, jerky movements of cords; otherwise normal.

Case 9.—R. H., aged 36, admitted July, 1907. Past history: denies chancre; addicted to alcohol and masturbator. Present illness began about eight years ago with severe sciatic pains; had three gastric crises in first year; then stiffness of legs and incoordination of movement; paresthesias in feet. Often had no control over his bowels; occasionally severe diarrhea.

Examination.—Jan. 24, 1908: Larynx diffusely congested, otherwise apparently normal. February 13: Hyperesthesia of larynx; left vocal cord does not open to its full extent, but only halfway; epiglottis flaps down somewhat. Patient, though not musical, is able to modulate his voice in singing.

Diagnosis.—Paresis of left posticus and laryngeus superior.

Case 10.—*History.*—M. G. admitted Sept. 25, 1907. Father died of apoplexy. As a child had measles, scarlet fever, and smallpox. Had gonorrhea, but denies a chancre; however, gives good history of secondary syphilis; married, but no children; wife aborted. Present illness began seventeen years ago, with pain and weakness in lower extremities; then his sight began to fail until six years ago, when he became totally blind. Had various paresthesias, especially girdle pains. Larynx normal.

Case 11.—*History.*—J. Z., aged 49, admitted Nov. 19, 1895. Father died of tabes. Had facial neuralgia as a boy; at 19 a cataract in left eye; at 31 two sores on the penis, coming thirty days after intercourse; had a sore throat; was treated for six months; excessive smoker and dissipated. In 1887 noticed failure of vision; in 1880 optic atrophy; 1890 girdle pains and weakness of legs; six or seven years ago incontinence of urine.

April 15, 1907: Could not be examined. Singing voice unimpaired.

May 27: Gives a history of having strange attacks of coughing-spells, which he calls "locomotor cough." These come on especially at night and are followed by sneezing.

Examination.—June 4: Partial paralysis of both vocal cords; sometimes they do not open at all during inspiration; no stridor or dyspnea.

Jan. 24, 1908: Larynx diffusely injected; epiglottis flaps down; vocal cords can not be seen; voice clear; occasionally laryngeal crises.

February 13: Vocal cords open only a few mm.; no stridor nor dyspnea.

March 2: Vocal cords participate but little in phonation and respiration; they close on phonation; when patient is told to take a deep breath the cords first approximate and then open, but not more than about 1 or 1½ mm. There is a slight elliptical space between the cords, and posteriorly a small slit; patient speaks in quite a clear voice; no dyspnea (patient not being able to walk, sits in a rocking chair).

Diagnosis.—Complete paralysis of both postici with median position of cords.

Case 12.—*History.*—F. H., aged 54, cigar packer, admitted February, 1908. Had scarlet fever and measles; chancre at 23; from age of 29 had attacks of migraine. Admits venereal and alcoholic excesses. Wife had several abortions. Present illness began four years ago with stinging sensations in the thighs and back, followed by weakness. Kept up with his work until two years ago, when shooting pains in small areas in the lower extremities appeared; weakness increased, with uncertainty in walking. A year ago could no longer walk without assistance; at the same time, paresthesias appeared, e. g., numbness, etc. Ataxia was marked; upper extremities became weak and felt heavy; has to strain to pass urine; girdle feeling developed a year ago; never had crises of any kind.

Examination.—Special Note: The left angulus scapula is prominent, e. g., there is a winged scapula; distinct signs of serratus magnus paralysis; digitations of left serratus more pronounced than those of right.

Feb. 13, 1908: Larynx normal.

Case 13.—*History.*—Mrs. M., aged 48, admitted June 18, 1906. Had usual diseases of childhood; first husband died of paresis; had one miscarriage. Present illness began with lightning pains and a girdle sensation; one year ago ataxia; diplopia five months ago. Lower limbs under poor control; occasional difficulty in speech; inability to use left hand; pain in left arm.

Examination.—Excursion of right vocal cord better than that of left, but that varies at times. There is usually a small triangular space open posteriorly at the cartilaginous part.

March 2, 1908: Larynx normal.

Case 14.—M. N., aged 45. Gives a history of chancre. Larynx normal.

Case 15.—A. L., aged 55, admitted September, 1907. Gonorrhea three times; chancre at 36; wife had six miscarriages. Larynx normal.

Case 16.—M. F., aged 52, admitted July, 1907. Has no knowledge of having had a chancre, but gives an indistinct description of secondary luetic manifestations; wife had two miscarriages.

Examination.—Jan. 28, 1908: Larynx apparently normal. February 13: Can not be examined.

Case 17.—*History.*—Mrs. B. L., aged 42, admitted Feb. 13, 1907. Mother died of apoplexia. No children. Seventeen years ago was at Mt. Sinai Hospital six months for gastric ulcer; vomited greatly and was fed by rectum; six years later was operated on for appendicitis. In July, 1906, was suddenly taken ill with severe vomiting, diarrhea, and cutting pains all over the body. The vomiting continued for about a month, and nothing could control it; she became so weak that for a time she could not talk; when she got out of bed she could hardly walk because her legs were ataxic, as were also her hands. Lightning pains in the thighs and, for a short time, she had no control over her bowels. Has had a number of attacks of gastric crises. Shows ataxic movements of vocal cords, but they open and close perfectly.

Case 18.—*History.*—C. A., aged 50, admitted May 23, 1905. Diphtheria; gonorrhea twice. In 1897 noticed strabismus, then cramps in legs; in 1898 diplopia and difficulty of holding urine; in 1899 staggering and girdle pains; later paresthesias in feet; in 1902 could see no longer, optic atrophy; had rectal crises in hospital. Upper extremities in good condition; coordination fairly well preserved; complete loss of coordination in lower extremities; tactile anesthesia from umbilicus down to toes.

Examination.—April 15, 1907: Larynx normal. May 27: Larynx normal.

Jan. 20, 1908: Voice clear; sensibility reduced; gives history of laryngeal crises, especially in beginning of disease. Left vocal cord does not move; remains in extreme abductor position; right cord moves freely and beyond the median line.

We note in this case a total paralysis of the left recurrent nerve, which developed under our eyes. When patient was examined on May 27, 1907, the vocal cords moved freely, while a year later the affection of the recurrent nerve was plainly visible. This is a point to be borne in mind by all those who examine their tabetic cases only once, and on this base a final opinion as to the rarity of those lesions.

Case 19.—*History.*—J. C. admitted Feb. 16, 1905. Had measles; denies syphilis; habits moderate; shoemaker by occupation. Present illness began two years ago, with pains in the lower extremities, which gradually increased in severity; after a time, complete loss of tactile sensation in feet, and patient finally became ataxic. A month ago, nocturnal incontinence; has to strain during the daytime; sexual power is diminished; no crises; during phonation, tremor of fauces visible for a few seconds, after which they assume a normal state.

Examination.—April 15, 1907: Long uvula; partial paralysis of right vocal cord (?). May 27: Impossible to examine.

Jan. 27, 1908: Larynx normal.

Case 20.—*History.*—Samuel C., aged 44. Had whooping-cough, measles, and at 15 typhoid. Chancre at 26; overindulged sexually. Present illness began eight years ago, with weakness in the legs and vertigo; then began to have difficulty in vision, optic neuritis; six years ago, bladder disturbances; has had attacks of laryngeal crises with obstinate attacks of hiccoughs lasting four days at a time, accompanied with some vomiting.

Examination.—April 15, 1907: Paralysis of left posticus; vocal cord fixed in median line, border uneven. Voice is peculiarly high-pitched and hoarse.

Jan. 24, 1908: Right vocal cord moves freely; left in cadaveric position. February 13: Left vocal cord immovable in almost extreme inspiratory position; right vocal cord moves beyond the median line toward the other cord, but does not meet it, leaving a chink open, so that vocal bands run parallel at about 1 mm. distance.

This is another example of a gradual development of the different stages of paralysis of the recurrent nerve.

LARYNGEAL FINDINGS OF CASES AT CITY HOSPITAL.

All presented a clear history of lues.

Case 21.—H. K., aged 41. Father died of tabes. Vocal cords close in median line, but open on inspiration only about 2 mm.

Case 22.—D. B., aged 45. Right recurrent paralysis; left vocal cord moves over to other side.

Case 23.—K. B. Sensibility of larynx reduced; right vocal cord normal; left, on inspiration, moves only to cadaveric position.

Case 24.—J. D., aged 58. Larynx normal.

Case 25.—A. C. Laryngeal and gastric crises. Epiglottis drops over introitus laryngis, obscuring view.

Case 26.—J. V., aged 66. Normal.

Case 27.—J. B., aged 68, coachman. Normal.

Case 28.—F. S., aged 66. Superior laryngeal nerve affected; right side of epiglottis drops over, shutting off view. Very interesting picture, though interior of larynx can not be seen.

Case 29.—J. McN. Laryngeal and gastric crises. Impossible to see larynx.

Case 30.—C. McD., aged 51. Larynx normal.

Case 31.—H., aged 59. Blind. Larynx normal.

Case 32.—J. C., aged 59. Bladder difficulty. Larynx normal.

Case 33.—D. S., aged 59. Shortness of breath; incontinence of urine. Larynx normal.

Case 34.—Henry T., aged 51. Larynx normal.

On going over these cases carefully there is noticed the great difference in the laryngeal conditions. At the City Hospital we have had, out of a total number of fourteen, not less than eleven cases in which no gross lesions of the nerves could be found. In these eleven cases are included three in which the interior of the larynx could not be seen on account of the epiglottis obscuring the view, or the patient being unmanageable. The other eight cases were marked normal, so that only three are left with pronounced lesions in the larynx. I am quite sure, however, that a larger number would have been found to be affected had we examined them several times at intervals, as we did those at the Montefiore Home.

In corroboration of his statement regarding the rarity of such affections, Harland quotes a number of writers, but his citations are characterized by the omission of those authorities who have done most work in the field, as, for example, Felix Semon, Krause, Burger, and others. Dreyfuss is the only author of any consequence, within my recollection, who found that the number of laryngeal disorders due to locomotor ataxia was very small. He observed among his twenty-two tabetics only two with laryngeal affections. But even Dreyfuss does not lay too much stress on his statistics, and they have to be accepted as exceptions to the rule.

On the other hand, Krause observed among 38 cases, gross lesions of the larynx 13 times. Burger noted laryngeal anomalies in 6 of 20 cases. The only form of paralysis he observed (4 times) was that of the crico-arytenoidei postici muscles, in other words, only the abductors were affected. In 14 cases Burger noted a high pulse rate, showing paralysis in the area of distribution of the vagus and the spinal accessory nerves.

In my 20 cases observed carefully, during a long period, at the Montefiore Home, there were only 6 with a normal larynx; 6 cases showed paralysis of the posterior crico-arytenoids, viz., total paralysis in 4 cases and partial paralysis in 2 cases. Besides these, there were 2 cases of complete paralysis of the recurrent nerve; 4 cases were either doubtful, on account of the impossibility of examining them, or were not classified.

We see, therefore, that the proportion of laryngeal affections is larger than that noted by other observers.

Are our cases especially malignant? I presume not, but rather believe that the considerable number is due entirely to the length of the period of observation. If other cases had been examined just as frequently, perhaps the same result would have been obtained.

LARYNGEAL CRISES.

The attacks termed laryngeal crises have been so frequently noticed by me in a mild or severe form that it would seem that they are almost of pathognomonic value in the early stage of the disease. Why these attacks occur, particularly at this period, was long a mystery to me, until an article by Dr. Michael Grossmann[1] of Vienna came to my mind. The reasons given by Grossmann for the sudden attacks of dyspnea in the beginning of the growth of an aneurism seem so applicable to our tabetic laryngeal crises, that, logically, we should adopt them for the latter as well.

Grossmann says that while we all understand the laryngeal conditions after the aneurism has once developed, the conditions during the period of formation have not been studied at all. He claims[2] that an aneurism, especially one of the large thoracic vessels, does not suddenly attain its full size, so as to cause complete compression and loss of function of the nerve at once. Before this final stage sets in there must be periods when the nerve is only mechanically irritated. Now, as long as the pressure is slight, simply a motor disturbance will follow, with resulting spasms of the glottis, and not a paralysis of the vocal cord. If the pressure remains slight the nerve may accommodate itself to it until an increase in pressure again produces motor disorders, accompanied by another spasmodic attack. Finally, the nerve becomes totally paralyzed, remaining permanently in the cadaveric position.

Grossmann bases his deductions on the following case observed by him:

A railroad conductor complained of a sudden attack of suffocation, and was found to have a paralysis of the left vocal cord. The next day the paralysis was gone, the vocal cords moving in a normal way. Later the patient returned, with reappearance of the paralysis, and Grossman made the diagnosis of a developing aneurism of the aorta, which afterward proved to be correct.

A few years after the publication of this report I was called in consultation to a very similar case, when the experience of Grossmann was still so fresh in my mind that I immediately made the diagnosis of beginning aortic aneurism, which later also proved to be correct. This happened about ten years ago.

When conducting the above investigations and seeking for the cause of the laryngeal crises, the analogy of the two conditions became evident. They differ only that in the one the irritation is mechanical and peripheral, while in the other it is central, and produced by the progressive process of tabes. On recently reading over Grossmann's original paper I found that he had referred to this analogy, but I had not been aware of it.

That in centrally produced irritations the nerves of both sides are affected is evident, and it is natural that such attacks will be more common in tabes than in developing aneurism. There is only one point that is not perfectly clear, viz., how is it that not all cases with laryngeal crises in the beginning show paralysis of the vocal cords afterward? Some do, but there are undoubtedly others that do not. The only explanation I can offer is that a local degenerative process was set up in the beginning of the disease, but failed to progress, so that the nerve had a chance to recuperate and apparently resume its function. But even in the later stages of locomotor ataxia laryngeal crises are not uncommon, if you will only carefully investigate the cases. They are overlooked frequently, just as are other laryngeal symptoms.

SEMON'S LAW.

If it were necessary to produce any new arguments in favor of Semon's law we have an abundance in our material. That law, as you well know, states that in all progressive organic lesions of the centers or the trunks of the motor laryngeal nerves, the abductors of the vocal cords succumb more frequently than the adductors. We have found that to be true in many of our cases, since under our observation they developed the progressive character of a paralysis of the abductors. Let me remind you of cases 1, 11, 18, etc. In one case there was distinctly, at first, a paralysis of the posticus, and afterward the vocal cord of the same side that was flabby before straightened out, i. e., a secondary contraction of the adductor had appeared.

But apart from that there are questions that can not be answered satisfactorily. One of these is: How can it be explained that while in tabetics atrophy of the muscles in other parts of the body is so rare, it is comparatively frequent in the larynx?

Very surprising is Oppenheim's case of tabes and paranoia. In this case there was found, postmortem only, a degeneration of the posterior crico-arytenoids. Otherwise, nothing abnormal could be discovered. Whether we will or not, therefore, we must admit that the paralysis of the abductors is the primary factor, and the contraction of the adductors a secondary matter. This law is also confirmed by the general experience in tabes. As far as I am aware, no primary contraction of any other muscles than those of the larynx has been seen in tabetics: Why should it occur just here? On the other hand, such contractions are observed in another affection, viz., multiple sclerosis, which, of course, has no relation to tabes.

In order to determine the laryngeal conditions in multiple sclerosis I studied the cases at the Montefiore Home, and report them briefly here. It may be mentioned that in all the cases of multiple sclerosis, as well as in those of locomotor ataxia, the diagnosis was unquestioned by all the visiting neurologists of this institution.

CASES OF MULTIPLE SCLEROSIS.

Case 35.—Lena K., aged 30. Jan. 14, 1908: Voice normal; on phonation, vocal cords close normally, on respiration move incoordinately; complains of difficult respiration, without apparent cause. February 3: Again complains of shortness of breath, but objectively respiration is easy. Motility normal.

Case 36.—*History.*—L. K., aged 36. Voice semi-monotonous, drawling, easily changing into falsetto; laryngeal sensibility reduced.

Examination.—Laryngoscopically we see a picture very similar to that so graphically described by Réthi in one of his cases. On phonation, the vocal bands at first do not reach the median line, but stop short by about 2 mm. Then they separate and now approximate in the normal way. The same action is noticed when the patient is told to take a deep breath. The vocal bands do not assume the extreme inspiratory positions at once, but stop half way, execute an inward movement, then an outward one, until they finally reach the intended position.

Case 37.—*History.*—M. F., aged 34. Voice very characteristic; articulation poor; the words, as in the case of v. Leube's patient, are expelled rather than spoken. Almost each syllable is divided from the next one by a short interval. The voice is monotonous, and it seems as if a modulation were impossible. After talking for a while, a crowing inspiration follows, which is quite loud.

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[1] Ueber die laryngealen Erscheinungen bei einem in der Brusthöhle sich entwickelnden Aneurysma, Archiv. für Laryngologie und Rhinologie, Berlin, ii, 254.

[2] Loc. cit., p. 258.

Examination.—Jan. 14, 1908: Closure of glottis good, but outward movement of vocal cords limited to about half their natural expansion. February 16: Vocal cords open and close normally. On January 14 status was determined very carefully and a paresis of the postici noticed. We were surprised when, a few weeks later, the motility of the cords was found to be normal. Such apparent improvement has been noticed by other observers also.

Case 38.—B. R., aged 25, admitted September, 1903. Jan. 14, 1908: Voice monotonous; has to catch breath very often when counting; sensibility normal; right vocal cord does not open to full extent. February 2: Very jerky movement of the left vocal cord on inspiration and phonation; both cords move freely on phonation and inspiration.

Case 39.—*History.*—M. S., aged 29, admitted October, 1906. Jan. 14, 1908: Voice normal, somewhat husky; sensation of soft palate and uvula reduced, also that of hard palate. Voice normal; left vocal cord can not be clearly seen, as epiglottis is somewhat pulled down; right vocal cord moves somewhat beyond the median line on phonation.

Diagnosis.—Paralysis of left recurrent nerve and partial paralysis of superior laryngeal nerve. February 3: *Status idem.*

Case 40.—H. P., aged 30. Jan. 16 and Feb. 11, 1908: Voice somewhat drawling; complains of shortness of breath, but can hold a tone a long time; vocal cords close in median line and open normally. No reason found for the subjective sensation of dyspnea.

Case 41.—Nellie S., aged 23. Jan. 14, 1908: Complete anesthesia of velum and soft palate, extending to hard palate and tongue, and posterior wall of pharynx. Voice normal; cords show oscillatory movements, but close and open perfectly.

Case 42.—Mrs. C. R., aged 61. Jan. 24, 1908: On phonation a small slit is left perfectly straight of about 2 mm. On inspiration vocal cords separate hardly at all, but appear to first close before opening.

Diagnosis.—Paralysis of both crico-arytenoidei postici.

Case 43.—W. F., aged 36. Laryngeal examination impossible.

Case 44.—Mary F., aged 39. Feb. 11, 1908: Right vocal cord does not reach median line, but there is a compensatory movement of the left cord, so that they meet. Voice clear.

Diagnosis.—Paresis of right recurrent.

Case 45.—Mrs. Rosie M., aged 50. Normal.

It was my belief that by careful examination of these eleven cases more light would be thrown on the above much discussed question. In multiple sclerosis we observe primary contractions of muscles in different parts of the body and we are, therefore, justified in asking why this should not occur in the laryngeal muscles as well?

But here, again, the clinical observations teach us differently. Thus, for example, in case 44, we have a paresis of one vocal cord, and there is no doubt that in the future it will become fixed in the median line, thus showing a total paralysis of the abductors—in other words, a gradual progress of the paralysis. In case 39 there is a paralysis of the recurrent nerve, and most likely one of the superior laryngeal nerves. The latter is of great importance, since it demonstrates so clearly the paralysis of these nerves and their muscles.

A much better illustration of paralysis of the superior laryngeal is found in case 28 (a tabetic)—a case which should be seen to be appreciated. A pronounced paralysis of the nerve was observed on the right side, that portion of the epiglottis dropping over to the other side and obscuring the view to the interior of the larynx.

So we may say that in all the cases of multiple sclerosis, as well as in those of tabes, the tendency of the abductor fibers of the recurrent nerve to become affected sooner than the adductor fibers, as stated by Semon, is very apparent and needs no further explanation.

Before examining systematically all the tabetics at the Montefiore Home we had no idea that we would find many with laryngeal involvement. But how great was our surprise when one case after another exhibited such lesions. Patients in whom we had never suspected any marked lesions showed bilateral paralysis of the crico-arytenoidei postici muscles. There was no dyspnea, as the patients were constantly seated in chairs, no alteration of the voice, nor anything else to indicate any such grave affection. In fact, some of them laughed at the idea of having their throats examined. "My throat is all right," exclaimed one man; "if only my legs were as good!" and that was the patient with the bilateral paralysis of the abductors.

However, I do not want to establish this as the rule. These patients have no dyspnea because they sit quietly in their chairs all day long. Dyspnea would set in very quickly if they should attempt to walk. I recollect very distinctly two patients who came to my clinic, both had bilateral paralysis of the postici muscles, of tabetic origin, and both suffered greatly from shortness of breath. (One, by the way, gave a history of severe laryngeal crises.) Tracheotomy was proposed, but was rejected, and both patients died suddenly on the street.

To the cases of abductor paralysis I may be allowed to add here one of the very rare peripheral lesions of this kind.

Case 46.—A woman whose husband suffered from tuberculosis came to my clinic complaining of a sensation as if she were choking. She weighed over 200 pounds, and the suspicion of any tuberculous process was a remote one.

Examination of the lungs revealed nothing positive, but the larynx showed a typical bilateral paralysis of the postici; the woman was suffering greatly from dyspnea. A few months later the diagnosis of pulmonary tuberculosis was made with certainty, both apices being affected.

POSITION OF THE VOCAL CORDS IN TOTAL PARALYSIS OF THE RECURRENT NERVE.

According to many observers the position assumed immediately after section of the recurrent nerve is the so-called cadaveric one. Semon, Horsley, Schech, and others have directly observed this, and their view is shared by most laryngologists who have worked in this field, with perhaps the only exception of Grossmann of Vienna. The latter, after experiments on the cat, believes it to be in the median line. Several observations made by me, in locomotor ataxia, seemed to indicate that—at least in some instances—the position is not in the median line nor in the cadaveric one, but outward and beyond this. In case 18 it is remarked that the vocal band is in extreme inspiratory position. In case 30 it is somewhat similar, and here it was furthermore observed that on phonation the healthy vocal band on passing over to the other side beyond the middle line, became parallel with the paralyzed cord, leaving a space of, perhaps, 1 or 2 mm. between them. That indicates that the retraction of the paralyzed vocal cord has advanced so far that the excursion of the healthy one is not extensive enough to close the rima glottidis, and it was remarkable that in the last mentioned case the affected vocal cord had retracted so far that it could hardly be seen.

VOICE.

In this connection it may be of interest to say a few words on the voice.

In multiple sclerosis the voice shows so many points of interest that this in itself could constitute the subject of a paper. I would mention here only the tremor, the drawling, and the monotonous speech; the change into falsetto, the impossibility of holding a tone for any length of time—which latter may be explained by the subjective, but not objectively perceptible, dyspnea of the patient, and many other points. I will take up briefly only one type, viz., the voice in tabetics.

It is not unusual for the voice to be unaffected in paralysis of one side of the larynx. A good example of this is found in the first case of Krishaber. An army officer with a paralysis of the left posticus had laryngeal crises; the voice was good. During one of these crises he was observed by Charcot. Three years later he was so much improved that he could re-enter service and give commands in a loud voice. After that, however, attacks of suffocation set in again.

But even in bilateral affections, a gross alteration of the voice is often absent. A remarkable example of this kind is found in Case 2. There was nothing to indicate those laryngeal symptoms so characteristic of bilateral paralysis of the postici muscles. The man had a strong, although not clear, voice, and no sign whatsoever of dyspnea. In spite of a few cases reported in the literature, I do not believe that to be the usual condition; on the contrary, the exception. Most of the other cases seen by me showed a certain alteration of the voice—an inspiratory interval between two or three words, etc.

The instability of the motor disturbances in the larynx has been referred to by Krause. After examining all these and many other cases, I conclude that he is right and that Burger is mistaken when he denies it. While we have to eliminate the special awkwardness of most of these patients, and the fear of a laryngeal examination (so natural in blind tabetics), etc., there remain cases that puzzle us by the diversity of the findings. Thus, in Case 5, we saw a paresis of the internus and transversus come and go, and a somewhat similar occurrence was noticed in other cases as well.

Baginsky also observed a case, reported by Kroenig, in which the laryngeal picture changed from time to time. Dreyfuss' case, quoted by Burger himself, showed on one occasion that the glottis was opened only to the cadaveric position, and on the next to a much greater extent. Another case, reported by Burger, viz., one observed by Dr. Kooy, presented a paralysis of one vocal cord which came and went quickly. All these observations should be borne in mind. The majority of all tabetic cases, however, demonstrate that the paralysis of the vocal bands is a steady one and that a cure is to be excluded.

CONCLUSIONS.

1. The larynx is frequently the seat of serious affections in tabetics.
2. Laryngeal crises are met with so often that they are almost of pathognomonic significance.
3. Unilateral and bilateral paralysis of the postici muscles are the affections par excellence in tabetics, but a unilateral paralysis of the recurrent nerve, often with the vocal cord in a hyper-abducted position, as mentioned by Harland, is nothing uncommon.
4. The abductor fibers of the recurrent laryngeal nerve are affected primarily in tabes as well as in multiple sclerosis.
5. The voice in tabetics is often not changed, in spite of advanced lesions.
6. In order to reach a positive diagnosis all these cases have to be observed during a considerable period.
7. In multiple sclerosis there is frequently present a subjective dyspnea that can not be explained by the objective signs.

DISCUSSION.

Dr. S. A. Friedberg, Chicago, mentioned a case of laryngeal crisis in tabes which he and Dr. Freer reported three months ago and in which he had the opportunity of observing the larynx during the crisis. The cords met in the middle line. There was perhaps a millimeter chink between, and in inspiration there was some passage of air through the glottis, a stridulous inspiration. The attack lasted about 20 seconds; it passed away, and recurred. The duration of the entire attack was probably about a minute. It was produced by an attempt to cocainize the larynx, and as soon as the applicator was put into the larynx the attack was brought on.

Dr. Emil Mayer, New York, said that a very important point in the diagnosis of these cases of laryngeal crisis is presented in the histories of two cases that came under his observation. In the one instance the patient presented himself with an apparently normal larynx, and yet with the story of having "choking attacks," as he explained it, at night. On further examination it seemed these were attacks of spasm that prevented him from breathing and at times made him feel as if he was choking. From the history Dr. Mayer made the diagnosis of locomotor ataxia, and took the patient to the neurologist in the Mount Sinai dispensary, where he had preseinted himself. The moment Dr. Mayer took the patient before the neurologist and told him what he suspected, he said: "Why yes, that man has been a patient of mine for some time." So that the laryngologist was able to make the diagnosis from the history of laryngeal crises. The second patient was a man who had had locomotor ataxia for about two years. He was attending to his business, being moved from his home to his carriage and from his carriage to the office, and was a confirmed tabetic, so that he himself knew his diagnosis. He had several attacks of extreme dyspnea, and his attending physician, not a laryngologist, took him to Dr. Mayer stating his belief that the man had laryngeal crises. An examination of the larynx showed a myxomatous polyp between the cords, removal of which removed every laryngeal symptom.

Dr. W. Freudenthal, New York, said that he has never succeeded in examining the larynx during the laryngeal crisis, and should be glad to have further information on the subject. As soon as the larynx is cocainized in most of these cases the crises cease; in the cases reported this afternoon the patients had such severe attacks that it was absolutely impossible to examine. The cases of Dr. Mayer are of interest; of course one would naturally look for a tumor. Those choking attacks are interesting. One patient told Dr. Freudenthal that he had queer attacks that he called locomotor cough, a characteristic description; Dr. Freudenthal would also be inclined to use this term. Just before coming to the meeting he received in New York a paper by Dr. Griffin of Berlin. Dr. Griffin has made systematic examinations of a great many cases of tabes, and he comes to almost the same conclusions. He says that the majority of these cases show some pathologic lesion in the larynx. And that is Dr. Freudenthal's experience, too.

Sugar Production from Fruit of Parkia Biglobosa.—At the meeting of the Paris Academy of Sciences, January 27, Goris and Crété presented a study of "Netté flour," the pulp of the fruit of the *Parkia biglobosa*. It is much used by the natives of tropical Africa as a nourishing article of food. Analysis showed that it contains more than 25 per cent. sugar—a larger proportion than is found in the sugar beet or sugar cane. The name "Netté flour" is misleading, as the fruit contains no starch.

THE PHLORIDZIN TEST.

WITH SPECIAL REFERENCE TO THE INFLUENCE EXERTED BY A DISEASED KIDNEY ON THE EXCRETORY WORK OF THE SECOND ORGAN.*

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I shall limit myself to the report of seven selected cases,[1] which I believe demonstrate that a diseased kidney may so affect the excretory activity of the second kidney as to mislead all who rely too much on our present functional tests. I shall not deal with those disturbances of the second kidney that we see in acute obstructive conditions of the diseased side and which have been produced experimentally by Götzl. These lead to oliguria or to complete, though usually only temporary, anuria, and are best explained on a nervous basis as instances of reflex inhibition. I shall confine myself to the more chronic conditions in which excretory functional tests are possible. Moreover, I shall not discuss the degenerative changes in the second kidney, so-called sympathetic or toxic nephritis induced by disease of the impaired kidney. These changes evidenced by albumin and casts in the secretion of the second kidney are well recognized and known to all of us.

In the voluminous literature of functional kidney tests surprisingly little attention has been paid to the facts that I wish to present, and this is all the more surprising, as it is evident that if a diseased kidney can seriously affect the excretory work of the second organ all functional tests must be unreliable. This phenomenon really marks the crux of the whole question of functional tests, and with its demonstration, it seems to me, all attempts at a really accurate estimation of kidney capacity must fall to the ground.

In the following cases I have made special use of phloridzin, which in normal cases leads to a glycosuria. As the percentage estimation of glucose recommended by Casper and Richter is liable to be influenced by incidental polyuria or oliguria, and as the estimation of the total amount of glucose excreted by each kidney is impossible because urine frequently leaks by the catheters into the bladder, and these can not regularly be left in the ureters until the glycosuria ceases, I have employed the simpler modification of Kapsammer. This method takes cognizance of the time of appearance of sugar in the two separated urines. Normally glucose appears in the first thirty minutes after hypodermic injection of a warm solution. I used from 10 to 20 minims of an alcoholic solution in which phloridzin is readily held, warming it always before subcutaneous injection with an alcohol-washed syringe. The urine was tested at frequent intervals for glucose with Fehling's reagent. In 1904 Kapsammer announced his modification of the phloridzin test, and recently he has published a large work[2] on kidney diagnosis and surgery which energetically pushes his earlier views.

Case 1.—K. G., 22 years, housewife.

Diagnosis.—Tuberculosis of kidney.

Nephrotomy of Left Kidney.—Oct. 23, 1906, for perinephritic and nephritic abscesses (pus sterile in smear and culture).

Cystoscopy and Bilateral Ureteral Catheterization.—Nov. 16, 1906, bladder and ureteral ostia normal.

Left Kidney (Tuberculosis).	*Right Kidney.*
Moderate, watery discharge.	Copious, amber colored.
Acid.	Acid.
Specific gravity, 1005.	Specific gravity, 1020.
No albumin. No sugar.	Trace of albumin. No sugar.
Urea, 3.5 per mille.	Urea, 13.0 per mille.
Chlorides, 1.0 per mille.	Chlorides, 3.0 per mille.
Microscopically.	
Moderate number of pus cells.	
Calcium oxalate crystals.	Calcium oxalate crystals.
No tubercle bacilli.	No tubercle bacilli.
No gonococci.	No gonococci.
Few red blood cells.	Few red blood cells.

Phloridzin Test.—Ten minims of a 1 per cent. solution in alcohol (33 per cent.). Left kidney absolutely negative in the fifty minutes following injection. Right kidney showed slight reduction of Fehling's solution at twenty minutes, but up to fifty minutes there was no sugar reaction.

Nov. 21, 1906: Nephrectomy. Left kidney showed a large caseous abscess in upper pole which did not communicate with the pelvis. Smaller tubercular foci were scattered through the kidney and the mucosa of the pelvis was thickened and inflamed.

January, 1907. Seven weeks after the nephrectomy another phloridzin test was made and the right kidney showed a copious sugar reaction at twenty minutes and this sugar excretion persisted for more than three hours (last examination). The patient's urine subsequent to the nephrectomy continued to show a faint trace of albumin and corresponded with the above analysis of the urine obtained from the right kidney minus red blood cells.

Here is a case in which the diseased organ so influenced the work of the second organ that the latter failed to excrete sugar (within fifty minutes) while the diseased organ was in the body. When the diseased kidney was removed the remaining organ responded promptly to the phloridzin test. If the first phloridzin test had been followed the patient would have remained an invalid, whereas now she is cured and well. Both the percentage estimates of Casper and Richter and the time of appearance of the sugar, according to Kapsammer, would have led us astray in determining subsequent therapy.

Case 2.—I. S., 37 years, housewife.

Diagnosis.—Tuberculosis of kidney.

Cystoscopy and Bilateral Ureteral Catheterization.—Jan. 5, 1907. Bladder normal. Left ureteral ostium negative. Right ureteral ostium at first normal in appearance, but during the examination it became plugged with a mass of brown, soft tissue which projected into bladder and could not be displaced. The right ureter was obstructed at three inches from the bladder and on removing the catheter from this ureter without obtaining a specimen, the above plug followed it down and blocked the meatus of the ureter. To make sure that this ureter was blocked I made use of the indigo carmine test, whose value in such cases I can not overestimate,[3] and obtained absolutely no discharge from the right kidney, and copious discharge of blue urine from the left kidney at twelve minutes after the injection. The left kidney rapidly secreted yellow, slightly turbid urine, acid, specific gravity 1018, distinct trace of albumin, no sugar, urea 1.1 per cent., chlorids 1.2 per cent.

Microscopic Examination.—Flat epithelial cells, caudate cells, few epithelial casts, red blood cells, no tubercle bacilli.

Phloridzin Test.—Ten minims, was negative. Slightest reduction at twenty-seven minutes, but no sugar reaction.

Phloridzin Test (second).—Jan. 6, 1907. Twenty minims injected. At twenty-five minutes slight reduction. No sugar reaction up to thirty-five minutes after injection.

Cystoscopy and Ureteral Catheterization (second).—Jan. 12, 1907. Same condition as examination of seven days earlier. Right ureter is still plugged and no urine is excreted from this kidney.

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*Read before the Genitourinary Section of the New York Academy of Medicine, April, 1908.

[1] The majority of these cases were studied in the German Hospital in the surgical services of Drs. Kammerer, Kiliani and Meyer. Many of the careful urine analyses were made by Dr. O. Hensel of the Pathological Department, to whom I am much indebted.

[2] Nierendiagnostik und Nierenchirurgie, Vienna, 1907

[3] Ann. Surg., October, 1906.

Phloridzin Test (*third*).—Fifteen minims injected. At twenty-seven minutes slightest reduction, but no sugar reaction. Left kidney secretes pale, clear, neutral urine, specific gravity 1007, phosphates 0.03 per cent., chlorids 0.15 per cent., urea 0.2 per cent., albumin, indican, acetone, sugar and diazo negative. Microscopically, few epithelial cells, few leucocytes.

Phloridzin Test (*fourth*). Jan. 13, 1907. Fifteen minims injected and again at twenty-five minutes slight reduction, but no sugar reaction within the first half hour.

Nephrectomy.—Jan. 14, 1907. Right kidney was enlarged and showed multiple abscesses connecting with the dilated pelvis which contained pus and albuminous masses (pseudostones), such as patient had passed and similar to the one that protruded into the bladder and blocked the ureteral meatus.

Phloridzin Test (*fifth*). Feb. 28, 1907. Fifteen minims injected and at twenty minutes a copious very marked sugar reaction was present.

In this case we have a patient who previous to the removal of the diseased kidney was living on her left kidney, as the right ureter was blocked. Apparently this organ was adequate, as she showed no signs of kidney insufficiency. Despite this adequacy on four successive phloridzin tests this kidney failed to excrete sugar within thirty or thirty-five minutes after the injection, but when the malevolent influence of the diseased organ was withdrawn by nephrectomy this left kidney promptly excretes sugar within twenty minutes. Though it was self-evident that this left kidney was adequate, as it alone was doing the excretory work of the patient, still the negative phloridzin tests bade us pause. Had we relied on these we would have made a serious mistake, as the patient recovered completely after the nephrectomy. The same criticism applies to any undue reliance on the low percentage of urea. Whereas high percentage speaks for concentrative power of the kidney, and perhaps high efficiency, low percentage as seen in this case, just like negative phloridzin results, appears very misleading.

CASE 3.—M. P., 56 years; housewife.

Diagnosis.—Pyonephrosis.

Cystoscopy and Bilateral Ureteral Catheterization.—Dec. 27, 1907. Bladder negative. Both ureteral ostia negative. There is no play at the left meatus, no efflux, and though three catheters were introduced (Nos. 4, 5 and 7, French scale), no specimen was obtainable. Right kidney secreted well; urine was acid, specific gravity 1020, very faint trace albumin, few pus cells, few erythrocytes.

Phloridzin Test.—Fifteen minims injected and there was no sugar excreted within fifty-two minutes.

Nephrectomy.—Dec. 30, 1907. Kidney enlarged, pelvis and ureter dilated and full of purulent fluid.

Diagnosis.—Pyonephrosis with obstructed ureter.

Phloridzin Test.—Jan. 27, 1907, after an uneventful recovery. At fifteen minutes there was reduction and at twenty-two minutes a copious sugar reaction. The postoperative urine analyses corresponded with the above analysis of the specimen obtained by ureteral catheterization.

Here again we see the influence of the diseased kidney on the second organ. Here again when the diseased kidney is removed the second organ responds to the phloridzin test as a normal kidney does. Here again the slight significance of a negative phloridzin result is emphasized. If the teachings of Casper and Richter, or of Kapsammer, had been adhered to, nephrectomy would not have been performed and our patient instead of being cured would be in her same suffering condition.

CASE 4.—F., 25 years; married.

Diagnosis.—Nephroptosis and tuberculosis of kidney.

Cystoscopy and Bilateral Ureteral Catheterization.—Feb. 19, 1908. Bladder was normal in appearance. Ureteral ostia were negative. The right osteum seemed drawn a little to the right. The right kidney specimen showed a very faint trace of albumin, some pus cells, some large epithelia. The left kidney specimen showed a trace of albumin, very few pus cells, many large epithelia.

Phloridzin Test.—Fifteen minims were absolutely negative on both sides at 20, 25, 30 and 35 minutes. Urine showed no tubercle bacilli.

Nephropexy.—This was performed Feb. 29, 1908, to relieve the repeated attacks of right renal pains, and during this operation a small diseased area was excised. This proved to be a tubercular lesion.

March 11. Bladder urine showed tubercle bacilli.

March 12. Bladder urine showed many tubercle bacilli.

Cystoscopy and Ureteral Catheterization.—March 14. The bladder picture was completely changed. The left ureter was normal, whereas the right ostium was edematous and pouting, surrounded by injected mucosa which was very tender. Just in front of the orifice was a distinct round little body resembling a tubercle. The mucosa of the right half of the trigone was injected and looked diffusely red, as if washed in blood. The left ureter was easily catheterized. I could not introduce a catheter into the swollen right ureteral ostium.

Uranalysis.—The specimen from the left kidney was acid, straw colored, clear, no sediment, specific gravity 1015, very faint trace of albumin, sugar (phloridzin) present, acetone negative, diacetic negative, indican negative, urea 0.8 per cent., chlorids 0.8 per cent.

Microscopically.—Few white corpuscles, few round epithelial cells, occasional red blood cells, no casts, no tubercle bacilli.

Phloridzin Test.—Fifteen minims showed a positive reaction between twenty and twenty-five minutes.

In this case I had a movable kidney, which at the same time was tubercular. Before the kidney was anchored the second organ failed to respond to the phloridzin test, but after the nephropexy, despite advancing tubercular disease, the second organ responded to the phloridzin test.

In the following cases the same peculiar functional disturbance of the second kidney is demonstrated with almost the same clearness, as in these cases the patients were living on only one kidney, and though that was adequate as far as allowing the patient to live, according to the phloridzin test the patients were living on an inadequate organ and should have been suffering from renal insufficiency.

CASE 5.—K., 36 years; housewife.

Diagnosis.—Ureteral calculus.

Cystoscopy and Bilateral Ureteral Catheterization.—May 20, 1907. Bladder shows some thickening of the mucosa. The right ureteral ostium is negative, whereas the left projects like a cervix and its lips are moderately everted. There is an obstruction in this side 1.5 cm. from the bladder which can not be pushed aside or passed with small or large catheters. No specimen could be obtained from left side due to occlusion, whereas from right side normal urine was obtained.

Phloridzin Test.—Negative during the first half hour.

The *x*-ray showed a calculus in lower end of left ureter.

Cystoscopy.—May 23, 1907. The left ureter was sounded with bougies. Injection of adrenalin and sterile liquid petrolatum into lower end of left ureter, which was still occluded. Stone could not be loosened.

Here again the failure to excrete sugar after the phloridzin injection can not be interpreted as due to any real and permanent disturbance, as the patient was living in absolute comfort and showed no signs of renal insufficiency. Evidently this is another of the instances of the malevolent influence of a disease of one side (ureter alone?) affecting the functional activity of the adequate organ, which is being subjected to the best test of its adequacy by the closure of the opposite ureter. If we could in this way imitate Nature and close one ureter temporarily, we would approach much more closely to the solution of the problem of the adequacy of a doubtful kidney than we have done heretofore.

CASE 6.—A. S., 46 years; weaver.

Diagnosis.—Nephrolithiasis and carcinoma of the kidney.

Cystoscopy and Bilateral Ureteral Catheterization.—Oct. 27, 1907. Bladder was normal except for injection about right ureteral ostium. The right ureter was blocked close to the pelvis and left kidney secreted normally.

Uranalysis.—Specimen was acid, yellow, slightly turbid, specific gravity 1018, faint trace of albumin, no sugar, indican, bile, acetone or diacetic acid, urea 1.6 per cent., chlorids 0.5 per cent.

Microscopically.—Very few hyaline casts, few pus cells or epithelial cells, few crystals of calcium oxalate, no tumor cells, tubercle bacilli or gonococci.

Phloridzin Test.—Fifteen minims caused no result within first hour; then slight reduction.

The *x*-ray showed large calculus in the right kidney and pelvis.

Nephrotomy.—Oct. 28, 1907. An enlarged kidney with dilated pelvis contained large calculus was found. Following the operation the bladder urine remained unchanged, showing that the ureter was plugged or compressed (autopsy showed a carcinoma of the lower pole of the kidney occluding the ureter by pressure). The patient's condition rapidly became feebler and the repeated hemorrhages from the opened kidney led to his death.

Autopsy.—A carcinoma was found as mentioned above. The second kidney on microscopic examination showed practically no changes of moment. It was anemic and normal.

This case again illustrates the influence of a diseased organ on its fellow's activity. Here the second organ was microscopically normal; still this kidney failed to excrete sugar as a normal organ does, because of the peculiar influence exerted by its diseased mate. Here also the patient was living on his left kidney, as the ureter of the right side was closed. Nature's test of the adequacy of the left kidney was again at variance with the phloridzin test.

CASE 7.—M. C., 58 years; housewife.

Diagnosis.—Closed hydronephrosis.

Cystoscopy and Bilateral Ureteral Catheterization.—June 4, 1907. Bladder was negative except for cystocele. Left kidney secreted rapidly.

Uranalysis.—This specimen was yellow and clear, acid, specific gravity 1014, faint trace of albumin, urea 0.9 per cent., chlorids 0.48 per cent.

Microscopically.—Red blood cells, epithelial cells, few cylindroids, no casts, tubercle bacilli or gonococci.

Right ureter was occluded close to the pelvis about eight inches from the bladder, and the indigo carmine test showed no discharge from this kidney, whereas the left discharged blue urine. This test, plus the inability to pass three different catheters beyond the obstruction, made it evident that this kidney was not doing any of the patient's excretory work.

Phloridzin Test.—Fifteen minims proved negative during the thirty minutes following the injection.

Phloridzin Test (second).—June 6, 1907. Fifteen minims again negative.

Phloridzin Test (third).—June 7, 1907. Fifteen minims again negative in first forty minutes following injection.

Cystoscopy and Ureteral Catheterization (second).—Same condition as on June 4, 1907.

Nephrectomy for Closed Hydronephrosis.—June 10, 1907.

Patient died June 18, 1907.

On the last day she passed some 700 c.c. of urine. Urine after operation showed considerable albumin (1 pro M.) hyaline and coarsely granular casts, red blood cells and leucocytes. At autopsy the left kidney shows some areas of an old nephritis and well-marked epithelial degeneration and many casts in the tubules.

Here again was a patient living in comfort with a closed ureter on one side, the other organ doing all the necessary work. It was more than likely that this condition of affairs had existed some time prior to the first cystoscopy and up to the time of nephrectomy. Still the repeated phloridzin tests pointed to the conclusion that the only organ that was functionating was inadequate, which was not borne out by the observations before and after operation. If reliance had been placed on the percentage of urea it would have been almost as misleading as the phloridzin test.

A point of great interest in this case is the postoperative disease of the second kidney after the removal of the enormous adherent hydronephrotic sac. The absorption from this huge area was sufficient to produce a marked degeneration of the second kidney, as evidenced by the postoperative urine and microscopic examination of this organ, despite the fact that Nature's test of its function by forcing it to do all the legitimate work after closing the right ureter had pointed to its adequacy.

These cases seem to permit of but one conclusion, i. e., that a diseased kidney may so influence the second organ as to cause the latter to appear gravely diseased. This same conclusion was forced on me several years ago in considering the value of cryoscopy of the blood.[4] Disturbed function of an adequate organ may lead to molecular retention and concentration of the blood (low, freezing point), misleading us just as phloridzin did in the above series of cases. In looking over these cases they naturally fall into two series, four cases belonging to one, and three to the other. The first four are particularly important, as I was able to make a phloridzin test subsequent to the operation. Of such cases there are very few instances in the literature, and these are just the most enlightening of all clinical data bearing on the question of functional kidney tests. Even cases similar to the last three have not been reported in any number.

Turning to the literature of this subject we find that Rovsing has reported one experience similar to those detailed above. In a case of pyonephrosis he found after nephrectomy an early response to phloridzin, whereas before the operation there had been none, and also a rapid increase in the amount of urea excreted, which had been minimal prior to operation.[5]

In a similar case Kapsammer reports[6] similar behavior after using phloridzin, though his case is less striking than those mentioned above. Rovsing believes that the diseased kidney frequently disturbs the work of the second organ, and though his data are not published in a conclusive form, he states that this influence is observed in the following conditions, arranged in order of frequency: malignant tumors, tubercular pyonephrosis, nephrolithiasis, uratic nephritis and perinephritis. Kapsammer, ardent advocate as he is of the modified phloridzin test, admits that he has seen almost regularly a functional improvement in the second organ after the condition in the diseased organ has been attended to.

Albarran[7] calls attention to the influence exerted by hydronephrosis on the activity of the second organ, as well as the remarkable improvement which follows drainage of such hydronephrotic sacs. Koranyi pubpublished a case of pyonephrosis with blood freezing at 0.68° C. As soon as the pyonephrotic sac was removed the second kidney secreted better and the blood concentration dropped to 0.57° C. Wiebrecht also reported a similar case of kidney tumor in which after nephrectomy the second kidney excreted more fluids and more solids than both organs before operation.

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[4] Present Status of Blood Cryoscopy in Determining the Functional Activity of the Kidneys. Am. Jour. Med. Sci., February, 1906.

[5] Arch. f. Klin. Chir., lxxv, 1905.

[6] Id., i, 317.

[7] Exploration des fonctions renales, 319.

From all the above it seems that there is a factor underlying functional tests that has not been emphasized sufficiently in the past. Until the factor can be estimated all functional tests of the excretory activity of a kidney are misleading. All negative results might be occasioned by this factor, this peculiar influence exerted by a diseased organ on its fellow, whereas all positive results may in turn be shorn of some of their importance by the above influence (stimulation or inhibition). Whereas it is comparatively easy to approach the negative results and elucidate their import, positive results, though they may be occasioned in part by some such influence as we are discussing, are much more difficult to analyze, for self-evident reasons.

Just the nature of this influence, whether it be toxic or reflex, or both combined, I do not wish to discuss in this particular paper, whose object is to emphasize and demonstrate the fact that the second kidney may be so influenced in its excretory activity as to appear functionally deficient, owing to the presence of a diseased kidney, and that as soon as this influence has been removed this apparently inadequate second kidney responds to our functional tests as a normal organ.

116 West Fifty-eight Street.

AN EPIDEMIC OF CEREBROSPINAL MENINGITIS

AND THE SUCCESSFUL USE OF FLEXNER'S ANTISERUM.

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PORTERVILLE, CAL.

Porterville is a town of about 2,000 inhabitants, in the San Joaquin Valley, at the foot of the Sierras. Here in 1896 occurred five cases of cerebrospinal meningitis, of which two recovered. One, now a boy of 16 years old, is a hopeless cripple; he has no use of arms or legs.

The following cases have occurred in the present outbreak, which began early in December, 1907. The first twelve cases are given briefly; antiserum was not used; only one recovered; thus the mortality in these twelve cases was 91.6 per cent.

Case 1.—(Dr. O. C. Higgins, December, 1907.) Miss T., aged 21, was examined at 11 a. m. by the doctor in a tent-wagon. Had had a chill and convulsions a few hours before. When seen by the doctor there was external strabismus and the patient was unconscious. Died about 9 a. m. the next day, within twenty-four hours of onset.

Case 2.—(Dr. O. C. Higgins, Dec. 21 and 22, 1907.) E. W., aged 14, complained of pain in the neck and between shoulders. Chill at 4 a. m.; vomited eight hours later for two and one-half hours. Ten hours after the chill had convulsions and delirium, followed by unconsciousness, which lasted till death. Choking spells from onset of unconsciousness until death. Head drawn back and marked opisthotonos. Length of illness, twenty-nine hours.

Case 3.—(Drs. Barber and Miller, Dec. 20, 1907.) L. H., aged 21; had a chill at bedtime; said he felt as though he had the grip. In the morning was found in bed unconscious and never regained consciousness. Kernig's sign and retraction of head were present and there was great restlessness and vomiting. Lumbar puncture was performed within twenty-four hours of onset; the cerebrospinal fluid was cloudy and contained many gram-negative diplococci, intracellular and extracellular. Patient died at the end of four days.

Case 4.—(Drs. Higgins and Barber, Dec. 21, 1907.) Mrs. N., aged 40, was taken sick at noon. When seen at 1 p. m., she had a chill; complained of vomiting, headache. Kernig's sign and external strabismus were present. Could be roused. Died before midnight. Sick less than twelve hours.

Case 5.—(Drs. Miller and Higgins, Dec. 31, 1907.) Mrs. O., aged 23, was taken sick at 4 p. m., with chill and severe headache and vomitings. She was unconscious by night. Kernig's sign was present, but no convulsions. Died at 11 p. m.; duration of illness, seven hours.

Case 6.—(Dr. Barber, Jan. 1, 1908.) Mr. C., aged 23. Malaise all day, followed at 5 p. m. with chill. Found later in the evening unconscious in bed. Had been vomiting. Head was retracted and Kernig's sign marked. Violent delirium during which he got up and went out of doors. Died in twenty-seven hours.

Case 7.—(Dr. Barber, Jan. 28, 1908.) C. E. B., aged 22; the night of January 27 had chill and vomiting. Went to Dr. Barber's office next day at 9 a. m., with pain in right iliac region. Temperature, 102 F.; tongue coated; symptoms of appendicitis. Signs of meningitis soon were apparent. Complained of pain in right thigh, but there was nothing objective there. Kernig's sign was present, also opisthotonos. Died in wild delirium. Sick three days.

Case 8.—(Drs. Miller and Barber, Feb. 15, 1908.) Eva W., aged 7. Illness began with chill, vomiting and fever. There was retraction of the head and she complained of "drawing feeling" under knees. Headache in vertex; frequent urination, somnolence and unconsciousness. Lumbar puncture showed a cloudy cerebrospinal fluid which contained a great many Gram-negative diplococci, both intracellular and extracellular. Lumbar puncture was repeated each day; about 5 c.c. of fluid being withdrawn and a like quantity of antistreptococcus serum injected. This treatment seemed to be of some slight benefit, but the symptoms progressed in severity until death at the end of four days.

Case 9.—(Drs. Barber and Miller, Feb. 23, 1908.) S. W., aged 4. The onset was typical, with chill, vomiting, retraction of head and somnolence. Kernig's sign and strabismus were present. Died at end of three days.

Case 10.—(History told Dr. Higgins by child's mother.) Miss B., aged 13; onset with chill, vomiting, fever, unconsciousness. Death in twenty-four hours.

Case 11.—(Dr. Barber, March 2, 1908.) S., aged 8. Onset with chill and vomiting; stupor. Marked Kernig's sign and retraction of head and strabismus. Was never unconscious; took nourishment throughout illness. His mother refused to have lumbar puncture done or to have the antiserum injected. Child recovered in one week.

Case 12.—(Dr. Barber, March 15, 1908.) K., aged 6. The girl went to bed well; at midnight had a chill and vomited. When seen by doctor there was marked Kernig's sign, delirium, opisthotonos and petechial eruption. Died in eight hours.

The following four cases had the benefit of Flexner's antiserum; three were marked by recovery, giving a mortality of 25 per cent. The one patient who died would probably have been saved if our supply of serum had lasted.

Case 13.—(Drs. Barber and Miller, March 12, 1908.) F. H., aged 14 months. At 8 a. m., March 11, he had a chill and vomited. Vomiting continued through the day and once in the night, at 1 a. m. Was seen by Dr. Barber at 5 p. m., March 11; temperature, 103 F.; pulse, 125. The child was very restless; Kernig's sign marked in both legs. By 7:30 p. m. there was external strabismus in both eyes and stupor. At the first visit the mother refused use of serum, saying, "I don't want any experiments tried on my baby."

March 12, 8 a. m.: Temperature, 102 F.; pulse, 140; respirations, 45. Child brighter and better. Kernig's sign not present in right leg, but slightly in left. Eyes straight. Nursed breast at 7 p. m. yesterday (first time since chill), and once last night. 9:30 a. m.: Temperature, 101 F.; pulse, 152; respirations, 48. Kernig's sign absent in right leg, slightly marked in left; eyes straight; expression fairly good. Blood examination showed leucocytes, 21,000. Parents consented to use of serum. Lumbar puncture performed and about 15 c.c. of cloudy spinal fluid withdrawn and 15 c.c. of antiserum injected. Culture on hydrocele-agar showed no growth. The films showed a great many leucocytes, polymorphonuclears preponderating, but also many large mononuclears. There were no bacteria to be seen. Specimen stained for tubercle bacilli was also negative. 12:30 p. m.: Temperature, 102 F.; pulse, 120; respirations, 40. Had taken some of mother's milk; appearance better; wide awake.

March 13, 11 a. m.: Child rested quietly during previous night; no opisthotonos; eyes divergent. Kernig's sign slightly marked in left leg, but absent in the right leg. Temperature down to 100 F. Child recognized his mother. Blood count showed 14,380 leucocytes. Lumbar puncture performed and about 10 c.c. of fluid withdrawn. There seemed to be less intraspinal pressure and the fluid was no more cloudy than on previous day. The flow almost stopped after the withdrawal of 10 c.c.; 15 c.c. of antiserum injected. No growth was shown on either agar or hydrocele-agar cultures.

March 14: Child was better. Temperature at 11 a. m., 99.8 F. Eyes were straight. Lumbar puncture was repeatedly attempted but fluid did not flow, only a few drops being obtained. Antiserum could not be injected. This trouble was found later to be due to the needle being filled with coagulated serum. About 7.5 c.c. was given intramuscularly. Blood examination showed 7,722 leucocytes. The child had a good day and took some milk. Looked brighter.

March 15: Rested well during the previous twenty-four hours. Had taken milk every three hours during the night. Breathing was quieter and more regular. Slight divergence of left eye. Leucocytes, 6,932. Lumbar puncture was performed and about 5 c.c. of fluid withdrawn. Fluid, which was slightly blood-stained, flowed very slowly, as apparently there was not a high intraspinal pressure. Fifteen c.c. of antiserum injected into the spinal canal. Leucocytes, mostly polymorphonuclears, were numerous and there were some meningococci to be seen within the cells, staining rather indistinctly.

March 16: Baby still improving. Ordered 3 gr. hexamethylenamin daily.

March 21: Had been steadily improving up to March 20, but in previous twenty-four hours had not been so well. Kernig's sign was marked in both legs. Some erupting teeth seemed to trouble him very much. Leucocyte count showed 32,266. Lumbar puncture was performed and 15 c.c. of reddish-brown cloudy spinal fluid withdrawn and 15 c.c. of anti-serum injected. Smears showed a large polymorphonuclear cellular content. Meningococci were occasionally seen within the cells; they stained darkly. Culture on agar showed no growth.

March 22: The previous night was the best he had had yet. Slept from 9 p. m. to 8 a. m. Took 3 ounces of milk for breakfast. At 3 p. m. he was very restless. Lumbar puncture performed and about 24 c.c. brownish spinal fluid withdrawn that was clearer than before. There were a large number of mononuclear cells with large pale-staining transitional-form nuclei; polymorphonuclear cells predominated. Meningococci were not numerous. Thirty c.c. of antiserum injected. Culture on agar showed no growth.

March 23, 9 a. m.: Rested well all night. Took 1½ ounces of milk at 5 a. m. Looked exceptionally bright. Kernig's sign was slightly marked in both legs, but much less than on previous day. Eyes were straight. Temperature, 99 F.; pulse, 104; and respirations, 20. At 4:30 p. m., 30 c.c. of spinal fluid was withdrawn; it was almost clear and of a light lemon color. Thirty c.c. of antiserum injected. Many polymorphonuclear cells were seen, in which were a few faintly-staining micro-organisms. There were a number of large mononuclear cells. A culture showed no growth.

March 24: Rested badly on account of urticaria. Temperature, 101 F.; pulse, 100; and respirations, 24. Had taken 1 pint of milk since night previous. Kernig's sign was marked in both legs.

March 25: Temperature, pulse and respirations were all normal.

March 29: Child had been progressing better during the last few days. There were no signs of meningitis. He had a ravenous appetite and was evidently cured.

Case 14.—(Dr. Miller, Feb. 15, 1908.) L. E. R., aged 8. Boy said to have been taken suddenly ill with pain in abdomen, cramps in muscles of arms and legs; vomited twice. Soon lost consciousness. Tossed and flung himself about the bed. He was seen six hours after onset and there were retraction of the head, divergent squint, Kernig's sign in both legs, and some petechial spots over arms, face, abdomen and legs. Blood examination showed 14,600 leucocytes. Lumbar puncture was performed and 35 c.c. of turbid spinal fluid was allowed to flow away and 30 c.c. of antiserum was injected. The fluid showed many polymorphonuclear leucocytes and some large mononuclears; meningococci were not numerous, but there were some within the cells and some without. Cultures both of agar and hydrocele agar showed no growth.

February 16: Boy much better; conscious. Took nourishment and drank water. Bowels moved twice and he urinated. There was some retraction of the head. On lumbar puncture only a few drops of spinal fluid flowed and this was lost. Puncture was repeated and 15 c.c. of antiserum was injected without withdrawing any spinal fluid.

March 17: Child had a good night and had a desire for food. Ordered 5 grains hexamethylenamin three times daily.

March 18: Child was still improving and neck was flexible. Legs showed a slight amount of rigidity. Kernig's sign. Evening temperature, 100.5 F. The boy demanded a liberal supply of food and wanted to get out of bed, saying he felt well.

March 20: Child up and dressed. Ate breakfast at family table. Recovery complete and remarkably prompt.

Case 15.—(Drs. Barber and Miller, March 18, 1908.) Miss F. G., aged 19. Taken suddenly ill on morning of March 17 with a chill, vomiting and aching in legs and head. Temperature was 104 F., pulse 140. Mind was perfectly clear; eyes straight; no Kernig's sign. In the evening felt somewhat better; temperature 103 F.; still no Kernig's sign. During the night she became very much worse; was delirious and had to be restrained and kept in bed. Kernig's sign became marked in both legs and there was a slight petechial eruption. Morphin was given. Leucocytes, 43,500. By lumbar puncture 30 c.c. of cloudy cerebrospinal fluid was withdrawn and 30 c.c. of antiserum injected. The cellular content of the fluid was mainly polymorphonuclear leucocytes. There were a number of large mononuclear lymphocytes. Meningococci were not numerous and all observed were intracellular. Some stained very intensely, others seemed mere shadows within the protoplasm of the leucocytes. Cultures on plain agar and on agar plus 2 or 3 c.c. of patient's blood gave no visible growth in forty-eight hours.

March 19: Rested quietly during previous twenty-four hours. Had taken four ounces of milk and some beef-tea. Mind fairly clear; Kernig's sign marked in both legs; eyes straight; leucocytes, 23,532; petechial eruption on body. On lumbar puncture fluid flowed but slowly through a needle of rather large caliber; not more cloudy than on day previous; slightly blood-stained; 15 c.c. withdrawn, when, on account of its slow flow and her improved condition, we did not attempt to obtain more spinal fluid, but injected 15 c.c. of the antimeningococcus serum. Cultures on agar and on agar plus 2 or 3 c.c. of patient's blood showed no growth. Smears from the spinal fluid showed a preponderance of polymorphonuclear leucocytes, there were many very large cells, each with a large single nucleus and some small lymphocytes. Meningococci were not numerous; they were intracellular; some stained darkly, others hardly at all; they were about the same in number and staining as on day previous. The large mononuclear cells were larger and more numerous than on the previous day.

March 20: Had a good night and took nourishment. Complained only of severe headache. Eyes were straight, but there was some retraction of head and contracture of legs. Temperature, 98.6 F. At 4 p. m. was very restless and complained bitterly of headache. Lumbar puncture was performed and 45 c.c. spinal fluid withdrawn. It flowed freely as though under increased pressure and was less cloudy than on previous day, 30 c.c. of antiserum injected. The smears were poorly stained, polymorphonuclears were numerous; no meningococci observed. Cultures on plain agar and on agar and blood gave no growth.

March 21: Had a good night and felt much better.

March 22: Got much worse during the night. Died at 10 a. m. She should have had serum March 21, but our supply was exhausted.

CASE 16.—(Drs. Barber and Miller, March 21, 1908.) M. S., aged 6, girl. On the evening of March 20 did not feel quite well; ate no supper. Next morning complained of being chilly, but had no well-marked chill. Much worse at 11 a. m.; restless, complained of headache; vomited almost a chamberful of yellowish, slimy fluid. Was somnolent most of the time, but would have attacks of clenching of hands and drawing back of head. Threw herself about the bed and off it once. Was unconscious during these attacks. These convulsions continued until serum was given, none after that. The child's home is in the country, twenty miles from Porterville. She came to Porterville, Monday, March 9, twelve days previously, and remained in town about four hours. She was first seen by us at 4 p. m., March 21. There was unconsciousness, retraction of head, and marked Kernig's sign in both legs. Blood examination showed leucocyte count of 51,800. Lumbar puncture was performed and cloudy spinal fluid was withdrawn. This was tinged with blood which appeared to come from the puncture, as the fluid shortly became free from blood. Thirty c.c. withdrawn and the same amount of antiserum injected. Many polymorphonuclear leucocytes were found; micro-organisms not numerous.

March 22: In the morning the temperature was 101.2 F., pulse 112, and respirations 24. Eyes were straight, but sensitive to light; Kernig's sign marked bilaterally; head slightly retracted; took water. Was rational for a time. At 4 p. m. 12 c.c. of spinal fluid was withdrawn and 30 c.c. of antiserum injected.

March 23: Slept all night and sat up and drank milk in the morning; was rational; eyes were straight. Took an interest in her surroundings. Kernig's sign present in both legs, but less marked than on previous day. Head was slightly retracted. Temperature 101, F., pulse 120, and respirations 26. At 4:30 p. m. lumbar puncture was performed and 20 c.c. of spinal fluid withdrawn; 30 c.c. of antiserum injected. The fluid was much clearer than before. The most frequent cells were polymorphonuclear leucocytes, there were some small mononuclear cells and some large ones, with pale-staining nuclei. No micro-organisms were found. Blood count showed leucocytes, 20,000. Culture on agar gave no growth. There was an urticaria on the lower limbs.

March 24: Rested badly previous night on account of urticaria; eyes straight; rational, Kernig's sign slightly more marked than on previous day; head slightly retracted; temperature 99 F., pulse 112 and respirations 24. Took meat broth. At 4:30 p. m. blood count showed leucocytes 22,660; lumbar puncture performed and only 6 c.c. of slightly cloudy spinal fluid was obtained; 30 c.c. antiserum was injected. There were but few cells and no micro-organisms.

March 25: Pulse, respiration and temperature were normal. Felt very well; legs showed slight Kernig's sign. The persistent leucocytosis of previous day may have been maintained by a chronic otitis media, which the child has had for a month or more.

March 29: Improvement had been progressive each day. There were no signs of meningitis. She seemed entirly recovered.

The following is a summary of the cases:

Case.	Sex.	Age.	Duration.	Lumbar Puncture	Total c.c. Antiserum used.	Result.
1	F.	21	24 hours	0	0	D*
2	M.	14	29 hours	0	0	D
3	M.	21	4 days	+	0	D
4	F.	40	12 hours	0	0	D
5	F.	23	7 hours	0	0	D
6	M.	23	27 hours	0	0	D
7	M.	22	3 days	0	0	D
8	F.	7	4 days	+	0	D
9	F.	4	3 days	0	0	D
10	F.	13	24 hours	0	0	D
11	M.	8	7 days	0	0	R*
12	F.	6	8 hours	0	0	D
13	M.	1	17 days	+	127.5	R
14	M.	8	5 days	+	45	R
15	F.	19	4 days	+	75	D
16	F.	6	7 days	+	120	R

* D: Died. R: Recovered.

We owe many thanks to Dr. Philip King Brown of San Francisco, who was much interested in our cases, and who made a 300-mile journey to see some of them. Through him we obtained the antiserum. Our small experience corroborated the wisdom of Dr. Flexner's instructions, namely, to use the serum as early as possible and to inject it into the spinal canal in daily doses of 30 c.c. whether the same amount of spinal fluid is obtained or not.

ARTHRITIS DEFORMANS OF THE HIP.*

A PRELIMINARY REPORT OF A NEW OPERATION.

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Arthritis deformans of the hip is a chronic joint disease which, contrary to former beliefs, attacks young and middle-aged adults as well as the aged. It is characterized clinically by a slow and gradual onset, absence of fever, local pain, muscular spasm, and wasting, stiffness, disability and deformity, but never presenting any tendency to suppuration. It may or may not be associated with similar conditions in other joints.

This condition has been known by many names; the most common one is coxitis senilis, which, implying that it is a disease of old age only, is misleading and not appropriate. A few of the many synonymous terms are rheumatic or rheumatoid arthritis, rheumatic gout, osteo-arthritis, nodular rheumatism, etc. The term I have chosen is as simple as any and appears to be the most expressive. It indicates a deforming pathologic process in a joint, whether it be trophic or inflammatory.

THE ETIOLOGY.

The true cause of this affection is still obscure. It has been ascribed to gout or rheumatism, to exposure or traumatism, of which injury certainly plays some part. I am convinced from my own experience and the statistics of others that old age plays only a small part. Blodgett, in 1903, reported ten cases, in which the onset of disease occurred in two under 30 years of age, in two between 30 and 40, in three between 40 and 50, and in three between 50 and 60.

Whether the point of origin of arthritis deformans is in the synovial membrane, the cartilage or the bone, is a matter still in dispute. Late authorities are inclined to consider it among the arthropathies of spinal cord origin similar to the Charcot joint associated with syringomyelia and tabes. While Schuller described a bacillus found in these joints, with which he has been able to produce similar processes in animals, his results have not been confirmed by other investigators. Dor has produced similar pathologic conditions by the injection of attenuated cultures of the staphylococcus.

PATHOLOGIC CHANGES.

In the early stages of this process the joint-fluid is increased, later it is diminished. Changes in the cartilage are noted early, cells multiply and the hyaline substance degenerates, rendering the cartilage friable. It takes on a yellowish appearance and the articular surfaces become thinned in the center, finally disappearing entirely. The head of the bone thus laid bare becomes smooth, polished and eburnated. Marginal ecchondroses or osteophytes appear and may become so large as to perforate the synovial membrane and become pedunculated or even detached, and appear as loose bodies in the joint. The head of the bone may become locked in the grasp of these bony outgrowths and motion be greatly interfered with, so much so that much wearing away of the head does not take place. On the other hand, if motion continues, the head may become flattened and in some cases almost entirely worn away, thus exposing the Haversian canals and presenting a worm-eaten appearance.

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* Read before the Surgical Section of the New York Academy of Medicine, April 3, 1908.

The acetabulum is deepened both by the wearing away of its floor and the ossification of the cotyloid ligament. In any event the motions of the hip are much limited and tend toward that of a cylindrical joint, on account of its anatomic changes.

The head wears away more and more and the marginal outgrowths progress toward the trochanter. In addition to this, the neck hypertrophies and may bend, thus forming more nearly a right angle with the shaft than normal. This event, as well as the wearing away of the acetabulum and the flattening of the head, results in an elevation of the trochanter above Nélaton's line and a consequent shortening of the leg. This actual shortening varies a good deal and averages about three-quarters of an inch. Blodgett's cases averaged five-eighths of an inch and varied from no appreciable shortening to that of one inch. Further than this, a very important feature is the consequent practical shortening and its resulting disability, coming from the deformity of adduction and flexion.

In a recent case this shortening amounted to 2¾ inches, while the actual bone shortening was one-quarter of an inch. This phenomenon, however, is not pathognomonic of arthritis deformans, but is a constant sequela of any chronic hip-joint inflammation. It is due to the continuous guarding of the joint by constant spasm of the surrounding muscles. Now as the adductors and flexors of the thigh are not only more powerful than their antagonists, the abductors and extensors, but exert their force at a better mechanical advantage, their action, if not prevented by treatment, causes an increasing adduction and flexion with permanent contracture or anchylosis.

THE SYMPTOMATOLOGY.

Arthritis deformans begins with pain in and about the joint, often shooting down the course of the sciatic nerve. Movements of the joint beyond a certain arc are painful and a distinct limp occurs early. External rotation, abduction and hyperextension are particularly painful and later in course of the disease much limited. Muscular atrophy comes on early, and the buttock of the affected side becomes flaccid and flattened. The arc of motion gradually diminishes, until finally the joint may become entirely stiff. In the earlier stages abduction and apparently lengthening rarely may be present, as in tuberculous hip disease.

The amount of pain and the effusion in joint varies greatly. A peculiar crepitation produced by the rubbing of the roughened synovial membrane and osteophytes may be present when the leg is manipulated. Motion may be almost or entirely lost either from muscular spasm, grasp of the surrounding osteophytes, disappearance of the synovial membrane, or flattening of the head of the bone. A very important diagnostic point is the fact that if motion exists in the advanced cases it will be practically in one plane, that of flexion. The earliest limitation of motion is in abduction and rotation. This is explained mechanically, as above, by changes that make the joint, instead of a spherical one, practically a cylindrical one. Flexion may be moderately limited, whereas abduction and rotation of leg may be nearly absent. No other condition with slight bony shortening produces this symptom-complex. If, however, a complicating bending of the neck occurs, a skiagraph is the only means of diagnosing the condition from that of ordinary coxa vera.

DIFFERENTIAL DIAGNOSIS.

The acute form of arthritis deformans may simulate sciatica, articular rheumatism, gonorrheal arthritis, infectious arthritis and tuberculous hip disease. In sciatica the limitation of motion is governed by the pain produced by the movement of the sensitive parts and tension on the sciatic nerve. Extreme flexion of thigh, therefore, with the leg extended, is the only motion limited; hyperextension, rotation and abduction are not interfered with. The diagnosis from the other hip conditions mentioned is based on the uniformity of the symptoms of limitation of motion and acuteness and also on the history and the *x*-ray appearances. The skiagraph of arthritis deformans of the hip is an exact profile view of the gross pathologic and anatomic changes described above and is of the greatest value in diagnosis.

TREATMENT.

The treatment demanded is first to relieve pain and, second, to correct the deformity, and should be both general and local, the latter being the more important. As in so many cases the condition is caused by an injury, it naturally would seem advisable to avoid further traumatism by protecting the joint. Rest in bed, with traction apparatus if necessary, will do much toward relieving this discomfort. The stiffness in the early stages is due to muscular spasm and not anchylosis, and is diminished, therefore, by any measure that protects the joint. Traction is indicated when passive manipulation is painful and restricted by muscular spasm. The patient should lie in bed with weight and pulley arranged as for ordinary hip disease. The weight, approximately five pounds, should pull in the normal direction of the leg unless pain is caused or excessive malposition of the leg exists. In either event the traction should be in the line of the deformity.

After the pain and joint irritability have been controlled, which occurs in from two to four weeks, the patient then is allowed to go about with a leather or plaster spica bandage, with or without crutches, or, as recommended by Dr. H. L. Taylor, with a jointed supporting brace (Dows'), "which not only protects the hip-joint from pressure, but allows motion at hip, knee and ankle." In this way the patient is enabled to enjoy the benefit of fresh air and mild exercise. If progress is not satisfactory and pain returns, rest in bed and traction should be instituted again, with a subsequent return to a brace. It should be understood that it is usually necessary to carry on brace treatment for a very long time.

Other therapeutic measures must be regarded as only accessories. Deep vibration, however, has been efficient in my hands not only as an accessory, but in a few very mild cases as the only therapeutic agent. High frequency electricity will occasionally diminish or relieve pain temporarily. A certain number of progressive and very advanced cases, associated with marked deformity and disability, demand operative treatment. The same is true of another class of patients, such as working men, with dependent families, who can not submit to the long brace treatment even if there are good chances of its being effectual. A resection of the upper extremity of the femur has been practiced on many of these patients with uncertain results. Anatomically this produces a delayed anchylosis, a new and rather unstable joint or a dislocation with considerable shortening in either instance, and in many cases a continuation of the old pain. Those results which terminated in anchylosis have been observed to be the most successful, both in respect to comfort and efficiency. Other operations have been to trim away the bony outgrowths from the rim of the acetabulum, or to do the so-called Murphy operation of turning a flap of fat and fascia in between the acetabulum and the head of the femur.

ILLUSTRATIVE CASE.

Patient.—Mr. M. N, aged 59, was referred to me in October, 1906, by Dr. Moriarty of Waterbury, Conn.

History.—An examination revealed an advanced case of arthritis deformans of the right hip. The brace treatment was recommended and explained to patient and refused on the ground that the treatment was so long and uncertain for a working man. Eleven months ago patient again came to me with the inquiry if something could not be done for him. He was admitted to the Postgraduate Hospital May 14, 1907, and gave the following history: Policeman for twenty-five years. Three years ago first began to notice pain and stiffness in right thigh and hip. Soon after this he went to Mount Clemens, where he took a large number of baths. General health was improved, but pain continued. Twenty-two months ago he was examined by physician and told that his right hip was dislocated and the right leg was two inches shorter than left. Symptoms became so severe that in December, 1906, the patient went to New Haven and submitted to an operation, the nature of which could not be ascertained. Symptoms of lameness, stiffness and pain had continued unabated ever since.

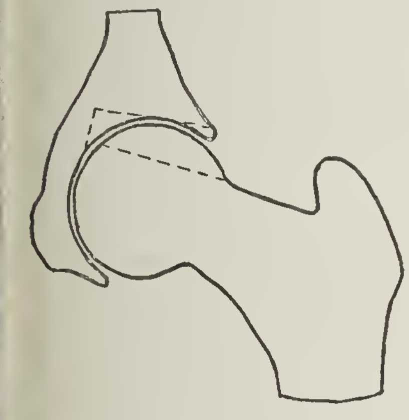
Figure 1.

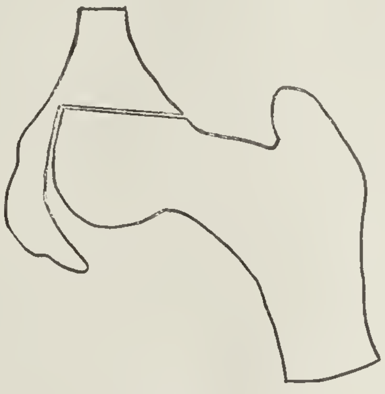
Figure 2.

Fig. 1.—The broken lines indicate the amount of bone to be removed. It is removed from the head and the acetabulum in different planes, in order to secure the desired abduction of the thigh, when the freshened bone surfaces are brought together.

Fig. 2.—Apposition of the freshened bone surfaces after the removal of the bone from the head and the acetabulum and the femur placed in slight abduction.

Examination.—A muscular man, weighing 185 pounds, pale and careworn, walked with a marked limp. Right shoe built up with cork 2½ inches. Long linear scar noted over right trochanter. Actual bony shortening of right leg ¼ inch; practical shortening 2¾ inches. Leg much atrophied and markedly adducted and flexed. Motion in any direction entirely absent, except for slight flexion. Attempts at passive motion painful. Some muscular spasm. A skiagraph showed the head of the femur much worn away and flattened with many bony outgrowths about rim of acetabulum.

Treatment.—In view of the disintegration of the joint, the marked adduction and flexion with firm contractures, the progression toward bony anchylosis, with the leg in faulty position, in a man so large and powerfully built, it seemed best to aim for immediate firm anchylosis, with the limb in a position of slight overcorrection of the deformity to compensate for the existing practical shortening. The operative indications, therefore, were to devise a procedure which would, if possible, fulfil the above requirements and at the same time produce of itself as little real bony shortening as possible. With the foregoing desiderata in mind the following operation was done. The hip joint was reached by an anterior incision five inches long, through skin and subcutaneous tissues, starting from just below and inside of anterior superior spine of the ilium, and extending downward along the inner border of the sartorius muscle, which was retracted outward. The muscles and the deep structures were separated by blunt dissection and the iliacus and the rectus femoris muscles were retracted inward. A part of a large ring of osteophytes about the rim of the acetabulum were turned upward with the soft tissues adherent to them as it seemed wise to leave as many as feasible on account of their bone-forming possibilities. In so thick a thigh, with the presence of so much bony outgrowth, it required some care to locate definitely the joint and head. With the head of the femur *in situ* about one-half of its upper hemisphere was removed with a large chisel, through a plane nearly parallel to the long axis of the neck of the femur. Then with the same instrument the acetabulum was transformed into a flat-surfaced roof against which the fresh surface of the head was finally brought into firm contact by abduction of the thigh. The bone was removed from the acetabulum so that the flat surface was tilted somewhat upward internally in order to produce in a way, locking of the fragments and also to prevent any possibility of dislocation. Further abduction was found impossible on account of the shortened adductors and an open tenotomy of these tendons and muscles, at their origins, was found necessary before the leg could be brought into proper position. The plain surfaces of the head and acetabulum were brought together by simply abducting the thigh. The capsule and soft tissues were then sutured. Access to the joint was much facilitated by a position of extreme adduction of the limb. For purposes of orientation an assistant was kept in constant readiness to rotate the femur when desired. The leg in strong abduction was finally put up in a spica from axilla to toes.

Subsequent History—Patient made an uneventful recovery and was walking about with crutches at the end of four weeks. A short spica bandage was applied at the end of five weeks. At the end of nine weeks he was able to walk without cane or crutch and he went back to work as patrolman in four months. He states that he has not suffered any pain since operation. The leg has remained well in corrected position and only an extra lift of leather has been worn on the heel. His occupation since the operation vouches for his locomotive abilities. He has continued as a patrolman, working nine hours a day, and has not lost a day on account of his hip since he went back to work in September, 1907.

ADVANTAGES OF OPERATION.

The preceding operation has the following advantages: First, it assures bony union by bringing two large bony surfaces together for anchylosis and holds them firmly by the mere correction of the deformity. Second, it produces a minimum amount of bony shortening. Third, dislocation is impossible. It excels complete excision in all these respects.

I have done the operation five times. The cases were all those of advanced arthritis deformans, although I think the operation is adapted to certain other conditions. The ages of the patients have been, respectively, 30, 60, 63, 55 and 67 years. The shock has been very slight in every case, which I think is accounted for by the fact that the joint is not disarticulated and there are very few structures cut. In every case the pain has been entirely relieved. All the wounds have healed by first intention. The second and third patients to be operated on reported by letter a few days ago that they were walking without the aid of crutches and without pain. They are, however, still wearing short spicas. It is seven weeks since the operation on the fourth patient. He is in a short spica and uses crutches, but can bear his whole weight on the affected leg without pain. The fifth patient, a man 63 years of age and weighing 216 pounds, was operated on six weeks ago and is still in the hospital. He is wearing a short spica and has been walking on crutches for ten days. He can bear his whole weight on the affected leg without pain.

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THE EYE AS A CONTRIBUTING FACTOR IN TUBERCULOSIS.*

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The almost universal prevalence of tuberculosis, the enormous death rate, together with its possible prevention and cure, have focused the attention of the world on this disease in a way and to an extent unique in the history of medicine. The opportunities for infection are so frequent, and the number of recoveries in which the healed lesions are recognized only postmortem are so numerous, as to justify the German-folk saying, *"Jedermann hat am Ende ein bischen Tuberculose."* It is evident, then, that some other element than that of infection merely must influence the course of this disease, otherwise, as almost every one is exposed to infection, the world would become a mortuary from this cause alone. It is generally recognized, however, that any condition which lowers the vital resistance or increases what Jonathan Hutchinson calls the "vulnerability," predisposes to infection and retards recovery.

Among the earliest symptoms of beginning tuberculosis are increased pulse rate and a loss of weight. Even before a local lesion has become sufficiently pronounced to be detected the rapid pulse and malnutrition are signals of the on-coming storm.

The importance, then, of recognizing any other existing conditions that can increase the pulse rate or interfere with digestion and nutrition will be self-evident. It may have a bearing, too, that it is by no means a settled question that the respiratory tract is always the port of entry of bacillus in pulmonary tuberculosis.

J. Vernon White[1] says that "the investigations of a number of recent authorities seem to show that tuberculous infection through the alimentary canal is of very frequent occurrence," and that "tuberculosis due to the bacillus that enters the lungs with breathed air is an unknown affection." As both these opinions are based on the same facts, known to all pathologists, it is evident that there are unknown factors which prevent agreement in the interpretation of what is already known.

This paper is based on the following propositions:

1. Errors of refraction, or marked muscle imbalance, may so disarrange the nervous functions that gastric or intestinal disturbances may result, and metabolism be retarded in consequence, with lowered resistance and increased susceptibility to infection.

2. The continued existence of such conditions, especially in the neurotic, may so lower the vitality as to retard recovery from tuberculous infections of the lungs.

3. Relief of the abnormal visual conditions is a necessary prerequisite to recovery from pulmonary disease.

4. In view of these facts the complete examination of a suspected tuberculous patient has not been made until the condition of the eyes, including the refraction and dynamics of the ocular muscles, has been investigated and carefully recorded.

The conclusions on which these premises are based have a practical application.

The following two cases, which are typical of many, will illustrate, first, the causative relation of eyestrain to disturbed digestion and assimilation, and, second, the importance of both in tuberculosis:

Case 1.—Eyestrain due to anisometropia causing gastric and intestinal indigestion.

Patient.—F. L., aged 33, principal of high school.

History.—About ten years ago he began to have severe pains in stomach. These would be relieved after eating, but would recur, with increased severity, in a few hours. This gradually grew less for four or five years, when he began to have attacks of nausea after eating, with a disagreeable "sour feeling" in the stomach. His digestion was always better when he did not use his eyes. Absolute rest for one day from close work was always followed by relief of the stomach symptoms. While walking on the street at times he would have blind attacks, with pain in and about the eyes. After half an hour, the blur would disappear, and he would become nauseated, with intense headache. Dietetic and medicinal treatment seemed to afford him little relief.

Examination.—A cycloplegic test showed hyperopic astigmia with anisometropia. R. V., + 0.50 D. cyl. ax. 75 V. = 20/20. L. V., — 0.37 D. cyl. ax. 120 V = 20/20. Muscle balance was normal.

Subsequent History.—After wearing corrective glasses for a week all these disagreeable symptoms disappeared and did not return. After six months, a slight acidity of the stomach suggested a re-examination of his eyes, when a change in the axis of the cylinder of the right eye was found, it having turned from 75 to 90 degrees. Since wearing the glasses, his metabolism had so improved that he had gained fifteen pounds in weight. The indigestion could be brought on again at any time by leaving off his glasses, if only for a few hours.

The second case shows the influence with a like condition exercised when associated with tuberculosis:

Case 2.—Compound hyperopic astigmia-anisometropia, causing impairment of digestion and metabolism, and preventing recovery in pulmonary tuberculosis.

Patient.—Mrs. J. S. P., female, aged 25.

History.—In 1905 she developed a tuberculous condition in the apex of one lung, and was immediately sent to the Adirondacks and put under competent care. The usual treatment, that of an absolutely outdoor life, with superalimentation, was followed. She suffered constantly from intestinal indigestion and malassimilation, continued to lose weight, and in October was much worse than in May. It was determined that she should spend the winter in California, and *en route* came from her father's home in Rochester to Buffalo for relief of an eyestrain of which she had recently become conscious.

Examination.—Under cycloplegics, the following condition of anisometropia was found: R. V., + 0.50 D. sph. ⊃ + 0.75 D. cyl. ax. 165 V. = 20/20; L. V., + 1.00 D. sph. ⊃ +1.75 D. cyl. ax. 165 V. = 20/20. Esophoria of 3 degrees was present. For nearly three months she had suffered persistently from nausea, with constant intestinal indigestion. She was so weak and nervous that she was obliged to lie down for several hours before she could have her refraction taken. Her pulse was exceedingly rapid and weak.

Subsequent History.—It was found that she could take a full correction, and two days later started for New Orleans.

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* Read in the Section on Ophthalmology of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

* This paper was discussed with the paper by Dr. Parker and the discussion will follow Dr. Parker's paper which will appear next week.

[1] New York Med. Jour., Nov. 2, 1907.

The nausea immediately disappeared. For the first time in her life she was able to take a railway journey without suffering from car sickness. With a disappearance of the nausea the indigestion ceased, assimiliation became normal, weight increased, and she returned in the spring, having gained fifteen pounds and fully recovered in every way. She can not go without her glasses without having a return of her old symptoms of indigestion.

If the theory advanced in this paper is correct, that the effort to use abnormal eyes may disturb the nervous currents elsewhere, and if the proportion of tuberculous people who suffer from eyestrain is at all large, its bearing on the general problem of tuberculosis is one of enormous importance. It is a generally accepted truism that any agent or condition which undermines the integrity of the nervous system will increase the susceptibility to disease, and the neurotic appears to be peculiarly vulnerable to tubercular infections.

In support of this contention, Clifford Albutt, discussing a variety of phthisis, says: "I began to find in my own practice and in the writings of alienists how large a part phthisis plays in neurotic families. Even then, however, it did not occur to me to associate any particular form of phthisis with neurotic disorder until a few striking cases of unclassable variety occurred in neurotic families under circumstances which spoke too eloquently to be overlooked. If we go a step further and ask for a pathologic explanation of these facts we approach a land of darkness."

It is not the purpose of this paper to discuss tuberculosis as a neurosis, but to demonstrate how important nervous conditions are in this disease, and to indicate that the eyes may be an important element in producing these conditions. Concerning the truth of this proposition, the mass of confirmatory testimony is so great that it is now very generally accepted, both by ophthalmologists and practitioners of internal medicine. Baker[2] reports 100 cases of migraine relieved by the correction of errors of refraction, and Musser has said that "functional gastric disorder is very rarely a primary trouble." Stockton was the first to point out the relation of eyestrain to digestion. In 1894 he said that the causes of functional gastric disorders are usually some reflex irritation or some toxemia. Max Einhorn, in 1893, described, under the title "achylia gastrica," a most important condition of the stomach, later described by Dr. Allen A. Jones as "gastric anacidity." The majority of the cases reported by Dr. Jones, together with several others included in the above-mentioned series, were examined as to the existence of eyestrain. Without a single exception, there was found to exist a definite and relatively uniform ocular defect, viz., unsymmetrical astigmatism of high degree, varying from one to five diopters. Cohn[3] emphasizes this by saying: "The visual apparatus is in closest connection with the other higher nervous mechanism, and the slightest disturbance of the visual portion may produce irritation in the entire motor, sensory and psychic systems." It may be conservatively stated, then, as the conclusion of the best American investigators, that eyestrain is a frequent cause of impaired metabolism.

The importance of eyestrain in the tuberculous being recognized, the natural inquiry which would follow is as to its frequency. Here we have absolutely no statistics. In none of the institutions established by public or private beneficence for the investigation or treatment of tuberculosis, in none of the reports which have been issued by individuals or associations, and by none of the authorities, so far as it has been possible to learn, has an exact examination with record of the condition of the refraction and of the dynamics of the eye muscles been considered an essential part of the anamnesis.

It can not be assumed that the tuberculous are more free from visual defects than are the non-tuberculous, and Gould says that he has never yet seen a mechanically perfect eye. How general visual disturbances, of such an extent that they may not be considered negligible quantities, are, is evidenced by the fact that refractive tests constitute from 60 to 70 per cent. of our daily work as ophthalmologists, while the attempted adaptation of lenses to eyes requiring their help occupies practically the entire time of opticians.

It is absurd, then, to ignore the existence of focal defects in the tuberculous or to minimize their importance. Yet in the Henry Phipps Institute, Philadelphia, where the examinations are conducted with the most scrupulous care and the reports are most detailed, the requirements seem to be met by recording the color of the eyes (an item of questionable value), and noting whether or not the pupils are dilated or unequal. Concerning the latter, the observations are most interesting and it would seem to lead one to think of further investigations: "The matter of dilated pupils and of unequal pupils as symptoms of tuberculosis," says the report of 1906, "receives our support from the table, but only in regard to frequency of occurrence. No light is thrown on the cause of the phenomenon nor on the relationship of the disease. It is not even clear that they actually are symptoms of tuberculosis. Occurring in some cases and not in others, it is possible, and even probable, that they may be due to mixed infection or some complication."

The third report, that for 1907, shows that among 885 new patients 208 had dilated pupils, 399 had not, and of 278 no record was made. In 55 patients the pupils were unequal. "Dilated pupils," says the report, "for this year have occurred in about one-third of the patients of whom a record has been made as to the pupils. Unequal pupils have been recorded infrequently. Much has been said as to the condition of the pupils in tuberculosis by some writers, and statistics are here presented with a view of getting some light on the subject. So far we can draw no conclusions. We do not even know to what the phenomenon is due. Usually it is ascribed to muscular weakness." One year, therefore, we find the accommodative weakness manifesting itself in enlargement of the pupils, ascribed to a toxemia which must have a remarkable predilection for particular nuclei of the third nerve, and the next year to a muscular weakness which is equally speculative.

Is it not amazing that with such a specific assurance that the visual mechanism is in trouble, investigation should cease and vague and variable surmise serve as a basis from which to guess the etiology?

A dilated pupil is often associated with myopia. Astigmatism is the turnstile, as Risley says, through which the eye passes in achieving myopia. Exophoria and dilated pupils are definitely correlated, and this combination works such disaster in the midbrain as often to be nerve wrecking. It is not essential that we should know the channels through which the irritation is carried in order that we may appreciate the fact that eyes organically unlike, in an endeavor to blend images in the cortex, will cause nausea, vertigo, hyperacidity or subacidity of the stomach, and intestinal indigestion. These are matters of daily experience in the practice of every ophthalmologist. That long neural band, the fasciculus longitudinalis, originating anterior to the nuclei of the third nerve and extending back till it is lost in the medulla is probably the medium by which the root organs of the various cerebral nerves are connected. That some such connection exists has been clinically demonstrated. When the eyes are organically different an excess of energy, equal to the difference between the better and the most abnormal eye, must be sent to both. Under such conditions the endeavor to maintain the parity between accommodation and convergence results in ciliary spasm or ciliary relaxation. It is probable that the one is associated with esophoria, the other with exophoria. The unconscious effort or paresis, as the case may be, of one set of muscles or fibers is reflected to other and remote sets. If one makes a strong effort to clench one hand very tightly he will find that he is unconsciouly closing the other. The effect of tension within the eye, or of relaxation, seems to be reflected particularly to the non-striated muscular tissue, and as a result a contraction or a relaxation of circular fibers follows. This is true of the vasodilators or vasoconstrictors of the capillaries, of the circular fibers of the stomach or of the intestines, of the urethra and of the uterus. Hence follow local congestions or local anemias, cramp of the stomach or catarrh of the stomach, constipation or diarrhea, incontinence of the urine, and in several instances I have seen pregnancy, after many years of sterility, follow the relief of an eyestrain that could be explained only on the basis of a relaxation of a persistent contraction of the circular fibers of the cervix. With these far-reaching nervous involvements, inadequacy of metabolism as an element in tuberculosis assumes an added importance whether or not Ravenel[4] is correct in his contention that "the alimentary tract is a frequent port of entry for the tubercle bacillus," for the same conditions that disturb the nervous functions of the digestive tract will involve nerve supply of all of the essential organs, and given a neuropathic diathesis we have the conditions prepared for the reception and culture of the infective organism.

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[2] A statistical inquiry as to the Relief and Cure of Migraine by the Correction of Errors of Refraction, Academy of Ophthalmology and Oto-Laryngology, 1906.

[3] Physiological Therapeutics.

CONCLUSIONS.

The essential propositions which these conclusions warrant are:

1. The inadequacies of focus or the motility of the eyes may give rise to and be responsible for disturbances of digestion and assimilation.

2. Lowered vitality, especially in the neurotic, predisposes to tuberculous infection, and as superalimentation is of first importance in effecting a cure, an exact and complete examination of the refraction and of the motility of the eyes should constitute an essential part of the examination of every patient suspected of having this disease.

3. If these are the views of the ophthalmologist on this subject they are of such vital importance to a vast number of sufferers that resolutions to that effect should be adopted, and the recommendation made to this Association that it is the sense of the members of this section that no examination for tuberculosis can be considered complete until it shall include the refraction and the motility of the eyes.

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[4] Am. Jour. Med. Sc., October, 1907.

OCULAR REACTION TO TUBERCULIN.*

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At a meeting of the Berlin Medical Society, May 8, 1907, von Pirquet[1] described his method of vaccinating, using a preparation of tuberculin, and reported 360 cases, all children, in which it had been tried. Of these clinically diagnosed "tuberculosis" a positive result was obtained in 88 per cent. The negative 12 per cent. occurred in the miliary cases or in those patients with cachexia, while 167 of the "unsuspected" gave positive results. In the discussion Wolff-Eisner[1] called attention to the possibility of obtaining a reaction to tuberculin when applied locally to other parts of the body and reported having observed such when a 1 to 10 dilution was used in the eye of a hay fever patient. This he had observed frequently and he described the reaction as consisting of a conjunctivitis, a chemosis, while in some cases the patient presented the condition observed in a general reaction from the subcutaneous administration of tuberculin.

Vallée[2] was able to confirm this statement by his work on cattle and horses, but doubted its utility or feasibility as a test in man, or even in the lower animals, on account of the pronounced inflammatory reaction. Calmette,[3] of Lille, France, at a meeting of the Académie des Sciences, described the method as modified by him, in which he advocated a 1 per cent. solution of purified tuberculin, the reaction being so mild that it could be used in man. Since that time much work has been accomplished, principally by the French and Germans. More recently reports have appeared in the English and American journals.

The reaction described by Calmette, aside from the name of the author, is also known as the "Ophthalmo tuberculin," the "Oculotuberculin" and the conjunctival or ophthalmic reaction to tuberculin. At this time it may be of service to consider some of the factors of importance in connection with the work.

DESCRIPTION OF THE REACTION.

As described by Calmette, the reaction consists of a slight redness and swelling, chiefly of the caruncle and the inner canthus, but also involving the conjunctiva. Aubaret and Lafound,[4] Aubaret and Magne[5] have subdivided these cases into four classes, depending on the degree of the reaction. Sabrazés and Dupérie[6] classified them as mild, medium and severe.

Varying according to circumstances and conditions, various results appear in the eye when the test is made. When the reaction is negative no changes whatever occur. A negative reaction may become positive by repeated instillations, even in the normal individual, or a negative reaction may become positive after the subcutaneous administration of tuberculin. When the reaction is positive the appearance is quite variable. In some only a very slight swelling and redness of the caruncle or surrounding portion of the conjunctiva may occur. The vessels, particularly those of the bulbar conjunctiva, are distended and appear more distinct.

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* Read before the Chicago Medical Society, Feb. 26, 1908.

[1] Berl. klin. Wchnschr., 1907, xliv.

[2] Acad. d. sci., 1907, cxliv, No. 24.

[3] Acad. d. sci., 1907, cxliv, No. 24; Presse méd., 1907, No. 49.

[4] Gaz. hebd. d. sc. méd. de Bordeaux, Aug. 4, 1907.

[5] Jour. de méd. de Bordeaux, Aug. 25, 1907.

[6] Gaz. hebd. des sc. méd. de Bordeaux, July 21, 1907.

When the reaction is more pronounced the swelling and redness become much more marked, resulting in an inflammatory condition. The lids may become much swollen, the eye partially or completely closed, and a chemosis may be present. The congestion is more pronounced than in the mild cases, and on the involved surface a deposit of fibrin may be found. An increased lachrymation and photophobia are associated features. In the severe reactions the changes become more marked, sometimes extreme. Actual pus formation with ulceration has occurred in the severest cases. In only two of the observed cases did the reaction become marked and severe, and even then not sufficient to require special attention.

The fever and other conditions manifest in a general reaction to the subcutaneous injection of tuberculin are absent. Pupillary changes are not obtained as a rule. Generally the patient complains of little or no discomfort in the eye, more than a very slight burning, a scratching or a sensation of fulness or tightness, unless the changes are pronounced.

TIME OF THE REACTION.

The time that elapses between the administration of tuberculin and the reaction varies from three or four hours to thirty-six hours or even longer. In the majority of cases the reaction reaches the acme in eight to fourteen hours. Usually by the third or fourth day the eye has returned to apparently normal. Wiens and Gunther,[7] Eisen,[8] G. Serafini,[9] A. Napier[10] and others report cases in which the reaction has been much prolonged and with resulting effects in the eye. In one of the cases reported by Serafini, a young man with mild pulmonary and glandular involvement, the local findings were much intensified.

FORM OF TUBERCULIN EMPLOYED.

In some of the earlier cases dilute old tuberculin was employed. This was done partially from lack of knowledge and partially from the difficulty of obtaining a proper preparation. The ordinary tuberculin is not suitable, as the contained glycerin, as well as perhaps other substances, may produce a condition simulating a positive reaction. McLellan[11] claims that 1 per cent. of the old tuberculin is non-irritating to the eye.

Calmette, in his original communication, recommended the use of the precipitated or purified tuberculin, which may now be obtained in powder, tablet or liquid form ready for immediate use. The tablets contain 10 mg. of the dry purified tuberculin, and added to 1 c.c. of sterile water or physiologic salt solution make a 1 per cent. suspension, as the tuberculin is insoluble. As sterile water is irritating to the normal eye, physiologic salt solution is to be preferred. Since the preparation is only a suspension, it is necessary that it be frequently agitated, otherwise the supernatant fluid will contain little or no tuberculin and produce questionable results. It is best always to make a fresh preparation, although one several days old has given positive results. The liquid form is marketed in glass containers similar to the vaccine tubes. Of the three, the tablet form is probably the most convenient and was employed in the present work.

THE DOSAGE AND TIME OF ADMINISTRATION.

Calmette recommends that one drop be instilled into the eye. Wiens and Gunther, as the result of their experience, urge that a 0.5 of 1 per cent. suspension be used, as in a number of their cases the patients presented severe reactions and changes in the eye that continued for at least three months. Schenck and Seiffert[12] used three strengths, 1 per cent., 2 per cent. and 4 per cent., using the weakest first and stronger for subsequent tests if a negative result was obtained.

This in great part is determined by circumstances. As the early and slight reactions may appear within five or six hours, it is best employed early in the day. This permits of the examination being made in daylight, which is often of great assistance in the doubtful cases. When possible all patients should be examined every two hours and in the best of light. In private and dispensary work the time may not be a matter of choice and the result often must be determined by an assistant or nurse. The dispensary cases are not included in the report.

METHOD OF ADMINISTERING.

This is not so simple as it may first appear. With a sterile medicine dropper one drop of the suspension is instilled into the inner canthus of one eye only, the other acting as a control and a means of comparison. There is no immediate discomfort from the instilled drop, but frequently the patient will close the eye quickly or forcibly or perhaps rub the eye. To prevent this the lower lid is drawn downward and held for some seconds until the drop is well distributed and the patient has become accustomed to its presence. In all instances the patient is cautioned not to rub or irritate the eye. When a negative result occurs the test may be repeated after the lapse of from six to ten days. As the examined eye, even in the normal, becomes sensitized by repeated tests it is advisable and necessary to try first one and then the other, never the same eye for two successive examinations.

In order to determine as far as possible the efficiency of the reaction a rather wide range of cases were selected. Only those under constant observation in hospital practice have been included in order that the findings may be more accurate. At least one-third of the tuberculosis cases were rejected as unsuitable for the test on account of the presence of a conjunctival hyperemia, conjunctivitis or some other eye disease. Referring to the tables it will be found that 153 patients have been examined, many receiving two or more instillations. Of these 54, or 35.4 per cent., gave a positive reaction.

In some of the patients with typhoid, cerebrospinal meningitis, gonorrheal rheumatism or secondary syphilis, and in whom tuberculosis was neither suspected nor revealed on careful examination, a well marked positive reaction occurred. Where it might have been expected to be positive, as in the cases of pleurisy, tuberculosis of the knee, hip, spine and cervical glands, it was negative. Pulmonary tuberculosis in some form was diagnosed in ninety-five cases, with a positive reaction in forty, or 42.1 per cent. It may be urged that the negative reaction indicates an absence of tuberculosis or a faulty diagnosis. Examination of the tables, however, will show that, in addition to the physical findings, the bacilli were present in forty-two cases. Here the condition can be hardly questioned, and of these just 50 per cent. gave a positive reaction. An attempt was made to determine in which form of pulmonary tuberculosis the reaction was most constant, but as far as could be judged there was no marked and constant difference which is not in accord with the findings of P. Eisen,[8] Wolff-Eisner and Teichmann,[13] and others.

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[7] München. med. Wchnschr., 1907, liv.
[8] Beitr. z. Klin. d. Tuberk., viii.
[9] Gior. d. r. Accad. di med. di Torino, November, 1907.
[10] Glasgow Med. Jour., January, 1908.
[11] Brit. Med. Jour., Dec. 7, 1907.
[12] München. med. Wchnschr., 1907. liv.

TABLE 1.—Findings in Medical Cases.

No. of Cases.	Clinical Diagnosis.	Reaction.	Remarks.
6	Typhoid fever	—	
1	Typhoid fever	+	Two instillations; marked.
9	Croupous pneumonia	—	Two instillations in two cases.
2	Pleurisy with effusion	—	
2	Pleurisy with effusion	+	Three instillations in one case, all marked. Both patients reacted very markedly.
1	Plastic pleurisy	—	
1	Cerebrospinal meningitis, lumbar puncture, diplococcus intracellularis in culture	+	Two instillations; marked.
1	Spinal meningitis (t. b. c.)	+	Three instillations; marked.
3	Diabetes mellitus	—	
4	Rheumatism, acute articular	—	
1	Rheumatism, gonorrheal	—	
1	Rheumatism, gonorrheal	+	Two instillations.
1	Sciatic	—	
2	Acute endocarditis	—	
1	Myocarditis	—	
1	Influenza	—	
1	Delirium tremens	—	Two instillations.
2	Hepatic cirrhosis	—	

TABLE 2.—Findings in Surgical and Orthopedic Cases.

No. of Cases.	Clinical Diagnosis.	Reaction.	Remarks.
1	Tuberculosis of knee	—	
2	Tuberculosis of knee	+	One instillation, slight.
1	Tuberculosis of hip	—	Two instillations.
1	Tuberculosis of spine	—	
2	Tuberculosis of spine	+	One very marked.
1	Orchitis (t. b. c.)	—	
1	Cervical adenitis (t. b. c.)	—	Two instillations.
1	Tuberculosis of spine or syphilis	—	Two instillations.
1	Tuberculosis of hip with sinus-bacilli in pus	+	
1	Rectal carcinoma	—	

TABLE 3.—Findings in Dermatological Cases.

No. of Cases.	Clinical Diagnosis.	Reaction.	Remarks.
1	Lupus	—	
1	Syphilis, secondary	—	
3	Syphilis, secondary	—	One very marked.
1	Syphilis, tertiary	—	

TABLE 4.—Findings in All Stages of Pulmonary Tuberculosis with Physical Signs.

No. of Cases.	Condition.	Reaction.	Remarks.
21	Bacilli in sputum	+	
21	Bacilli in sputum	—	
19	No bacilli in sputum	+	
34	No bacilli in sputum	—	
4	Bacilli in sputum	+	Instillations at first all negative; 1 mg. tuberculin given subcutaneously and positive ocular occurred in 4 (50 per cent.) without a second instillation.
4	Bacilli in sputum	—	

In two of the cases in which a very incipient tuberculosis was present repeated tests were all negative. If any difference existed the negative reactions occurred most frequently in the far advanced. Where the anemic condition was pronounced practically all were negative. In eight cases the subcutaneous administration of tuberculin produced a most positive ocular reaction in four, or 50 per cent.

These findings, compared with those of Calmette and many of the earlier investigators, are not as encouraging, while with the later reports the difference is not so great. P. Eisen obtained a positive reaction in 66.6 per cent., where the diagnosis of tuberculosis was certain and 31.1 per cent. of non-tuberculous affections also reacted.

On account of the limited number of cases and the incomplete state of the work I feel that I am not justified in making any positive statements, but a review of the reported cases and of my own forces me to certain conclusions which appear fair and just.

CONCLUSIONS.

1. As a diagnostic method Calmette's test is by no means positive or even specific. In a varying proportion of tuberculous cases of various forms a positive reaction will occur, but not in all. In differential diagnosis it can be of but limited service as it appears, apparently, in non-tuberculous affections. When the subcutaneous use of tuberculin in doubtful cases of tuberculosis is not possible on account of fever the ocular test may be employed. In my incipient cases in which an early positive diagnosis was most desired it was of no service.

2. Wolff-Eisner and Teichmann[13] have employed and suggest the reaction as a means of prognosis. They determined that when an active reaction took place in patients in the incipient and early stages of tuberculosis it indicated an active effort at protection and consequently was a favorable sign. A weak, slow reaction was found in the far advanced, in the first and second stages, when the resistance was poor. When no reaction took place it indicated that the resistance was still less. It would appear to me that a diagnostic means of so little value can have still less value as a means of prognosis.

3. In a review of the literature no reference is made to the therapeutic possibilities in this method of administering tuberculin. The absorption by the conjunctiva is rapid and considerable, as can be demonstrated in the use of other drugs. Just what effect ocular administration of tuberculin has on the powers of resistance as indicated by the opsonic index has not been determined. If the ocular reaction is analogous to the local or general reaction produced by subcutaneous injections of tuberculin, and it is found feasible to administer it in this manner, it may be found necessary to avoid the pronounced and severe reactions.

4. Concerning the cause of the reaction I have nothing definite to offer, as the work along this line has not yet been sufficient. Wolff-Eisner and Teichmann[13] in their work in determining the prognostic value of the test, consider the presence and intensity of the reaction due to the development of an endotoxin. Smithies and Walker[14] have suggested that the inflammatory reaction in the eye is produced by the action of endotoxins which are liberated by the action of the antibodies on the dead bacilli in the eye. As the reaction occurs apparently in patients in whom no tuberculosis can be demonstrated it may, like the reaction from subcutaneous use of tuberculin, belong to the "group reactions."

5. From all we can now judge, the ocular reaction to tuberculin must be considered simply as confirmatory and must always be considered secondary to the findings as determined by a careful physical examination.

I take this opportunity to thank various members of the attending and resident staffs of Cook County Hospital, especially Dr. Miller, superintendent of the County Tuberculosis Hospital, for the use of cases and the assistance rendered in the present work.

103 State Street.

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[13] Berl. klin. Wchnschr., Jan. 13, 1908.

[14] The Journal A. M. A., Jan. 25, 1908, 259.

Clinical Notes

ATRIOVENTRICULAR DISSOCIATION FOLLOWING DIPHTHERIA.

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OMAHA, NEB.

The following case is deemed worth reporting, as it suggests a cause of heart block hitherto unrecorded, so far as I know. The case was seen in the practice of Dr. Hombach, of Council Bluffs, Iowa.

History.—F. E., boy, aged 11, after suffering four days from a severe sore throat, was seen by Dr. Hombach, who found a membrane covering the entire right faucial pillar and tonsil with enlarged glands on the same side. Reaction to antitoxin was prompt, the membrane and lymphatic enlargement disappeared rapidly, and the pulse dropped gradually from 130 to 71 during five days of uneventful convalescence. At 9 a. m. of the ninth day the pulse was 56 and the temperature 98.9. During the night the patient had been restless, vomited, and had complained of pain in his abdomen. At 6 p. m. the pulse fell to 18 and there was an epileptiform convulsion lasting about ten seconds. The patient was unconscious for a few seconds. Under stimulation, the pulse gradually rose until 10 a. m. of the tenth day. The patient was then well nourished, rested quietly in bed, and said that he felt all right and desired to get up. Except for a fear that he was in danger of being hurt, an da slight cyanotic tinge, he appeared normal.

Examination.—This was made on the tenth day, and proved negative except in the following particulars: The radial pulse was 28; the wave was strong and well formed, but succeeded by a rather empty vessel. The area of heart dulness was not materially enlarged. The apex lay in the fourth interspace, a good finger's breadth within the nipple line. It was normal in size and was made up of the left ventricle. The right heart border (deep cardiac dulness) was flush with the right sternal margin. The apex beat was 28 a minute. All the heart sounds were clear. A muffled beating was to be heard between the regular beats in the second and third interspaces just to the left of the sternum. There were usually three of these faint sounds to one of the regular heart beats. They were heard nowhere else and were to be attributed to auricular contractions. The veins of the neck were pulsating rapidly. Two different pulse waves could be made out: (1) a negative venous pulse wave, the crest of which was presystolic, the deep trough systolic-diastolic; (2) more rapid slight pulse waves, three of which were to be seen to one of the other; the occurrence of a fourth was to be assumed at the maximum of the other wave. A count of this latter venous pulse gave 112 to the minute; the counter of the former was the same as of the apex beat. The carotid beat was synchronous with the trough of the negative venous pulse wave. Unfortunately no apparatus was available to make tracings. The auricles therefore were beating to the ventricles in the ratio of 4 to 1. The liver was palpable 0.5 c.m. below the costal arch and was somewhat tender. There was no pulsation. The temperature was 96.8.

Clinical Course.—With the exception of an occasional emesis and slight transient restlessness, the patient improved for twenty-four hours. During this time the temperature rose once to normal, and he seemed to be in fair condition except that the temperature had dropped once to 94 but soon returned to 97.3. At 6 p. m. of the eleventh day (second day of heart block), the pulse was 38 to 40; the temperature 97.2; the respiration 22. The auricles, as registered by the jugular pulse, were beating 80 to the minute. The auriculoventricular ratio was therefore 2 to 1 instead of 4 to 1 as recorded the day previous. A muffled beat was to be heard in the second and third left interspaces midway between the regular cardiac systoles. The area of cardiac dulness was not increased. The heart sounds remained clear. There was slight cyanosis; the liver was still somewhat enlarged and tender.

During the following night and day there was considerable restlessness and emesis. The patient grew weaker. For several hours the temperature was too low to register. The night of the twelfth day, the patient was more restless than ever; the pulse was weak and he complained a little of abdominal pain. At 6:35 a. m. of the twelfth day the pulse registered 36; the tempeature was 93.8, and the respiration 22. No thermometer readings could be obtained later, as the scale was not low enough. Death occurred at 11:30 a. m., after several tonic convulsions which lasted only a few seconds. Ventricular systole stopped fully two minutes before death. The patient was conscious and talking during this time. The fine pulsations of the veins of the neck continued. A tonic convulsion ended the scene in the midst of a sentence. Artificial respiration and precordial massage were instituted and a few beats were felt at the apex.

At no time during the course of the disease were there marked signs of cardiac decompensation. After the injection of the antitoxin there was no tachycardia or other signs of extreme myocarditis. An autopsy was refused. The case from its clinical manifestations was one of heart block. In the absence of a postmortem a more or less selective action of the diphtheria toxin on the bundle of His can only be assumed.

An investigation of the literature on the subject shows no similar case recorded. The case is reported merely to draw attention in postdiphtheritic bradycardias to auriculoventricular dissociation and to suggest a probable pathology for certain cases.

DEVICE FOR FILLING BLOOD PIPETTES.

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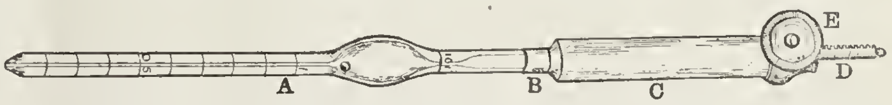
BEAUMONT, TEX.

The accompanying illustration shows a simple little instrument that I have found very satisfactory and accurate in filling blood pipettes. The apparatus consists essentially of a blood pipette from a Thoma-Zeiss hemocytometer and the ordinary metal barrel and plunger of a hypodermatic syringe, supplied with a pinion. The pinion was made and attached to the syringe by a local jeweler. To the pipette A is comented the metal ferrule B, into which screws the syringe C. The plunger of the syringe is operated by the pinion head E working in the notched piston shaft D.

In filling the pipette the instrument is held by the third and fourth fingers, the thumb and index finger of the same hand operating the plunger by means of the pinion head. The opposite hand is left free to encourage the flow of blood or to place the part from which the blood is taken in the most favorable position. The advantages of this apparatus are:



A simple device for filling blood pipettes. A, blood pipette; B, metal ferrule; C, ordinary metal hypodermatic syringe; D, notched plunger shaft; E, milled screw-head of pinion.

1. Greater rapidity in filling pipettes with absolute accuracy because the suction is under delicate control and the graduations can be read at right angles instead of obliquely.

2. Avoidance of the insanitary method of passing the usual bone-tipped tube from mouth to mouth.

3. Greater ease and rapidity in cleaning pipettes after dilutions.

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[*For other information see second page following reading matter.*]

SATURDAY, JUNE 13, 1908.

TYPHOID CARRIERS.

It is now generally recognized that a certain percentage of persons who have had typhoid fever continue to harbor the bacilli for varying periods of time after their recovery. The proportion of such "carriers" is put variously at from 1.7 per cent. up to 5 per cent. The length of time that this condition may last is at present a matter of speculation only. The most extreme case thus far reported is one of the Strassburg carriers, a woman who had had typhoid fever thirty years previously and still harbored typhoid bacilli. Such cases are known as chronic "carriers" to distinguish them from the acute "carriers" who show the presence of typhoid bacilli in the discharges for short periods of time only. The first very striking history of a chronic carrier was reported about two years ago by Kayser[1] of Strassburg. Here, as in most of the subsequent instances, there had been a series of strictly localized outbreaks of typhoid fever, which could not be accounted for in any of the ordinary ways. The infection was finally traced to a woman baker, who had had the disease ten years previously and whose discharges contained typhoid bacilli. Kayser reported another epidemic, which was due to infected milk, the carrier in this instance being engaged in the milk trade and causing infection of seventeen persons. Friedel's case was that of an insane woman, who prepared salads and vegetables for the other inmates of the asylum. She proved to be a typhoid carrier, although no history of an attack of the disease could be obtained. Probably the most brilliant case is Soper's woman cook, an account of whose devastations was published last year in The Journal.[2] This woman, during less than five years' time—the complete history could not be obtained—had caused outbreaks of typhoid fever in seven households, the number of cases aggregating twenty-six.

The most recent addition to the literature of the typhoid carrier is an article by Scheller,[3] recounting an investigation into the conditions on a large estate in Prussia, where typhoid fever had been endemic for fourteen years. During this time thirty-two cases of typhoid fever had occurred among the 180 persons living on the estate. By careful study of the conditions, the focus of infection was finally decided to be the dairy of the proprietor, practically all the victims having used milk from it. A woman employed in the dairy had suffered from typhoid fever seventeen years previously, and on examination typhoid bacilli were found in her stools in almost pure culture. At first it seemed inexplicable that the earliest cases traceable to her should have occurred fourteen years ago, three years after her illness, but an examination of the books showed that she entered on her dairy employment only fourteen years ago and it was then that she began to spread the infection. The number of cases that were traced to her, thirty-two, is the largest thus far credited to any single carrier.

There was a surprisingly large number of carriers found by Scheller, not less than eighteen among the forty persons who drank the milk of this dairy and only five of these had ever had typhoid fever. All, however, except the originator of the infection, proved to be only temporary carriers and yielded readily to treatment, while the latter continued to harbor bacilli even after rigorous measures had been employed. The great majority of carriers thus far reported have been women. It has been stated that this fact is in accord with the greater prevalence of gallstones among women. Still it must be remembered that women have exceptional opportunities for spreading the infection. All of the striking cases in the literature are cooks or cooks' helpers, bakers, dairy workers, etc., occupations involving the constant handling of substances which are excellent culture media for the typhoid bacillus. The real proportion between the sexes can be discovered only by the study of large numbers of cases.

In some instances it becomes a matter of clever detective work to discover a typhoid carrier. Thus Scheller tells of a tenement house in which cases of typhoid fever were continually appearing. The infection seemed to be connected with a woman living in the house and employed in a neighboring barracks. The woman herself was not a typhoid carrier, but careful search revealed the fact that a soldier working in the same room with her was one, and that the woman was in the habit of carrying away food from this room which she distributed at home. Later another soldier working in this same room developed typhoid fever.

There is probably nothing in the field of municipal sanitation which offers so difficult a problem as this. It is not only a question of ascertaining whether the urine and stools of each typhoid patient are free from bacilli at the time quarantine is removed. That alone would be difficult enough in private practice. But investigation has shown that the bacilli may disappear during convalescence only to reappear, in some instances, months later. Moreover, in these cases the number of bacilli excreted is enormously greater than that usually excreted at the height of the disease. It is admittedly difficult to isolate the typhoid bacillus from the stools during the disease, but the stools of typhoid carriers may contain very few organisms other than the typhoid bacillus, and the urine usually contains a pure culture. Obviously, then, we have not begun to solve the question of prophylaxis when we insist on disinfection of the discharges during the period of illness only. The matter becomes still more complicated through the discovery of typhoid carriers who have no history of ever having had the disease. Such persons probably harbor the bacilli only for short periods of time, yet during that time they are a menace to their neighbors. The evidence points to the probability that many who come into close contact with cases of typhoid fever become temporary carriers, but, having no symptoms of the disease, they take no precautions as to their discharges. Against such carriers no prophylactic measures can be taken. They will inevitably escape detection until an outbreak of typhoid fever in their environment leads to an examination of all possible sources of infection.

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[1] Arb. a. d. k. Gsndhtsamte, 1906; p. 173-176.
[2] 1907, xlviii, 2019.
[3] Centralbl. f. Bakteriol., 1908, No. 5, p. 385.

Perhaps the most important lesson to be learned from these investigations is the folly of neglecting municipal hygiene. A long protracted retribution awaits that city which has allowed typhoid fever to become endemic in its midst. Such a city as Pittsburg, for instance, must contain hosts of typhoid carriers, and these will doubtless continue to visit the sins of the fathers upon the children long after the city's water supply has been purified.

FADS IN MENTAL HEALING.

There are some people who pride themselves on being "cock-sure" of anything about which they have made up their minds; sound common sense is their strong point; they "know what's what;" they are not to be taken in. As a matter of fact, such persons are commonly among the most gullible of mortals. Lacking imagination, lacking idealism (and even proud of their defects in this regard), utterly lacking in sense of perspective and in capacity for broad and comprehensive views of things, they are impressed as easily as children by some vulgar and utterly unsubstantiated pretense of a cure of cancer or of caries; and most illogically (at the same time considering themselves to be nothing if not logical) they conclude that some popular cult—such as Eddyism—has better claim on the understanding than all science, from Hippocrates to Koch.

There is absolutely nothing new in the story. Not to go further back, Macaulay observed of Joanna Southcott, who was born in 1750: "We have seen an old woman with no talents beyond the cunning of a fortune teller, and with the education of a scullion, exalted into a prophetess and surrounded by tens of thousands of devoted followers, many of whom were, in station and in knowledge, immeasurably her superiors; and all this in the nineteenth century; and all this in London." Mesmer began by impressing the ignorant and the degraded; he ended by having for his disciples many among the aristocratic and the educated in the most brilliant and intellectual capital of Europe. Many thousands presented themselves as living proofs of his power to cure the gravest diseases. Yet there never has been from that time to this day proof of a single cure of a structural disease by his or any other merely psychic method. Perkinsism, spiritualism, theosophy, Dowieism and hundreds of similar movements are all in the same class. Evidently it is not sufficiently appreciated that knowledge and wisdom are by no means synonymous terms. Those who desire to pursue this subject further and to examine into the psychic processes by which such cults thrive are recommended to read Le Bon's book on "The Crowd; A Study of the Popular Mind." (The title in the original French is *La Foule;* not entirely unsuggestive!)

There died the other day, in New York, under most melancholy circumstances, Mr. William H. Marsh, who, while tenderly nursing a dog that had been bitten by a rabid cur, had contracted hydrophobia. It is well that a postmortem examination established beyond peradventure the fact that rabies was the disease of which this heroic man died. Thus was corroborated the diagnosis which the physicians had made during life. Nevertheless there were many who declared that the malady had in reality been pseudohydrophobia, and that the psychic state had been fostered by the physicians, whose unfavorable prognosis had precipitated the end, and that had the unfortunate patient denied the reality of the disease—had he but used sufficient will power—he would certainly have recovered. This aspect of the case has moved our esteemed lay contemporary, the New York *Evening Post,* to this editorial expression on "Will Power in Disease:"

"According to Mrs. Eddy, the source of all disease is in the patient's own fear. 'Disease is fear made manifest on the body,' a delusion which can be cured by a mental act, by 'agreeing to disagree with the approaching symptoms.' In other words, by a persistent effort of the will we can overcome illness, and death itself. There is some truth in this, and on the whole, if Christian Science has injured many devotees, it has perhaps done more good than harm, curing more than it has killed. While denouncing medicine and hygiene, it has done a useful service to both by calling general attention to the remarkable power of the mind over the body and the therapeutic value of the will."

One would think from this that no one ever before had heard of the influence of the will in disease. Yet what physician can practice his profession for twenty-four hours without recognizing the psychic factor and encouraging its exhibition by the sick? Not to go back to Boccaccio and Petrarch—and thus on through Paracelsus, Harvey, Johannes Mueller, Kant, Schopenhauer and hundreds of others—did not Dr. Tuke several decades ago write a standard work on "The Influence of the Mind on the Body"? Have such men as Myers, Braid, Charcot, Binet, Janet, Weir Mitchell not achieved things in this line by this very means, or are we only dreaming?

The foregoing quotation is from one of the ablest, one of the sanest (in general), one of the most influential of our great newspapers. Does it not admirably illustrate and support our assertion that only the element of time is necessary for the most intellectual agencies to be enlisted on the side of humbugs in general and of Mrs. Eddy in particular?

THE PRESIDENT-ELECT OF THE AMERICAN MEDICAL ASSOCIATION.

Two of the greatest recent triumphs of preventive medicine have been the freeing of Cuba from yellow fever and the rendering possible that Phœnix-like resurrection of the Panama Canal from the charnel house of dead efforts. Under these circumstances it was most natural that Colonel Gorgas, the chairman of the Section on Hygiene and Sanitary Science, the man to whom the first named public service was in the main, and the second entirely, due, should have been chosen president of the American Medical Association. In thus honoring Colonel Gorgas the Association has also honored not only itself, but the Medical Corps of the United States Army, the profession of medicine, and the government that was wise enough to recognize the fact that, all prejudice and precedent to the contrary notwithstanding, it is to the voice of the sanitarian that industrial and engineering enterprise must look for the axioms and postulates without which its theorems can not be effectively demonstrated or its problems solved. And if it be said that the American Medical Association itself exercised no little influence in the awakening that resulted in Colonel Gorgas' appointment as a member of the Canal Commission, thus placing him in a position in which his great work could become fully effective, surely that renders it the more natural and inevitable that the Association should bestow its highest honor on him. Colonel Gorgas was graduated in 1875 as A.B. by the University of the South, and in 1879 as M.D. by Bellevue Hospital Medical College, where he became a member of the house staff. He entered the Medical Corps of the United States Army in 1880 as first lieutenant, becoming captain in 1885, major in 1898, and colonel by special act of Congress in 1903 in recognition of his splendid work in ridding Havana of yellow fever. In 1903 the University of Pennsylvania conferred on him the honorary degree of doctor of science. His appointment as chief sanitary officer of the Isthmian Canal Zone, the work he did there in face of the most trying obstacles and insensate limitations, and his subsequent elevation to an authoritative position as a member of the commission, with the grand results to which the president himself has borne testimony, are matters of common knowledge. It can not fail that his scientific attainments and proved executive ability shall add fresh luster to the already illustrious office of president of the American Medical Association.

FOURTH OF JULY ACCIDENTS AND TETANUS.

This year, as usual, The Journal will publish statistics regarding accidents occurring in connection with the celebration of the Fourth of July, with special reference to the cases of tetanus which may result therefrom. A request is made, therefore, that full details be sent us of all cases of tetanus resulting from fireworks or other means of celebration, as well as of any accidents of special interest. Results in the use of tetanus antitoxin are particularly desired. It is hoped that a more extensive cooperation this year by physicians who have such cases will enable us to make these statistics more accurate and therefore more valuable.

THE CHICAGO SESSION.

The Fifty-ninth Annual Session of the American Medical Association, held last week in Chicago, has more than fulfilled all the expectations that were formed for it. It has demonstrated the increasing realization of the community of interest between the medical profession at large and the altruistic policy of professional betterment and uplifting for which the Association stands—no longer merely in academic theory, but in practical, statesman-like, effective effort. The session was certainly the most noteworthy of all that have been held. The registration of members reached the high mark of 6,446. The highest number previous to this was 4,722 at Boston in 1906. Last year at Atlantic City it was 3,713. The addresses, than which none better have been delivered, have already been commented on. The entertainments, which were eminently successful, were arranged to suit all tastes—receptions at the Fortnightly Club, the Chicago Woman's Club, at the Country Club by Mrs. Herbert Burrell, at the Art Institute, and an orchestral concert by the Theodore Thomas Orchestra, for the ladies; section and college banquets and reunions; trips to the packing houses and steel works for those interested in industrial enterprise; and finally the president's reception and ball on Wednesday night and a smoker on Thursday night, both at the Coliseum, which vast hall was on both occasions filled to overflowing. The section meetings were unusually well attended; the papers presented were of a high order, and the discussions thereon vigorous and well sustained. The scientific work of the Chicago Session leaves nothing to be desired. It is a matter for congratulation that the Section on Hygiene and Sanitary Science is arousing increasing attention. Hitherto the Cinderella among medical departments, a general awakening to the fact that preventive medicine will assuredly form the major part of the medicine of the future is now clearly in evidence. The business of the meeting was despatched by the House of Delegates with laudable promptitude and without the disturbance of harmony. The attendance of delegates was large throughout. More members registered for the first meeting than at any time since the reorganization. A noteworthy feature is a growing tendency to refer resolutions and other matters direct to special committees, deferring discussion thereon until the presentation of the committees' reports, thus avoiding the threshing out of a subject twice over. One measure that deserves special mention was the endorsement by the House of Delegates of the report of the Board of Public Instruction, which recommended the institution of public lectures, signed articles by competent authorities on medical matters of public interest, in the lay press and magazines, etc. That this is a movement in accordance with the enlightened spirit of the age can not be doubted.

Medical News

ARKANSAS.

Commencement.—At the annual commencement exercises of the College of Physicians and Surgeons, Little Rock, held April 30, a class of 15 was graduated. The doctorate address was delivered by Rev. W. D. Buckner, Pine Bluff, and the faculty address by Dr. Arthur E. Sweatland, and the degrees were conferred by the dean.

Society Meeting.—At the annual meeting of the Carroll County Medical Society, held in Berryville, May 5, the following officers were elected: President, Dr. Henry Pace, Eureka Springs; vice-president, Dr. Isaac M. Poyner, Berryville; secretary, Dr. V. F. Lassagne; treasurer, Dr. John D. Jordan, Eureka Springs, and delegates to the state medical society, Drs. Russell G. Floyd and Henry Pace, both of Eureka Springs.

CONNECTICUT.

Tablet for Anesthetist.—The tablet in honor of Dr. Horace Wells, pioneer in anesthesia, sent from Madrid by the Odontological Society, has reached Hartford. The memorial is composed of silver plate, surrounded by wreaths of white metal, showing laurel leaves on one side and oak on the other. The plate is 33 by 24 inches and bears the following inscription: "The Spanish Odontological Association to Horace Wells, Jan. 14, 1907."

State Society Meeting.—At the one hundred and sixteenth meeting of the Connecticut State Medical Society, held in New Haven, May 27 and 28, the following officers were elected: President, Dr. Seldom B. Overlock, Pomfret; vice-presidents, Drs. Irving L. Hamant, Norfolk, and Walter L. Barber, Waterbury; secretary, Dr. Walter R. Steiner, Hartford (re-elected); treasurer, Dr. Joseph H. Townsend, New Haven; and delegate to the American Medical Association, Dr. Everett J. McKnight, Hartford.

DISTRICT OF COLUMBIA.

Commencement Exercises.—The annual commencement exercises of Howard University were held in the First Congregational Church, Washington, May 27.

Establish Research Fellowship.—The class of 1908 of the Department of Medicine of Georgetown University, numbering 45, which was graduated on June 3, announces to the university authorities that it will establish a class research fellowship to be known as "Class of '08 Fellowship," with an annual fund for its support of not less than $300.

FLORIDA.

Society Meeting.—At the annual meeting of Citrus County Medical Society the following officers were elected: President, Dr. James F. Miller, Inverness; vice-president, Dr. Joseph D. Bennett, Crystal River; secretary-treasurer, Dr. George A. Dame, Inverness; and delegate to state society, Dr. B. H. Maynard, Floral City.

Vital Statistics.—During April the records of the Jacksonville board of health show there had been 49 births reported, 13 of which were white and 36 colored. The number of deaths during the month were 81, of which 28 were white and 52 colored individuals. Of these deaths 72 were due to natural causes. During the month 5 white men and 9 colored men died from consumption.

ILLINOIS.

Smallpox.—Smallpox in mild type is reported in and around Marston.——Joliet reports 3 cases.——State Inspector Crawford has found 22 cases in Elgin and has ordered all employés of the watch factory to show certificates of vaccination or be vaccinated.——Seven cases of smallpox in one family at Alexander are reported; 6 cases in another family, and 2 in another in Whiteside Township, Marshall County.

Personal.—Dr. Robert C. Bourland has been appointed major surgeon of the Third Infantry, Ill. N. G., vice Major Carleton E. Starrett, deceased, subject to the report of the examining board.——Dr. Michael W. Kelley, Joliet, is in St. Joseph's Hospital seriously ill with paralysis, due to a spinal injury.——Ira Ganstang, a senior student of the Medical Department of the University of Illinois, died from throat disease, May 7, in Chicago.——Dr. John A. Koch, Quincy, has been appointed a delegate from Illinois to the International Congress on Tuberculosis.

Chicago.

X-Ray Burns.—Damages of $10,000 are said to have been awarded John Bortoli against the Lakeside Hospital, May 28, for burns suffered while submitting to *x*-ray treatment.

Graduating Exercises.—At the annual commencement exercises of the College of Physicians and Surgeons, held June 9, Dr. Rudolph Matas, New Orleans, delivered the doctorate address.

Hospital for South Chicago.—At a recent meeting of the South Chicago Hospital Association, the president was authorized to advertise for bids for the construction of a building at Ninety-second Place and Luella Avenue, to cost $40,000.

Communicable Diseases.—A total of 491 cases of communicable diseases was reported to the bureau of contagious diseases during the week ended June 6. Of these 269 were measles, 63 scarlet fever, 61 diphtheria, 36 chickenpox, 21 tuberculosis, 20 whooping cough, 16 typhoid fever, 1 smallpox, and 4 diseases of minor importance.

Unlicensed Practitioner Fined.—Phillopena Schmidt is said to have been fined $100 and costs June 4, by Municipal Judge Scovel for practicing medicine without a license. She is said to have been found guilty of a similar charge a year ago and to have been fined the same amount.——Anna Hiavacek and her daughter, Anna Paviovic, are said each to have been fined $100 and costs by Judge Scovel, on the charge of practicing medicine without a license, May 20.

Deaths of the Week.—During the week ended June 6 there were 483 deaths reported from all causes, equivalent to an annual death rate of 11.63 per 1,000. The deaths numbered 95 fewer than for the previous week and 91 fewer than for the corresponding week of 1907. With the exception of violence and influenza, all the important causes show a decrease during the week. Deaths from pneumonia, acute diseases and tuberculosis were also lower than during the corresponding week of 1907.

KENTUCKY.

Personal.—Dr. W. W. Ranshaw has succeeded Dr. L. E. Brinker as health officer of Covington.——Dr. Oscar C. Dilly has been appointed president of the Louisville State Hospital, vice Dr. Jouett Menefee. Dr. Menefee sailed from New York for Europe, June 1.

Officers Elected.—At the annual meeting of the Southwestern Kentucky Medical Society in Paducah, May 12-13, the following officers were elected: President, Dr. Vernon Blythe, Paducah; vice-presidents, Drs. H. T. Crouch, Bardwell, and Robert Overbey, Birmingham; secretary, Dr. C. E. Purcell, Paducah; treasurer, Dr. Charles H. Brothers, Paducah; historian, Dr. Robert T. Hocker, Arlington.——The fourth annual meeting of the Kentucky State Association of Railway Surgeons was held in Louisville, May 12-13. The following officers were elected: President, Dr. Cuthbert Thompson, Louisville; vice-presidents, Drs. J. L. Phythian, Newport, H. P. Cartwright, Bowling Green, and H. S. Chase, Junction City; secretary, Dr. J. B. Kinnaird, Lancaster; treasurer, Dr. Clarence H. Vaught, Richmond.——At the annual meeting of the State Medical Association of Colored Physicians, held in Louisville, May 14, the following officers were elected: President, Dr. P. D. Robinson, Lexington (re-elected); vice-president, Dr. E. D. Whedbee, Louisville; secretary, Dr. B. F. Jones, Danville; treasurer, Dr. C. N. Harris, Mount Sterling.

MARYLAND.

Personal.—Dr. Foutz, Westminster, has been appointed health officer of Carroll.

Smallpox in Suburbs.—Five additional cases of smallpox have been discovered near Patasco, in the suburbs of Baltimore, making 12 cases in all.——On May 27, 6 cases of smallpox were discovered in the vicinity of Baltimore. Two of the patients were quarantined in the house and the other four were sent to the Isolation Hospital.

Found Guilty.—Drs. W. Curby, Burkhard, and A. Newton Sibert, are said to have pleaded guilty, May 6, in the United States District Court for using the mails for sale of illegal medicines. The former was sentenced to 13 months in the Atlanta penitentiary and the latter, the manager, was sentenced to three months in jail.——Max Parel, Baltimore, is said to have been fined $250 in the District Court May 27, having pleaded guilty of using the mail for advertisement of illegal medicine.

Personal.—Dr. Pontz, Westminster, has been appointed health officer of Carroll county.——Dr. S. O. Mast has been appointed associate professor of Biology in the Woman's College of Baltimore.——Dr. W. E. Burge has been appointed fellow in physiology, Dr. E. C. Dickson fellow in pathology, and Dr. A. Schaeffer fellow in biology in Johns Hopkins University.——Dr. Frederick H. Baetjer, *x*-ray expert of Baltimore was obliged to have his eye enucleated June 1.——Dr. Ralph Duffy has been made medical superintendent of Franklin Square Hospital, Baltimore.

Commencements.—The annual commencement of the University of Maryland was held June 1. The graduates of the department of medicine numbered 73. The university gold medal was awarded Dr. David Franklin and certificates of honor were given to Drs. William M. Hollyday, Solomon S. Cherry, Lawrence Kolb, Henry L. Sinskey, and Louis H. Seth. ——Maryland Medical College graduated a class of 20, June 2. Dr. Marcus S. Dillon of West Virginia carried off chief honors. Dr. Henry B. Kolb, Baltimore; J. R. Armstead, Alabama; and F. A. Neegaard, Tennessee, received honorable mention.——At the College of Physicians and Surgeons, a class of 68 was graduated, Dr. William H. Thearle of Maryland receiving the highest honors and a gold medal.——The twenty-sixth annual commencement exercises of the Woman's Medical College were held May 28, when a class of 11 was graduated. The doctorate address was delivered by Dr. John C. Hemmeter.

MASSACHUSETTS.

New Hospital.—Drs. Albert C. Lane, Seth W. Kelley and William H. Keleher are the medical members of the incorporators of Woburn Hospital.

Decides Not to Change Name.—At the meeting of the Massachusetts Association of Boards of Health, April 30, a proposed amendment to the constitution to change the name to Massachusetts Public Health Association, was lost.

Against Tuberculosis.—At a meeting recently held in Pittsfield a local anti-tuberculosis society was organized. Dr. James F. A. Adams was elected president; Dr. Henry Colt, secretary; Dr. Frederick S. Coolidge, treasurer; and Alfreda B. Withington and R. Allen Woodruff, medical members of the executive committee.——At the meeting for organization of the Waltham Anti-Tuberculosis Association, Dr. Arthur D. Draper was elected secretary.

Personal.—Drs. Walter D. Riordan, John J. Sullivan, Joseph F. Walch, Bernard L. Mulholland, Thomas H. Redmond and Patrick J. Hughes have been re-elected ward physicians of Lawrence.——Dr. and Mrs. Leander M. Crosby, Wakefield, sail for Europe July 10.——Dr. Lewis Bates, Weymouth, has sailed for Panama.——Dr. Henry N. Longfellow, Boston, has returned from an extended trip to the Pacific Coast.——Dr. John H. Bannon, Lawrence, will soon leave for a two months' tour of English hospitals.

MICHIGAN.

Commencement.—The fortieth annual commencement exercises of the Detroit College of Medicine were held May 28. During the week preceding graduation, alumni clinics were held by eminent specialists.

Smallpox.—Three cases of smallpox have been discovered in Atlantic.——Smallpox is reported to be epidemic and spreading in Jackson. The isolation hospital is filled and tents have been put up for other patients.——At present about ten cases are in the Calumet Detention Hospital.

Personal.—Dr. W. A. Colton has been appointed health commissioner of Escanaba and Dr. James O. Johnson, health officer of Adrian.——The house of Dr. Henry C. Judson, Detroit, was damaged to the extent of $400 by fire, May 29.——Dr. William H. Veenboer has resigned as city bacteriologist of Grand Rapids.——Dr. Eben D. Kanaga, Charlevoix, has been appointed assistant physician at the Michigan Hospital for the Insane, Kalamazoo.——Dr. Johnson B. Kennedy has been elected vice-president of the Detroit Board of Health.

NEW JERSEY.

To Build Hospital.—At the meeting of the Board of Freeholders, June 4, it was decided to build a new hospital at New Lisbon. The plans of the new structure are similar to those of the county insane hospital. The building will be two stories in height, will accommodate 36 patients, and will cost $12,000.

State Society Meeting.—The one hundred and forty-second annual meeting of the Medical Society of New Jersey will be held at Cape May City, June 18-20, under the presidency of Dr. Edward J. Ill, Newark. The society is to be tendered a banquet by the management of the Hotel Cape May, followed by a vaudeville entertainment. Dr. Stephen Pierson, Morristown, will respond to the toast of "The General Practitioner;" Dr. Hobart A. Hare, Philadelphia, "The Medical Man as a Teacher," and Hon. Joseph S. Frelinghuysen, Raritan, to "The Doctor as a Politician."

NEW YORK.

Ward Bill Signed.—This measure, which authorizes magistrates in New York City to order the arrest of persons who are complained of as being insane, and giving them power to order the insane persons to be committed to the insane department at Bellevue Hospital, until examination, has been signed by Governor Hughes.

Milk Producers' Difficulties.—The Board of Health of New York City has ordered that all persons who milk cows must wear white duck trousers and jackets, or else that the milk will not be admitted to the city. Much of the milking in the vicinity of Middletown has been done by the wives and daughters of the farmers who refuse to don the prescribed garb. The problem is thus far unsolved.

New York City.

Summer Hospital Open.—The Seaside Hospital at Newdorp S. I. was opened on June 1 by St. John's Guild. Patients will be taken to the hospital daily until the Floating Hospital begins its trips about July 1.

Personal.—Dr. and Mrs. Charles H. Chetwood sailed for Europe June 6 and Dr. and Mrs. L. Emmett Holt, June 3.——Dr. Mary Merritt Crawford, who has been an interne in the Williamsburg Hospital, has become an ambulance surgeon for this same hospital. This is the first time Brooklyn has had a woman on the ambulance service.

Stray Dogs to Be Killed.—There are said to be 150,000 stray dogs in New York City which the Health Department will begin to kill in a systematic way, as it believes that the danger from hydrophobia will thus be lessened. The work will be extended to every part of the city. Dr. Darlington believes that if the ordinances in regard to stray dogs were enforced, rabies would soon become extinct.

Dinner to Foreign Guests.—The Otologic Section of the New York Academy of Medicine gave a dinner on May 25, in honor of Arthur H. Cheatle, F.B.C.S., professor in King's College Hospital, London, and Dr. Albert Jansen of Berlin. Among the speakers were Professor Cheatle, Dr. Charles J. Kipp, Newark; Dr. Jansen, Dr. Walter B. Janes, Dr. John Winters Brannan, Dr. H. S. Birkett, Montreal, and Dr. Holbrook Curtis.

Hospital Real Estate Taxable.—Roosevelt Hospital and all similar institutions must pay taxes on all property that they own which is not devoted solely to the general purposes of the institution according to decision just rendered by the Supreme Court. This decision was the result of the assessment of a tenement belonging to Roosevelt Hospital, which the trustees thought ought to be exempt from taxation because the income was used for hospital purposes and because under the charter granted the hospital, it was exempt from taxation. A tax law has since been passed revoking all special exemptions and holding that only such property as was actually used for hospital or similar charitable purposes should be exempt.

Hospital for Rockefeller Institute.—A gift of $500,000 has been made to the Rockefeller Institute for Medical Research by D. J. Rockefeller, for the purpose of erecting and equipping a hospital which is to adjoin the present building. The building, though small when compared with many others in the city, has been designed with a view of studying the nature and treatment of individual cases of disease with a thoroughness not now possible in other places. This hospital will contain elaborate provisions for the fresh-air treatment of patients, by balconies and roof gardens. The purpose of the hospital will not be to provide accommodation for many, but to develop new and more exact methods of treatment which may be applied elsewhere on a larger scale.

PENNSYLVANIA.

Philadelphia.

Everhart Museum Dedicated.—The Everhart Museum of Science and Natural History, a gift of Dr. Isaiah F. Everhart, was dedicated and presented to the city of Scranton with fitting ceremonies, May 30. Dr. Everhart also endowed the institution with a fund of $101,000. Dr. Everhart was presented with an embossed copy of the resolutions of thanks and appreciation from the citizens of Scranton.

Medical Alumni Clinics.—The annual meeting of the Alumni Association of the University of Pennsylvania will be held at the University, June 16. Starting at 9 a. m., a series of clinics will be given throughout the day in the different departments of the institution. The clinics will be held both morning and afternoon in the hospital and medical laboratories. Luncheon will be served at 1 o'clock in Houston Hall at which Dr. J. William White will deliver an address of welcome.

Personal.—The honorary degree of D.Sc. will be conferred on Dr. Henry C. Chapman, professor of institutes of medicine and medical jurisprudence at Jefferson Medical College, by the University of Pennsylvania at the annual commencement, June 17.——Dr. George M. Boyd sails for Europe June 13.——Dr. W. M. Bridgett, who has been seriously ill with typhoid fever, is recovering.——Dr. Walter E. Weyl has returned from Italy.——Dr. J. Victor Wilson sailed for Europe, June 4.——Dr. Matthew Woods lectured last week at the New Century Club on "Hobbies" for the benefit of "The Clinic for the Home Treatment of Chest and Throat Diseases."——Dr. Alfred Gordon has been placed in charge of the Out-Patient Department of nervous and mental diseases of the Northwestern General Hospital.

Health Report.—The total number of deaths reported for the week ended June 6 aggregated 441, including 237 males and 204 females. This is a decrease of 33 from the number reported last week and 41 less than those reported in the corresponding period of 1907.——The principal causes of death were: Typhoid fever, 3; measles, 6; scarlet fever, 5; whooping cough, 6; diphtheria, 7; consumption, 65; cancer, 20; diabetes, 4; apoplexy, 11; paralysis, 5; heart disease, 46; acute respiratory disease, 42; enteritis, 21; appendicitis. 5; Bright's disease, 33; puerperal septicemia, 7; premature birth, 14; congenital debility, 9; old age 3; suicide, 6; accidents, 11, and marasmus, 1. There were 143 cases of contagious disease reported with 15 deaths. as compared with 134 cases and 12 deaths reported in the preceding week.

Commencements.—The eighty-sixth annual commencement of Jefferson Medical College was held in the Academy of Music, June 8. when a class of 169 from all parts of the world was graduated. The diplomas were conferred by the Hon. William Potter, president of the Board of Trustees, and the annual address to the graduating class was delivered by Dr. Ira Remsen, president of Johns Hopkins University.——The annual commencement exercises of the Medico-Chirurgical College of Philadelphia were held in the Academy of Music, June 6. A class of 67 was graduated. The degrees were conferred by Hon. Henry F. Walton, and the doctorate oration was delivered by Prof. Judson Perry Welsh, vice-president of Pennsylvania State College.——The annual commencement exercises of the Temple University were held in the Academy of Music, June 3 when 8 men were presented for the degree in medicine. Dr. Elmer E. Brown, vice-president of the university, conferred the degrees and the annual oration was delivered by Hon. Hampton L. Carson.

GENERAL.

Order Section Transactions.—Those who desire copies of the 1908 Transactions of any of the sections should order them at once as printing is about to commence. Only enough are printed to supply the demand, and each year some persons order too late to be supplied. It is to be remembered that one may give a permanent order for Transactions—that is, his name is put on the list and the Transactions of the sections specified are sent. from year to year, until the order is canceled. Address orders to the American Medical Association, 103 Dearborn Avenue, Chicago.

Coming Meetings.—The National Medical Association, composed of negro physicians, pharmacists and dentists, organized in 1898 in Atlanta, Ga., will hold its tenth annual meeting in New York City, August 25 to 27. The association is the parent body of numerous state and local societies. An attendance of 500 is expected. Dr. Peter A. Johnson is chairman, and Charles H. Roberts, D.D.S., secretary, of the local committee.——The one hundred and tenth annual conference of the American Hospital Association will be held in Toronto, Ont., September 22 to 25. The association now has a total membership of 400 and the meeting will be presided over by Dr. Sigismund S. Goldwater of Mount Sinai Hospital, New York City.

Personal.—Col. William C. Gorgas, Medical Corps, U. S. Army, chief sanitary officer Isthmian Canal Commission, has been appointed delegate to the American Sanitary Congress, to be held in Santiago, Chile, in December.——The following appointments have been made to the staff of the Rockefeller Institute for Medical Research: P. A. Lewis, assistant in pathology; A. I. Kendall, assistant in bacteriology; A. R. Dochez, fellow in pathology, and A. O. Shaklee, fellow in physiology and pharmacology. The following promotions have been made: John Auer, associate in physiology and pharmacology; Don R. Joseph, assistant in physiology and pharmacology; Alexis Carrel, associate in surgery; J. W. Jobling, associate in pathology; Benjamin T. Terry, assistant in protozoology; Donald D. Van Slyke, assistant in biologic chemistry; Walter A. Jacobs, assistant in biologic chemistry; Bertha I. Barker, fellow in pathology, and R. V. Lamar, fellow in pathology.

Society Meetings.—At the twenty-second annual meeting of the American Orthopedic Association, held in Chicago, June 4 to 6, the following officers were elected: President, Dr. Ansel G. Cook, Hartford, Conn.; vice-presidents, Drs. Albert H. Freiberg, Cincinnati, and Augustus Thorndike, Boston; secretary, Dr. Robert B. Osgood, Boston; treasurer, Dr. Gwillym G. Davis, Philadelphia; executive committee, the president, secretary and Drs. John Ridlon, Chicago; Robert W. Lovett, Boston, and Reginald H. Sayre, New York City; delegate to the Congress of American Physicians and Surgeons, Dr. Virgil P. Gibney, New York City, and alternate, Dr. H. Augustus Wilson, Philadelphia.——At the annual meeting of the Association of Surgeons of the Southern Railway and Allied Lines, held in Birmingham, Ala., the following officers were elected: President, Dr. Benjamin G. Copeland, Birmingham; vice-presidents, Drs. Henry T. Bahnson, Winston-Salem, N. C., and James H. Shorter, Macon, Ga.; secretary-treasurer, Dr. Jacob U. Ray, Woodstock, Ala., and member of the executive committee, Dr. S. Rush Miller, Knoxville, Tenn.——At the annual meeting of the National Association for the Study and Prevention of Tuberculosis, held in Chicago, June 5 and 6, the following officers were elected: President, Dr. Vincent Y. Bowditch, Boston; honorary vice-presidents, the President of the United States, Hon. Grover Cleveland and Dr. William Osler, Oxford, England; vice-presidents, Homer Folks, New York City, and Dr. Charles L. Minor, Asheville, N. C.; treasurer, Brig.-Gen. George M. Sternberg, Medical Corps, U. S. Army, retired, Washington, D. C.; secretary, Dr. Henry Barton Jacobs, Baltimore; executive secretary, Livingston Farrand, New York City; and directors, Drs. John N. Hurty, Indianapolis; S. Adolphus Knopf, New York City; Victor C. Vaughan, Ann Arbor, Mich.; Edward R. Baldwin, Saranac Lake, N. Y.; Rudolph Matas, New Orleans, and Messrs. James J. Hill, St. Paul; Frederick Redfield Proctor, Proctor, Vt.; J. B. Bixby, St. Louis; C. B. Boothe, Los Angeles, and A. B. Cummins, governor of Iowa.

Army Medical Department Examinations.—The act of April 23, 1908, reorganizing the Medical Corps of the Army, gives an increase in that corps of six colonels, twelve lieutenant-colonels, forty-five majors and sixty captains or first lieutenants, and establishes a medical reserve corps as an adjunct to the medical corps. Under this recent act, the lieutenants of the medical corps are promoted to captain after three years' service instead of five, and the increase in the higher grades insures promotion at a reasonable rate all through an officer's military career. Furthermore, applicants who are found qualified in the preliminary examination are appointed first lieutenants of the medical reserve corps and ordered to the Army Medical School in Washington, D. C., for eight months' instruction. Full information concerning the medical corps and the medical reserve corps may be procured on application to the Surgeon General, U. S. Army, Washington, D. C.

THE MEDICAL CORPS.

Preliminary examination for appointment in the medical corps will be held on Aug. 3. 1908, and formal applications should be in possession of the War Department prior to July 1. The applicant must be a citizen of the United States, between 22 and 30 years of age, a graduate of a medical school legally authorized to confer the degree of doctor of medicine, of good moral character and habits, and must have had at least one year's hospital training or its equivalent in practice. The examination will be held concurrently throughout the country at points where boards can conveniently be assembled, and due consideration will be given to the localities from which applications are received, in order to lessen the traveling expenses of applicants as much as possible. The examination in subjects of general preliminary education may be omitted in the case of applicants holding diplomas from reputable literary or scientific colleges, normal schools or high schools, or graduates of medical schools which require an entrance examination satisfactory to the faculty of the Army Medical School. The large number of vacancies created in the medical corps by recent legislation makes it certain that all successful candidates will be recommended for a commission for several years to come.

THE MEDICAL RESERVE CORPS.

It is desired to obtain and maintain a list of qualified medical men all over the country who are willing to serve as medical officers in time of emergency, and to such men the President is authorized to issue commissions as first lieutenants, medical reserve corps. It is recognized that it will be necessary to place only a limited number of these officers on the active list in time of peace, and it is hoped that young medical men throughout the country and medical officers of the militia of the various states may be sufficiently interested to secure positions on the medical reserve corps list. An applicant must be between 22 and 45 years of age, a citizen of the United States, a graduate of a reputable medical school legally authorized to confer the degree of doctor of medicine, and must have qualified to practice medicine in the state in which he resides. Examinations will be held in the near future and will embrace the practical medical subjects.

CANADA.

Ontario Medical Association.—From the standpoint of attendance and scientific work done, the meeting of the Ontario Medical Association at Hamilton, May 26-28, was the best ever held. The number actually registered was 317. The address in medicine was delivered by Dr. Charles G. Stockton, Buffalo, and the address in surgery by Dr. Charles L. Scudder, Boston. The association adopted a resolution expressing its hearty approval of the proposed establishment of psychiatric clinics by the Ontario government in connection with the hospitals for the insane in the province. It also will request the government of the province to appoint a commission in lunacy or a board of alienists who alone shall give expert evidence in courts of law as to sanity or insanity. Still another resolution called on the government to institute reforms in the hospitals for the insane service, looking toward appointments and promotions on the basis of merit rather than for political activity, and that a superintendent should not be appointed to any of these institutions unless he has had some years of training in the service. The association condemned in the strongest possible terms criminal practices. The following officers were elected: Dr. Herbert J. Hamilton, Toronto, was elected president; Drs. Robert R. Wallace, Hamilton; Alexander N. McFaul, Collingwood; A. Dalton Smith, Mitchell, and George H. Field, Coburg, vice-presidents; Dr. E. Stanley Ryerson, Toronto, general secretary; Dr. James E. Davey, Hamilton, assistant secretary; and Dr. James H. Mullin, Hamilton, treasurer. Dr. Thomas G. Roddick was present, and at the annual banquet entered a strong plea for interprovincial registration and voiced his opinion that as soon as Ontario took decided ground and urged the measure, the other provinces would promptly fall in line. The meeting was held under the presidency of Dr. Ingersoll Olmsted, Hamilton.

FOREIGN.

Anglo-American Information Bureau at Berlin.—The Anglo-American Medical Association has opened an information bureau at *Friedrichstrasse* 105, Berlin.

Chair of American Antiquities at Paris.—The course of lectures on American Antiquities at the Collège de France has been entrusted to a physician, Dr. Capitan, who has made a special study of prehistoric lore for which he has found time in his busy professional career. This chair was founded recently by the duc de Loubat.

Appendicitis in Prussia.—The number of cases of appendicitis treated in the public hospitals of Prussia is said to have increased from 8,412 in 1903 to 16,781 in 1906. The mortality has dropped from 9.46 to 6.68 per cent. The mortality is the highest between the ages of 10 and 25. One exchange states that more persons have died at this age from appendicitis than from all other diseases combined.

Plague in Ecuador.—Minister Fox of Quito reports that in order to prevent the spread of plague from Guayaquil into the interior of Ecuador all traffic has been suspended on the railroad between Huigra and Alausi. The former place is the headquarters of the railroad and the hospital. Patients discovered on trains are put off at this point, and on this account more cases are reported from there than any other place except the port of Guayaquil. Orders have been issued to burn all houses in Huigra found to be infected and a sanitary cordon has been established between Huigra and Alausi and all communication between these points has been transiently suspended.

First International Congress of Urology.—This congress will open at Paris, Sept. 30, 1908, with Professor Albarran presiding. The following four questions will be discussed: "Pathogenesis and Treatment of Anuria," presented by Kümmel, Hamburg; Watson, Boston, and Achard, Paris; "Retention of Urine without Mechanical Obstacle," presented by Frankl-Hochwart, Vienna; Albarran, Paris; d'Hoenens, Brussels; "Normal Physiology and Pathology of the Prostate," presented by Posner, Berlin; Pardoe, London, and Haberern, Budapest; "Operative Indications in Tuberculosis of the Kidney," presented by Ceccherelli, Parma; Brongersma, Amsterdam; Guisy, Athens, and Heresco, Bucharest. The discussions will be restricted to these subjects.

Foreign Medical Students in France.—Out of the total 7,538 medical students in France, 819 come from foreign countries; more than half are from Russia, and a large proportion from the countries around the Mediterranean. Only 3 are from the United States, 13 from Germany and 6 from Great Britain. The totals of both native and foreign students have considerably increased this last year. The *Semaine Médicale*, May 20, pleads for more favorable conditions for admittance of foreign pupils to the French medical courses, so as to attract larger numbers. The crowd now passes on to Germany and Austria, where special facilities are provided for postgraduate courses, besides the regular courses. A recent writer explains this as due to the fact that east of the Rhine medicine is more of a science, while in France, on the other hand, it is regarded more as an art.

Second Spanish Surgical Congress.—This congress was held at Madrid, in May, Professor Cortejarena in the chair. Ribera discussed surgery of the stomach and hydatid cysts. For the latter he operated in 117 cases, 60 men and 57 women, the youngest patient 3 and the oldest 79 years old. In two cases the cyst was in the lung and was diagnosed by the bulging of one side of the chest and dyspnea on exertion, with good general health. He differentiates hydatid cyst in the liver when the tumor is not accompanied by functional derangement, especially of the biliary passages. In his numerous cases of this affection in the liver jaundice was not observed in any instance, merely a slight tendency in one or two patients. He prefers the marsupialization technic and warns against neglecting to seek for other lesions in the liver when a hydatid cyst is encountered. Failure to do this was responsible for one death in his experience, an abscess on the other side of the liver escaping detection.

Alleged "Meat Juice" Preparations.—As already mentioned, a widely advertised German "meat juice" preparation was recently written up in the medical journals as not containing any meat juice, tests showing that it was merely a meat extract with egg albumin. Some of the smaller medical journals are still carrying the advertisement affirming it to be meat juice; they have announced that when their contracts expire they will not renew them. The *Münch. med. Wchnschr.*, however, publishes a lawyer's opinion which shows that the German law does not compel the fulfilling of an advertising contract when it was accepted in ignorance of the incorrectness of the statements in the advertisement. At Hamburg the authorities have confiscated a large amount of the "meat juice" preparation in question. The Munich courts have also taken up the matter, and are considering the authorship of the write-ups which have appeared during the last few years in the medical and lay press. The fraudulent composition of the preparation escaped discovery by chemical and other tests until the new biologic precipitin test was worked out. This is another example of the practical importance of pure laboratory research—differentiation of albumin from different species having first become possible by the new precipitin biologic reactions. The proprietors admit now that the term "meat juice" was a misnomer. Meat juice and meat albumin, they say, will not keep, and meat extract and egg albumin have to be used in such preparations

Therapeutics

[It is the purpose of this department to outline an up-to-date management of disease, to suggest scientific treatment for diseased conditions, and to present prescriptions that are simple, useful and palatable. Prescriptions are written in both the metric and apothecaries' systems, but the amounts of the ingredients are **NOT** exact translations of one system into the other, but quantities convenient for pharmacist and physician. It should be understood that solids are weighed in grams or fractions of grams, while liquids are measured in cubic centimeters; that a teaspoon holds five cubic centimeters, i. e., more than a fluid dram, hence a 100 cubic centimeter preparation will contain twenty doses.]

Eczema in Infants and Young Children.

Dr. James N. Winfield, Brooklyn, in the *New York Medical Journal*, March 21, 1908, gives a splendid review of some of the causes of this troublesome condition, and offers some good advice as to its treatment. He estimates that eczema constitutes about one-third of all the skin diseases treated in the dermatologic clinics of the world. It "is a catarrhal dermatitis" which, according to the length of time it has endured, may be termed acute, subacute or chronic. The acute or subacute form, the most frequent in infants, is attended with more or less heat, redness and swelling, while thickening of the skin only occurs when the disease becomes more chronic. This disease of the skin may be divided into "the erythematous, the papulovesicular, pustular and squamous."

The erythematous form is mild; the skin is usually dry, and it "is often described under the name of pityriasis." The papular variety occurs in children, while the vesicular form is the most typical of this disease in infants, and generally occurs on the face. In this vesicular form the duration of the vesical is usually short and has ruptured, leaving a red, moist surface, when the physician first sees the patient. The skin in infants may show considerable inflammation with a good deal of redness, which constitutes "the infantile eczema rubrum." If these broken vesicles become infected with pus organisms, then pustular eczema occurs, with a purulent discharge and intermixed with brownish crusts or scabs. Squamous eczema may follow any of these types, and really represents an attempt at resolution.

Winfield considers the cause of eczema in the young to be either "external irritants or reflexes from the gastrointestinal tract." Therefore, the diet is an important element in the cause of eczema in infants and young children, and overfeeding is as frequent a cause as the kind of food given. If a teething child has also digestive disturbances, he may develop an eczema, though the teething may not be the direct cause. Intestinal parasites may cause eczema, and Winfield thinks that various reflexes may cause it, such as a tight foreskin or adhesions of the clitoris.

Among the external causes are animal parasites, improper clothing, as too much rough woolen next the skin; too tight or improperly arranged binders, etc., or irritating dyestuffs in the clothing. An abnormally dry skin may be the cause of eczema.

Winfield divides the treatment of the disease into two parts: "1, The care of the child, and, 2, the treatment of the disease proper."

A child with eczema should be clothed as lightly as possible, and flannel underclothing should be avoided. The weight and the warmth of the clothing should be just sufficient to protect the child and not enough to cause much perspiration, or so badly arranged as to cause chafing.

Theoretically water for bathing should be avoided and some bland oil, such as olive oil or almond oil, substituted. But as it is impossible properly to remove the crusts from the eczematous patches, or to remove the normal secretions of the body without water, practically a fine soap and soft water must be used. If rain water or soft water can not be obtained, bran may be added to the bath, and also sodium bicarbonate. The child having been thoroughly dried after his bath, or the part bathed having been thoroughly dried, he should be well rubbed with almond oil or a pure, fresh cold cream. While such bathing should not be done too frequently, still a properly carried out general bath once every third day, or more frequently if needed, is not so irritant to eczema as is supposed. If deemed advisable, the skin may be powdered after bathing, and Winfield says preferably with a mineral dusting powder, because the vegetable powders such as lycopodium, rice powder or starch take up the secretions, become rancid, and readily serve as culture media. A fine talcum powder may be used, or the oxid or stearate of zinc, with or without bismuth. An infant with eczema should not be held too much, or allowed to become overheated or excited.

Eczema more frequently occurs in children who are improperly cared for, and in those who are fed on artificial foods than in those who are fed with mother's milk or modified cow's milk. In other words, the artificial foods usually contain too much starch. Older children who are allowed to eat too many crackers or much candy are likely to develop the same condition.

It should not be forgotten how much water infants and young children need. This simple necessity is often neglected.

Winfield says that after a child has cut its teeth, "milk should still constitute the bulk of its diet, with the addition of beef juice, cream, dry bread and zwieback," and if there is constipation or lack of nutrition, a little olive oil. Orange juice and baked apple may also be added at times with advantage.

When constipation is present, as it generally is in eczematous children, and olive oil or milk of magnesium is not sufficient to relieve it, a small dose of calomel may be given occasionally, or castor oil or rhubarb. But if a stronger drug than magnesium must be given continuously, a preparation of cascara sagrada is the best. Winfield has found malt sugar of advantage in the constipation of infants. Care should be taken, whatever laxative is used, not to cause excessive action and deplete the child, or cause intestinal irritation, as not only will the nutrition of the child be impaired, but the eczema will not be benefited and may be made worse.

The most troublesome symptom of eczema is the itching, and this, fortunately, is generally relieved by proper external applications. If not, Winfield suggests small doses of bromid or chloral, but this seems inadvisable unless in very exceptional instances. He condemns the administration of arsenic in infantile eczema, and in this we certainly concur.

The external treatment is protective, and nothing should be applied to the skin that will irritate it. The scales and crusts should be first removed after softening with olive or almond oil, or with soap and warm water if necessary. Scales and scabs that can not readily be removed should not be torn off, but should be gradually macerated with the oil. Resorcin or phenol may be added to the oil as follows:

℞.	gm. or c.c.		
Resorcini	60	or	gr. ix
Olei amygdalæ expressi	100		fl℥iv

M. et Sig.: Use externally as directed.

Or:

℞.	gm. or c.c.		
Phenolis	50	or	gr. viii
Olei olivæ	100		fl℥iv

M. et Sig.: Use externally as directed.

Later the eczematous patches may be washed with soap and bran water or with water containing a small quantity of bicarbonate of sodium. Between such necessary baths the diseased parts may be cleansed with oil. "In the erythematous type of eczema a simple protective ointment, such as cold cream, white petroleum or wool fat is all that is necessary." In other words, what such skin needs is protection, and if the eczematous part is exposed to the outer air it may be well to cover this ointment with one of the dusting powders above mentioned. When there is much inflammation with the eczema (eczema rubrum) the inflamed parts should be dusted with zinc oxid or bismuth, either separately or combined, as:

℞.	gm.		
Zinci oxidi	50	or	
Bismuthi subnitratis	50		āā, ℥ii

M. et fac pulverem.

Sig.: Use as a dusting powder.

If there is much irritation a mild boric acid wash, as a tablespoonful of boric acid to a pint of water, may be used. Later Winfield suggests using the following ointment:

℞.	gm.		
Hydrargyri ammoniati	60		gr. ix
Zinci oxidi	1	or	gr. xv
Unguenti aquæ rosæ	30		℥i

M. et Sig.: Use externally.

If there is much itching, phenol may be added to the above, as:

℞.	gm.		
Hydrargyri ammoniati	60		gr. ix
Zinci oxidi	1	or	gr. xv
Phenolis liquefacti	30		m. v
Unguenti aquæ rosæ	30		℥i

M. et Sig.: Use externally.

If eczema has become chronic, either oil of cade or beta-naphthol may be used, as:

℞.	gm.		
Beta-naphtholis	1	or	gr. xv
Unguenti aquæ rosæ	30		℥i

M. et Sig.: Use externally as directed.

Or:

℞.	gm. or c.c.		
Olei cadini	1	or	m. xv
Petrolati	30		℥i

M. et Sig.: Use externally as directed.

Tar preparations should not be used carelessly, as they may aggravate the disease and cause an actual dermatitis, although many times an eczema seems hardly to be cured without their aid. Winfield says that occasionally an eczematous skin resents fatty applications, and in this case lotions should be used, such as a calamin lotion.

As above inferred from the various causes of eczema, genital reflexes due to adhesions must be corrected, and all skin parasites must be exterminated. When the child's skin is abnormally dry, which it may be even from birth, daily inunctions of oil should be given, and plenty of water should be given internally. For this condition Winfield does not mention thyroid, but many times a small amount of thyroid extract given to a child with such a condition of skin and with recurrent eczemas, is beneficial. The dose should be small, not more than 0.03 gm. (½ grain) of the dried extract, administered once a day. While such treatment, like all other treatments, is not always successful, it is often of marked benefit, not in acute eczemas, but in the chronic form just mentioned.

DUSTING POWDERS.

℞.	gm.		
Acidi borici	10		ʒiiss
Zinci oxidi	20	or	ʒv
Talci purifacti	30		℥i

M. et Sig.: Use externally as a dusting powder.

℞.	gm.		
Pulveris talci salicylici (N. F.)	50	or	℥ii

Sig.: Use externally as a dusting powder.

This powder contains 3 per cent. of salicylic acid and 10 per cent. of boric acid.

℞.	gm.		
Pulveris antiseptici (N. F.)	50	or	℥ii

Sig.: Use externally as a dusting powder.

This powder is principally boric acid and contains 0.1 per cent. each of phenol, eucalyptol, menthol and thymol; 0.5 per cent. of salicylic acid and 12 per cent. of zinc sulphate. It is soluble and may be used in 5 per cent. aqueous solution.

℞.	gm.		
Lycopodii	50	or	℥ii

Sig.: Use externally as a dusting powder.

℞.	gm. or c.c.		
Amyli	25		ʒvi
Talci purifacti	25	or	ʒvi
Phenolis liquefacti	1		m. xv

Sig.: Use externally as a dusting powder.

OINTMENTS.

The following ointments are sedative and protective:

℞.	gm.		
Acidi borici	10		ʒiiss
Unguenti zinci oxidi	20		ʒv
Unguenti aquæ rosæ	20	or	ʒv

M. et Sig.: Use externally as directed.

℞.	gm.		
Unguenti acidi borici	30	or	℥i

Sig.: Use externally as directed.

℞.	gm.		
Unguenti aquæ rosæ	30	or	℥i

Sig.: Use externally as directed.

℞.	gm.		
Acidi salicyli	2		ʒss
Adipis lanæ hydrosi	15	or	℥ss
Petrolati albi	30		℥i

M. et Sig.: Use externally as directed.

Pharmacology

THE BROADER AIMS OF THE COUNCIL ON PHARMACY AND CHEMISTRY.

TORALD SOLLMANN, M.D.
Member of the Council, Professor of Pharmacology and Materia Medica at the Medical Department of Western Reserve University.
CLEVELAND, OHIO.

(*Continued from page 1917.*)

XII. "ETHICAL PRODUCTS" ADVERTISED INDIRECTLY TO THE LAITY.

In the last paper I had occasion to point out some of the ways in which dissimulating manufacturers exploit the patronage of physicians to introduce their wares to the laity. This refined Jekyll-Hyde performance is reached by Rule 4 of the Council, which reads:

> No article will be admitted whose label, package or circular accompanying the package, contains the names of diseases, in the treatment of which the article is indicated. The therapeutic indications, properties and doses may be stated.

Since this rule does not interfere in the slightest degree with the dissemination of such statements to physicians, but only to their appearance on the package, which goes to the patient and *not* to the physician, it might be supposed that the rule would be welcomed by such manufacturing houses as are sincere in their statements that they desire only the patronage of physicians. Indeed, the rule should be more far-reaching than it is. The Council has already ruled against containers on which the name is permanently affixed ("blown in the bottle"), and also holds that therapeutically suggestive names are contrary to the spirit of this rule, and enforces this interpretation in the case of mixtures, and is contemplating its extension to all products. I believe that the mention of all therapeutic indications whatsoever should be omitted from the package, and one firm at least has voluntarily accepted this suggestion.

But even in its original mild form, this rule has caused a great deal of difficulty. When it was first adopted it barred nearly every proprietary product of American manufacture and thus caused much delay in the admission of such products. This was the principal reason why German products were admitted at first much more rapidly than American products. Our German cousins had, on the whole, kept their labels free from these objectionable features; for some reason the custom had not become so fashionable abroad. That many American manufacturers had adopted the fashion as a mere commercial custom, without ulterior motives, was evidenced by their prompt compliance with this rule, when its meaning was pointed out to them. Others required rather more argument, or the threat of the rejection of their products. On the whole, however, the response has been satisfactory, if not always quite voluntary, and the Council feels rather proud of the fact that the profession can now prescribe any of the admitted remedies without subjecting the patient to this form of advertising. There are a few exceptions in the case of some of the older suggestive names, which will be eliminated as rapidly as possible, but which, in the meantime, the prescriber himself can readily recognize.

The manufacturers whose products are not admitted by the Council have not generally participated in this reform; they prefer to continue their attempts to satisfy the two masters —or rather, to beguile the two dupes—the profession and the public. The profession can no longer plead the excuse of ignorance; and if every physician will follow his conscience these products will be very promptly eliminated from professional use. Many, I hope, will disappear altogether; others will at least abandon false pretenses and sail under their true colors—as confessed "patent medicines."

THE TESTIMONIAL AS A COMMERCIAL ASSET.

Incidentally, the hour of unmasking will reveal somewhat strikingly one folly of the testimonial habit. A testimonial which is no longer acceptable to the profession is still a commercial asset in advertising to the laity, and whether paid for or not, it will not generally be thrown aside until it becomes altogether too threadbare or ancient for further use. Antikamnia, listerine, Kutnow's powder and many more are well on the way. What about those who "testified" when these still basked in the rays of professional sunshine? Is anyone quite sure that his testimonial will not be put to the same prostitution? Is the high reputation of a firm a positive guarantee? Doubtless, there *are* firms, whose justly esteemed owners would not stoop to what they would consider dishonest practice. Professional and commercial ethics, however, are not quite the same thing, and what is deemed highly improper in one may be the custom, and, therefore, the right thing, in the other. Moreover, the founders of these highly respected houses wax old, and retire or die; but the firm may continue as long as there is any profit in the business. The house of Squibb is no longer in the hands of those who founded it, and to whom its high standard was due; the house of Lehn & Fink is no longer managed by the men whose names it bears. Indeed, this house of Lehn & Fink furnishes a fine illustration for the text—one illustration merely, for while this is the latest and most flagrant example, it is not unique.

MARKETABLE VALUE OF THE "URIC-ACID THEORY."

The details of the story may be read in THE JOURNAL.[1] The plot is briefly as follows: Some years ago, as everyone will recall, a tide of "uric-acid theory" enthusiasm swept over the civilized world, carrying with it a host of "uric-acid solvents;" prominent among these, a substance named piperazin. As usual, this was backed by numerous testimonials from men prominent and obscure.

The professional enthusiasm soon ebbed away, and I dare say that the testimonials would not be quite as numerous now. I believe that some of the writers are even a little ashamed that they were taken in so easily, and would prefer not to have the subject alluded to. Not so the manufacturers! The laity has not yet succeeded in eliminating the uric acid idea, and is, therefore, still using the eliminators. Do you see the commercial value of these obsolete testimonials? The public can not be expected to know that all these eminent professors and clinicians have renounced their opinions of a few years ago. Now is the time to go for the public, before it is too late.

A COMMERCIAL CATSPAW.

It would be quite below the dignity of the large chemical house which manufactures piperazin to advertise any of their products direct to the laity. Let us give it due credit for the fact. The house of Lehn & Fink is not troubled with such petty scruples. As the manufacturer's agents, they originally introduced the piperazin to the American profession, and know all about it; the testimonials are ready at hand; why throw them away? Accordingly, Lehn & Fink proceed to circularize the "better and more intelligent class of laymen" with advertisements of their "Piperazine Water," a solution of piperazin and phenocoll, *the* "scientific cure" for rheumatism and gout, attested and endorsed by all the most eminent members of the medical profession—witness our old friends, the resurrected testimonials! There they all are, nicely served—an appropriate tail to the kite of the "mail order" treatment of Edwin P. Adams, M.D., who writes so scientifically (to physicians), or entertainingly (to the public) on "Uric Acid Diseases and Their Treatment with Piperazine Water."

(*To be continued.*)

PYRENOL.

Another Mechanical Mixture Advertised as a Chemical Compound.

We called attention recently[1] to the evolutionary process which arhovin, a preparation put out by a German firm, was undergoing in its change from the atomic to the molecular.

Still another product of the same firm—pyrenol—has fallen from its high estate as a chemical compound (as exploited by its manufacturers) to a mere mechanical mixture (as determined by disinterested analysts). Pyrenol is described by its makers as a synthetic combination containing the radicals of thymol, benzoic acid and salicylic acid united with sodium. To represent this product there was invented a graphic formula of fearful and wonderful design, which the manufacturer, when cornered, admitted was not only unscientific but impossible. The excuse given was that it—the formula—would assist the physician to get a clear idea of the composition of this unique synthetic and that it was not intended for chemists and pharmacists!

When analyzed by Zernik, of the Pharmaceutical Institute of the University of Berlin, pyrenol was found to be a mere mixture of sodium benzoate and sodium salicylate with small amounts of free benzoic acid (0.84 per cent.) and thymol (0.2 per cent.). This analysis was verified by Professor Thoms, director of the Pharmaceutical Institute, and also independently by Gadamer and Gaebel of Breslau. The manufacturer when confronted with these facts claimed that as the preparation was produced by melting the ingredients together, and not merely mixing them mechanically, that a synthetic substance was formed. That a new substance may in some cases be formed by fusing together two or more ingredients is unquestionably true, but the point to be considered is not what *may* happen but what *does* happen. In this particular case the result appears to be a simple mixture.

The firm that makes pyrenol, the *Chemisches Institut*, Dr. A. Horowitz, Berlin, also makes iodofan, the composition of which was recently[2] shown to differ vastly from the advertised claims. It also puts out visvit, a nostrum which has been exploited by means of clinical histories rehashed from write-ups of other preparations.[3] All of which goes to show that pharmaceutical literary fiction is not confined to the United States, but that German enterprise in this, as in other lines, is encroaching on a highly specialized field. Simple patriotism, however, would seem to dictate that if we must be humbugged let it at least be by home talent.

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1. Feb. 29, 1908, 704.

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1. THE JOURNAL, May 9, 1908, 1541.
2. THE JOURNAL, March 7, 1908, 784.
3. THE JOURNAL, May 2, 1908, 1440.

Correspondence

Quinin in Pneumonia.

Cananea, Sonora, Mexico, April 25, 1908.

To the Editor:—I was surprised to see an abstract on page 1286 of The Journal, April 18, in which the massive doses of quinin in pneumonia are again advocated. The method can hardly be called new in any other sense than that Dr. Galbraith added the iron that made it "original." I have often been tempted to write on the subject, but I thought that so few physicians nowadays would be looking for a specific drug treatment for pneumonia that the discussion would be limited, and that my letter would have no right to space in The Journal. I have seen considerable discussion in good journals, however, and when I was in California many of my friends asked me about it, so that I think it well that the other side be made known.

It may be significant to many that those physicians here who have seen the treatment used most, now never use it in their private practice and most emphatically condemn it.

I feel sure that if many of the physicians trying this method had read the original papers they would not have taken any notice of the matter. I quote from "Fifty Consecutive Cases of Pneumonia Without a Death," by Dr. W. J. Galbraith in The Journal, Jan. 28, 1905, page 291.

"The present knowledge of the etiology (excepting exposure to wet, cold and alcohol) and pathology is somewhat limited, and I question the propriety of basing our management on the principles of theory alone. I am inclined to believe that an invasion of a combination of micro-organisms, or their products, are etiologic factors in pneumonia." The doctor would better incline a little further and believe it confidently.

"The fact that I have been able to detect in several cases tenderness and pain . . . in the region of the gall bladder during the first stage of the disease, has strengthened my theory of primary gall-bladder invasion. . . . What relation, if any, these preliminary symptoms have to pneumonia, and the factors that produce these symptoms, are [sic] difficult or impossible to explain." The explanation might be sought with advantage in an article on diaphragmatic pleurisy.

"While improvement at this early period of the disease is gratifying, it is no comparison to the results achieved by the treatment in preventing the dangerous *symptoms of cardiac failure, commonly called crisis.* (Italics mine.) . . .

"That iron is a principal factor in maintaining the strength of the heart, as well as in acting as an antiseptic, there can hardly be a doubt. . . .

"I have proved that quinin will not depress the heart in any stage of pneumonia; on the contrary, it is the most reliable stimulant, and produces the effect that we have so often looked for in strychnin and alcohol. . . . I strongly maintain that the use of stimulants, alcohol and strychnin, prior to the stage of resolution, is a dangerous practice, as it increases the mechanical conditions that are distressing the patient instead of strengthening the disabled heart." These two statements (a little more widely separated in the article) read like the advertisement of a new proprietary that will at the same time abolish the cough and stimulate the amount of expectoration.

"I find that bromid of lithium in combination with chloral controls the nervousness and delirium, which is probably produced by toxemia, much better than does morphin. . . ." What is the use of these drugs if quinin acts so much better?

"The absence of complications, with one exception, in the last fifty cases, has possibly been influenced by the treatment. I do not feel justified, however, in making any positive claims of this character on so limited a number of cases." It is to be wished that a like reserve had been shown in the articles and interviews written for the *Cananea Herald.*

Before a physician begins treating his patients in such an irrational and dangerous manner, he ought to get more evidence than that given in this article. If one will prescribe what one knows might on general principles prove dangerous, how much more easily will one prescribe a proprietary whose composition is unknown to one

The following extracts are from "Wood's Therapeutics," twelfth edition:

"After toxic doses (of quinin) severe headache, delirium, stupor, complete deafness and blindness, dilated pupils, embarrassment of respiration, great weakness, convulsions, paralysis, and finally collapse may result, either comatose or delirious."

"Death has been shown by Henbach to be produced, at least in the lower animals, by a failure of respiration."

"The evidence is conclusive that both in man and the lower animals quinin in sufficient amount is a powerful depressant to the heart muscle or ganglia."

"On the red blood corpuscles quinin exerts a distinct influence in inhibiting their functional activity."

"The results of Binz' experiments seem to us to agree with the emphatic teachings of clinical experience that quinin has no direct specific influence in pyemic, septic or exanthematous diseases."

No one after reading up on the effects of quinin in large doses would think of trying to treat pneumonia with it.

During a three months' stay here in 1904 I had an opportunity to study this treatment and I was soon impressed by its harmfulness, as have been others who at different times have seen it used. As in most company hospitals, only the simplest case records were kept, and these by an untrained Mexican who occasionally put down the temperature, pulse, food, bowel movements and the medicine given. I noticed that the dosage, which at first was 75 grains, was reduced to 40 and often to 20. The patients often vomited the quinin shortly afterward, and they sometimes could not stand the iron. Dr. Galbraith's statement that there is no crisis is correct, because a sthenic case is soon transformed into what resembles a bad case of typhoid, and recovery is very slow, with delayed resolution, empyema, femoral phlebitis and other sequelæ. Are these included in what the doctor calls "discharging the patient practically well"? Several observers have occasionally noticed a remarkable freedom from tinnitus aurium and other signs of cinchonism after these doses. I have seen it also, and can explain it only by the fact that most of the remedy has been vomited or by the rapid appearance of the typhoid state in which the patient does not complain of anything, even the pleuritic pain. I have never seen the pulse benefited—though it often stands the treatment wonderfully—but I have seen the patient become nearly pulseless. I have also seen a big, strong young man take about three weeks for resolution after this treatment, and three days after his discharge from the hospital he dropped dead in his chair. A few months ago I saw a powerful young Mexican, who had every prospect of recovery, die after taking what I computed to be 40 grains of quinin. He had been doing well until the fourth day, when he took the "specific," which was followed by terrible tinnitus and a bursting feeling in the head. He became almost completely blind, was delirious all night and next day died after a few hours of stupor.

The tinnitus and blindness are not always recovered from, and I have seen several hopeless cases.

It is said that pneumonia is particularly malignant here, but I do not find that statement borne out either by the evidence of those who have practiced here longest or in my own experience. With the fresh-air treatment, which can not be too highly praised, with careful nursing directed especially to the avoidance of all effort by the patient, and the use of medicines only when definitely indicated, men recover here as well as anywhere else.

I would state in closing that I can only be surprised at the occasional good reports that come in. I class them with the eighty cases of typhoid I once saw reported in which a diet of vegetables and fruit caused no increase in mortality. A few cases do not prove anything.

We shall often fool ourselves, especially if we write up a series of cases while waiting to catch a train, as Dr. Galbraith says he did, without full notes before us, for our memories have a tendency to omit a few cases that unfortunately entered an otherwise perfect series.

Walter C. Alvarez, M.D.

Queries and Minor Notes

Anonymous Communications will not be noticed. Queries for is column must be accompanied by the writer's name and ad-ess, but the request of the writer not to publish name or address ll be faithfully observed.

CHLOROFORM ADMINISTRATION BY GAS LIGHT.

Alexandria, Va., May 31, 1908.

To the Editor:—Please state what changes may occur in chloro-rm vapor when it comes in contact with a gas flame and what jury may be done to the patient or attendants. M. M. O.

Answer.—Chloroform vapor, when in contact with a flame, is composed, with the formation of HCl, Cl, $COCl_2$ (carbonyl llorid) and other substances. These products of decomposition e irritating to the respiratory passages, and a fatal case of isoning from them has been reported. The irritant vapors are ot likely to be produced in sufficient quantity to be dangerous if ie room is well ventilated. It has been suggested that the ill fects of this decomposition may be prevented by hanging up a eet or towel saturated with ammonia by which the acid vapors ill be neutralized. The quantity of ammonia used should not be fficient to be of itself a cause of irritation.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending June 6, 1908:

Ashford, B. K., and Baily, H. W., captains, when no longer eeded at Hattiesburg, Miss., ordered to return to Washington Bar-acks.

Straub, P. F., major, ordered to report to the President of the rmy War College for duty pertaining to the staff ride over the attle fields of Virginia.

Lynch, Chas., major, ordered to temporary duty in the Sur-eon General's office, and on its completion to revert to status of eave.

Hutton, P. C., captain, ordered to return to Ft. Wm. H. Seward, laska, from Fort Benjamin Harrison, Ind.

Torney, G. H., colonel, granted leave of absence for 15 days.

Reynolds, C. R., captain, arrived in New York from the Philip-ines Division, on leave of absence.

Ebert, R. G., major, ordered to Vancouver Barracks, Washing-on, for duty as chief surgeon, Department of the Columbia.

LaGarde, L. A. lieut.-colonel, granted an extension of his leave f absence, to include June 24.

Munson, E. L., major, granted leave of absence for one month.

Baily, H. H., captain, returned to Fort Myer, Va., from detached ervice at Hattiesburg, Miss.

Crampton, L. W., colonel, LaGarde, L. A., and Banister, J. M., ieut.-colonels, appointed a board of review to meet at Washinpton, D. C., to review proceedings and findings of medical examining boards in the case of medical officers found disqualified for promotion.

Stone, J. H., major, relieved from duty with the Army of Cuban Pacification, and ordered to Newport News, Va., for further orders.

Sparrenberger, F. H., contract surgeon, granted leave for 1 month, 20 days, about July 10, 1908.

George, W. R. S., contract surgeon, returned to Fort Greble, R. I., from leave of absence.

Cutliffe, W. O., contract surgeon, relieved from service in the Philippines Division and ordered to sail August 15 for San Francisco., and there report for orders.

Whinnery, J. C., dental surgeon, left Ft. Stevens, Ore., for duty at Ft. Columbia, Ore.

Voorhies, H. G., dental surgeon, left Ft. Meade, S. D., for duty at Ft. Washakie, Wyo.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the two weeks ending June 6, 1908.

Cather, D. C., P. A. surgeon, commissioned P. A. surgeon from July 9, 1907.

Lane, H. H., asst.-surgeon, appointed asst.-surgeon from May 5, 1908.

Mayers, G. M., P. A. surgeon, ordered to continue treatment at the Naval Hospital, Mare Island, Cal.

Reed, E. U., asst.-surgeon, detached from the *Charleston* and ordered to the Navy Yard, Mare Island, Cal.

Castro, D. H., asst.-surgeon, detached from the *Maine* and ordered to the Naval Station, Guam, L. I.

Munger, C. B., asst.-surgeon, detached from the *Supply* and ordered to the *Maine*.

Holeman, C. J., asst.-surgeon, detached from the Naval Training Station, San Francisco, Cal., and ordered to the *Charleston*.

Old, E. H. H., asst.-surgeon, detached from the Naval Hospital, Canacao, P. I., and ordered to Washington, D. C., for examination for promotion, and then to wait orders.

McMurdo, H. B., acting asst.-surgeon, ordered to the Naval Training Station, San Francisco, Cal.

Warner, R. A., P. A. surgeon, commissioned P. A. surgeon from May 3, 1908.

Bishop, L. W., P. A., surgeon, detached from the *Haneoek* and ordered to the Naval Recruiting Station, Indianapolis.

Allen, A. H., asst.-surgeon, detached from duty in connection with the Cape Cruz-Casilda Survey Expedition and ordered to duty with marines at Havana, Cuba

White, E. C., asst. surgeon, detached from duty with marines at Havana, Cuba, and ordered home to wait orders.

Schaller, W. F., asst.-surgeon, resignation accepted to take effect June 1, 1908.

Biello, J. A., asst.-surgeon, detached from the Naval Hospital, Portsmouth, N. H., and ordered to the *Solace*.

Cook, F. C., surgeon, detached from the Naval Academy, and ordered to the *North Carolina*, June 6, 1908.

Smith, C. G., P. A. surgeon, ordered to the Naval Hospital, Portsmouth, N. H.

McDonell, W. N., P. A. surgeon, detached from the Naval Recruiting Station, Buffalo, N. Y., and ordered to the *Severn*, for duty in connection with the Navy Rifle Team.

Brister, J. M., P. A. surgeon, detached from the Naval Hospital, Puget Sound, Washington, and ordered to continue other duties.

Holeman, C. J., asst.-surgeon, orders of May 26 modified: detached from Naval Training Station, San Francisco, and ordered to the *Arethusa*.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the 14 days ended June 3, 1908:

Cobb, J. O., surgeon, granted leave of absence for 7 days.

Smith, A. C., surgeon, granted leave of absence for 1 month and 15 days, from July 6, 1908.

Young, G. B., surgeon, detailed to attend the meeting of the Lake Michigan Water Commission, at Grand Rapids, Michigan, May 27, 1908.

Rosenau, M. J., surgeon, granted leave of absence for 1 month.

Gardner, C. H., P. A. surgeon, granted leave of absence for 1 month, from May 31, 1908.

White, M. J., P. A. surgeon, granted leave of absence for 1 month, from June 1, 1908.

King, W. W., P. A. surgeon, relieved from duty at San Francisco Quarantine Station, and directed to report to the medical officer in command of the Marine Hospital at San Francisco, for duty and assignment to quarters.

Holt, J. M., P. A. surgeon, detailed to attend the annual meeting of the Oregon State Medical Association, Portland, Ore., July 1-3, 1908.

Trask, J. W., P. A. surgeon, granted leave of absence for 5 days, from June 2, 1908.

Roberts, Norman, asst.-surgeon, granted leave of absence for 3 days, from May 25, 1908, under Paragraph 191, Service Regulations.

Roberts, Norman, asst.-surgeon, granted leave of absence for 1 month, from June 1, 1908.

Hunt, Reid, Chief Division of Pharmacology, detailed to attend the Council of Pharmacology and Chemistry, in Chicago, Ill., June 2, 1908, on the completion of which duty to rejoin his station.

Carter, P. I., acting asst.-surgeon, granted leave of absence for 3 days, from May 19, 1908, under Paragraph 210, Service Regulations.

Cleaves, F. H., acting asst.-surgeon, granted leave of absence for 1 day, May 22, 1908, on account of sickness.

Eichelberger, W. W., acting asst.-surgeon, granted leave of absence for 15 days, from June 10, 1908.

Fahey, E. W., acting asst.-surgeon, granted leave of absence for 10 days, from May 26, 1908.

Hunter, W. R., acting asst.-surgeon, granted leave of absence for 4 days, from June 4, 1908.

Keatley, H. W., acting asst.-surgeon, granted leave of absence for 3 days, from May 13, 1908, on account of sickness.

Naulty, C. W., Jr., acting asst.-surgeon, granted leave of absence for 5 days, from June 17, 1908.

Pearse, H. E., acting asst.-surgeon, granted leave of absence for 3 months without pay, from June 15, 1908.

Thornton, M. J., acting asst.-surgeon, granted leave of absence for 1 month, from June 5, 1908.

Wakefield, H. C., acting asst.-surgeon, granted leave of absence for 5 days, from May 21, 1908, under Paragraph 210, Service Regulations.

Bell, J. M., pharmacist, granted leave of absence for 5 days, from May 19, 1908, under Paragraph 210, Service Regulations.

APPOINTMENT.

Dr. Nathanael L. A. K. Slamberg appointed as acting asst.-surgeon, for duty at Eastport, Idaho.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended June 5, 1908:

SMALLPOX—UNITED STATES.

California: Los Angeles, May 9-16, 1 case; San Francisco, 4 cases.

Florida: Jacksonville, May 16-23, 1 case.

Illinois: Chicago, May 16-23, 1 case; Springfield, May 14-21, 2 cases.

Indiana: Fort Wayne, May 18-25, 1 case; La Fayette, 3 cases; Terre Haute, May 16-23, 10 cases.

Kansas: Kansas City, May 16-23, 7 cases; Wichita, April 18-25, 6 cases.

Kentucky: Covington, May 16-23, 5 cases.

Louisiana: New Orleans, May 16-23, 4 cases.

Michigan: Detroit, May 16-23, 1 case.

Minnesota: Winona, May 16-23, 1 case.

Missouri: Kansas City, May 16-23, 10 cases; St. Joseph, May 19-26, 16 cases; St. Louis, May 16-23, 4 cases.

Montana: Butte, May 12-19, 1 case.

North Carolina: Charlotte, May 16-23, 1 case.

Ohio: Cincinnati, May 15-23, 3 cases; Dayton, May 16-23, 1 case.

Texas: Galveston, May 15-22, 3 cases.

Virginia: Richmond, May 16-23, 1 case.

Washington: Spokane, May 9-16, 16 cases.

Wisconsin: La Crosse, May 16-23, 6 cases; Racine, May 16 23, 3 cases.

SMALLPOX—FOREIGN.

Brazil: Manaos, April 18-25, 1 case; Rio de Janeiro, April 19-26, 163 cases, 59 deaths.

Canada: Hamilton, April 1-30, 12 cases.

China: Hongkong, April 11-18, 23 cases, 18 deaths; Shanghai, April 12-26, 6 deaths.

Egypt: Cairo, April 22-May 6, 14 cases, 5 deaths.

France: Paris, May 2-9, 4 cases; Toulon, April 1-30, 7 cases.

Great Britain: Glasgow, May 8-15, 1 case; London, May 2-9, 1 case, 1 death.

India: Bombay, April 1-28, 48 deaths; Calcutta, April 11-18, 28 deaths.

Italy, general, May 2-9, 39 cases.

Java: Batavia, April 4-11, 5 cases.

Mexico: Aguascalientes, May 10-17, 2 deaths; Mexico City, May 4-11, 16 deaths; Progreso, April 1-30, 1 death.

Portugal: Lisbon, May 2-9, 4 cases.

Russia: Moscow, April 18-May 2, 45 cases, 25 deaths; Odessa, 20 cases; Riga, April 25-May 9, 3 cases; St. Petersburg, April 18-25, 5 cases, 5 deaths; Warsaw, March 28-April 18, 14 deaths.

Spain: Denia, May 2-9, 3 cases, 1 death; Madrid, April 1-30, 1 death; Seville, 2 deaths; Valencia, May 2-9, 21 cases.

Transvaal: Pretoria, April 11-18, 1 case.

Turkey: Bagdad, April 11-18, 30 cases, 2 deaths; Constantinople, April 26-May 10, 4 deaths.

YELLOW FEVER.

Brazil: Manaos, April 25-May 2, 1 case, 1 death; Para, 15 cases, 12 deaths.

Mexico: Laguna de Terminos, May 30-June 2, 2 deaths on Russian bark *Lembit*.

CHOLERA.

India: Bombay, April 21-28, 5 deaths; Calcutta, April 11-18, 267 deaths; Madras, April 18-24, 2 deaths; Rangoon, April 11-18, 4 deaths.

PLAGUE.

China: Foochow, April 11-18, present; Hong Kong, 20 cases, 15 deaths.

Egypt: General, April 12-May 12, 268 cases, 150 deaths; Alexandria, April 1-May 12, 4 cases, 1 death.

India: General, April 18 25, 6,755 cases, 5,523 deaths; Bombay, April 21-28, 462 deaths; Calcutta, April 11-18, 118 deaths; Rangoon, 27 deaths.

Turkey: Bagdad, June 2, present.

Association News

NEW MEMBERS.

List of new members of the American Medical Association for the month of May, 1908:

ALABAMA.

Acker, C. T., Columbiana.
Blair, H. W., Sheffield.
Hutton, C. C., Yellow Pine.

ARIZONA.

Cohen, M.D., Bisbee.
Cutter, W. D., Bisbee.
Murrieta, A. J., Jerome.

ARKANSAS.

Barry, W. H., Hot Springs.
Hartsell, W. L., Draughon.
Johnson, Hugh, Barling.
Moncrief, J. J., Beebe.
Price, C. C., Douglas.
Steele, S. B., Hot Springs.

CALIFORNIA.

Elliott, A. J., San Diego.
Jones, J. W., South Pasadena.
Klonk, M., Lodi.
Meierdierks, W. A., San Francisco.
Neff, F. F., Concord.
Russ, Raymond, San Francisco.
Savage, P. M., China, Cal.
Scott, A. J., Los Angeles.
Voorhees, H. M., Los Angeles.

COLORADO.

Claybaugh, W. W., Fort Morgan.
Dawson, J. F., Platteville.
Day, D. W., Ft. Collins.
Rook, C. W., Julesburg.
Woodbridge, J. H., Pueblo.

CONNECTICUT.

Alcott, R. W. E., West Hartford.
Egbert, J. H., Willimantic.
McWhorter, E. F., New Haven.
Swasey, E. P., New Britain.
Ward, J. W., Hartford.

DISTRICT OF COLUMBIA.

Barnhart, G. S., Washington.
Hynson, L. M., Washington.

FLORIDA.

McEwan, J. S., Orlando.

GEORGIA.

Cato, F. L., Americus.
Rogers, W. D., Kensington.

IDAHO.

Froom, J. E., Boise.
Hawley, F. S., Mountain Home.

INDIANA.

Allen, H. R., Indianapolis.
Ambrose, U. C., Connersville.
Arthur, N. Maude, Washington.
Baker, W. H., Terre Haute.
Beavers, S. D., Decatur.
Bills, L. F., Atlanta.
Botts, E. H., Zanesville.
Coole, A. H., Frankfort.
Cook, T. R., Bowling Green.
Crampton, C. C., Delphi.
Cupp, M. F., Metamora.
Cuthbert, F. S., Kingman.
Dando, G. H., Orland.
Davis, E. J., Moreland.
Darroch, S. C., Cayuga.
Denant, M. S., Walkerton.
Dyar, E. W., Ossian.
Eckelman, M. M., Elkhart.
Farver, M. A., Middlebury.
Flack, O. M., Boswell.
Furniss, H. W., Indianapolis.
Galbreth, W. H., Rockfield.
Gardner, C. A., Kendallville.
Gilbert, J. L., Kendallville.
Gillum, W. H., Rockville.
Givens, C. C., Lewis.
Goodrich, C. D., Elkhart.
Grant, L. E., Marengo.
Greenwell, Franklin, Huntertown.
Hall, H. M., Camden.
Hamilton, A. N., Waynetown.
Hatfield, I. N., Bluffton.
Holland, J. E. P., Bloomington.
Horton, C. J., Argos.
Hoy, B. F., Syracuse.
Hunt, L. F., Anderson.
Johnson, C. E., Otis.
Jones, T. M., Anderson.
Kimmel, C. C., Ft Wayne.
King, F. A., Garrett.
Kister, G. H., Elberfeld.
Kutch, M. H., Terre Haute.
Lake, G. B., Wolcottville.
Lawhead, W. E., Inwood.
Leuthart, C. P., Galena.
Lloyd, A. W., Marion.
Luckey, J. E., Wolf Lake.
Macbeth, A. H., Fort Wayne.
Martin, J. S., Rolling Prairie.
McArdle, J. E., Ft. Wayne.
McDonald, A. C., Warsaw.
McGaughey, W. M., Greencastle.
McQuoun, O. W., Marion.
Mentzer, S. E., Monroville.
Myers, I. N., Maples.
Nye, J. H., Cromwell.
Page, W. B., Middlebury.
Parker, E. E., Culver.
Patten, V. C., Morristown.
Poinier, E. W., Andrews.
Preston, H. P., Plymouth.
Pulskamp, Bernard, Rome City.
Rawles, L. T., Huntertown.
Reed, J. V., Indianapolis.
Rogers, E. A., Somerset.
Schrock, H. W., La Grange.
Shultz, J. J., Delphi.
Shumaker, W. F., Butler.
Snee, H. Boyd, South Bend.
Snyder, B. F., Camden.
Spaulding, L. A., Bluffton.
Stroup, C. C., Mishawaka.
Stout, O. L., Upland.
Stunkard, T. C., Terre Haute.
Thomson, J. F., Garrett.
Trook, E. M., Marion.
Vancleave, R. H., Farmersburg.
Vereker, M. F., Kitchel.
White, W. J., Gary.
Williams, L. L., Brazil.
Williamson, A. A., Marshall.
Wilson, LeRoy, Kingsbury.
Wood, Charles, Sardinia.
Woodruff, C. A., Ligonier.
Young, M. H., Harmony.

ILLINOIS.

Acres, Louise, Chicago.
Allan, J. G., Edgewood.
Anderson, J. A., Chicago.
Andrews, J. J., Chicago.
Atwood, R. J., Paxton.
Austin, A. M., Stronghurst.
Bacon, M. W., Chicago.
Balensiefer, O., Peru.
Ball, A. W., Rushville.
Barlow, T. H., Glen Ellyn.
Barnes, O. F., Arcola.
Barnhizer, J. G., Forrest.
Bauman, F., Chicago.
Bechtold, W. G., Breese.
Bennett, H. F., Litchfield.
Benz, H. A., Wheeling.
Bert, Eddy, Chicago.
Bishop, R. W., Chicago.
Blayney, F. H., Chicago.
Boehmer, O., Chicago.
Bohart, W. H., Chicago.
Borin, W. A., Bartonville.
Borland, L. C., Chicago.
Boshell, H. N., Melvin.
Boyer, W. N., Aledo.
Boynton, L. V., Vermont.
Brian, C. F., Bellmont.
Brigham, C. R., Brookville.
Brooks, Overton, Chicago.
Brown, A. E., Waukegan.
Brydges, J. C., Chicago.
Bucknam, A. F., Warren.
Burkholder, J. F., Chicago.
Bushnell, G. E., Rochelle.
Carr, J. G., Chicago.
Chapman, C. M., Deer Creek.
Clark, Dwight, Evanston.
Clarke, G. W., Roseville.
Clayton, C. F., Chicago.
Colby, B. D., Chicago.
Collins, J. S., Carlinville.
Conant, P. B., Roseville.
Conibear, W. H., Morton.
Copenhaver, J. H., Bellflower.
Corcoran, E. A., Chicago.
Corcoran, Katherine W., Chicago.
Cramp, A. J., Chicago.
Crist, J. C., Chicago.
Cruikshank, R. D., Danville.
Culver, Louise L., Sandwich.
Davis, C. B., Chicago.
Dean, G. A., Lane.
Dechow, P. H., Kinderhook.
Dern, H. J., South Chicago.
Dillman, J. V., Ingraham.
Dimond, S. B., Albany.
Doe, Anders, Chicago.
Doederlein, T. J., Chicago.
Drake, A. K., Macomb.
Duckwall, M. H., Moweaqua.
Dwyer, Anna, Chicago.
Elfrink, B. F., Chenoa.
Ely, C. F., Chicago.
Engelbrectson, Ferdinand, Chicago.
Ewan, R. T., Smithfield.
Exton, Lucy A., Thomasboro.
Farquharson, H. M., Chicago.
Fern, W. J., Tunnel Hill.
Flannery, R. E., Chicago.
Forrester, C. R. G., Chicago.
French, L. C., Chicago.
Freund, A. L., Chicago.
Friend, Emanuel, Chicago.
Frost, H. B., Chicago.
Fuller, G., Chicago.
Fuller, G. W., Paris.
Gardner, Stella M., Chicago.
Geen, J. S., Utica.
Geiger, A. H., Chicago.
Geiger, C. W., Kankakee.
Gibbs, S. P., Chicago.
Gillmore, Emma W., Chicago.
Golden, I. J. K., Chicago.
Goodwin, C. G., Chicago.
Gotchy, E. D., Chicago.
Gould, Henrietta, Chicago.
Gourley, F. L., Waukegan.
Grant, J. F., Chicago.
Green, J. A., Rockford.
Griffitts, T. H. D., Springfield.
Griswold, W. C., Princeton.
Guerin, John, Chicago.
Gunn, H. F., Galena.
Hagans, F. M., Lincoln.
Haley, S., Wellington.
Hall, W. T., Toulon.
Hall, W. W., McLeansboro.
Hamisfar, Florence N., Chicago.
Hanes, W. W., Mt. Morris.
Hardinger, J. D., Gays.
Harper, Mary McKibbin, Maywood.
Harrison, C. W., Chicago.
Harrower, H. R., Kankakee.
Hartman, W. W., Chicago.
Harvey, J. A., Chicago.
Hash, Evelyn St. Croix, Chicago
Hash, E. W., Chicago.
Heckman, I. J., Hinckley.
Hedges, A. N., Matteson.
Heinen, Aloys, Chicago.
Hench, J. B., Hinsdale.
Herstman, H. G., Vergennes.
Hertig, Elmira, Galesburg.
Herz, Karl, Chicago.
Hill, E. L., Percy.
Hill, T. C., Fancy Prairie.
Hornsby, J. A., Chicago.
Hoyt, D. C., Chicago.
Hubbard, O. W., Batavia.
Irenans, Carl, Chicago.
Isom, W. C., Rockwood.
Jackman, F. O., Bloomington.
Jackson, Dudley, Chicago.
Jacobs, H. L., Chicago.
Joffee, Wm., Chicago.
Johnson, G. W., Savanna.
Johnson, S. R., Divernon.
Johnston, J. A., Byron.
Johnston, R. C., Aledo.
Jones, C. L., Noble.
Jones, R. R., Sherman.
Jordan, G. T., Chicago.
Jungels, W. W., Chicago.
Kaa, Niels A., Stockton.
Keller, Alvin, Candiff.
Kelly, P. H., Chillicothe.
Keller, U. S. G., Warren.
Kemp, N. C., Chicago.
Kerlin, E. I., Chicago.
Kilgore, J. G., Vermillion.
Kirby, D. D., Carter.
Kitzing, F. F., Chicago.
Kloutz, C. E., Cherry Valley.
Knapheide, W. S., Quincy.
Kratz, E. A., Champaign.
Kreye, Paul, Chicago.
Krost, R. A., Chicago.
Kunze, W. R., Belleville.
Lampe, H. G., Chicago.
Landau, B. G., Chicago.
Landau, D. R., Chicago.
Langhorst, F. H., El Paso.
Langstaff, J. H., Roberts.
Leigh, C. W., Chicago.
Lenz, J. A., Chicago.
Leonard, T. H., New Holland.
Letourneau, R. A., Chicago.
Lewis, J. W., Chicago.
Lightle, G. A., Plainville.
Linden, F. C., Chicago.
Lindorff, O. W., Swedona.
Lindsay, J. C., Chicago.
Little, Z., Chicago.
Long, J. P., Chicago.
Lowe, A. L., Robinson.
Lumley, G. G., Chicago.
Lytle, C. F., Altoona.
Macdonald, P. S., Chicago.
MacNab, M.D., Chicago.
Manning, E. T., Galesburg.
Marder, J. L., Venice.
Marshall, H. L., Stronghurst.
Martin, F. A., Lakewood.
Martin, H. G., Chicago.
Martin, S. C., Anna.
Martin, W. B., Sherrard.
Matthew, E. S., Divernon.
Mauzey, W. H., Findlay.
Maxwell, G., Polo.
McClure, C. F., La Grange.
McCormick, O., Herscher.
McCutchan, J. F., Alexis.

McDonald, C. H., Decatur.
McDowell, W. S. I., Chicago.
McEwen, Mary G., Evanston.
McKinney, T. J., Gifford.
Melton, J. E., Fish Hook.
Mercer, W. H., Raymond.
Meyer, A. W., Bloomington.
Meyers, H. L., Chicago.
Millar, A. J., Edgington.
Miller, J. M., Villa Grove.
Miller, W. E., Columbus.
Milton, B. S., Chicago.
Mitchell, O. L., Chicago.
Molkup, F. C., Chicago.
Moore, R. V., Freeport.
Moore, S. M., Chicago.
Morey, L. L., Vandalia.
Morse, Eliza R., Chicago.
Morse, M. R., Harvey.
Nathason, J. L., Chadwick.
Noren, G. P., Kewanee.
O'Brien, G. G., Chicago.
O'Callaghan, C. D., Chicago.
Ohlendorf, W. C., Chicago.
Olson, W. C., Chicago.
Overholser, J. D., Milledgeville.
Oyen, A. M., Chicago.
Palmer, J. M., Grays Lake.
Parker, C. H., Chicago.
Paul, I. O., Winnebago.
Peacock, S. B., Baylis.
Phelps, L. B., Chicago.
Phifer, C. H., Chicago.
Piper, C. W., Chicago.
Plumer, J. A., Trivoli.
Pollock, H. L., Chicago.
Pollock, M. D., Decatur.
Porterfield, W. L., Chicago.
Powers, J. W., Mt. Carroll.
Pratt, Earl M., Oak Park.
Pratt, G. N., Chicago.
Pratt, H. L., Elgin.
Pribble, E. B., St. Elmo.
Price, W. J., Princeville.
Putman, H. C., Canton.
Quinn, J. J., Chicago.
Rich, Katherine B., Chicago.
Richards, Ellen A., Streator.
Rightman, Wm., Chicago.
Riley, J. H., DeKalb.
Rinedollar, N., Mt. Carroll.
Ring, Frances A., Chicago.
Roarke, J. P., Bushnell.
Roberts, A. J., Ottawa.
Roberts, B. T., Morgan Park.
Robinson, L. F., Ullin.
Rogier, H. O., Mason City.
Rohr, F. W., Chicago.
Roth, C. R., Chicago.
Rothstein, Thos., Chicago.
Royall, B. A., Villa Ridge.
Ruggles, E. W., Chicago.
Runkle, G. D., Industry.
Rudd, Helga, Chicago.
Sadler, Lena K., Chicago.
Salinger, David, Chicago.
Salyers, J. O., Springfield.
Sass, Marja Dowiatt, Chicago.
Schwingel, W. H., Aurora.
Scott, W. H., Dallas City.
Seaton, C. M., Morrisonville.
Senn, W. N., Chicago.
Shaffer, Vesper, Chicago.
Sibley, W. C., Fairfield.
Sidley, F. K., Peoria.
Simmons, J. C., Norris.
Sloan, J. F., Peoria.
Smedley, J. E., Chicago.
Smith, R. T., DeKalb.
Speik, F. A., Chicago.
Sperry, H. C., Hull.
Staley, Clinton, Enfield.
Standard, A. P., Macomb.
Steele, W. A., Chicago.
Steen, E. R., Joliet.
Stewart, J. C., Anna.
Stout, A. M., Chicago.
Stuart, G. J., Chicago.
Sweeting, G. C., Morton Park.
Tate, L. N., Carthage.
Taylor, C. M., Bethany.
Taylor, O. F., Granville.
Thompson, M. W., Chicago.
Thompson, P. C., Jacksonville.
Thompson, Theodore, Shelbyville.
Tucker, G. W., Chicago.
Turner, C. W., Harrisburg.
Tuttle, H. H., Springfield.
Vick, J. W., Carterville.
Wadsworth, J. L. R., Collinsville.
Walker, F. J., Maquon.
Walker, J. H., Effingham.
Warder, W. S., Nauvoo.
Watson, R. L., Florid.
von Wedelstaedt, Bismarck, Chicago.
Weinlander, John, Chicago.
Weir, J. W., Sparta.
Wheeler, Ralph, Chicago.
Whited, D. F., Dahlgren.
Wickham, R., Chicago.
Williams, E. C., Downs.
Williams, J. F., Chicago.
Wolff, M. B., Chicago.
Wood, Glenn, Chicago.
Worstall, S. A., Waldron.
Wuerth, J. J., Chicago.
Yerger, C. F., Chicago.
Yerkes, T. P., Upper Alton.
Young, W. A., Springfield.
Zeigler, W. T., Canton.
Zerfass, F. P., Sullivan.
Zorger, Annie L., Champaign.

IOWA.

Amos, H. H., Charles City.
Augustine, Grant, Minden.
Ball, J. A., Stuart.
Barry, P. J., Auburn.
Bendixen, P. A., Davenport.
Bilby, A. M., Galva.
Bilger, F. W., Riverton.
Bryant, A. J., Blairstown.
Byerly, A. J., Coggon.
Chapman, E. C., Ft. Madison.
Chittum, J. H., Wapello.
Christensen, C. J., Jewell.
Cooper, J. C., Villisca.
Craig, Jas., Keosauqua.
Crane, G. H., Holstein.
Crowley, D. F., Des Moines.
Day, W. R., Moravia.
Delahunt, J., Marathon.
Dosh, G. W., Brighton.
Fleming, J. C., Burlington.
Garver, B. J., Iowa Falls.
Harken, C. R., Osceola.
Henry, C. W., Coon Rapids.
Heilman, E. S., Ida Grove.
Hennessy, F. A., Calmar.
Henry, C. A., Farson.
Heslop, Payne R., Van Horne.
Hoffman, P. M., Tipton.
Howard, W. A., Holstein.
Jarvis, H. D., Rosehill.
Jenkins, E. R., Washington.
Johnson, J., Jr., Alden.
Johnson, M. E., Corning.
Karterman, M. R., Ida Grove.
Kershner, F. O., Clinton.
Knepper, J. J., Baldwin.
Knipe, J. B., Armstrong.
Labagh, N. W., Mystic.
La Force, B. D., Ottumwa.
Lashbrook, E. E., Shellsburg.
Layman, D. W., Garwin.
Leigh, H. J., Carroll.
Lesher, H. B., Fairfield.
Love, F. L., Iowa City.
Lyon, J. D., Chester.
Mattison, C. W., Swea City.
McCowen, Jennie, Davenport.
McFau, W. D., Miles.
Mehlhop, C. W., Dubuque.
Moore, M. F., Martinsburg.
Morris, Livingston, Stockport.
Morris, Z. E., Stockport.
Noland, C. A., Boone.
Park, George, Sioux City.
Pfannebecker, Wm., Sigourney.
Piper, L. P., Des Moines.
Replogle, J. A., Udell.
Roberts, F. M., Ralston.
Robertson, A. A., Crescent.
Shaffer, C. J., Carson.
Sherman, B. H., Dexter.
Smith, R. C., Cedar Rapids.
Stevenson, E. F., Webster City.
Stoecks, W. A., Davenport.
Sweet, H. L., Mt. Etna.
Townsend, D. J., Lohrville.
Werner, C. A. A., Albert City.

KANSAS.

Adams, W. A., Easton.
Barker, J. L., Dearing.
Bigelow, G. J., Caney.
Clark, J. D., Wichita.
Dillon, J. A., Larned.
Eager, J. L. B., Kansas City.
Home, F. B., Beloit.
Miller, Max, Newton.
Olson, Evald, Burlingame.
Stahl, C. W., Auburn.
Walker, H. M., Pratt.
Wilson, R. M., Norton Ville.
Wright, R. E., Bern.

KENTUCKY.

Asman, Bernard, Louisville.
Bean, A. J., Hardin.
Beard, S. L., Shelbyville.
Buck, G. H., Grayson.
Childress, W. J., Livingston.
Chipps, J. E., Birdsville.
Clark, O. P., Russell.
Clement, I. H., Marion.
Darbro, J. R., Eagle Station.
Eisenman, F. T., Louisville.
Ellis, P. V., Ghent.
Ford, G. W., Powder Mills.
Foster, R. L., Hartford.
Gowdy, E. L., Campbellsville.
Graham, E. J., Hudgins.
Hall, S. J., Constantine.
Hampton, J. B., Millerstown.
Harover, S. R., Maysville.
Harwood, C. P., Milton.
Hatfield, J. H., Barren Fork.
Heim, J. W., Louisville.
Holland, D. J., Louisville.
Maguire, J. D., Lexington.
McGuire, C., Wedonia.
McIntyre, E. L., Woodlawn.
McKenna, P. K., Mt. Sterling.
McMahan, J. W., Bedford.
Milner, W. L., Union Star.
Moser, J. T., Lebanon.
Peters, S. B., Gray.
Powell, H. B., Corydon.
Quesenberry, J. L., Worthington.
Rankin, C. B., Monticello.
Sanders, Wm., Louisville.
Todd, J. N., Fredonia.
Vicars, J. W., Pikeville.
Willmoth, A. D., Louisville.

LOUISIANA.

Buffington, W. R., Yellow Pine.
Schulze, William, Monroe.

MAINE.

Parker, R. A., Auburn.
Smith, F. M., Portland.
Sturgis, J., Auburn.
Tomlinson, E., Orono.

MARYLAND.

Goldsborough, F. C., Baltimore.
Iglehart, J. H., Baltimore.
Norris, R. R., Baltimore.
Pessagno, E. L., Baltimore.
Shemwell, J. F., Baltimore.

MASSACHUSETTS.

Cooper, A. V., Palmer.
Coyne; T. J., Boston.
Ehrenfried, A., Boston.
Lucas, W. P., Boston.
Mather, J. A., Colerain.
Merritt, L. A., Bridgewater.
Milot, A. F., Taunton.
Prince, C. O., Melrose.
Reynolds, G. E., Pittsfield.
Towle, E. D., Salem.
Tyzzer, E. E., Wakefield.
Wood, B. E., Allston.

MICHIGAN.

Bauer, Frederick, Moscow.
Begle, H. L., Detroit.
Braidwood, C. M., Dryden.
Butler, P. T., Kalamazoo.
Connor, Ray, Detroit.
Elwell, Loiza, Battle Creek.
Epler, B. N., Kalamazoo.
Ericsson, B. O., Ionia.
Garbutt, V. L., Detroit.
Garner, H. B., Traverse City.
Graham, D. M., Detroit.
De Haas, N., Fremont.
Haines, T. J., Three Rivers.
Harris, L. J., Jackson.
Herrick, A. W., Bay City.
Holm, M. L., Lansing.
Irwin, A. J., Port Huron.
Kirwan, E. J., Ludington.
Kremers, E. D., Holland.
Leenhouts, A., Holland.
Leighton, N. E., Hopkins.
Livingstone, P. I., Detroit.
McGraw, T. A., Jr., Detroit.
Miller, J. A., Farmington.
Moon, Cora A., Grand Rapids.
Moshier, Bertha E., Battle Creek.
Orr, J. W., Flint.
Paine, E. M., Grand Lodge.
Pitz, H. R., Kalamazoo.
Powers, L. I., Muskegon.
Quick, P. A., Muskegon.
Roob, G. W., Flushing.
Rozema, S. L., Grand Rapids.
Rumer, J. F., Davison.
Sands, T. E., Battle Creek.
Seager, G. B. M., Adrian.
Sellards, G. B., Deerfield.
Sethney, H. T., Crystal Falls.
Shepard, B. A., Plainwell.
Starring, Anna M., Crystal Falls.
Stone, R. C., Battle Creek.
Stoner, Laura B., Battle Creek.
Toles, L. W., Lansing.
Walker, R. E., Ann Arbor.
Wickham, A. B., Detroit.

MINNESOTA.

Arllrod, D. L., Hutchinson.
Bacon, Knox, St. Paul.
Ball, C. R., St. Paul.
Carman, J. B., Detroit.
Chowning, Wm. M., Minneapolis.
O'Connor, J. V., St. Paul.
Cook, P. B., St. Paul.
Dolder, F. C., St. Charles.
Freeborn, J. A., Fergus Falls.
Goodrich, Judd U., St. Paul.
Hall, A. R., St. Paul.
Hedback, A. E., Minneapolis.
Hodgkinson, J. G., So. St. Paul.
Holm, P. F., Wells.
Kennedy, Jane F., Minneapolis.
Lynch, M. J., Minneapolis.
McCollum, C. A., Minneapolis.
McKelway, G. I., St. Paul.
Muir, E. S., Winona.
Noth, H. W., Minneapolis.
Pease, G. R., Redwood Falls.
Ramsey, W. R., St. Paul.
Rees, S. P., Minneapolis.
Renz, G. A., St. Paul.
Sheldon, W. D., Minneapolis.
Sternes, E. G., St. Paul.
Ulrich, Mabel S., Minneapolis.

MISSISSIPPI.

Garroway, E. H., Jackson.
Martin, L. E., Anguilla.

MISSOURI.

Baker, W. M., St. Louis.
Carbaugh, Eugene, Kansas City.
Chilton, J. C., Hannibal.
Conover, C. C., Kansas City.
Cotton, T. W., Van Buren.
Dewey, Martin, Kansas City.
Eidmann, W. P., St. Louis.
Fisher, J. A., St. Louis.
Frankenthal, M. A., St. Louis.
Fulbright, C. H., St. James
Goebel, Arthur, St. Louis.
Hollis, L. T., Kansas City.
Jacobs, M. W., St. Louis.
Kennedy, W. U., St. Louis.
Kitchell, W. E., St. Clair.
Manko, Emanuel, Kansas City.
McMurtrey, A. T. Salem.
McNees, A. J., Clinton.
Millar, R. C. M., St. Louis.
Minor, J. C., Chillicothe.
Rassieur, Louis, St. Louis.
Reed, Elizabeth B., St. Louis.
Roberson, H. M., Kansas City.
Rusk, Elizabeth, St. Louis.
Russell, J. M., Monett.
Ruyle, H. J., Springfield.
Sounders, L. E., Stewartsville.
Schorer, E. H., Columbia.
Singleton, D. E., Shelbina.
Wallace, W. S., Excelsior Springs.
Waters, W. T., New London.
Williamson, W. H., Mokane.
White, C. A., St. Louis.

MONTANA.

Gates, L. A., Billings.
Potter, Peter, Butte.

NEBRASKA.

Bunce, A. C., Omaha.
Everett, O. W., Lincoln.
Farrell, Henry, Axtell.
Ginn, A. P., Nebraska.
Goldsberry, Craig.
King, H. E., Silver Creek.
Lindquest, A. B., Omaha.
Long, J. H., Garrison.
McCaw, F. W., Omaha.
Meriwether, C. N., Paulina.
Mick, W. H., Omaha.
Neely, J. M., Elmwood.
Rickard, E. T., Weeping Water.
Simon, Frank, Oakland.
Updegraff, E. J., Omaha.
Wood, M., Tekamah.

NEW HAMPSHIRE.

Carr, B. W., Pittsfield.

NEW JERSEY.

Beatty, E. E. B., Newton.
Donovan, A. Q., Elizabeth.
Finke, C. H., Jersey City.
Freile, Wm., Jersey City.
Lake, W. A., Erma.
Lyon, L. C., Magnolia.
Scott, E. A., Asbury Park.
Silk, C. I., Perth Amboy.
Vail, J. L., Cranford.

NEW MEXICO.

Peters, Le Roy S., Silver City.
Willson, H. G., Gallup.

NEW YORK.

Allen, W. B., New York City.
Andrews, B. F., Sonyea.
Bailey, Pearce, New York City.
Baldwin, Helen, New York City.
Bayliss, A. W., Buffalo.
Bock, F. W., Rochester.
Brinsmade, W. B., Brooklyn.
Brownell, W. H., Utica.
Bryant, J. D., Kingston.
Buerger, Leo, New York City.
Burns, J. E., Glen Cove.
Burstein, M. J., New York City.
Campbell, P. J., Utica.
Canna, R. R., Amsterdam.
Chapman, J. F., Katonah.
Chesebro, C. H., Unadilla Forks.
Cordner, Robt., Middletown.

Corning, Erastus, Albany.
Cornwell, B. W., Williamsville.
Costello, M. E., Branchport.
Curtis, J. G., New York City.
Davis, C. E., Mecklenburg.
Dennett, R. H., New York City.
Dutcher, Adelaida, Syracuse.
Eastmond, Charles, Brooklyn.
Feldstein, Samuel, New York City.
Ferguson, J. S., New York City.
Fleming, W. M., New York City.
Ford, R. W., Otego.
Fraser, Roderick, New York City.
Freeborn, G. C., New York City.
Fuchsius, J. H., New York City.
Garnsey, N. D., Kinderhook.
Gillette, Elizabeth Van R., Schenectady.
Goodfellow, E. H., Schenectady.
Groat, W. A., Syracuse.
Green, I. L., Watertown.
Greene, F. H., Poughkeepsie.
Groves, Oliver, Rochester.
Hackett, G. W., Ceres.
Hall, J. M., Staten Island.
Harris, B. S., Brooklyn.
Hatch, Edith R., Buffalo.
Hauswirth, Louis, New York City.
Helmer, R. D., Auburn.
Hiss, P. H., Jr., Brooklyn.
Hitchcock, P. L., Croton Falls.
Holcomb, H. V., New York City.
Huggins, W. Q., Sanborn.
Hughes, J. L., Mt. Vernon.
Huyck, R. P., Herkimer.
Hyde, C. J., Poughkeepsie.
Joachim, Henry, Brooklyn.
Janes, E. W., Hamburg.
Jennings, C. P., Macedon.
Jennings, F. S., Cortland.
Johnston, H. L., Binghamton.
King, D. F., New York City.
Kleeberg, Felix, New York City.
Knapp, C. N., Port Jervis.
Konther, A. F., Brooklyn.
La Porte, E. C., Amsterdam.
Leggett, Noel B., New York City.
Leonard, J. E., Hartford Mills.
Lewis, Henry, Argyle.
Linder, William, Brooklyn.
Lynch, J. B., New York City.
Lyon, E. D., Peekskill.
MacMinn, C. A., Schenectady.
Manning, C. E., Brooklyn.
Mark, Alexander, Elmira.
Markle, F. G., Bangor.
Mayer, Abraham, New York City.
McMenamin, T. D., Highland Falls.
Mills, T. D., Middleton.
Moffit, A. R., Poughkeepsie.
Moore, R. G., New York City.
Mulcahy, W. L., New York City.
Myers, A. Y., Buskirk Bridge.
Northridge, W. A., Brooklyn.
O'Hanlon, George, Kings Park.
O'Leary, W. J., Kingston.
Page, Agnes E., Albany.
Pannaci, C. E. E., Gloversville.
Peters, J. B., Walden.
Phillips, H. C., Rochester.
Prendergast, F. A., Brooklyn.
Reid, M. S., Coeymans.
Reifenstein, E. C., Syracuse.
Rimer, E. S., Staten Island.
Rivenburgh, W. T., Middleburg.
Rodenhurst, D. C., Philadelphia.
Rodman, Harry, New York City.
Rubenstein, Jacob L., New York City.
Schuyler, A. H., Rochester.
Seccomb, M. L., Ira.
Shetterly, W. R., Brooklyn.
Skinner, C. N., Port Jervis.
Smith, E. J., Larchmont.
Snow, L. D., Weedsport.
Sour, Bernard, New York City.
Stanton, E. M., Schenectady.
Stewart, O. K., Canisteo.
Strouse, A. N., New York City.
Suits, P. T., Tribes Hill.
Sutton, M. B. E., New Rochelle.
Swain, F. S., Corning.
Thompson, G. S., Brooklyn.
Thornton, M. Frances, New York City.
Teed, E. L., Lisle.
Todd, J. B., Syracuse.
Todd, J. F., Brooklyn.
Towlerton, C. H., Lyons.
Trader, W. N., Jr., Sonyea.
Trego, T. M., Albany.
Trimble, W. B., New York City.
Turrell, G. H., New York City.
Van Patten, P. S., Mt. Vernon.
Van Santvoord, R., New York City.
Waller, N. B., New York City.
Walser, C. W., New Brighton.
Waterman, L. G., Buffalo.
Waters, B. H., New York City.
Weaver, F. B., New York City.
Wilton, W. H., Brooklyn.
Wiley, C. F., Syracuse.
Wollheim, J. L., New York City.
Wren, A. A., New York City.
Wright, J. S., Perry.
Wolf, G., New York City.
Zabriskie, Glen Cove, L. I.

NORTH CAROLINA.

Akerman, J. A., Wilmington.
Bellamy, R. H., Wilmington.
Nichols, A. A., Painter.

NORTH DAKOTA.

Callander, C. N., Fargo.
Mulligan, Thomas, Grand Forks.

OHIO.

Alexander, H. B., Dayton.
Baker, C. L., Kirkpatrick.
Bausman, C. W., Bradford.
Bayliff, J. E., Uniopolis.
Beach, J. W. H., Arlington.
Berry, W. H., Middlepoint.
Bennett, G. U., Cleveland.
Bennett, H. C., Lima.
Berlin, C. C., Wapakoneta.
Bice, A. W., Lima.
Boerstler, G. W., Lancaster.
Boesger, M. A., Cleveland.
Bolt, R. A., Cleveland.
Bone, P. S., Royalton.
Booth, G. B., Toledo.
Borden, W. E., Tedrow.
Bowser, M. S., Lima.
Bretz, I. S., Cleveland.
Brickley, D. W., Canal Winchester.
Brown, R. A., Commercial Pt.
Budwig, Maurice, Cleveland.
Clemons, J. G., Georgetown.
Cobbs, A. R., Damascus.
Conley, C. W., Eaton.
Cook, J. M. C., Weston.
Courtright, J. L., Cincinnati.
Crum, E. C., Dayton.
Dahlenburg, C. W., Toledo.
Dawson, R. W., E. Liverpool.
Duckwall, F. A., Dayton.
Duckwall, F. C., Scott.
Espey, P. D., Port William.
Fast, L. R., Paulding.
Fayen, Emmett, Cincinnati.
Ferneau, F. D., Toledo.
Fisher, V. L., Mt. Vernon.
Fledderjohann, F. F., New Bremen.
Gaston, E. M., West Union.
Hamilton, N. A., Franklin.
Harrison, J. M., Toledo.
Hatfield, C. C., Kingston.
Held, W. A., West Unity.
Herrick, H. J., Cleveland.
Herrmann, A. A., Newark.
Higbie, J. L., Jenera.
Hunter, J. S., Jackson.
Ingersoll, J. M., Cleveland.
Ireland, S. A., Washington C. H.
Justice, C. R., Poland.
Klepinger, L. G., Dayton.
Knight, A. W., Attica.
Lawless, R. E., Toledo.
Leahy, Maurice, Tiffin.
Lickly, I. M., Lima.
Lindersmith, H. C., Sherwood.
Lorimer, H. F., Chillicothe.
Marshall, W. A., Wharton.
Martz, G. J., Hollandsburg.
Mattern, J. H., Unionport.
McLaughlin, R. B., Mt. Liberty.
McMurray, J. A., Marion.
Mecklem, W. S., Mansfield.
Meggenhofen, Edward, Chillicothe.
Mondhank, R. W., Lancaster.
Morton, F. J., Cleveland.
Nachtegan, B. J. A., Cleveland.
Newcomb, R. B., Cleveland.
Ochs, K. E., Cleveland.
Osburn, C. W., Norwood.
Overly, J. E., Columbus.
Pay, W. C., Bellefontaine.
Porter, E. H., Tiffin.
Perry, F. E., Jefferson.
Phillips, D. T., Morristown.
Plattfaut, W., Dayton.
Ray, E. S., Hamden Junction.
Rogers, J. E., Peebles.
Root, R. R., Youngstown.
Rudy, A. S., Lima.
Ryall, W. W., Youngstown.
Sallume, S. N., Salem.
Samson, H. M., Lancaster.
Sanford, H. L., Cleveland.
Scott, B. B., Mt. Vernon.
Shaffer, J. W., Youngstown.
Shollenbarger, W. L., Cincinnati.
Sill, R. H., Cleveland.
Smith, G. J., Niles.
Smith, J. M., Dunbridge.
Smith, W. S., Dayton.
Snively, G. W., West Lebanon.
Snyder, E. H., Cleveland.
Spangler, M. H., Alger.
Stayner, I. C., Spencerville.
Steiner, O. B., Lima.
Stemen, H. G., Delphos.
Stoll, J. H., Wooster.
Stotter, H. B., Cleveland.
Teter, C. K., Cleveland.
Theis, H. H., Youngstown.
Thomas, Arthur, Minerva.
Thomas, G. F., Cleveland.
Thomas, H. G., Greenville.
Thomas, T. R., Lima.
Thorne, H., Dayton.
Tidd, E. W., Stockdale.
Tinker, L. M., Frankfort.
Tobias, E. H., Bowling Green.
Todd, C. D., McComb.
Todhunter, E. F., Washington C. H.
Trump, J. F., Hamilton.
Waugh, J. M., Cleveland.
Webster, H. H., Cleveland.
Welker, A. D., Gambier.
West, W. L., New Matamoras.
White, J. M., Ironton.
Wills, J. W., Richmond Dale.
Wilson, J. B., Scott.
Wilson, M. E., Bettsville.
Wolfenstein, Leo, Cleveland.
Woodlin, W. J., Columbus.
Workman, I. S., Gambier.

OKLAHOMA.

Allison, T. P., Westville.
Buffo, Umberto, Krebs.
Ewing, F. W., Terral.
Garland, H. S., Sapulpa.
Hatfield, W. M., Mulhall.
Jester, J. A., Foss.
Landrum, S. H., Olustee.
Renegar, J. F., Wapanucka.
Womack, Jesse L., Moore.

PENNSYLVANIA.

Altman, O. R., Uniontown.
Ambrose, C. D., Ligonier.
Apgar, C. S., Pittsburg.
Baker, W. C., Hummelstown.
Berry, E. S., Shippensburg.
Bernd, L. H., Philadelphia.
Boak, R. G., New Castle.
Boyer, G. H., Allentown.
Bradshaw, G. M. B., Sugar Grove.
Brady, R. W., Honesdale.
Brooks, A. C., Wilkesbarre.
Brosius, P. F., Hazleton.
Burt, J. C., Pittsburg.
Cass, C. D., Philadelphia.
Craighead, Nancy B., Pittsburg.
Cooke, E. S., Philadelphia.
Corson, C. G., Rileyville.
Davies, J. R., Forksville.
DeBashore, Simeon, Palmyra.
Denny, C. B., Noblestown.
Dissler, H. S., Denver.
Dukes, J. L., Philadelphia.
Engle, W. D., Aliquippa.
Fitzsimmons, T. C., Carbondale.
Fogel, S. C. B., Allentown.
Gensburg, Nate, Philadelphia.
Goodstone, M. A., Pittsburg.
Greer, R. B., Butler.
Haines, F. G., Warren.
Hawman, E. G., Reading.
Hibbs, S. E., Fairchance.
Hiller, H. M., Chester.
Hindman, A. O., Cross Creek.
Hoffman, Edward, Montandon.
Horn, C. T., Lehighton.
Humphrey, W. J., Union City.
Hutchison, D. E., E. Downingtown.
Hyer, I. G., Clarendon.
Johnson, W. H., Dudley.
King, H. B., Reynoldsville.
Kneedler, G. C., N. S. Pittsburg.
Lecates, C. A., Philadelphia.
Lowry, R. S., Markleton.
Lyle, J. W., Houston.
McLain, P. J., Ridgway.
Meyers, H. P., Markleysburg.
Nonamaker, N. S., Bedminster.
Parsons, J. W., Canton.
Phillips, Bert L., Nelson.
Poulson, W. C. T., Philadelphia.
Ralston, J. H., Harmony.
Ralston, S. E., Zelienople.
Reemsnyder, B. J., Ephrata.
Rimer, J. T. R., Clarion.
Rodgers, W. H., Pittsburg.
Rodman, G. L., Hawley.
Ross, C. C., Clarion.
Sayers, J. C., Reynoldsville.
Sebring, J., Jr., Bellefontaine.
Shaffer, H. A., Williamstown.
Sohn, Charles, Pittsburg.
Stewart, A. H., Marion Center.
Stewart, F. S., Philadelphia.
Sutton, M. A., Avonmore.
Urey, F. F., New Castle.
Wagner, F. M., Wampum.
Ward, F. E., Berwick.
Young, C. M., Adrian.
Young, R. J., Snow Shoe.

SOUTH DAKOTA.

Hoagland, C. C., Veblen.
Pherrin, O. D., Stickney.
Sherwood, H. W., Doland.
Smiley, T. B., Mt. Vernon.

TENNESSEE.

Cox, J. W., Johnson City.
Massey, J. F., Knoxville.
Noel, L. G., Nashville.
Russell, W. B., Nashville.

TEXAS.

Alexander, R. L., Coahoma.
Auerbach, L. B., El Paso.
Clemons, P. T., Waller.
Clune, W. M., Darwin.
Cook, W. G., Ft. Worth.
Hackney, U. P., Dallas.
Ledbetter, E. E., Tioga.
Maxfield, J. R., Grand Salem.
Miller, K. M., Houston.
Mohlau, F. G., Brenham.
Rush, J. W., Corinth.
Stone, M. P., Dallas.
White, David, Hamlin.
White, F. A., Sulphur Bluff.

UTAH.

Beatty, T. B., Salt Lake City.

VERMONT.

Derven, J. J., Poultney.

VIRGINIA.

Barham, W. B., Newsoms.
Brown, A. G., Richmond.
Ferguson, R. T., Richmond.
Hill, Emory, Scottsville.
Southall, P. T., Amelia.
Tankard, J. W., Lilian.

WASHINGTON.

Brazean, S. D., Asotin.
Dean, H. Z., Reardan.
Fick, E. P., Seattle.
Huntley, Mary M., Olympia.
von Phul, P. V., Seattle.
Waugh, F. P., Wapato.
Wendt, S. M., Castle Rock.

WEST VIRGINIA.

Aultz, L. L., Charleston.
Bigony, H. F., Hinton.
Casey, M. R., Roanoke.
Copeland, C. E., Charleston.
Eakin, B. W., Carlisle.
English, J. W., McDowell.
Furlong, J. C., Weaver.
Kelly, M. B., Wheeling.
Lemon, C. W., Claremont.
McGuire, T. J., Parkersburg.
Palmer, W. N., Hinton.
Parks, C. L., Atwood.
Rudasill, D. J., Kingwood.
Smith, F. W., Bluefield.
Strickler, E. W., Kingwood.
Yost, L. N., Fairmont.

WISCONSIN.

Ankenbrandt, A. A., Mattoon.
Baer, C. A., Milwaukee.
Bergh, Christian, Whitehall.
Chipman, H. A., Stoughton.
Conroy, J. M., Milwaukee.
Craig, S. S., East Troy.
Dean, Joseph, Madison.
Eagan, J. B., Excelsior.
Eastman, J. R., Kenosha.
Elliott, S. T., Richland Center.
Frey, G. R., Burlington.
Hansen, O. L., Argyle.
Herriman, L. L., Boyceville.
Hogue, G. I., Milwaukee.
Houck, Mary P., La Crosse.
Kerr, A. N., Martell.
Kleinhans, M. A., Milwaukee.
Mason, E. L., Eau Claire.
McCallin, A. E., Wautoma.
Meyers, J. M., Odanah.
Monk, R. W., Lamartine.
Munn, W. A., Janesville.
Pogue, Mary E., Lake Geneva.
Reinhard, H. A., Milwaukee.
Riddle, Julia, Oshkosh.
Rudolf, S. F., Ellsworth.
Russell, Rose A., Neenah.
Schell, Ida L., Milwaukee.
Schroeder, H. F., Marinette.
Schuster, B. L., Milwaukee.
Thayer, F. A., Beloit.
Waters, H. F., Nekoosa.
Wood, F. C., Westfield.

WYOMING.

Keller, P. P., Sheridan.
Monahan, J. J., Encampment.
Steffen, W. A., Sheridan.

PHILIPPINES.

Ruediger, E. H., Manila.

PROCEEDINGS OF THE CHICAGO SESSION.

MINUTES OF THE FIFTY-NINTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT CHICAGO, JUNE 2-5, 1908.

House of Delegates

(*Continued from page 1927.*)

Third Meeting—Tuesday Afternoon, June 2

The House of Delegates met at 2 p. m. and was called to order by President H. L. Burrell. The Secretary called the roll and 67 delegates responded.

Dr. H. Bert Ellis, chairman, presented a supplementary report of the Committee on Credentials.

The minutes of the previous meeting were read and approved.

Report of the Reference Committee on Medical Education.

Under the head of Reports of Reference Committees, Dr. H. D. Arnold, Massachusetts, chairman, read the report of the Reference Committee on Medical Education, as follows:

Your committee wishes to extend to the Council on Medical Education its congratulations on the continued excellence of the work done in securing improved conditions of medical education. The work of the past year has been a continuance of and a development of the lines of work which have accomplished so much for this cause in the past few years. During the past year there has been a gratifying increase in the number of schools which have adopted an advanced standard for admission, and other schools have shown a desire to do this as soon as the local conditions will permit. The statistics published by the Council show an improvement in medical education all along the line, as evidenced by the results of the state board examinations.

The committee recommends the continuance of the campaign of publicity, the continuance of efforts to persuade more schools to adopt the higher standards for admission, and wishes the Council further success in the line of getting medical schools to unite for more effective educational work.

Frank Billings,
A. Vander Veer,
Arthur D. Bevan,
Victor C. Vaughan,
Horace D. Arnold,
Chairman.

On motion by Dr. Frank Billings, Illinois, seconded by several delegates, the report was adopted.

Report of Reference Committee on Reports of Officers.

Dr. Wisner R. Townsend, New York, chairman, presented the following report of the Reference Committee on Reports of Officers:

To the House of Delegates of the American Medical Association:

The Reference Committee on Reports of Officers appointed by the President, June 1, respectfully presents the following:

REPORT OF THE PRESIDENT.

1. The Committee recommends that all suggestions in the President's report, relating to matters contained in the present Constitution and By-Laws, be referred to a special committee of three, whose duties shall be to make a complete revision of the present Constitution and By-Laws, and present the same at the next annual session of the Association.

2. The Committee recommends the adoption of the following resolutions by the Association:

Resolved, That the Association approves of the recommendations of the President, relating to the teaching of the principles of moral philosophy as applied to medicine, and would respectfully advise that the measure be carried into effect at the earliest practical moment in institutions devoted to the purposes of medical education.

TEACHING OF MEDICAL ETHICS.

3. The following action is recommended:

Resolved, That a committee of five be appointed to take into consideration the elaboration of "The Principles of Ethics of the American Medical Association" next year.

Resolved, That said committee report all proffered suggestions on the subject for the consideration and action of the House of Delegates at the next annual session.

ANIMAL EXPERIMENTATION.

4. The following action is recommended:

Whereas, From time to time, attempts, fostered largely by erroneous statements and accusations and false sentiment and prejudice, are made in some parts of this country to enact specific legislation, prescribing the conditions under which experiments on animals may or may not be performed; be it,

A. Resolved, by the American Medical Association, That animal experimentation has been of incalculable benefit to science and art, the progress of which is as absolutely dependent on experimental methods as are all the physical and natural sciences.

B. Resolved, That no abuse of the practice of animal experimentation in this country has been shown to exist to warrant specific legislation, nor is there any probability of such abuse arising.

C. Resolved, by the American Medical Association, That the unrestricted performance by proper persons of scientific experiments on living animals is essential to the maintenance and progress of medicine and biology.

CONSERVATION OF NATURAL RESOURCES OF THE COUNTRY.

5. In response to the invitation by the President of the United States to the American Medical Association to participate in the meeting held in Washington to consider the conservation of the natural resources of the United States, the adoption of the following resolution is recommended:

Resolved, That the members of the American Medical Association, in regular session assembled, do hereby express their high appreciation of the invitation to aid in the conservation of the natural resources of the country, and would gladly cooperate in this, and in other measures, which make for improvement in the health and welfare of the people in this land.

REPORT OF THE SECRETARY.

The committee recommends the adoption of the following resolution:

Resolved, That a committee of three be appointed to consider the question of uniform regulations regarding membership, and that this committee endeavor to make arrangements with the different state organizations so that uniformity shall exist among all the states and the national organization in this important subject.

REPORT OF BOARD OF TRUSTEES.

Your committee would recommend that all the matter contained in the report of the Board of Trustees (see The Journal, May 23, page 1732), beginning with the words "Your Board of Trustees feels that the time," and ending with the words "putting the matter into the hands of the different state associations" be stricken out, and that other changes be made in the same paragraph so that it may read as follows:

NATIONAL ORGANIZER.

The American Medical Association will ever owe Dr. J. N. McCormack a debt of gratitude for the great work which he has done in his special department. In accord with the recommendation of the House of Delegates made at Atlantic City, June 6, 1907, the Board of Trustees arranged with Dr. McCormack to enter vigorously on the work therein suggested. It is believed that his time can be profitably employed, in addition to his duty as organizer, in presenting pure food matters, and the need of uniform state laws governing the practice of medicine before the legislatures of the different states, and as an educator of the public in matters medical, as he has been chiefly doing this year; and it is recommended that he be requested to continue the work.

COOPERATION OF TREASURY DEPARTMENT.

Your committee recommends that the report of the committee appointed to secure cooperation of the U. S. Treasury Department with the Council on Pharmacy and Chemistry be published with the annual report of the Trustees.

SECOND EDITION OF DIRECTORY APPROVED.

Your committee would also recommend the following:

Resolved, That the action of the Board of Trustees in making preparations for the second issuance of the Directory be endorsed by the House of Delegates.

REPORT OF THE CHAIRMAN OF COMMITTEE ON ORGANIZATION.

In regard to this report it is respectfully recommended:

1. That the postgraduate work be continued and that the Trustees be requested to appropriate for the same such funds as in their discretion can be profitably employed for that purpose.

2. That such portion of Dr. McCormack's address as relates to the teaching of medical economics in schools of medicine be referred to the Council on Medical Education for their consideration.

3. The committee sincerely regrets the decision of Dr. McCormack to retire from official work which he has so ably and efficiently performed and expresses the hope that his determination in this respect may not be final.

In conclusion, the committee desires to express its appreciation of the good and faithful work done by the officers and committees during the past year.

Respectfully submitted,
W. T. Williamson, Secretary.
Frank Paschal.
Donald Campbell.
W. T. Sarles.
Wisner R. Townsend, Chairman.

The report was first read as a whole, and then voted on section by section.

Section 1 was read, after which Dr. Alexander R. Craig, Pennsylvania, moved that this section be referred to the Reference Committee on Constitution and By-Laws rather than to a special committee of three as set forth in the report, which motion was seconded by Dr. Charles S. Bacon, Illinois, and carried, and the section was so referred.

Sections 2, 3, 4 and 5 were read and adopted. The sections relating to the reports of the Secretary, Board of Trustees and of the Committee on Organization were read and adopted, after which Dr. H. Bert Ellis, California, moved that the report of the committee be adopted as a whole, which was seconded and carried.

Council on Research Defense.

Dr. Wisner R. Townsend, New York, offered the following resolution:

Resolved, That a Council on Defense of Medical Research be created, to consist of not less than seven members, these to be appointed by the President of the Association, and that the Board of Trustees be requested to appropriate the necessary funds and to arrange for the printing, collection and distribution of appropriate literature, and such other details as may be needed to make effective the work of this Council.

Dr. Philip Mills Jones, California, moved that the resolution be referred to the Board of Trustees, as it involved the expenditure of money. Seconded.

Dr. Frank Billings, Illinois, moved to amend that the House of Delegates endorse most heartily the resolution and recommend the Board of Trustees to establish such a committee.

The amendment was seconded, accepted, and the original motion as amended was carried.

Resolutions on Organization.

Dr. W. H. Sanders, Alabama, made the following remarks and introduced a resolution which was referred to the Reference Committee on Legislation and Political Action:

Mr. President:—I give notice that it is my intention to submit a motion, but before doing so I ask the privilege of making some prefatory remarks.

Medical organization in this country has for more than half a century been undergoing evolution. For many years progress was slow, but always perceptible and steady. In recent years, however, the movement forward has been rapid, and, not only so, the scope of achievement to be wrought out has been immensely broadened. The constitutions, or organic laws, of the different divisions of the great army of organized medical men in this country—county, state and national—should keep pace with the new ideas evolved and with the ever-widening field of work. The goals of a few years ago have been achieved and new fields for conquest now inspire medical men with fresh enthusiasm and courage. Witness the marshaling of forces everywhere to make a simultaneous and combined attack on the great white plague, as on every other enemy to human life!

It behooves us, therefore, to broaden our systems of organization so as to have them endowed with public health functions, as well as scientific functions. Heretofore, the rule in organization has not been to make one and the same body of medical men both a public health and scientific one. No good reason exists why these two functions may not be combined. They have been combined in my state (Alabama) for thirty years, or thereabout, and experience has abundantly justified the union.

The time is ripe, therefore, for a reconsideration of the organic laws or constitutions under which many bodies of medical men are working. This reconsideration should apply to the Constitution and By-Laws of this Association, and to the form of constitution formulated for state organizations. It might even be extended to, and include, the draft of a constitution for county societies. In this way a correlated and coherent system of organization might be brought about in counties and states, all culminating in this as a national body, and all endowed with the legal right to act as public health bodies. Think of what might be accomplished in behalf of sick and suffering humanity were every organized body of medical men authorized to formulate the public health policy to be pursued in the territory over which it presides, and then to supervise the execution of the same!

Special reasons exist why the organization should be reconsidered. All agree, I take it, that a charter from the general government is desirable, if one can be obtained. This question was investigated, more or less, several years ago, with the result, I believe, of securing contrary opinions.

In support of the view that the general government could grant such a charter, I offer the opinion of Senator Morgan of my state, now deceased, than whom no man in the nation ranked higher as a constitutional lawyer. Several years ago, he expressed the unqualified opinion to me that the government could grant a charter to this Association which would carry with it the right of transacting business anywhere in the United States. Whether this be true or not can certainly be ascertained; if in no other way than by having a bill to that effect introduced into Congress. Such a bill would be referred to the judiciary committees of the two houses, the verdict of which bodies would definitely settle the question.

If a national charter can not be obtained the next thing would be to obtain the best possible form of state charter.

The form in which the Articles of Incorporation of this Association exist at present—filed in this state—could, with all due deference, be changed with advantage. The articles are practically identical with the Constitution, consequently whenever an amendment to the Constitution is made, a corresponding change in the articles of incorporation must be made. This could be obviated by drawing up articles of incorporation setting forth in a geenral way the rights and powers of the Association, and filing them, after which the Constitution could be amended in such way as might be deemed desirable without disturbing the articles of incorporation; provided that the amendment did not violate in any way the articles, or, better still, a formal charter might be obtained from the legislature of this or some other state.

Further and very strong reasons might be assigned for a reconsideration and reconstruction of the Constitution of this Association.

Take Article 7 therein, for instance, which reads as follows:

> The House of Delegates may create such branch organizations as may be deemed essential to promote the welfare of the medical profession.

For indefiniteness this article is certainly open to criticism. Just ten questions must be asked and answered before one could decide whether he favors the article or not.

They are: What kind of branch organizations are meant? How shall they be created by the House of Delegates? What relations shall they sustain to the present body? What to one another? What rights shall they have? What duties shall they perform? What responsibilities shall be imposed on them? What dues shall they pay? What is meant by the "welfare of the profession?" Is it the material, moral, or scientific welfare that is to be promoted? What good will be accomplished by creating branch organizations?

One of the unwritten laws in constitution writing is that the words in which such instruments are formulated must furnish their own interpretation and not need outside explanation. An unfortunate failure on this point in the great organic law of the land cost this country the greatest and most lavish expenditure of blood and treasure in the history of the world. Without waiting to have the ten questions in regard to branch organizations answered, the bad wisdom of Article 7 was apparent to me when it first appeared in the Constitution, and as time goes on, that conviction grows stronger and stronger.

In a logical and coherent system of medical organization in this country the only official bodies should be county, state and national. Any member of the profession can find in these three fields ample opportunity for all of the scientific and public health work he can find leisure to do.

Possibly in the large cities justification for other organizations may exist, but the three mentioned should be the only ones to which official recognition should be accorded.

Did time permit, objections to other parts of our present Constitution and By-Laws might be alleged, but without stopping to call attention to them, I move that a committee of five be appointed by the President, the appointment to be announced at any time within one month, whose duty it shall be:

1. To ascertain as definitely as can be whether a charter for this Association can be obtained from the Congress of the United States which would confer the right of transacting business at any place where a meeting may be held.

2. Should it appear that such a charter can not be obtained, to prepare a broad and comprehensive statement of the principles of organization that should prevail in this Association, together with the objects to be achieved; such statement, on the approval of this body, to be used either as articles of incorporation under state authority, or to secure a formal charter under state authority.

3. To reconstruct the present Constitution and By-Laws of this body, so as to bring them up to the broadest and highest standard in the evolutionary development of the principles and objects of medical organization.

4. To reconsider the form of Constitution submitted for adoption by state organizations and to suggest such changes therein as present developments may seem to render wise and expedient.

5. To formulate a plan of organization and constitution for county societies, with the view of aiding them in so far as their varying conditions will render the adoption of such plan and constitution feasible.

The object is, Mr. President, for the proposed committee to study all of these questions broadly and at the same time analytically, so as to evolve the best thought and lines of action of which these subjects are susceptible. Under such organic laws as may be formulated, the medical men of this country might be marshaled as a loyal, coherent, and invincible army in the battle with disease.

I need hardly say that the committee, if appointed, is to be entirely without power, except to study maturely and comprehensively the questions referred to it, and to bring the results of that study before this body for such action thereon as it may deem wise and proper. Such study can do no harm, and may do great good.

I am aware, Mr. President and Gentlemen, that I have taxed your patience, but my apology for the time consumed is that I can conceive of no subject more worthy of your thought and consideration than the one I have endeavored to present.

Amendments to By-Laws Introduced.

Dr. H. Bert Ellis, California, presented the following amendments to the By-laws:

Amend Section 1, Chapter VII, Book 2, Page 13, of the By-Laws by cutting out all after the words "Board of Trustees," striking out the following, "and the orator shall be nominated, respectively, by the Sections on Practice of Medicine, on Surgery and Anatomy, and on Hygiene and Sanitary Science."

Strike out Section 5, Chapter VII, Book 2, Page 14, of the By-Laws entire and make Section 6, Section 5 and Section 7, Section 6.

Amend Section 1, Chapter XI, Book 4, Page 25, of the By-Laws to read as follows: "Section 1.—Time of General Meeting.—The General Meeting shall be held at 10:30 a. m. on the first day of the annual session and shall be presided over by the President, or, in his absence or at his request, by one of the Vice-Presidents."

Amend Section 2, Chapter XI, Book 4, Page 25, of the By-Laws by striking out the word "opening" in the second line and by striking out everything after the word "action" in the fourth line, making the section read as follows: "Section 2.—Addresses at the General Meeting.—Before the General Meeting shall be delivered the address by the President, whose recommendations shall thereon go to the House of Delegates for action."

Amend Section 3, Chapter XI, Book 4, Page 25, of the By-Laws by striking out the words "first or opening" in the second line of the paragraph.

Amend Section 3, Chapter XII, Book 4, Page 27, of the By-Laws so that the last sentence of the section shall read as follows: "The Sections on Practice of Medicine, on Surgery and Anatomy and on Hygiene and Sanitary Science, may each elect one of their members to deliver at the ensuing annual session the Oration on Practice of Medicine, the Oration on Surgery and the Oration on State Medicine."

The above amendments were referred to the Reference Committee on Constitution and By-Laws.

Petition from Chicago Medical Examiners' Association.

Dr. Philip Mills Jones, California, presented the following petition from the Chicago Medical Examiners' Association, which was referred to the Reference Committee on Sections and Section Work:

To the House of Delegates of the American Medical Association:

You are respectfully petitioned to form, in accordance with Article 6 of the Constitution, a section of the Association to be devoted to the science and art of diagnosis. The spirit of modern medicine being the prevention of disease, an essential requisite, therefore, is the determination of the normal as well as the pathologic human constitution. A large number of the members of this Association are, by virtue of their positions as medical examiners for insurance companies, for the army and the navy, for pension applications, for athletic clubs, etc., engaged in the study and practice of diagnosis from the standpoint of the normal man. As such they have created vast professional and financial interests and have developed a field of work with special methods, statistics and results. They feel that they deserve and ought to have the recognition of this Association, thereby enhancing the dignity of their work by the stamp of its approval and safeguarding their medical and material interests by its powerful protection. They believe that the creation of the section prayed for will contribute to the attainment of the noble objects of the Association, as laid down in Article 2 of the Constitution. Relying on the fraternal spirit which makes the interests of workers in every section of medicine the concern of all, they confidently submit their petition to your consideration.

The Chicago Medical Examiners' Association.

By Dr. David Doherty, President, and Dr. Glenn Wood, Secretary.

Report of Reference Committee on Amendments to Constitution and By-Laws.

Dr. George W. Guthrie, Pennsylvania, chairman, presented the following report of the Reference Committee on Amendments to the Constitution and By-laws:

1. Amendment to Section 1, Article 5, page 2 of the Constitution: "Ex-Presidents of this Association shall also be members of the House of Delegates." And also substitute: "Ex-Presidents of this Association and the Trustees shall be members of the House of Delegates without the right to vote."

On both the amendment and the substitute the committee reports adversely.

2. On proposed amendment to the By-laws, Book 1, Chapter 3, page 8, "retired members:" "Anyone who has been a member in good standing of the American Medical Association for twenty years, and who has been placed on the retired list of his state association, shall, on his request, be placed by the Secretary of the American Medical Association on the retired list of the members of this Association. Retired member shall be exempt from the payment of dues."

On this proposed amendment the committee also reports adversely.

3. On the proposed amendment, Section 5, Chapter 10, Book 3, page 20, of the By-laws, substituting the word "legislative" for "congressional" the committee reports favorably.

C. E. Cantrell,
G. L. Taneyhill,
C. H. Cook,
G. L. Strader,
G. W. Guthrie, Chairman.

Dr. Philip Mills Jones, California, moved the adoption of the report with the recommendation of the Committee.

Seconded and carried.

Resolutions on Patent Laws.

Dr. Charles S. Bacon, Illinois. introduced the following preambles and resolution by request:

Whereas, The object of the patent laws is to promote progress in science and useful arts; and

Whereas, The application of the United States patent law to materia medica inventions and discoveries is a hindrance to progress in therapeutics, because patents on products are allowed, thus creating monopoly and preventing progress and improvement in the art; and

Whereas, Foreign countries, including Germany, France, Austria-Hungary, Italy, Japan, Argentina, etc., prohibit the patenting of materia medica products; and

Whereas, A patent on a product creates a monopoly not only on the product itself, but on all subsequent improvements in processes for making the same, thereby destroying the stimulus for improvement and discovery through research; and

Whereas, The registration of the name of medicines as trademarks creates and fosters monopolies, protects secrecy and fraud, causes confusion in pharmaceutical nomenclature, and enables the manufacturers of nostrums to build up a dishonest commercial business in drugs by misleading advertisements, to the injury of the public health; therefore, be it

Resolved, That a committee of five be appointed by the House of Delegates to work with the Council on Pharmacy and Chemistry and committtees of other societies created for a like purpose to study the whole question and cooperate with the Committee on

Medical Legislation in preparing and securing the enactment of a bill which shall secure such modification of the patent and trademark laws as will correct the abuses stated in these resolutions.

On motion, these preambles and resolution were referred to the Reference Committee on Legislation and Political Action.

Report of the Committee on Scientific Exhibit.

Dr. F. B. Wynn, chairman, presented a preliminary report from the Committee on Scientific Exhibit, as follows:

In response to the action of the House of Delegates at the last session, the Committee on Scientific Exhibit has prepared and herewith submits:

1. *Certificates of Honor* to be awarded meritorious exhibitors. These are embellished with photogravures respectively of Harvey, Pasteur, Virchow and Davis; three standing for scientific medicine in France, Germany and England; the fourth for the Association and American medicine. These certificates are to be engrossed later with the names of persons or laboratories to whom the awards are made.

2. *Gold Medals:*—One for the best compact but comprehensive tuberculosis exhibit; another for the best research exhibit. The question of whether or not awards of the medals be made, should depend on the merits of the exhibits, this fact to be determined by the committee on awards.

It is recommended that a committee on awards be appointed by the President of the Association; that said committee meet to pass on exhibits not later than Wednesday noon.

It is recommended that the usual $500 be appropriated for expenses of the Scientific Exhibit, and $100 for medals to be offered for such particular exhibits as the Committee on Scientific Exhibit may deem best.

Respectfully submitted,
E. R. Le Count,
W. M. L. Coplin,
Frank B. Wynn, Chairman.
Committee on Scientific Exhibit.

Committee on Awards Appointed.

Dr. C. E. Cantrell, Texas, moved the appointment of a committee of three on awards, as called for in the report, which was seconded by Dr. Arthur T. McCormack, Kentucky, and carried.

The President appointed as a Committee on Awards of Scientific Exhibit Drs. W. M. L. Coplin, Philadelphia; George Dock, Ann Arbor, and George W. Crile, Cleveland.

It was then moved that the preliminary report of the Committee on Scientific Exhibit be adopted. Seconded.

Dr. Alexander R. Craig, Pennsylvania, moved to amend that part of the report with reference to appropriation of money be referred to the Board of Trustees with the recommendation that the amounts specified be appropriated.

The amendment was seconded, accepted, and the original motion as amended was carried.

Report of Committee on Davis Memorial.

Dr. Henry O. Marcy, chairman, presented a supplementary report of the Committee on N. S. Davis Memorial, stating the amounts of money that had already been received, and suggested that if the Board of Trustees would appropriate $5,000 for this Memorial, state societies would follow. On motion of Dr. Charles S. Bacon, Illinois, the report was referred to the Reference Committee on Miscellaneous Business.

Resolution on Army Dental Corps.

Dr. A. Vander Veer, New York, offered the following preamble and resolution:

Whereas, The value of the services of the Dental Corps in the Army is now thoroughly recognized.

Resolved, That the Committee on Medical Legislation be instructed to further such legislation as will place the Dental Corps in the Army on a commissioned basis, such legislation to meet the approval of the War Department.

On motion, the preamble and resolution were referred to the Reference Committee on Legislation and Political Action.

Resolutions on State Journal Advertising.

Dr. Arthur T. McCormack, Kentucky, presented the follow-resolutions:

Resolved, That this Association heartily approves the action of the Board of Trustees in restricting advertisements of medical preparations to those approved by the Council on Pharmacy and Chemistry; and, further,

Resolved, That this House of Delegates requests all those state associations which now do or hereafter may publish or control medical journals to restrict their advertisements to such approved preparations, and that the General Secretary be requested to bring this resolution to the attention of all of the state associations.

On motion, the resolutions were referred to the Reference Committee on Miscellaneous Business.

Dr. McCormack's Work Endorsed.

Dr. Frank Billings, Illinois, offered the following:

Resolved, That the House of Delegates fully and heartily endorses the work of Dr. J. N. McCormack and recommends the Board of Trustees to continue him in the same capacity for another year.

The resolution was seconded by several delegates and was carried unanimously.

On motion, the House of Delegates adjourned until 2 p. m. on Wednesday.

Fourth Meeting—Wednesday, June 3

The House of Delegates met at 2 p. m. and was called to order by the President.

The roll was called, and 52 members responded.

The minutes of the previous meeting were read and adopted.

Report of Reference Committee on Sections and Section Work.

Dr. Julius Bierwirth, New York, member of the Reference Committee on Sections and Section Work, stated that the Committee had considered the petition referred to it to organize a section to be devoted to the science and art of diagnosis, and that the Committee respectfully reported adversely on this request.

On motion the report of the committee was adopted.

Report of Reference Committee on Legislation and Political Action.

Dr. Charles S. Bacon, Illinois, chairman, presented the following report of the Reference Committee on Legislation and Political Action:

To this committee has been referred the report of the standing committee on medical legislation, and several resolutions.

1. Under the head of national legislation, the standing committee reports the passage of the Army and Medical bill, the cessation of action to secure the passage of the three naval bills, the passage of the Carroll-Lazear pension bills and the probable failure of the objectionable sectarian bills, and makes no suggestion for further action on these or other national matters. Two resolutions relating to national affairs have been referred to the committee. One is as follows:

Whereas, The value of the services of the Dental Corps of the Army is now thoroughly recognized;

Resolved, That the Committee on Medical Legislation be instructed to further such legislation as will place the dental corps in the Army on a commissioned basis, such legislation to meet the approval of the War Department.

The House of Delegates last year endorsed a bill providing for a dental corps in the Navy, and as it seems desirable to make the proposed resolution more general so as to embrace both branches of the service the committee recommends the adoption of the following resolution:

The House of Delegates of the American Medical Association, recognizing the great importance of the services of the dental corps of both the Army and Navy and appreciating the importance of placing both on a commissioned basis, authorizes the Committee on Medical Legislation to assist in securing the passage of such bills as meet the approval of the War Department or the chief of the Bureau of Medicine and Surgery of the Navy Department.

2. The second national matter referred to the committee was the question of the revision of the patent laws concerning materia medica products, and the registration of names of medicines. The committee believes that the action proposed by the resolution would be very important in the development of therapeutics, and a great benefit to the public, and recommends the passage of the resolution substantially as presented.

3. Under state legislation the standing Committee on Medical Legislation reports the work that has been done during the last year by the Bureau of Medical Education toward the drafting of a medical practice law. It has made a comparison and analysis of existing medical practice acts and has published a summary of the same. It has nearly completed a history of medical legislation in the different states and in foreign countries. It has begun the compilation, collation, and comparison of the decisions of the state and federal courts so far as they relate to the constitution, interpretation and enforcement of medical practice acts. Your reference committee believes that this preliminary work is of vital importance to the final formulation of a satisfactory medical practice law that will be applicable to all the United States and

one that will serve as a basis for reciprocity in medical practice licensure.

4. The annual conference of the Committee on Medical Legislation and national council last December emphasized the importance of "Careful investigation of the actual conditions to which they apply," in the preparation of standard bills in the report of the special committee on uniform medical legislation, which report was adopted after a full discussion by the conference. It is agreed that in some states conditions are such that a new practice law would be desirable. The fact, however, that in 31 out of 46 states new practice laws have been passed or radical changes have been made within the last eight year shows that heretofore hasty and insufficiently considered action has been the rule. Hence your reference committee recommends the adoption of the recommendation of the standing committee that "only absolutely necessary changes in the State practice laws be undertaken preceding the completion of the investigation and preparation of a model bill.

The resolution of Dr. Cook on this subject provides no further instruction to the legislative committee than already given to it. The delegation of the duty of formulating a bill to a special committee would not be desirable, considering the work already accomplished by the bureau.

5. A summary of the work done in perfecting a model bill for state legislation on vital statistics is given in the report and the endorsement of the House of Delegates is asked for the bill. Your reference committee approves of the request, and recommends the adoption of the following resolutions:

Resolved, That the draft of a model law for state registration of births and deaths be approved as recommended by the Committee on Medical Legislation.

Resolved, That the Bureau of Legislation be authorized to make such minor changes as may seem advisable in cooperation with the commissioners on uniform state laws, the American Public Health Commission and the Bureau of the Census, and to urge the adoption of such legislation in non-registration states.

In the organization of the National Council and the National Auxiliary Committees, it is asked that the House of Delegates recommend to the various state associations the establishment of legislative committees and auxiliary legislative committees, and that the chairman of the Legislative Committee of a state be appointed a member of the National Legislative Council of the American Medical Association from that state, and that the members of the Auxiliary State Committees constitute the National Auxiliary Committees. Your committee approves this recommendation and recommends its adoption.

6. A further matter referred to this committee was a series of resolutions presented by Dr. Sanders of Alabama providing for the appointment of a committee of five to consider, first the question of securing a charter for the American Medical Association from the United States Congress; second, the revision of the constitution of the American Medical Association, and, third, the revision of the constitutions of the state societies and of the county societies. Your committee believes that the failure of previous persistent and long continued efforts towards securing a Federal charter for the American Medical Association has shown that the project is futile, and it does not believe that it is advisable to take up this matter again. It is the opinion of your committee that the other matters are outside of the province of the committee.

Respectfully submitted,

J. N. Hall,
M. W. Ireland,
Charles A. L. Reed,
Henry G. Beyer,
Samuel Bailey,
C. S. Bacon, Chairman.

Dr. H. Bert Ellis, California, moved that the report be considered section by section.

Sections 1, 2, 3, 4, 5, and 6 were read and adopted, after which Dr. Philip Mills Jones, California, moved that the report be adopted as a whole, with the exception of that part of the report dealing with other matters outside of the province of the Committee, and that these be referred to the Committee on Organization, with the request that this Committee report next year. Seconded and carried.

Report of the Reference Committee on Hygiene and Public Health.

Dr. G. B. Young, U. S. Public Health and Marine-Hospital Service, chairman, presented the report of the Reference Committee on Hygiene and Public Health, as follows:

REPORT OF BOARD OF PUBLIC INSTRUCTION APPROVED.

The Reference Committee on Hygiene and Public Health reports that it approves the adoption of the report of the Board of Public Instruction. This Board asks that the House of Delegates indicate its sentiment concerning the signing of the articles which shall be published under its authority. To bring this subject before the House of Delegates, the Reference Committee offers the following:

Resolved, That it is the sense of the House of Delegates of the American Medical Association that papers authorized by the Board of Public Instruction shall bear the statement of such authorization by the American Medical Association, and at the discretion of the Board of Public Instruction may be signed by the author, and it is recommended that the Board of Trustees be asked for an appropriation of $5,000, or so much thereof as shall be needed. for this work.

Concerning the Boards it proposes to be established by the State Societies, this Committee suggests that as soon as the plans of the Board of Public Instruction of the American Medical Association are sufficiently elaborated, the Board enter into communication with the various state associations, requesting that these associations take such part in the work as shall insure the carrying out of the plans of the Board of Public Instruction of the American Medical Association.

REPORT OF COMMITTEE ON NOMENCLATURE AND CLASSIFICATION OF DISEASES.

The report of the Committee on Nomenclature and Classification of Diseases should be adopted, and for the resolutions contained therein the Committee suggests the following substitute which has been placed in their hands by Dr. Cressy L. Wilbur, Chief Statistician of the Division of Vital Statistics of the Bureau of Census:

Resolved, By the American Medical Association:

1. That the International Classification of Diseases and Causes of Death be recommended for all official mortality and morbidity statistical reports.
2. That the Committee on Nomenclature and Classification of Diseases present a report on the Nomenclature of Diseases of the Royal College of Physicians of London to the Association at its meeting in 1909, with such recommendations as may seem advisable for American usage, and with the assignment of each term indicated according to the International Classification.
3. That a tentative reconstruction of the International Classification be framed on the basis of the foregoing report, and recommendations be drafted for submission to the International Commission of Revision.
4. That inquiry be made as to the possibility of holding the next Decennial Revision of the International Classification at Washington in 1910 in connection with the International Congress of Hygiene and Demography.
5. That after the revision of the International Classification in 1910 the Nomenclature of Diseases be recast in corresponding form, so that there will be available under a uniform arrangement and with precise agreement in the meaning of terms (1) International Classification of Causes of Death. (2) International Classification of Sickness and Disability. (3) International Nomenclature of Diseases and Injuries.

The Committee suggests that the same Committee be continued to complete the work begun.

Respectfully submitted.

W. N. Wishard,
A. R. Craig,
J. D. Griffith.
G. B. Young, Chairman.

At the conclusion of the reading of the report, Dr. Philip Mills Jones, California, moved that the report be received and the recommendations adopted. This motion was seconded by several delegates.

Dr. Frank Billings, Illinois: I am very sorry that Dr. Clark, the Chairman of the Board, is not here to say something in regard to the recommendations of the Reference Committee on Hygiene and Public Health in regard to the signing of these articles. We have had meetings during the last year in New York, and some of the members of the Committee have met in Chicago, so that we have discussed this matter very fully, and it seems, from the evidence we can secure all over the country, that it is pretty evenly divided as to whether these articles should be signed or not. We feel as a Committee that articles published in newspapers, written by scientific workers, should be signed, but perhaps there is doubt as to whether articles on the more practical subjects of diseases themselves would better be signed or not. A good many of the best men in the profession feel that such articles should not be signed, while many others feel that they should. There are a good many educators and editors who feel that they should be signed, while others feel that they should not, so that the Board was in doubt, and we are glad to have the opinions of the members of the Reference Committee on Hygiene and Public Health. I want you to think this matter over before you vote on it.

The President:—We will consider the preliminary portion of this report first, relating to the question of approving of the report of the Board of Public Instruction.

Dr. Frank Billings (resuming): The Board feels that if these articles or papers are signed, there ought to be some designation from the Committee that they are written with the approval of the Board of Public Instruction, and the writers should sign the articles under the direction of this Board. But that is not stated by this Committee. If that feature could be brought out more in detail it would give the Board proper instruction. Again, the Board feels that we should not establish Auxiliary Boards in states until the work has been well begun by the Board. I hope the members of the House have read the Report of the Board of Public Instruction and will feel at liberty to offer suggestions. I think the matter of establishing Auxiliary Boards may be left over for another year. I hope the House of Delegates through this Reference Committee will recommend to the Board of Trustees the appropriation of a certain sum of money for this Board for another year.

Dr. Lewis S. McMurtry, Kentucky:—I wish to emphasize what Dr. Billings has stated and to express the hope that the House will consider this matter very carefully before voting on it. There is no one thing that has given the Board of Public Instruction more difficulty and more cause for serious consideration that the question of the signing of these articles and how they should be signed. As Dr. Billings has stated, the Board of Public Instruction has had the matter under consideration. All this work is very important, and it is a new departure, and the Board of Public Instruction has been considering it with great care, and whatever action the House of Delegates takes regarding it we hope it will be done after due deliberation.

Dr. J. F. Percy, Illinois: In helping the Committee to decide whether or not these articles should be signed, there are only two ways of considering the question:

The objection to signing any of these articles must be dealt with merely on the ground of advertising of the individuals, and, it seems to me, the medical profession has gone too far in that direction. We have feared to allow the public to know the names of members of the profession who are engaged in scientific work, and that brings up the thought I had in mind in dealing with this question, namely, that two things are to be considered: First, the one of publicity, and, second, the one of advertising. Now, as a matter of publicity, I think the names of the men who prepare these articles should be attached to them. I believe it will give added weight to what is said, and it provides a recognized and ethical way of getting the names of the men before the public who are capable of preparing these articles. This matter has already come up in the Illinois State Medical Society. I dealt with it last year in my address as President of that Society, and the newspapers seized on it and used it not in the way that it was intended. They made out of it that there should be on the part of the medical profession a license for the universal advertising of our work, but that left out of scientific consideration the question in the public press. But when we have scientific men who can write scientific articles for the education of the public, I believe this Board can be helped and the work it is doing aided greatly if we give them permission to insist that the names of the writers accompany the articles that are sent out.

Dr. William T. Smith, New Hampshire: The lay press has been for years furnishing articles for public instruction, many of them dealing with topics of such varying value that they have been largely discredited by intelligent laymen. It seems to me, if this Association is going to put out articles for publication in the lay press, it should give its endorsement to the signatures of those who write the articles, or the articles should receive the endorsement of the Board.

Dr. G. B. Young, U. S. P. H. and M.-H. S.: Your Committee would sugest that the resolution can be recast in this form: That it is the sense of the House of Delegates that papers authorized by the Board of Public Instruction may be signed by the author or authors, but that neither residence nor position shall be designated, and that the Board of Trustees be asked to appropriate $5,000 for the execution and furtherance of this work.

Dr. H. D. Arnold, Massachusetts: It seems to me, that the adding of the signature of the writer to an article should be left to the Board, and should have the endorsement of the Committee representing the Association. In regard to the general principle, we have no matter of equal importance before the Association to-day as that of properly educating the public. As we medical men write articles the authority that stands back of them under the names of the writers is a matter of the greatest importance, and it must be so with the public. It would be desirable, if it can be so arranged, to have suitable control of the problem of advertising, but I think we can thoroughly trust the judgment of our Board.

Dr. A. K. West, Oklahoma: I rather disagree with the Committee in regard to leaving this matter to the signatures only. My impression is that the reading public is absolutely entitled to know the position of a man who is contributing an article and wherein his authority lies. Unless this is done, they will not fully appreciate the fact that the American Medical Association is behind this matter and guarantees the writer his authority and position. The reading public should know something about the organization of medicine. If a man contributes an article on a sanitary subject and holds some office of trust in the United States Government, it would be wise to give his position. It is true, most of our leading men are known at least locally over the state, and if any of them have served a term of residence as superintendent of public health in some of the larger cities it would give some weight to the laity to have that fact made known. I for one have no sympathy with the notion that we should contribute these articles anonymously and keep the public in the dark as to the source of our authority, or who it is that is contributing the articles. The name of a leading man of a given state, talking to the public who knows his ability to contribute an article, will carry more weight than the grinding out of scientific papers authorized by this Board.

Dr. Oliver T. Osborne, Section on Pharmacology and Therapeutics: I am heartily in favor of the opinion expressed by the gentleman who said that the titles should be published. I do not think we ought to say they *shall* be published.

I would move as an amendment that that part of the report which refers to the publication of the titles be left to the discretion of the Board.

Seconded by Dr. West.

Dr. C. E. Cantrell, Texas: It seems to me, that this whole matter should be left with the Board. The people who will profit by this education will not know very much about a single man's standing in the matter, and if in the judgment of the Board he is well enough known, it should be left to them to decide. The matter of signing an article or articles as coming from the American Medical Association is what is going to do the good to the people. The people have been denied knowledge on medical subjects for a long time. The lay press is looking for something to satisfy the reading public, and we want to establish sources of information so as to benefit the people. I think this matter should be left to the discretion of the Board of Public Instruction.

Dr. M. L. Harris, Trustee: I wish to say a word in regard to the latter part of this motion to the effect that the Board of Trustees has been willing to aid and encourage this Board of Public Instruction, and has already made an appropriation for the salary of a permanent secretary together with the expenses of publication, printing, etc., incurred by or asked for by the Board. That has already been done and the Board is still willing to continue.

Dr. G. B. Young, U. S. P. H. and M.-H. S.: If there is any ambiguity about the language used by the Committee, it has no objection to changing it in order to avoid any misconception.

The President: It seems to the Chair that such an important matter as this should be stated explicitly if possible. The Committee has been enlightened by the arguments that have been presented *pro* and *con* in regard to this matter, and a motion to recommit this, to have it formulated and presented by the Committee to-morrow would be the easiest way out of the matter.

REPORT RECOMMITTED.

It was accordingly moved and seconded that this part of the report be recommitted to the Reference Committee on Hygiene and Public Health. Carried.

Dr. Philip Mills Jones, California, then moved that the remainder of the report of the Reference Committee on Hygiene and Public Health be adopted as read.

Seconded and carried.

Report of the Reference Committee on Amendments to the Constitution and By-Laws.

Dr. George W. Guthrie, Pennsylvania, Chairman, presented the following report of the Reference Committee on Constitution and By-Laws:

The Committee reported that it unanimously approved the following:

Amend Section 1, Chapter 7, Book 2, Page 13, of the By-Laws by cutting out after the words "Board of Trustees," striking out the following, "and the Orators shall be nominated, respectively, by the Sections on Practice of Medicine, on Surgery and Anatomy, and on Hygiene and Sanitary Science."

Strike out Section 5, Chapter 7, Book 2, Page 14, of the By-Laws entire and make Section 6, Section 5 and Section 7, Section 6.

Amend Section 1, Chapter 11, Book 4, Page 25, of the By-Laws to read as follows: "Section 1.—Time of General Meeting.—The General meeting shall be held at 10:30 a. m. on the first day of the annual session, and shall be presided over by the President, or, in his absence or at his request, by one of the Vice-Presidents."

Amend Section 2, Chapter 2, Book 4, Page 25, of the By-Laws by striking out the word "opening" in the second line and by striking out everything after the word "action" in the fourth line, making the section read as follows: "Section 2.—Address at the General Meeting.—Before the General Meeting shall be delivered the address by the President, whose recommendations shall thereupon go to the House of Delegates for action."

Amend Section 3, Chapter 11, Book 4, Page 25, of the By-Laws by striking out the words "first or opening" in the second line of the paragraph.

Amend Section 3, Chapter 12, Book 4, Pages 26 and 27, of the By-Laws so that the last sentence of the section shall read as follows: "The Section on Practice of Medicine, on Surgery and Anatomy and on Hygiene and Sanitary Science may each elect a member to deliver at the ensuing Annual Session the Oration on Practice of Medicine, the Oration on Surgery, and the Oration on State Medicine, before the respective sections."

On motion of Dr. H. Bert Ellis, California, the report was adopted.

Report of the Reference Committee on Miscellaneous Business.

Dr. Stuart McGuire, Virginia, read the following report of the Reference Committee on Miscellaneous Business:

Two subjects have been referred to us. *First*, the report of the Committee on Davis Memorial, supplemented by remarks of its Chairman, Dr. Marcy. This Committee requests an appropriation of $5,000 and power to fill vacancies. By reference to the report of the Board of Trustees, it will be seen that the question of making this appropriation has been carefully considered during the past year, and that the Board has declined to act favorably, owing to the precedent it would establish.

Our Committee is in full sympathy with the work of Dr. Marcy and his colleagues, but we unanimously endorse the policy of the Board of Trustees. We, therefore, recommend, *first*, that the appropriation be not endorsed and, *second*, that the Committee be given the power to fill such vacancies as occur in its body.

The other subject referred to us was the resolution of Dr. A. T. McCormack, endorsing the action of the Board of Trustees in restricting advertisements of medical preparations in The Journal of the Association to those approved by the Council on Pharmacy and Chemistry; and further, that this body request all state associations which do now, or may hereafter, publish or control medical journals to restrict advertisements to such approved preparations, and that the general secretary be requested to bring this resolution to the attention of all the state associations.

As this resolution is merely advisory and thoroughly in accord with the previous action of the Association, we recommend its adoption.

Stuart McGuire, Chairman.
J. Harris Pierpont,
J. B. McGaughey,
H. H. McCarthy,
S. T. Turner.

Dr. Philip Mills Jones, California, moved that the report of the Reference Committee on Miscellaneous Business be adopted as a whole. Seconded.

Dr. Walter Cheyne, South Carolina: I am in perfect accord with this report of the Committee, but I would ask the House of Delegates not to take action at this time in regard to the question of advertising in state medical journals, and of the question of the Trustees restricting the advertising in state journals as passed on by the Council on Pharmacy and Chemistry. The state of South Carolina is in thorough accord with that, and there are many other states that are in accord with the same idea, but there are some who are not. At this meeting we formed an association of state secretaries and editors under the auspices of the American Medical Association, and there was a Committee appointed at this Association meeting to which was referred the question of advertising. This is a matter for thought and consideration. It takes time to bring the people up to a high moral standard, and I think it would be wise at this time if that matter were left over and let this Association of State Editors and Secretaries talk it over and advise. I believe we are all in accord with the resolution, but as food takes time to digest in the stomach, so mental pabulum will take time to be digested, and it would be more prudent at this time not to incur any antagonism; it would make the way easier for us to put away the big stick.

Dr. Arthur T. McCormack, Kentucky: At the last meeting of the Association the following resolutions were unanimously adopted.:

> Whereas, The Council on Pharmacy and Chemistry, after examining many hundreds of preparations, has officially announced approval of a large number of such preparations: and,
>
> Whereas, We believe that the editors of many medical journals in this country, both official organs of state associations and privately owned journals, are desirous of cooperating in the work of freeing the medical profession from the nostrum control; therefore, be it
>
> *Resolved*, That this Association most earnestly requests all medical journals to refuse to aid in promoting the sale of preparations which have not been approved by the Council, by refusing advertising space to such preparations; and be it further
>
> *Resolved*, That we most earnestly request the moral and financial support of our members for those medical journals, whether privately owned or controlled by medical organizations, which disregard commercialism and stand firm for honesty and right dealing, thus sustaining the Council in its greatest work of the medical profession.

This resolution is a reiteration of the former resolution, with the exception that it specifies that the matter shall be referred to the constituent associations of this association for definite action.

Now, Mr. President, the time has come when the constituent associations can no longer refuse to take a definite stand on this question of simple honesty. The time has come when we can no longer compromise with dishonour. If any constituent association of this association wishes to continue to accept these advertisements, after the general request of last year, and the specific request of this year, then we should instruct our state associations to discontinue dishonest advertising in their pages.

Dr. Oliver T. Osborne, Section on Pharmacology and Therapeutics.—This puts me in mind of what happened in Connecticut. Last summer we had a pure food and drug law. The druggists opposed it, tooth and nail. They told the legislators and the governor to hold it over for the next session. We have a session once in two years. I saw the governor and tried to see what he could do for us, and he said if that law is good enough two years hence, it is good enough for us now. The law went through. If this matter is good enough a year hence, it is good enough now, and I hope the Committee's report will prevail.

Dr. A. K. West, Oklahoma.—This is a matter of great importance. It seems to me there can only be argument made on one side of the question. I think the gentleman from South Carolina misunderstands the attitude of the medical profession in this matter. The Council on Pharmacy and Chemistry does not intend to hurt anyone's business. It wants to help the business of the country. It wants to be a constructive force. It only criticizes dishonesty in preparations or claims, and it is careful about making these recommendations. It has not withheld recommendation from any manufacturer's product that is beyond any cavil. Therefore, this is not binding, it is only a suggestion, it is only helpful, and I can not see how any state journal or any journal controlled by a state association can do otherwise than to give attention to the suggestion made by the General Secretary, and I would like to see this promulgated, and now is the time to do it and not put it off another year.

The motion to adopt the report was then put and carried.

Conference Committee on Drugs Authorized.

Under the head of "New Business," Dr. Lewis S. McMurtry, Kentucky, offered the following resolution:

> *Resolved*, That in accordance with the recommendation of the Committee on Organization, the President is requested to appoint a committee of three members to confer with a like committee to be appointed by the American Pharmaceutical Association in regard to drug reforms, a return to scientific prescription writing and other matter of material interest to these two associations.

On motion of Dr. Philip Mills Jones, California, the resolution was adopted.

At this juncture Dr. M. L. Harris invited the House of Delegates to visit the Association headquarters. Ten o'clock Thursday morning was selected as the time for making the visit.

Resolution on Davis Memorial.

Dr. G. Lane Taneyhill, Maryland, presented the following resolution, which was referred to the Committee on Miscellaneous Business:

> *Resolved*, 1. That the following be and are hereby appointed by this body to be known as "N. S. Davis Endowment Fund for Research Work" Committee, namely, Drs. William E. Quine, Robert B. Preble, Heman Spalding, Frank S. Johnson, and William E. Morgan, with power to add to their number.

2. That the funds already in hand and so far as practicable subscriptions collectable be turned over to said committee forthwith.

3. That this committee shall control the same until a sufficient amount in their judgment shall have accumulated to warrant the beginning of research work.

4. That said committee shall make a written report annually to the House of Delegates of the American Medical Association.

5. That their term of service shall be 5 years or until their successors be appointed; that the terms of the above-named members be as follows: William E. Quine, 5 years; Robert B. Preble, 4 years; Heman Spalding, 3 years; Frank S. Johnson, 2 years; and William E. Morgan, 1 year, and that the presiding officer of the House of Delegates appoint one member each year thereafter.

Resolutions on Abortion.

Dr. Charles S. Bacon, Illinois, presented the following resolutions for the Section on Obstetrics and Diseases of Women:

Resolved, That the subject of the Chairman's address be referred to the House of Delegates, and that this body be and is hereby requested to appoint a standing committee which shall be called the National Committee on Criminal Abortion, whose duty shall be to investigate the laws on criminal abortion as they now appear on the statute books of the different states and territories of the United States, and to request all state and territorial medical societies to appoint like committees whose duty shall be to confer with the attorneys general of their states and territories, in the enactment of new and adequate laws governing criminal abortion. Be it further

Resolved, That the state and territorial committees shall confer with the said National Committee on Criminal Abortion annually, and that the said National Committee on Criminal Abortion, in cooperation with the National Committee on Medical Legislation, shall report annually to the House of Delegates what progress has been made in the several states and territories toward the suppression of criminal abortion, as well as what suggestions they may have to make as to prosecution of the cause.

On motion, these resolutions were referred to the Reference Committee on Hygiene and Public Health.

Resolutions on Public Instruction.

Dr. Charles S. Bacon also presented the following resolutions from the Section on Obstetrics and Diseases of Women:

Resolved, That the Section on Obstetrics and Gynecology recommends to the House of Delegates the advisability of establishing some system of instructing the youth of our country through lectures by competent persons in our public schools, before women's clubs, and in church organizations, and by monographs of suitable character, teaching the important and sacred rôle of the generative organs, and that this section urge our delegate to give this matter his best support in the House of Delegates. Be it further

Resolved, That a committee be appointed to consider the advisability of publishing a journal for lay subscribers which shall disseminate truth and counteract the falsehood of the many such publications now extant.

Dr. Arthur T. McCormack, Kentucky, moved that these resolutions be referred to the Board of Public Instruction with the exception of the recommendation regarding the establishment of a journal.

Seconded and carried unanimously.

Report of Chairman of American Committee for the Sixteenth International Medical Congress.

Dr. Frank Billings, Illinois, presented the following report for Dr. Musser:

To the House of Delegates:—In pursuance with your resolution confirming the appointment of the undersigned by the President of the International Congress of 1909, as Chairman of the Committee of Arrangements for the United States, I beg to report the selection of the following gentlemen as members of the committee:

The President of the American Medical Association, Dr. J. D. Bryant, New York; the President-elect, Dr. H. L. Burrell, Boston; the Surgeon-General of the Army; the Surgeon-General of the Navy; the Surgeon-General of the Public Health and Marine-Hospital Service;

Dr. F. Forcheimer, Cincinnati.
Dr. George H. Simmons, Chicago.
Dr. Richard Mills Pearce, New York City.
Dr. Reginald H. Fitz, Boston.
Dr. R. Matas, New Orleans.
Dr. William H. Welch, Baltimore.
Dr. F. Fremont Smith, Washington, D. C.
Dr. John A. Witherspoon, Nashville, Tenn.
Dr. C. H. Frazier, Philadelphia.
Dr. E. G. Janeway, New York.
Dr. Geo. M. Kober, Washington, D. C.
Dr. Ramon Guiteras, New York.
Dr. Grover W. Wende, Buffalo, N. Y.
Dr. H. A. Kelly, Baltimore.
Dr. Arthur D. Bevan, Chicago.
Dr. Chas. H. Stockton, Buffalo, N. Y
Dr. J. Riddle Goffe, New York.
Dr. W. E. Fischel, St. Louis, Mo.
Dr. John F. Binnie, Kansas City.
Dr. G. C. Huber, Ann Arbor, Mich.
Dr. Geo. Dock, Ann Arbor, Mich.
Dr. W. H. Carmalt, New Haven, Conn.
Dr. Samuel D. Risley, New Haven, Conn.
Dr. James E. Newcomb, Philadelphia.
Dr. James McBride, Los Angeles, Cal.
Dr. J. B. Murphy, Chicago.
Dr. W. F. Westbrook, St. Paul, Minn.
Dr. H. Moffatt, San Francisco, Cal.
Dr. James B. Herrick, Chicago.
Dr. Charles G. Kerley, New York.
Dr. M. H. Richardson, Boston, Mass.
Dr. A. Jacobi, New York.
Dr. S. J. Meltzer, New York.
Dr. Chas. A. L. Reed, Cincinnati.
Dr. Frank Billings, Chicago.
Dr. H. Sewall, Colorado.
Dr. Wm. J. Mayo, Rochester, Minn.
Dr. Victor C. Vaughan, Ann Arbor, Mich.
Dr. Geo. W. Crile, Cleveland, Ohio.
Dr. Geo. Ben Johnston, Richmond, Va.

At a meeting of the Committee, held Monday, June 1, 1908, the Chairman was authorized to appoint as executive committee the following: Dr. William H. Welch, Dr. A. Jacobi, Dr. R. H. Fitz, Dr. Frank Billings, Dr. G. E. de Schweinitz.

He was also authorized to name a secretary and to ask the American Medical Association and constituent societies of the Congress of Physicians and Surgeons to make the usual contributions for clerical expenses and postage.

The Congress meets August 24 to September 4. The Committee will have the various communications from the Committee of Arrangements in Budapest reported in the journals. The Chairman will send to any who desire the following: (1) The Rules. (2) The Announcements. (3) The Provisional Program. (4) Applications for Membership. (5) Applications to read papers. Respectfully,

J. H. Musser.

On motion the report was adopted with its recommendations.

Association to Cooperate with American Association for the Advancement of Science.

Dr. William H. Welch, Trustee, moved that the House of Delegates accept the invitation of the American Association for the Advancement of Science for the appointment of two members to represent the American Medical Association in the Council of the American Association for the Advancement of Science, and that the President appoint these representatives annually.

The motion was seconded by several and carried.

Dr. C. A. L. Reed Endorsed.

Dr. Lewis S. McMurtry, Kentucky, presented the following resolution:

Resolved, That this House of Delegates, without any reference to political affiliation, heartily commends the candidacy of Dr. Charles A. L. Reed for United States Senator.

Dr. Arthur T. McCormack moved that the resolution be adopted by rising vote.

Seconded and carried unanimously.

Pending Legislation in Congress.

Dr. H. L. E. Johnson, Trustee, presented two bills at present before Congress, one H. R., No. 6154, introduced by Mr. Livingston, and the other Senate bill No. 6976, introduced by Senator Gallinger, both of which were referred to the Reference Committee on Legislation and Political Action.

Resolution on Department of Public Health.

Dr. W. T. Sarles, Wisconsin, presented the following resolution, which was adopted by the Northwestern University Medical School alumni, to be referred to the House of Delegates:

Resolved, That it is the sense of this House that the time has arrived when a department of public health ought to be established by the national government, and to this end we ask the different political parties to make formal declaration in their respective national platforms soon to be submitted to the people.

On motion of Dr. Sarles the resolution was referred to the Reference Committee on Legislation and Political Action.

Resolutions on Ophthalmia Neonatorum.

Dr. N. K. Foster, Section on Hygiene and Sanitary Science, presented the following:

Whereas, The contagious character of ophthalmia neonatorum has long ago been clearly established; and,

Whereas, This disease is by far the most frequent cause of blindness; therefore, be it

Resolved, It is the opinion of the Section on Hygiene and Sanitary Science of the American Medical Association that ophthalmia neonatorum should be classed among the contagious diseases by all state and municipal boards of health and be dealth with accordingly by them.

S. T. Armstrong, Secretary of the Section.

On motion, this resolution was referred to the Reference Committee on Hygiene and Public Health.

Resolutions Endorsing the United States Public Health and Marine-Hospital Service.

Dr. N. K. Foster presented the following, which was referred to the Reference Committee on Legislation and Political Action:

The Section on Hygiene and Sanitary Science wishes to express its appreciation of the excellent work done under the United States Public Health and Marine Hospital Service, and especially to emphasize its efforts at San Francisco and New Orleans in aiding the state and municipal sanitary authorities in their fight against plague and yellow fever, respectively.

It further requests that the American Medical Association through its House of Delegates urge that the powers of the Bureau be so extended as to embrace all the functions necessary to the performance of the duties pertaining to the national department of of health.

S. T. ARMSTRONG, Secretary of Section.

Dr. N. K. Foster also presented the following:

It was moved, seconded and adopted by the Section on Hygiene and Sanitary Science that the delegates of that section request the House of Delegates to express the confidence of the American Medical Association in the work of the United States Public Health and Marine-Hospital Service in national health supervision.

S. T. ARMSTRONG, Secretary of Section.

On motion of Dr. McMurtry this resolution was referred to the Reference Committee on Legislation and Political Action.

Resolution Regarding Conference.

Dr. J. N. Hall, Colorado, offered preambles and a resolution requesting the Committee on Medical Legislation to arrange for a conference between the Committee of One Hundred and the officials of the Public Health and Marine-Hospital Service. On motion, these were referred to the Reference Committee on Legislation and Political Action.

Resolution on Work of Dr. McCormack.

Dr. Charles S. Bacon, Illinois, offered the following:

Resolved, That the duties of the Chairman of the Committee on Organization be, and they are hereby, made to include needed cooperation with the Committee on Medical Legislation, and that so far as may be consistent with the duties already devolving on that office Dr. J. N. McCormack, the present incumbent of that office, be, and he is hereby, directed to represent the Committee on Medical Legislation at its request, at Washington, when necessary or expedient, during the second session of the Sixtieth Congress.

On motion, the resolution was adopted.

Report of Reference Committee on Hygiene and Public Health Asked For.

Dr. E. C. Cantrell, Texas, moved that the action previously taken by the House of Delegates on the preliminary part of the report of the Reference Committee on Hygiene and Public Health with regard to the report of the Board of Public Instruction be rescinded and that the Committee be requested to report now.

Seconded and carried.

Report of Reference Committee on Hygiene and Public Health.

Dr. G. B. Young, U. S. Public Health and Marine-Hospital Service, reported on behalf of the Reference Committee on Hygiene and Public Health that the Committee approved the adoption of the report of the Board of Public Instruction as set forth on page 94 of the published reports.

On motion of Dr. Cantrell the report was adopted.

On motion, the House of Delegates adjourned until 2 p. m., Thursday.

Fifth Meeting—Thursday, June 4

The House of Delegates met at 2 p. m., and was called to order by the President. The roll was called and 109 members responded. The minutes of the previous meeting were read and adopted.

Election of Officers.

After the roll call the election of officers was in order. The President appointed as tellers Dr. R. R. Campbell, Illinois; Dr. C. E. Cantrell, Texas, and Dr. E. Garceau, Massachusetts.

The following officers were nominated, balloted for and declared duly elected:

President—Dr. William C. Gorgas, Ancon, Panama.

First Vice President—Dr. Thomas Jefferson Murray, Butte, Mont.

Second Vice President—Dr. John A. Hatchett, El Reno, Okla.

Third Vice President—Dr. Thomas A. Woodruff, Chicago, Ill.

Fourth Vice President—Dr. E. N. Hall, Woodburn, Ky.

General Secretary—Dr. George H. Simmons, Chicago, Ill., re-elected.

Treasurer—Dr. Frank Bilings, Chicago, Ill., re-elected.

Trustees—Dr. Wisner R. Townsend, New York, to serve until 1911; Dr. Philip Mills Jones, San Francisco, to serve until 1911; Dr. William T. Sarles, Sparta, Wis., to serve until 1911.

The other members of the Board are Dr. William H. Welch, Baltimore, 1909; Dr. Miles F. Porter, Fort Wayne, Ind., 1909; Dr. M. L. Harris, Chicago, 1909; Dr. T. J. Happel, Trenton, Tenn., 1910; Dr. W. W. Grant, Denver, Colo., 1910; and Dr. Philip Marvel, Atlantic City, N. J., 1910.

Standing Committees Appointed.

The following nominations were made by the President and confirmed by the House of Delegates:

Committee on Medical Legislation: Dr. Charles Harrington, Boston, Mass., to serve until 1911.

The other members of the Committee are: Dr. Charles A. L. Reed, Cincinnati, Ohio, Chairman, 1909; and Dr. Charles S. Bacon, Chicago, Ill., 1910.

Council on Medical Education: Dr. Victor C. Vaughan, Ann Arbor, Mich., to serve until 1913.

The other members of the Council are Dr. Arthur D. Bevan, Chicago, Chairman, 1909; Dr. W. T. Councilman, Boston, Mass., 1910; Dr. James W. Holland, Philadelphia, Pa., 1912; and Dr. John A. Witherspoon, Nashville, Tenn., 1911.

Committee on Transportation and Place of Session: Dr. M. L. Harris, Chicago, Chairman, for 3 years.

Honorary Members Elected.

The following were elected honorary members: Dr. Edward F. Schaefer, Edinburgh, Scotland; Dr. August Martin, Griefswald, Germany; Dr. E. Treacher Collins, London, England.

Resolution of Thanks to Hosts Adopted.

Dr. Philip Mills Jones, California, presented the following resolution:

Resolved, That the American Medical Association extends its thanks and appreciation to the Cook County Medical Society, the Illinois State Medical Society and the medical profession of the City of Chicago and the State of Illinois for their courtesy, hospitality and tireless energy in entertaining this Association.

On motion, the resolution was adopted unanimously by a rising vote.

Report of the Chairman on Scientific Exhibit.

Dr. Frank B. Wynn, Chairman of the Scientific Exhibit, presented the following report:

The extraordinary Scientific Exhibit made at the two previous sessions aroused trepidation in the minds of many, lest the West might not be able to keep the pace set by the East. A visit to the exhibit will prove that these fears were not well grounded. The present exhibition certainly compares favorably with any previously made. First praise is due the men of Chicago who have so generously supported the enterprise. Nor are we unmindful of the great aid which has come from New York, Boston, Philadelphia, Baltimore, Washington, New Orleans, Cincinnati and Iowa City. And this, too, has resulted without great urging. The fact attests not only national loyalty, but a genuine enthusiasm for the success of the good work. The following are the medical schools, hospitals and individuals represented, in the exhibit:

COLLEGES.

RUSH MEDICAL COLLEGE:
E. R. Le Count and H. T. Ricketts.

NORTHWESTERN UNIVERSITY MEDICAL SCHOOL:
F. Robert Zeit, Edward Carlton, Casey A. Wood, Frank Allport.

MEDICAL DEPARTMENT, COLUMBIA UNIVERSITY:
J. Draper Maury, Robert M. Brown, and N. B. Leggett.

HARVARD MEDICAL SCHOOL:
F. B. Mallory and S. B. Wolbach.

MEDICAL DEPARTMENT, TULANE UNIVERSITY:
Edmond Souchon.

MEDICAL DEPARTMENT, IOWA UNIVERSITY:
Henry Albert.

WASHINGTON UNIVERSITY, ST. LOUIS:
C. C. Guthrie.

HOSPITALS.

MICHAEL REESE HOSPITAL, CHICAGO:
M. Herzog.

CINCINNATI HOSPITAL:
H. J. Whitacre and J. E. Greiwe.

NEW YORK LYING-IN HOSPITAL:
George Kosmak, Ross McPherson and J. E. Welch.

COOK COUNTY HOSPITAL:
A. M. Stober.

ST. PETER STATE HOSPITAL (MINN.):
H. D. Valin.

U. S. BUREAU OF CHEMISTRY:
H. W. Wiley.

U. S. BUREAU OF ANIMAL INDUSTRY:
L. E. Day, Chicago.

ST. MARY'S HOSPITAL, ROCHESTER, MINN:
Drs. Mayo and Louis B. Wilson.

INDIANA UNIVERSITY SCHOOL OF MEDICINE:
B. D. Myers.

PHILADELPHIA POLYCLINIC:
James A. Kelly and John M. Swan.

COLLEGE OF PHYSICIANS AND SURGEONS, BALTIMORE:
W. R. Stokes and Marshall L. Price.

MARINE-HOSPITAL SERVICE:
M. J. Rosenau and Chas W. Stiles.

INDIVIDUAL EXHIBITS.

Fenton B. Turck, Chicago.
E. Amberg, Detroit.
Charles L. Leonard, Philadelphia.
Charles H. Beard, Chicago.

There are in all twenty-six exhibits. Twenty of these represent the fields of anatomy and pathology, both general and special. Five are research exhibits and abundantly justify the committee's action in offering a medal to encourage research investigation. Regret is expressed that only one tuberculosis exhibit has been presented in competition for the medal offered. Not dismayed, the committee will offer a medal next year for the best tuberculosis exhibit which shall combine compactness with completeness, in elucidating the whole problem of tuberculosis. The idea is to secure a model exhibit, suitable for installation in public libraries, railway stations and the like.

No one will now question the great practical benefits of the Scientific Exhibit to the Association. The object lesson of a series of specimens illustrating some phase of pathology, or the suggestive and convincing information of a research exhibit, can not fail to make a lasting impression on the receptive mind. And while it must be admitted that incalculable good has resulted in an educational way, to the membership the fact is that the chief benefit accrues individually to those who prepare and present these exhibits.

It should furthermore be observed that in consequence of this movement in the American Medical Association the teaching museums of medical colleges generally have improved at manifold rate.

It is with a feeling of deep regret that we note the failure of many states and cities of potential medical influence to participate in this phase of the Association work. The observation is not made in a spirit of criticism, but rather as an exhortation. To such it is suggested that a great opportunity is lost. Let no one be deterred by the circumstances of environment. Did not Koch begin his great work as a country practitioner? The very creditable research exhibit for which a gold medal has been awarded, represents work carried on in the country. A certificate of honor has been awarded for an exhibit indicating superior surgical study, done in a small city. Bigness of the place or the exhibit counts for less than excellence of the product.

I have scant patience with the laboratory worker who refuses to participate in the work of the exhibit because of alleged lack of appreciation by members, or the inability of many to comprehend the full significance of scientific demonstrations made. The same argument would condemn the education of our children. Nor have I any sympathy for the clinician who rails at the laboratory man as impractical. I am prone to consider both unscientific in the broader sense; both impractical. The highest attainment is only achieved by their cooperation. The Scientific Exhibit affords a common meeting ground for all. Few of us can be discoverers; all should be coworkers. Let the science and art of medicine touch elbows in the march of medical progress.

Respectfully submitted,
Frank B. Wynn,
Director and Chairman, Scientific Exhibit Committee.

On motion of Dr. H. Bert Ellis, California, the report was accepted and placed on file.

Report of the Committee on Awards.

Dr. William M. L. Coplin, Section on Pathology and Physiology, Chairman, presented the report of the Committee on Awards, as follows:

To the House of Delegates of the American Medical Association:

Your committee on awards would respectfully submit the following report:

In the opinion of the committee no exhibit coming within the specifications of competition for the medal on tuberculosis has been presented, and therefore, we would not, at this time, recommend the award of any medal.

The following awards are recommended:

Dr. H. T. Ricketts: Gold medal for research exhibit on tick fever.

Dr. Fenton B. Turck: Diploma for exhibit illustrating pathology of peptic ulcer.

Northwestern University Medical Department: Diploma for teaching exhibit, illustrating morbid anatomy.

Rush Medical College: Diploma for teaching exhibit, illustrating morbid anatomy.

Dr. Charles H. Beard: Diploma for exhibit of drawings of the human eyeground.

Dr. Maximillian Herzog: Diploma for exhibit, illustrating early human embryology.

St. Mary's Hospital, Rochester, Minn: Diploma for clinical and pathologic exhibit of stereoscopic photographs.

Dr. Edmond Souchon: Diploma for improved method for the preservation and exhibition of anatomic specimens.

Dr. A. M. Stober, Cook County Hospital: Diploma for exhibit, illustrating blastomycosis.

Dr. Mallory and Dr. Wolbach (Harvard): Diploma for exhibit of drawings and photomicrographs, illustrating the classification of tumors.

U. S. Public Health and Marine-Hospital Service: Honorable mention for exhibit, illustrating the investigations of Dr. C. W. Stiles on hookworm.

Iowa State University: Honorable mention for instructive tuberculosis exhibit.

Cincinnati Hospital: Honorable mention for creditable group of specimens.

Philadelphia Polyclinic: Honorable mention for creditable exhibit of group of teaching specimens.

Lying-in Hospital of New York: Honorable mention for creditable exhibit.

Your committee would further recommend a continuation of the policy of offering medals, diplomas, and honorable mention at the Scientific Exhibit of the Association.

Respectfully submitted,
W. M. L. Coplin.
George Dock.
George W. Crile.

On motion of Dr. Oliver T. Osborne, Section on Pharmacology and Therapeutics, the report was adopted.

Resolution of Confidence in Secretary-Editor Adopted.

Dr. W. R. Tipton, New Mexico, introduced the following resolution:

Resolved, That this Association extend to its distinguished Secretary-Editor, George H. Simmons, its confidence and appreciation and pledge him its continued support in his splendid work.

On motion, the resolution was adopted by a rising vote.

Dr. Simmons said: I wish to thank you most earnestly and assure you that I am most grateful for this expression of your appreciation of the efforts I have made, although these would amount to little if it were not for the hearty cooperation of my associates and the endorsement and support of the best men in the profession.

Report of the Committee on Transportation and Place of Session.

Dr. E. Eliot Harris reported on behalf of the Committee on Transportation and Place of Session as follows:

In view of the fact that the receipts from our exhibit go to the Association, instead as formerly to the Local Committee of Arrangements of the state, the Committee has felt free to consider the best interest of the Association as a whole without regard to the capacity of the profession of a single state to entertain us and all that it means in the way of extraordinary expense. After considering invitations to hold the next annual session at Seattle, Wash.; St. Louis, Mo.; Washington, D. C.; Saratoga, N. Y.; New York City and Atlantic City, the Committee has selected Atlantic City, N. J., as the next place of meeting.

On motion of Dr. J. D. Griffith, Missouri, the report was adopted.

Thanks Extended to the President.

Dr. Arthur T. McCormack, Kentucky, moved that the thanks of the Association be extended to the President for his address which places before the profession and the public the high plane and altruistic character of the hopes and plans of the medical profession, and that we thank him for his fairness and consideration in presiding over the deliberations of its House of Delegates.

The motion was seconded by Dr. W. H. Sanders, Alabama, and others and was unanimously carried.

Resolution Regarding Badges.

Dr. Oscar Dowling, Louisiana, offered the following:

Resolved, That in future the official button of this Association shall be provided by each member and used instead of those of other designs, and that the local committee of entertainments may have the privilege of furnishing stick pins or pendants, showing the place and date of meeting.

On motion of Dr. H. Bert Ellis, California, this resolution was referred to the Board of Trustees.

Supplementary Report of the Reference Committee on Legislation and Political Action.

Dr. Charles S. Bacon, Illinois, Chairman, presented the following report of the Reference Committee on Legislation and Political Action:

The committee approves and recommends the adoption of the resolution presented to the House of Delegates by the Northwestern University Medical School Alumni, which reads as follows:

Resolved, That it is the sense of the House of Delegates of the American Medical Association that the time has arrived when a department of public health ought to be established by the national government, and to this end we ask the different political parties to make formal declaration in their respective national platforms soon to be submitted to the people.

Two other communications concerning the proposed department of health and especially its relations to the United States Public Health and Marine-Hospital Service were referred to your committee, one coming from the Section on Hygiene and Sanitary Science, the other from the floor of the House. The communication from the Section on Hygiene and Sanitary Science, after commending the work of the United States Public Health and Marine-Hospital Service in fighting the plague and yellow fever, requests the House of Delegates to urge that: "The Powers of the Bureau be so extended as to embrace all the functions necessary to the performance of the duties pertaining to the National Department of Health."

The other communication, after alluding to the new grounds of hope for the success of the movement to secure a national department of health, expresses a fear that the movement may not be supported by the Public Health and Marine-Hospital Service probably because of a misunderstanding of the purposes of the new department, and asks for a conference of the Committee on Medical Legislation with the Committee of One Hundred authorized by the American Association for the Advancement of Science, and the Surgeon General of the Army, Navy, and Public Health and Marine-Hospital Service, the Pure Food Bureau, the Bureau of Animal Industry, the Bureau of the Census, and other bureaus and laboratories, which would be interested in the organization of the proposed department of health.

It is evident that these two communications express two radically different policies. One policy asks for an extension of the powers of the Public Health and Marine-Hospital Service to embrace all the functions of a national health department. The other policy is that of the Committee of One Hundred and proposes the creation of a department of public health on new and much broader lines. For many years the latter policy has been that of the American Medical Association, and last year the Committee on Legislation was instructed to cooperate with the Committee of One Hundred in its work to secure such a department.

After mature consideration your Reference Committee is of the unanimous opinion that it is not wise to change the policy of the Association, and therefore disapproves of the resolution, which urges the extension of the powers of the bureau. On the other hand, it recognizes that a conference of the Committee on Legislation with a Committee of One Hundred and with the interested services and bureaus might be valuable in eliminating all grounds for opposition and coordinate all interested forces in the support of the movement, and therefore, recommends the passage of the following:

Whereas, The campaign for a national department of public health so long conducted by this Association and the sanitarians of this country is now so actively supported by the Committee of One Hundred of the Association for the Advancement of Science and by the departments of political economy of our great universities as to give new hope and inspiration to those interested in this movement; and,

Whereas, It is probable that the medical departments of the Army, the Navy and the Public Health and Marine-Hospital Service, the Pure Food Bureau, the Bureau of Animal Industry, the Bureau of the Census, and the other bureaus and laboratories, scattered through the various departments, could be brought to cooperate in building up such a department so long demanded by the profession and sanitarians and so vital to the welfare of the Nation; therefore, be it

Resolved, That the Committee on Medical Legislation be requested to arrange for such conferences with the Committee of One Hundred, the surgeons-general of the Army, the Navy, and the Public Health and Marine-Hospital Service, the bureaus above named and others or their representatives, jointly or severally, that may be deemed best, with a view of attempting to secure such a coordination and a cooperation of all these forces as will further the creation of such a department.

Other resolutions and suggestions relating to this subject seem at the present time unnecessary or undesirable.

It is recommended that the medical practice bill for the District of Columbia as well as the chiropractic bill be referred to the Committee on Medical Legislation with power to act in accordance with the principles already adopted by the House of Delegates for the guidance of the committee.

Respectfully submitted,
Henry G. Beyer,
J. N. Hall,
M. W. Ireland,
Charles A. L. Reed,
Samuel Bailey,
C. S. Bacon, Chairman.

On motion of Dr. Alexander R. Craig, Pennsylvania, the report was adopted with its recommendations.

Supplementary Report of the Reference Committee on Miscellaneous Business.

Dr. Stuart McGuire, Virginia, Chairman, read the report of the Reference Committee on Miscellaneous Business, as follows:

Your Committee reports adversely on the resolution presented by Dr. Taneyhill, Maryland, which provides for the creation of a body to be known as the N. S. Davis Endowment Fund for Research Work, and also directs that all funds collected by the Committee on Davis Memorial be forthwith turned over to it.

This resolution, if adopted, would discharge Dr. Marcy's Committee, which has done earnest and devoted, if not successful, work, and would also divert the money which has been given for a specific purpose to one not contemplated by the subscribers.

We recommend that the present Committee on Davis Memorial, with Dr. Marcy as Chairman, be continued for another year, and that it be requested to consider the proposition presented by Dr. Taneyhill and report at the next meeting of the House of Delegates.

J. B. McGaughey,
H. H. McCarthy,
S. T. Turner,
J. H. Pierpont,
Stuart McGuire, Chairman.

Dr. S. Bailey, Iowa, moved that the report be adopted. Seconded.

Dr. G. Lane Taneyhill, Maryland, moved to substitute the preliminary report and the resolution for the report as submitted by the Reference Committee on Miscellaneous Business. Seconded.

On motion of Dr. R. S. Cathcart, South Carolina, the substitute offered by Dr. Taneyhill was tabled.

The President then put the motion of Dr. Bailey to adopt the report of the Committee and declared it carried.

Supplementary Report from the Reference Committee on Hygiene and Public Health.

Dr. G. B. Young, United States Public Health and Marine-Hospital Service, reported on behalf of the Reference Committee on Hygiene and Public Health regarding a resolution referred to it from the Section on Hygiene and Sanitary Science concerning the contagious character of ophthalmia neonatorum, that the Committee respectfully recommends its adoption.

On motion, the recommendation was concurred in.

The Reference Committee on Hygiene and Public Health also recommended, with regard to a resolution referred to it from the Section on Obstetrics and Diseases of Women concerning the establishment of a national committee on criminal abortion, that no action be taken, as it is within the purview of the Committee on Medical Legislation.

On motion, the recommendation was concurred in.

Dental and Associate Members Elected.

The following nominations were presented:

For dental membership: L. G. Noel, Nashville, Tenn.; C. K. Tetter, Cleveland, Ohio; Martin Dewey, Kansas City, Mo.

For associate membership: Henry B. Ward, Lincoln, Neb.

On motion, these applicants were elected.

Report of the Judicial Council.

Dr. C. E. Cantrell, Texas, presented the following:

One year ago, after the changing of the law, providing for filling of vacancies on this council, we held a meeting.

There was the case of Dr. George E. Petty of Memphis, on appeal from Tennessee, who appeared before the committee accompanied by his lawyer, presenting a brief that would have done credit to a court of last resort in our government. Inasmuch as the constitutional time had elapsed to entitle him to reappear before his county society for membership, we recommended that he do so with a report from your Judicial Council that they allow him the same consideration, as if he had never been rejected. We have since learned that his county society did accept his application for membership, but when the time came to vote on the same he was again rejected for membership.

Inasmuch as there had not been a meeting of this council for a number of years, there had accumulated a quantity of correspondence, which has been gone over carefully and disposed of.

The present Constitution and By-Laws, if properly understood and followed, would make it impossible for a case to reach the Judicial Council of this Association for adjustment on account of the time limit adjusting the matter itself. Your council apprehends no danger in the future of such a case reaching them.

Soon after my arrival at home after the Atlantic City session last year, Dr. Frederick R. Green, Assistant Secretary to the Association, sent to me by express one strong box well filled with papers; after searching diligently through them, I failed to find anything of apparent value to the Judicial Council, and beg authority from this House to return said box to Dr. Green so that he preserve it in the archives of this Association, and that the committee be relieved from further burden of this box.

Respectfully submitted,

C. C. CANTRELL.

On motion the report was adopted and ordered placed on file.

There being no further business to come before the meeting, the House of Delegates then adjourned *sine die*.

MEMBERS OF THE HOUSE OF DELEGATES IN ATTENDANCE.

(The figure following the name of the state shows the number of delegates to which the state is entitled.)

ALABAMA—3.

W. H. Sanders	Montgomery
J. D. S. Davis	Birmingham
I. F. Watkins	Montgomery

ARKANSAS—2.

G. A. Warren	Black Rock

CALIFORNIA—3.

Philip Mills Jones	San Francisco
H. Bert Ellis	Los Angeles

COLORADO—2.

J. N. Hall	Denver
Crum Epler	Pueblo

CONNECTICUT—2.

D. Chester Brown	Danbury
Everett J. McKnight,	Hartford

DELAWARE—1.

P. W. Tomlinson	Wilmington

DISTRICT OF COLUMBIA—1.

G. W. Cook	Washington

FLORIDA—1.

J. Harris Pierpont	Pensacola

GEORGIA—2.

Michael Hoke	Georgia
F. G. Hodgson	Atlanta

IDAHO—1.

E. W. Kleinman	Hailey

ILLINOIS—7.

C. S. Bacon	Chicago
J. R. Hollowbush	Rock Island
R. T. Gillmore	Chicago
J. F. Percy	Galesburg
L. H. A. Nickerson	Quincy
E. W. Weis	Ottawa
Frank Billings	Chicago

INDIANA—4.

L. L. Whiteside	Franklin
W. N. Wishard	Indianapolis
A. M. Hayden	Evansville
J. B. Berteling	South Bend

IOWA—3.

S. Bailey	Mt. Ayr
G. E. Crawford	Cedar Rapids
M. J. Kenefick	Algona

KANSAS—3.

H. L. Alkire	Topeka
J. E. Sawtell	Kansas City
George E. Tooley	Washington

KENTUCKY—3.

L. S. McMurtry	Louisville
W. W. Richmond	Clinton
A. T. McCormack	Bowling Green

LOUISIANA—2.

Charles McVea	Baton Rouge
Oscar Dowling	Shreveport

MAINE—1.

C. E. Williams	Auburn

MARYLAND—2.

Harry Friedenwald	Baltimore
G. Lane Taneyhill	Baltimore

MASSACHUSETTS—6.

Perley P. Comey	Worcester
C. H. Cook	Natick
H. D. Arnold	Boston
J. A. Gage	Lowell
O. J. Brown	North Adams
E. Garceau	Boston

MICHIGAN—4.

H. O. Walker	Detroit
Collins H. Johnston	Grand Rapids
D. E. Robinson	Jackson

MINNESOTA—2.

J. B. McGaughey	Winona
A. E. Spalding	Luverne

MISSISSIPPI—2.

W. W. Crawford	Hattiesburg
H. L. Sutherland	Rosedale

MISSOURI—4.

C. M. Nicholson	St. Louis
F. E. Murphy	Kansas City
C. Lester Hall	Kansas City
J. D. Griffith	Kansas City

MONTANA—1.

Donald Campbell	Butte

NEBRASKA—2.

F. A. Long	Madison
A. R. Mitchell	Lincoln

NEW HAMPSHIRE—1.

William T. Smith	Hanover

NEW JERSEY—3.

Luther M. Halsey	Williamstown
Charles J. Kipp	Newark

NEW MEXICO—1.

W. R. Tipton	Las Vegas

NEW YORK—11.

J. A. Fordyce	New York
Charles Jewett	Brooklyn
R. F. Weir	New York City
E. B. Angell	Rochester
J. C. Bierwirth	Brooklyn
D. C. Moriarta	Saratoga
Wisner R. Townsend	New York City
A. Vander Veer	Albany

Charles Stover	Amsterdam
Wesley T. Mulligan	Rochester
W. H. Thornton	Buffalo
NEVADA—1.	
Chas. H. Francis	Reno
NORTH CAROLINA—3.	
J. F. Highsmith	Fayetteville
H. H. Briggs	Asheville
Albert Anderson	Raleigh
NORTH DAKOTA—1.	
Victor Hugo Stickney	Dickinson
OHIO—6.	
Rufus Hall	Cincinnati
Horace Bonner	Dayton
W. D. Deuschle	Columbus
Hugh F. Lorimer	Chillicothe
R. E. Skeel	Cleveland
Charles Graefe	Sandusky
OKLAHOMA—2.	
A. K. West	Oklahoma City
Virgil Berry	Wetumka
OREGON—1.	
W. T. Williamson	Portland
PENNSYLVANIA—8.	
Adolph Koenig	Pittsburg
William T. Williams	Mt. Carmel
Samuel Wolfe	Philadelphia
Alexander R. Craig	Philadelphia
Philip Y. Eisenberg	Norristown
George W. Guthrie	Wilkes-Barre
David Dennis	Erie
W. F. Bacon	York
RHODE ISLAND—1.	
John Champlin	Westerly
SOUTH CAROLINA—2.	
Walter Cheyne	Sumter
R. S. Cathcart	Charleston
SOUTH DAKOTA—1.	
H. J. Rock	Aberdeen
TENNESSEE—2.	
S. W. Woodyard	Greenville
S. S. Crockett	Nashville
TEXAS—5.	
C. E. Cantrell	Greenville
Frank Paschal	San Antonio
S. T. Turner	El Paso
R. W. Knox	Houston
UTAH—1.	
S. C. Baldwin	Salt Lake City
VERMONT—1.	
J. N. Jenne	Burlington
VIRGINIA—3.	
J. Shelton Horsley	Richmond
William E. Anderson	Farmville
Stuart McGuire	Richmond
WASHINGTON—1.	
H. H. McCarthy	Spokane
WEST VIRGINIA—1.	
O. O. Cooper	Hinton
WISCONSIN—3.	
W. T. Sarles	Sparta
B. M. Caples	Waukesha
L. H. Pelton	Waupaca
WYOMING—1.	
G. L. Strader	Cheyenne
PRACTICE OF MEDICINE—1.	
George Dock	Ann Arbor, Mich.
OBSTETRICS AND DISEASES OF WOMEN—1.	
T. J. Watkins	Chicago
SURGERY AND ANATOMY—1.	
Edward H. Ochsner	Chicago
HYGIENE AND SANITARY SCIENCE—1.	
N. K. Foster	Sacramento, Cal.
OPHTHALMOLOGY—1.	
W. B. Marple	New York City
DISEASES OF CHILDREN—1.	
Thomas Parke	Birmingham
STOMATOLOGY—1.	
M. L. Rhein	New York City
NERVOUS AND MENTAL DISEASES—1.	
Morton Prince	Boston
CUTANEOUS MEDICINE AND SURGERY—1.	
R. R. Campbell	Chicago
LARYNGOLOGY AND OTOLOGY—1.	
Otto F. Freer	Chicago
PHARMACOLOGY AND THERAPEUTICS—1.	
Oliver T. Osborne	New Haven, Conn.
PATHOLOGY AND PHYSIOLOGY—1.	
W. M. L. Coplin	Philadelphia
U. S. P. H. AND M.-H. SERVICE—1.	
Surgeon G. B. Young	Chicago
U. S. NAVY—1.	
H. G. Beyer	Washington, D. C.
U. S. ARMY—1.	
Major M. W. Ireland	Washington, D. C.

MINUTES OF THE SECTIONS.

The minutes of the sections will be published next week. The new officers of the sections are named on advertising page 6 of this issue.

Medical Economics

POSTGRADUATE COURSE FOR COUNTY SOCIETIES.

DR. JOHN H. BLACKBURN, DIRECTOR.
BOWLING GREEN, KENTUCKY.

Ninth Month.

FOURTH WEEKLY MEETING.

Acute Ileocolitis.

Etiology: Age, season, diet, etc. Secondary to infection.

Bacteriology: Researches of Booker, Shiga, Flexner.

Pathology. Acute Catarrhal: Gross changes, intestinal contents, mucous membrane, blood vessels, lymph nodes, Peyer's patches. Microscopic changes.

Catarrhal Ulceration: Gross and microscopic changes.

Follicular Ulceration: Incidence, site, number, gross appearances. Microscopic changes.

Acute Membranous: Site, extent, gross appearances, microscopic changes, characteristic fibrinous exudate.

Associated Pathology: Bronchopneumonia, bronchitis, nephritic changes.

Symptoms.

Catarrhal: Cases of moderate severity, sudden onset, vomiting, pain, fever, diarrhea. Characteristic discharges later, blood and mucus, tenesmus. Usual course and duration. Tendency to relapse.

Severe Catarrhal Form: Symptoms more marked, high fever, frequently bloody stools, prostration, nervous symptoms, toxic symptoms, usual terminations. Gradual recovery.

Follicular Ulceration: Usually a terminal process of gastroenteric infection. Sudden or gradual onset. Continued temperature, mucus in discharges, little blood, slight vomiting, loss of weight. Tendency to remissions and relapses. Slow recovery and convalescence.

Membranous: Severe onset, high fever, vomiting, large bloody stools, prostration, nervous symptoms. Pain, rectal prolapse, tenesmus. Characteristic shreds of pseudomembrane. Usual termination, influence of age.

Chronic Ileocolitis.

Symptoms: Differentiation between acute and chronic stages. Absence of pain, tenderness and temperature. General condition, loss of weight progressive, loss of superficial fat, condition of skin. Stomatitis, gastric disturbance slight. Stools; number, character. Nervous symptoms. Course and duration, tendency to relapses.

Diagnosis: Differentiate superficial catarrhal inflammation follicular ulceration, and general tuberculosis.

Marriages

John J. Andrews, M.D., to Miss Florence Pardridge, both of Chicago, June 3.

F. J. Atwell, M.D., to Miss Helen Williams of Cooperstown, N. Y., May 28.

James J. Kennedy, M.D., to Miss Alice C. Mary, both of Philadelphia, April 29.

Joseph W. Helz, M.D., to Miss Frances Raidy, both of Fond du Lac, Wis., May 26.

Morris H. Evans, M.D., to Mrs. Lucy E. Schwartz, both of Emerson, Neb., June 2.

David I. Miller, M.D., to Miss Mary Frances Swartz, both of Harrisburg, Pa., June 2.

James B. Knipe, M.D., to Miss Grace Maria Stuart, both of Armstrong, Iowa, June 1.

Charles Burton Wormelle, M.D., to Miss Annie Estella Hyde, both of Boston, recently.

Adolph H. Olsen, M.D., Oak Park, Ill., to Miss Elizabeth Witt Gordon of Chicago, June 10.

Thomas J. Billion, M.D., Sioux Falls, S. D., to Miss Gretta Houser of Monterey, Mexico, recently.

Arthur Rand Whitefort, M.D., St. Elmo, Ill., to Miss Mabel Andrews of Carthage, Ill., May 29.

Henry Hoch, M.D., Texline, Texas, to Miss Rose C. Gerble of Jacksonville, Ill., at Carthage, Ill., May 17.

Blake McKenzie Lancaster, M.D., Inkster, N. D., to Miss Maud Carson of West Lorne, Ont., May 20.

Benjamin David Lemery, M.D., Inkster, N. D., to Miss Sarah Muriel Full of Pembina, N. D., June 10.

Robert Irwin Myers, M.D., Washington, D. C., to Miss Cynthia Estelle Verney, at Cumberland, Md., May 19.

Deaths

James Coe Culbertson, M.D.—1841-1908.

James Coe Culbertson, M.D. Bellevue Hospital Medical College, New York City, 1865; from 1891 to 1893 editor of The Journal of the American Medical Association; editor and publisher of the Cincinnati *Lancet-Clinic* since 1873; a private and hospital steward in the Army and later assistant surgeon of the One Hundred and Thirty-seventh Ohio Volunteer Infantry during the Civil War and since that time a practitioner of Cincinnati; professor of principles and practice of medicine in the Cincinnati College of Medicine and Surgery since 1893; who as a member of the Cincinnati board of aldermen from 1884 to 1888, helped to make the University of Cincinnati a reality, and through whose efforts the ordinance was passed which gave to the institution the tract of 60 acres in Burnet Woods, where its buildings now stand; a prominent member of the Cincinnati board of education since May, 1896, and an active worker in the movement which has made possible public playgrounds, free bathhouses and other improvements; died at his home in Cincinnati, June 4, from arteriosclerosis, after an illness of two years and a half, aged 67.

Horace George Miller, M.D. Medical School of Harvard University, Boston, 1865; a member of the American Medical Association; president of the American Otological Society from 1900 to 1902; of the New England Ophthalmological Society and of the Rhode Island Medical Society; vice-president of the Harvard Medical Alumni Association from 1894 to 1897; president of the Brown University Medical Associatio a member of the American Academy of Medicine, America Ophthalmological Society, American Association of Pensio Examining Surgeons and American Association for the A vancement of Science; consulting ophthalmologist to th Rhode Island Hospital, St. Elizabeth Home, St. Joseph Ho pital and Providence Lying-in Hospital; a veteran of th Civil War, and U. S. pension examining surgeon; one of th most distinguished eye and ear specialists of Rhode Islan died suddenly from cerebral hemorrhage, at his summer hom in Camden, Maine, May 29, aged 68.

Jacob E. Schadle, M.D. Jefferson Medical College, Philade phia, 1881; a member of the American Medical Associatio and American Rhinological, Laryngological and Otological So ciety; professor of laryngology and rhinology in the College o Medicine of the University of Minnesota; chief of staff of th St. Paul Free Dispensary; a member of the staff of St. Luke Hospital and of the Northern Pacific Benefit Association, S Paul; prominent throughout the northwest as a specialist o diseases of the nose, throat and ear; died at St. Joseph's Ho pital, St. Paul, May 29, from cerebral hemorrhage, aged 58.

William H. Christie, M.D. Rus Medical College, Chicago 1868 a member of the American Medical Association and the Medica Society of the Missouri Valley professor of materia medica an therapeutics in the Medical College of the University o Nebraska; physician to Immanuel and Clarkson Memorial hospitals, Omaha; a veteran of th Civil War, and a member of th local board of U. S. pension examining surgeons; for six year a member of the Omaha schoo board; died at his home in tha city, May 28, from cerebral hemorrhage, after a short illness aged 64.

Noble P. Howard, M.D. Medica College of Indiana, Indianapolis 1879; a member of the America Medical Association, Mississipp Valley Medical Association, Association of Railway Surgeons o the P., C., C. & St. L. R. R., and American Association of Railroad Surgeons; local surgeon fo the Pennsylvania System and Indianapolis & Eastern Railroad for two terms secretary of the Hancock County board of health and for four years postmaster of Greenfield, Ind.; died at his home in that place, May 26, after a lingering illness, aged 52.

Thomas G. Hyland, M.D. Bellevue Hospital Medical College New York City, 1879; a member of the American Medical Association; health officer of Amsterdam from 1890 to 1894; coroner of Montgomery County from 1885 to 1888, and assistant surgeon of the forty-sixth separate company, N. G. N. Y.; a member of the staff of the City Hospital and St. Mary's Hospital, Amsterdam, N. Y.; died suddenly, May 26, from angina pectoris on a train while en route to Utica, N. Y., aged 50.

John Carroll Irish, M.D. Bellevue Hospital Medical College, New York City, 1872; a member of the American Medical Association; consulting surgeon to the State Hospital, Tewksbury, Mass., and St. John's Hospital, Lowell, Mass.; medical examiner of the district for more than 30 years; formerly president of the Boston Gynecological Society; eminent as an abdominal surgeon; died at his home in Belvidere, Lowell, May 29, from cerebral hemorrhage, after an illness of three days, aged 54.

George Gallagher Hopkins, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1868; a member of the American Medical Association and American Academy of Medicine; consulting surgeon to St. John's Hospital, Brooklyn;

urgeon to the Home for the Aged, the Orphan House and ome for the Blind; a veteran of the Civil War, and an expert n light therapeutics; died suddenly near his home in Brookyn, May 23, aged 64.

Ebenezer A. Deane, M.D. Berkshire Medical College, Pittseld, Mass., 1853; once vice-president of the Massachusetts ledical Society, and once president of the Franklin District ledical Society; for nearly half a century a practitioner of lontague Center, Mass.; and for several years a member of he school board and a trustee of the public library; died at is home, May 31, after a protracted illness, aged 83.

Melvin O. Lower, M.D. Cincinnati College of Medicine and urgery, 1874; a member of the American Medical Association nd Association of Surgeons of the Pennsylvania Railroad ystem; local surgeon of the Vandalia Road at North Manhester, Ind.; formerly president of the Wabash County Medcal Society; died at his home in North Manchester, May 31, rom diabetes of 20 years' duration, aged 56.

Robert Harris Faunce, M.D. Medical School of Harvard University, Boston, 1882; a member of the Massachusetts and Barnstable district medical societies; for many years one of he medical examiners of Cape Cod and chairman of the school ommittee of Sandwich; died at his home in that town, May 25, after an illness of one day, from cerebral hemorrhage, aged 49.

John Charles Fremont Thorne, M.D. Rush Medical College, Chicago, 1884; a member of the Indiana State and Howard County medical societies; mayor of Kokomo in 1892; died at his home, May 24, from brain disease, three years after a collision between his buggy and a street car, in which he received severe injuries of the head, aged 50.

A. C. Davis, Jr., M.D. Chicago Homeopathic Medical College, Chicago, 1899; pastor of the Seventh-Day Baptist Church and a practitioner of West Edmeston, N. Y.; editor of three local journals; was thrown from his carriage, May 25, and instantly killed, aged about 40.

James G. Stewart, M.D. Medical College of Ohio, Medical Department University of Cincinnati, 1864; a veteran of the Civil War; died at his home in Biggsville, Ill., May 7, from cancer of the stomach, after a lingering illness, aged 77.

John T. Horton, M.D. Cleveland Homeopathic Medical College, 1884; three times coroner of Steuben Co., N. Y., and twice health officer of Hammondsport; died suddenly at his home in that place, May 23, from heart disease, aged 50.

Jesse C. Mosshammer, M.D. University of Buffalo (N. Y.) Medical Department, 1904; a member of the American Medical Association; died at his home in Dayton, Ohio, May 27, from pleuropneumonia, after an illness of 10 days, aged 36.

David E. Spoor, M.D. Hahnemann Medical College and Hospital of Chicago, 1878; of Schenectady, N. Y.; died at Ellis Hospital in that city, May 29, as a result of injuries received in an automobile accident two days before, aged 62.

George Delance Emerson, M.D. University of Vermont, College of Medicine, Burlington, 1888; formerly of Auburn, Maine; died at his home in South Berwick, Maine, May 24, from kidney disease, after a short illness, aged 43.

Robert D. Connell, M.D. Pulte Medical College, Cincinnati, 1879; at one time a member of the city council of Columbus, Ohio; died suddenly from cerebral hemorrhage while making a professional call in that city, May 31, aged 57.

Henry Case, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1865; for 22 years a practitioner of San José, Cal., died May 27, at his home in that city, after a prolonged illness, aged 67.

Dewitt Clinton Griswold, M.D. Rush Medical College, Chicago, (Registration, Wisconsin, 1899); died at his home in Clinton, Wis., May 6, from chronic gout, after an illness of nearly four months, aged about 65.

William P. Madden, M.D. Eclectic Medical Institute, Cincinnati, 1877; a veteran of the Civil War; died at his home in Xenia, Ohio, May 30, from septicemia, due to an operation wound three years before, aged 64.

Samuel J. Funk (License, Pa., 1881); a practitioner of Trumbauersville, Pa., for more than half a century; died at his home in that place, May 17, from cancer of the stomach, after a prolonged illness, aged 72.

Agnes Kemp, M.D. Woman's Medical College of Pennsylvania, Philadelphia, 1879; for many years a practitioner of Harrisburg, Pa.; died at the home of her son in Swarthmore, Pa., May 20, aged 85.

Ellen Hancock Lyon, M.D. Hahnemann Medical College and Hospital of Chicago, 1892; of Chicago; died at her home in Wheaton, Ill., May 24, from cancer, after an illness of two years, aged 38.

Michael Getz, M.D. Illinois Medical College, Chicago, 1901; a member of the Illinois State Medical Society; died at his home in Chicago, May 29, from uremia due to chronic nephritis, aged 47.

L. A. Archibald, M.D. Louisville (Ky.) Medical College, 1872; died at his home in Slaughtersville, Ky., from spinal concussion, May 26, due to a fall from a ladder the day before, aged 60.

Allen Pence (Years of Practice, Ind.); for 61 years a practitioner of Terre Haute, Ind.; at one time alderman and city commissioner; died suddenly at his office, January 22, aged 88.

Theophilus E. F. Miller, M.D. Hahnemann Medical College and Hospital of Chicago, 1886; died suddenly from cerebral hemorrhage, at his home in Westport, Ind., May 26, aged 57.

Medad S. Corey, M.D. University of Buffalo (N. Y.) Medical Department, 1861; a pioneer practitioner of Chautauqua Co., N. Y.; died at his home in Fredonia, May 25, aged 81.

George B. Spencer, M.D. Western Reserve University, Medical College, Cleveland, 1867; of Weston, Ohio; died suddenly at his summer cottage on the Maumee, May 31, aged 62.

Walter R. Dodds, M.D. Missouri Medical College, St. Louis, 1884; of St. Louis; died in the St. Louis City Hospital, May 7, from nephritis, after an illness of eight days, aged 42.

Steven Simon Thrower (License, Cranshaw Co., Ala., 1884); one of the oldest practitioners of that county; died at his home in Bradleytown, May 21, after a long illness.

Dillard S. Price, M.D. University of Louisvile, Medical Department, 1856; died at his home in Winchester, Ky., May 30, from senile debility, after a long illness, aged 77.

Thomas E. Wetzel, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1891; died at his home in Boise, Idaho, May 23, from rheumatism, after a long illness, aged 39.

John E. Brooks, M.D. Eclectic Medical Institute, Cincinnati, 1884; died at his home in Whittier, Cal., May 19, after an illness of several weeks, aged 49.

Charles De Long Chandler, M.D. Hahnemann Medical College and Hospital, Philadelphia, 1896; died at his home in Hartington, Neb., May 28, aged 37.

W. D. McCurdy (License, Ark., 1906); for several years a practitioner of Grand Glaize, Ark.; died at his home in that place, May 21, aged 39.

Milton Cain (Years of Practice, Ill., 1877); died at his home in Lewistown, Ill., May 24, from nephritis, aged 75.

Society Proceedings

COMING MEETINGS.

Indiana State Medical Association, French Lick, June 18-19.
Medical Society of New Jersey, Cape May, June 18-20.
Medical Society of State of North Carolina, Winston, June 16-19.
Michigan State Medical Society, Manistee, June 24-25.
State Medical Society of Wisconsin, Milwaukee, June 24-26.
Oregon State Medical Association, Portland, July 1-3.
American Ophthalmological Society, New London, Conn., July 15-16

ILLINOIS STATE MEDICAL SOCIETY.

Fifty-eighth Annual Meeting, held at Peoria, May 19-21, 1908.

(Continued from page 1932.)

Treatment of General Peritonitis Complicating Appendicitis.

Dr. Daniel N. Eisendrath, Chicago, reviewed briefly the principal points in the pathology and diagnosis of this complication of appendicitis. Although it was formerly a much dreaded condition, it is now felt that the surgeon can control the outcome in the majority of cases if they are seen during the first twenty-four to seventy-two hours. The reasons for this improvement are a rapid technic in removing the source, i. e., the appendix; a minimum amount of manipulation of the intestines, with no irrigation; the use of the Fowler position, and the continuous administration per rectum of normal saline solution. He presented a back-rest for maintaining the Fowler position, and also described an apparatus for administering salt solution.

Management of Health of State.

President Baum, in his annual address, suggested the establishment of a state commissioner of health and a board of medical examiners in lieu of the present State Board of Health, saying that these two separate offices had worked well in other states. This matter was referred to the legislative committee, that it might prepare a bill covering the recommendation and present it to the state legislature.

Control of Hyperacidity by Diet and Drugs.

Dr. M. Milton Portis, Chicago, detailed some experiments conducted on dogs with Pawlow stomachs. A great variety of foods were given, and in all cases it was found that vegetables excited the stomach to the least secretion. The time of secretion and the amount secreted are much reduced as compared with the feeding of meat, but the per cent. of HCl secreted could not be reduced. The total amount of secretion can be still further reduced by giving the vegetables in a finely divided state. The alkalies, especially if given before meals, reduce secretion, as has been previously observed. Morphin and hyoscin have very little effect. Atropin and strontium bromid have a marked effect in reducing the amount of secretion.

Baths and Exercises in the Treatment of Heart Disease.

Dr. Robert H. Babcock, Chicago, emphasizes the fact that the water should be merely warm or tepid, 95 to 92 F., for the initial baths, and weakly saline, never warm enough to feel hot to the patient; also that as the patient's reaction permits, the temperature should be lowered from time to time, until toward the end of the series a temperature of 85 F. could be obtained, by which time the waters are strongly charged with sodium chlorid, 3 per cent., calcium chlorid, 1 per cent., and made strongly effervescing. The weaker baths should be considered sedative and suited to weak dilated hearts, while the colder, strongly saline and carbonated waters are stimulating. Since the natural Nauheim waters are strongly impregnated with calcium salts, Dr. Babcock never omits the addition of calcium chlorid, as some American physicians do. Since these baths are capable of harm as well as good, he believes they should be prescribed only after frequent careful examinations of the patient, and with due regard to the individual's reaction after, and his sensations during, each bath. This treatment is applicable chiefly to myocardial incompetence and valvular insufficiencies. These baths should be given cautiously in cases of stenosis and arteriosclerosis, and are of doubtful utility when chronic fibrous mediastinitis is present, and not at all useful in cases of aortic aneurism or ectasia, for although the heart's contractions may be invigorated, the vascular lesion can not be improved and may be increased. This balneologic treatment should be deferred, in cases of pronounced dilatation with edema, until rest and other measures have improved cardiac power.

Exercises are of two kinds, the so-called resistance exercises and medical gymnastics. The former consist of extension and rotation of the extremities and trunk, performed against a measured degree of resistance offered by a trained assistant. Their beneficial effects in feeble dilated hearts are attributed to dilatation of the intermuscular arterioles, and consequent unloading of the heart's cavities. Patients with chronic myocarditis soon appreciate the benefit of exercise by a lessening of dyspnea and palpitation, by increased strength, and by reduction in abdominal girth. The speaker keeps close watch on the effects and in some cases combines medicinal therapy with the exercises. He concludes that: 1. He is justified in recommending medical gymnastics as an important part of the management of myocardial incompetence when this is not too advanced. 2. They should be performed only with the aid of a trained assistant who understands the object and kind of exercises to be given, and who will maintain close watch on the pulse and respiration. 3. These medical gymnastics produce results similar to those of resistance exercises, and in suitable cases more quickly and powerfully. 4. Individuals with myocardial incompetence should not be allowed to substitute for these medical gymnastics so-called self-resisting movements at home. 5. The effect on the heart should be watched by a physician, who can judge of the degree of benefit obtained and decide how long the exercises shall be taken.

The Use of the X-Ray by the General Practitioner.

Dr. George S. Edmondson, Clinton, has used the *x*-ray in diagnosing fractures, in determining the extent of bone lesions, and also for diagnosing dislocations. He has been highly pleased with the *x*-ray treatment in cases of lupus. One case of carcinoma of the cervix yielded satisfactorily to the application of the *x*-ray by means of the Caldwell tube, but returned just as rapidly after the treatment had ceased. He has treated many cases of superfluous hair on the face, and in not one has he witnessed a failure to remove the hair. In the course of a few months the hairs invariably return, but usually are not so hard to remove the second or third time. He has treated several cases of acne by the *x*-ray with satisfactory results.

Fracture of the Base of the Cranium, with Diastasis of the Left Temporo-Parietal Articulation; Complete Recovery.

Dr. George de Tarnowsky, Chicago, reported a case of fracture of the base of the cranium, and summarized by saying that all head injuries should be prepared in a surgical way. All cases should be placed under the very keenest observation obtainable. No operation should be done in cases of diffuse cerebral contusion. A progressive disintegration of cellular structures can not be restrained by a simple relief of pressure. Operation should never be done hurriedly or without first observing the symptoms of the case and their trend, namely, increasing severity or manifest tendency to spontaneous recovery. Having diagnosed epidural hemorrhage, if coma should deepen, temperature decline and pulse grow weaker, operation is indicated at once; if, with reaction, the clinical picture shows a tendency to remain stationary or to clear up, one should wait and watch. Not all blood clots need surgical removal in order to effect a complete recovery.

Traumatism of the Brain.

Dr. J. W. McDonald, Aurora, discussed fractures of the skull, their diagnosis and treatment. He devoted considerable space to the consideration of intracranial lesions, such as hemorrhage, thrombosis of sinuses, contusions, lacerations and their sequelæ. He likewise discussed meningeal and parenchymatous inflammations usually of a septic character. He reported a case which was interesting on account of the extent of the fracture, laceration of the artery, extent of the hemorrhage, and the speedy recovery.

DISCUSSION.

Dr. Daniel N. Eisendrath, Chicago, said there is a condition of laceration or contusion of the brain which must be separated completely in the diagnosis and prognosis from concussion and compression. There may be cases of contusion or laceration of the brain without any of the accompanying symptoms of head injury, such as are usually found in compression and concussion. These cases manifest themselves shortly after the injury, without unconsciousness or other focal symptoms except a focal disturbance, such as would be ordinarily due to pressure on some cortical area of the brain.

Dr. T. J. Sullivan, Chicago, said that in all injuries, where there is only a slight abrasion, no one is justified in allowing them to pass without thoroughly shaving, disinfecting and closing the wound with some occlusive dressing. In many of these injuries, where there is an escape of fluid from the ear, and where other symptoms do not warrant immediate operative interference, thorough attention to the ear is essential. The ear should be thoroughly washed with soap and water for a considerable time, and after that with alcohol, and in children, for instance, where there is an escape of serum, it can be completely stopped, and an occlusive dressing applied by packing the ear with iodoform gauze, saturated with compound tincture of benzoin. This will prevent the escape of serum, make an antiseptic occlusive dressing, and cut off the port of entry of infection.

Dr. S. C. Stremmel, Macomb, agreed with the last speaker, but could not agree with Dr. McDonald in using applications of ice in these cases, as it interferes with the early reaction and thus with repair in the case of milder injuries. In more serious injuries it is different.

Dr. H. C. Fairbrother, East St. Louis, said the picture-complex of a fracture of the base of the skull is variable, and not the same in any two cases, but depends on the site of fracture, the amount of hemorrhage, and the crushing force producing the fracture. There is no definite picture of symptoms pointing to certain fractures of the base of the skull, and the only certainty in arriving at a conclusion is by post-mortem examination in fatal cases.

Dr. McDonald said that an ice-cap may be used when indicated only, and then not applied to the site of the fracture, as it would delay repair.

Dr. Tarnowsky, in closing, thought the diagnosis of fracture of the base and of diastasis of the temporo-parietal articulation in his case was positive and not guesswork.

Injuries to the Diaphragm.

Dr. John Young Brown, St. Louis, emphasized the importance of early diagnosis and the prompt surgical treatment of these injuries.

Treatment of Tuberculous Sinuses by Bismuth Paste.

Dr. Emil G. Beck, Chicago, said that in the ten cases presented before the Chicago Medical Society, January 15, the fistulas have remained closed, and the two which at that time had a slight discharge have since closed. A longer series of cases treated since, with equally good results, has taught him some new points. First, the bismuth paste, if it is not discharged during the healing process, becomes encapsulated and finally absorbed. In cavities with rigid walls, the bismuth plug becomes first organized by connective tissue, and after absorption of the bismuth, fibrous tissue remains. When the walls of the abscess are resilient, such as the pleura, for instance, they will gradually collapse while the bismuth is undergoing absorption. This can be proved, first, by the taking of radiographs at certain periods; second, by physical examination of the patient; third, by microscopic examination of tissues. Bismuth subnitrate, although considered an insoluble substance, has been proved to be absorbed, when taken internally, or injected into fresh wounds. It was found by many observers in the urine, blood and milk, as well as in the organs, thirty days after ingestion.

Having proved the absorption of bismuth, the practical question arises, Is the absorption harmful? Little is heard of bismuth poisoning, although nearly every practitioner prescribes that drug, and radiographers administer as much as 40 grams of pure bismuth subnitrate in one bismuth meal, to obtain radiographs of the digestive tract, and none has observed any ill-effects from it. A few authentic cases of bismuth poisoning found in literature have put the author on his guard, but in about 2,000 injections he has not yet met with any symptoms of poisoning. Guinea-pigs were injected with one-twentieth of their body weight of bismuth paste, exhibiting no symptoms of poisoning. Arsenic-free bismuth may be considered harmless, but it is safer not to use more than 100 grams of the 33 per cent. bismuth-vaselin paste in the first injection.

The bactericidal value of bismuth subnitrate has been underestimated. The author has determined that its presence in the living tissues invariably causes the gradual diminution, and often a complete extermination, of micro-organisms in the secretions. The *Bacillus tuberculosis* shares the same fate. The discharge from the fistula likewise changes from a purulent or seropurulent to the serous. The method is contraindicated wherever the plug may obstruct the secretion from vital organs, or in the cranial cavity, where pressure on the brain may cause serious damage. There is a promising field in the sinuses of the head. Five cases of resisting suppurative disease of the antrum of Highmore have been cured by Dr. Joseph C. Beck by this method.

The most important advance made since January 15 is the prevention of tuberculous sinuses. The method is as follows: A cold abscess following tuberculous disease should, under the most aseptic measures, be opened by an incision about one-quarter of an inch long, the pus evacuated, and the cavity refilled at once with half the quantity of a 10 per cent. bismuth-vaselin paste, and the opening not sealed. A sterile gauze dressing is placed over the incision and a five-yard sterile gauze bandage is snugly put on and securely pinned, so that the patient, usually a child, can not displace and infect it. Fresh dressings are to be applied daily under aseptic precautions. Should the opening close and fluid reaccumulate, it should be reopened; the fluid, which is then more serous, squeezed out, but the cavity need not be refilled, as it will usually remain collapsed. Three cases so far treated in this way have demonstrated the practical value of the prophylactic method by bismuth paste injection.

(To be continued.)

ASSOCIATION OF AMERICAN PHYSICIANS.

Twenty-third Annual Meeting, held in Washington, D. C., May 12-13, 1908.

(Continued from page 1932.)

Acute Pancreatitis.

Dr. Joseph Sailer, Philadelphia, has produced pancreatitis by the injections of oil into the duct of Wirsung and described the completeness and rapidity of the process. There was apparent absence of any specific toxic substance in the pancreas itself. The manner in which pancreatitis is produced is still unknown. Injection of almost any substance will produce it; obstruction of duct seemed to predispose. Three views are held at present; it might be bacterial; it may be ferment infection due to the escape of trypsin; we are not in a position to make any definite statement. He concluded that the serum of dogs suffering with pancreatitis is more toxic than normal blood; it has been injected into guinea-pigs and a parenchymatous necrosis of the pancreas was produced with no evidence of bacterial infection. Dogs dying from the disease showed definite lesions. It is probable that it will be found possible to produce immunity from the toxic effects. It is impossible at present to say whether the toxin is trypsin or some other element of the pancreatic secretion, or an abnormal product from disease of the pancreas, or from disturbance of the metabolic processes.

Clinical Features of Pancreatitis.

Dr. John H. Musser, Philadelphia, said that pancreatitis with hemorrhage may occur and be the cause of death in the course of typhoid fever. There may be renal calculus at the same time as the pancreatitis. Patients may recover from acute pancreatitis. Of 9 cases there had been shock in 8; usually upper abdominal symptoms; in 7 epigastric tumor was present. Diarrhea occurred in 6 of the 9 cases. In no instance were there symptoms of intestinal obstruction. Subnormal temperature occurred in 9 cases; dyspnea in 8; increased pulse rate in all. There was no opportunity to make positive observations of the stools. Two deaths occurred after operation; 3 without operation.

DISCUSSION ON PANCREATITIS.

Dr. R. Fitz, Boston, thinks the doctor had an enviable experience in seeing so many cases in which diagnosis was confirmed by operation or death. Many see cases suspected to be pancreatitis and the difficulties of making the diagnosis have not been much cleared up by recent investigations. He thinks that Dr. Sailer's work might give a new aid in making diagnoses; if the results proved as in his experimental cases it would be valuable.

Dr. W. H. Welch, Baltimore, asked Dr. Sailer if he had tested the toxic action of the serum on dogs. The dog's serum is normally toxic to the guinea-pig, but of course not in the doses he used. The serum of the dog with acute obstructive pancreatitis becomes increasingly toxic. In pneumonia in the human, the serum is highly toxic to the rabbit, but that is not evidence of specific toxin. The human serum becomes toxic to lower animals. The experiments would be more convincing if they demonstrated that the serum of the dog the subject of pancreatitis is toxic to normal dogs.

Renal Hypernephroma Simulating Aortic Aneurism.

Dr. Augustus A. Eshner, Philadelphia, said that hypernephroma is a tumor of adrenal structure, involving the adrenal gland itself, or situated in some other organ or tissue. It may be small and benign, and remain encapsulated, or large and malignant and give rise to metastasis. The primary growth is often situated in the kidney, while secondary growths have been observed in many structures, especially in the bones. The symptoms do not differ essentially from those of other forms of neoplasm. In the case reported by Dr. Eshner a pulsatile elastic tumor of the manubrium sterni, in the course of the aorta, and yielding a systolic murmur on auscultation, was found after death to be a metastatic growth secondary to a hypernephroma of the kidney. There were growths also in the lung, uterus and liver.

DISCUSSION.

Dr. C. G. Stockton, Buffalo, said that the symptoms were not unlike those of other malignant tumors. He had a case of remarkable irregular intermittent fever that had continued for nearly a year. The patient had been in a malarial climate and was suspected of having malaria. Tumor was discovered in the region of the neck; enucleated and proved to be a hypernephroma.

Negative Results in Blood Cultures.

Dr. E. Libman, New York, said that in all blood culture work up to the present stress has been laid on the positive findings. As a result of a study of a large number of blood cultures he has found that the absence of bacteria is often significant in giving diagnostic and therapeutic indications. Negative blood cultures are particularly important in determining the presence of certain intra-abdominal diseases and in the diagnosis of endocarditis. He has studied over 1,500 cases.

DISCUSSION.

Dr. W. H. Welch, Baltimore, commented on the great value of these studies. A large number of routine examinations analyzed in this way would bring out conclusions of the greatest clinical importance. One thing, he said, stands out particularly as confirmatory of the idea entertained now by most bacteriologists—in the human infections from bacteria in the blood we are not dealing with a condition like septicemia in the lower animals. They may be there accidentally, particularly where the focus of infection is so located that there is easy entrance of the bacteria into the circulation. The result of tying the jugular vein in cases of sinus infection—the prompt disappearance of the bacteria from the blood—is very significant. The bacteria are simply washed into the circulation and are not increasing and multiplying there. It depends on whether the focus of infection is so located that the bacteria are readily carried into the blood stream.

Dr. E. Libman agreed with Dr. Welch that in most cases the bacteria are swept into the circulating blood stream and that multiplication there is not frequent. The mastoid cases are a most instructive example of this view. He had a series of cases showing prompt disappearance of the bacteria from the blood after ligation of the jugular vein; they disappeared entirely in two days after ligating the vein. What we are dealing with generally is an invasion of the blood current and not a multiplication there; not a true septicemia.

Obstruction of Superior Vena Cava in Exophthalmic Goiter.

Drs. C. G. Stockton and A. E. Wochnert, Buffalo, reported a case which was rather unique in the history of this disease—a thrombus in the vena cava, and a very extensive one. The thrombus occurred about a month before death, beginning in the right subclavian and extending through the innominate. There was no explanation. Other cases have not been found in the literature after a very careful search.

Dr. Jacobi, New York, asked if the thyroid was large enough to interfere with the venous circulation.

Dr. Stockton replied that it was enlarged but it did not enter into the obstruction. From the beginning of the thrombus to the end it could be followed.

Relation of Auditory Area to Aphasia.

Dr. Adolph Meyer, New York, said that Nature's experiments with man are largely injuries, vascular lesions and the like, that is, coarse interference almost inevitably subcortical as well as cortical. Similarly the convolutional patterns commonly used in descriptions fail to allow sufficiently reliable specifications. Descriptions are especially loose, and therefore interpretations are difficult in respect to the temporal lobe in which the essential receiving station is hidden. The study of the cases of sensory aphasia in the collection of the Pathological Institute of the New York State Hospital show: 1. The possibility of easy and efficient reconstruction from serial sections rendering accurately the relation of the lesions to both the fiber paths and especially also to definite cortical areas which are as easily demonstrable in the adult as with Flechsig's method in the infant's brain. 2. The probability that the extent of the lesion of the narrower auditory zone (the transverse temporal gyri) and its fiber goes parallel with the extent of auditory word imperception.

Pathology of Exophthalmic Goiter.

Dr. Louis B. Wilson, Rochester, Minn., included in this paper an analysis of the gross anatomy and histology of glands in each case, and the percentage of recurrence of various phenomena. The cases were grouped from a pathologic standpoint into two series: Series 1, those showing marked increase of the total number of parenchyma cells within given alveoli. Series 2, those showing an increased number of alveoli only without extra alveolar increase. Series 1 was again divided into four groups according to development of process; Series 2 was divided into four parallel groups in similar manner. The relationship of these series to each other was considered and of each group to the clinical histories of the patients. The clinical groups were approximately parallel to the pathologic groups. The various hypotheses of function perversion in this disease as examined in the light of the author's cases were discussed and a combination of the several hypotheses proposed which would seem to explain the data of the present series of cases and of cases reported by other observers.

Erythromelalgia and Raynaud's Disease in Relation to Vascular Diseases of Extremities.

Dr. B. Sachs (in association with Dr. L. Buerger), New York, from a study of twenty cases attempted to show that these disorders can not be maintained as distinct clinical entities; that they constitute in the majority of instances symptom-groups merging into one another and often representing varying degrees of the morbid process in the blood vessels. Dr. Buerger's studies on the pathology of the blood vessels in these conditions prove that the pathologic process is not an obliterating endarteritis, but an obliterating thromboangeitis.

The Intraventricular Systole.

Dr. H. A. Stewart, Baltimore, said that the development of pulmonary insufficiency when there is an increase of the pulmonic pressure, and its disappearance with a readjustment of the pulmonary circulation, point to the important action which the pulmonary musculature must have in maintaining the competency of the valves of the artery. In the case of the aortic orifice, while it is not common, it is by no means rare to note the disappearance of a diastolic murmur with an amelioration of the cardiac action. Clinically the latter has been noted in cases of exophthalmic goiter, and experimentally in dogs when a diminution of the cardiac tone is produced. In view of these facts a study has been made of the action of the ventricular musculature surrounding the aortic orifice in dogs, in order to determine to what extent the valvular competency was dependent on muscular action. For this purpose an instrument was devised by which the contraction of the ventricle internally could be recorded. The approximation of the opposing walls of the ventricle, at different points from apex to base, were noted. Special study was made of the sphincter-like muscle which surrounds the aortic outlet. The investigation showed that the cavity of the ventricle is contracted first at the apex, the contraction passing upward toward the base. The contraction at the outlet appeared to be more complete than elsewhere. The contraction of the muscle mentioned above, viz., the aortic ring muscle, is prolonged into diastole.

DISCUSSION.

DR. W. S. THAYER, Baltimore, called attention to the fact that Dr. Stewart, by a series of other experiments, has confirmed the work reported, taking the record of the contraction of the heart muscle by an ingenious little instrument, and getting the same results, showing prolongation of the contraction of the aortic ring muscle into diastole.

Anemia in Children.

DR. M. H. FUSSELL, Philadelphia, reported three cases. The first patient, male, aged 13 months, was only child, and during life had intestinal disturbance; at about eight months the child began to get pale and a tumor in the abdomen was noticed. It died suddenly during an attack of vomiting. At autopsy all the tissues were extremely pale but with the exception of enlargement of the mesenteric glands and spleen there was nothing else; there was hyperplasia of the spleen and lymphatic glands. The second patient, female, aged 7, vomited blood a number of times and had been for some time weak and pale. She had all the physical signs of ordinary anemia, with enlarged heart; probably a septic condition. The child died after a large hemorrhage from the stomach, before which blood examination showed 20 per cent. hemoglobin; 1,275,000 reds, 6,000 whites. At autopsy the liver was found large, pale and pinkish in color and one branch of the hepatic vein closed with a thrombus. The third child was sick three months; pale, yellow color; he could get no history. Spleen was extremely large; liver half way between the xyphoid cartilage and umbilicus. Hemoglobin 20 per cent.; 1,600,000 reds. This patient developed further anemia and died. The bone marrow was pale and made up of large cells with granular protoplasm and a vast number of small lymphocytes. Malpighian bodies were small.

Status of Serum and Vaccine Therapy.

DR. MARK W. RICHARDSON, Boston, under the general consideration of this subject reviewed the history of antitoxins, bacteriolysins, anti-endotoxins, opsinins, vaccines, filtrates and residues, giving a résumé of the treatment of bacterial diseases with homologous sera and bacterial products.

The Therapeutics of Self-Repair.

DR. S. J. MELTZER, New York, said that numerous facts in biology justify the conception that the living organism represents a mechanism and is in many respects comparable to a complex human-made machine. The efficient repair of a mechanism justly presupposes a familiarity with its normal structures and construction, and also a complete understanding of the nature of the disorder. The actual extent of knowledge of the living machine it must be admitted is very small and is only an infinitesimal fraction of that knowledge which would enable physicians to comprehend it as a competent engineer understands the human-made machine. While no man would be permitted to meddle with serious disorders of the human-made machine with only a fraction of knowledge of its conception, yet with the disorders of the mechanism of life for thousands of years millions of men have meddled, with a knowledge infinitesimally small indeed even when compared with the present understanding of the processes of life and their disorders. With just regard to therapeutics the living animal body ought not and could not be compared with an artificial machine. No machine has yet been invented which can automatically repair its own disorders, but the living organism is well provided with such automatic arrangements for self repair. He said two methods of treatment competed in the past in the domain of internal medicine, the rational and the empirical, the former possessing only negative virtues, leading essentially to inactivity, the latter satisfying its followers by the activity which it inspired. Many ailments and diseases terminate spontaneously in recovery; therefore, it is evident that the animal organism must possess means and methods by which it accomplishes these recoveries. Dr. Meltzer said he feared that the study of immunity is not yet appreciated even by some of the leading pharmacologists. It is a good thing that the antitoxins were discovered; here is something which physiology can not claim as its own and pathology has not yet laid hands on. Here is something which the body in its efforts at defense and repair evidently manufactures anew. The present tendency in pathology is to consider every symptom as a manifestation of the efforts of the organism for defense and self repair. All the signs of inflammation are considered as factors in self repair. The various attempts to influence favorably the course of infectious diseases by the artificial production of leucocytosis is another venture to utilize therapeutically one of the methods of defense and self repair employed by the body against inflammation. Fever is another which is now being tried by various investigators as a curative agent. He referred to the experiments of Opie in which tuberculosis of the pleura and lungs of dogs is cured or greatly mitigated by the intrapleural injection of sterile pus obtained from another animal. Learning the methods of Nature should not imply that they are to be followed blindly; on the contrary, they should be improved on. In studying self repair Nature strives only to avoid death; the physician has an additional duty—to make life bearable. Among the new creations he mentioned the antitoxins, bacteriolysins, anti-endotoxins, agglutinins, precipitins and coagulins.

Dietetic and Hygienic Therapeutics.

DR. DAVID L. EDSALL, Philadelphia, said that in recent years there has been a growing tendency to rejoice in the condemnation of drugs, and that the majority of young men of moderate training believe they can not get the results with dietetics and hygiene that they can with drugs; and this is because they have learned to administer drugs more rationally. He thinks that in the majority of cases the attending physician does not give rules for hygienic conduct in the treatment of disease, as for instance, in the care of typhoid fever—giving instructions for the preparing of food for other members of the family. The question of drugs is presented in such a way that the student has an intelligent reason for employing them; hygienic therapeutics, on the other hand, comes only from experience and the gathering together of material gradually. The students should be taught in regard to diet and hygiene that it is not so necessary to learn a large number of new facts as to correlate and put in practice the ideas they have gained from the study of physiology and etiology. They are too apt to overlook the commonplace. Most text-books say simply that the dietetic and hygienic treatment is not to be neglected, but fail to say what this treatment is. He deprecated the way in which prepared foods are used without any knowledge of their food value; the exact value of drugs is much better understood.

Organotherapy.

DR. REID HUNT, Washington, D. C., said that this is one of the oldest forms of therapeutics, but it was only after the subject began to be studied scientifically that any results were obtained. He thinks that what is now called organotherapy will in a few years be called simply drug therapy because of the similarity of the hormones to ordinary drugs. The present tendencies in organotherapy are along three lines: first, more thorough study of the rôle of these hormones in the body; second, to obtain them in form suitable for therapeutic purposes; third, efforts to influence the hormones in the body itself. A proper definition of organotherapy, he said, is the utilization of that group of internal secretions called hormones. It has been shown that the fetus produces some secretion which leads to development of the mammary glands and the formation of milk. Evidence is clear that the ovary has two or more internal secretions, and that the corpus luteum produces a secretion necessary for the fixation of the embryo to the uterus. Two hundred and sixty-seven organotherapeutic preparations are described in medical literature and advertised in the journals, and the list does not differ much from those in vogue a century ago. The parathyroid has undoubtedly a marked effect in tetany produced by removal of the thyroid. Encouraging results have also been reported from the secretion of the pituitary body. New uses have been found for some of the preparations, as for instance, the thyroid in rheumatism. Suprarenalin has been used as an ordinary drug rather than as an organic product; in the only disease in which there is lack of adrenalin secretion, Addison's disease, it does not seem to be of much value. Many of these products can be made synthetically. He said that there is no standard at present for the commercial thyroid, some preparations having a much larger iodin content than others.

Psychotherapy.

Dr. L. F. Barker, Baltimore, gave a brief historical résumé of the subject and discussed the advantages and limitations of the psychotherapeutic methods in vogue at present and the outlook for their further development. He said that any influence which exerts a psychic effects also exerts a physical one so that psychotherapy is also physical therapy, but medical psychiatry knows nothing of telepathy or hypnotism. When one thinks of the many drugs vaunted for a time and then disappearing, he must believe that there must have been a strong psychic effect produced by them. The psychotherapy of persuasion rather than of suggestion has been revived. Isolation is of the greatest importance and he called attention to the fact that the idea of isolation in disease arose in antiquity with the anchorites. The psychoneuroses are the most promising diseases for psychotherapy and any intelligent man may gain an insight into these disorders and give relief by this form of therapy. Its limitations are definite, but its field is broad and the future will reveal great opportunities. Unfortunately, psychotherapy has had in the past such a yellow streak that many medical men have refrained from employing it. Its use should always be preceded by definite diagnosis.

Radical Cure of Chronic Constipation by Psychotherapy.

Dr. Irving P. Lyon, Buffalo, said that chronic constipation is generally looked on and treated as a local disease of the intestines; that this view is erroneous, and if strictly followed leads to failure in treatment. He considers that chronic constipation is generally a simple psychoneurosis—a mental habit or conviction of constipation, by which the normal innervation of the intestine is obstructed or altered. This altered innervation does not necessarily lead to either a tonic or an atonic condition of the bowel. While such forms might sometimes be clearly marked, usually no change of innervation is evident, but rather merely a habit of uncontrolled irregular action. This faulty control is intensified by dependence upon cathartics. In the treatment the physical basis of the disordered function should be recognized, emphasized and utilized. Drugs and special local measures should be regarded as unnecessary if not positively harmful. The patient's mentality or conviction of constipation should be changed at once, and at the first interview the patient should leave the doctor's office thoroughly convinced that constipation is merely a faulty habit that can be immediately overcome. Various accessories or natural stimuli to normal function at regular times should be utilized, especially at first. The cure should be established as a rule within a few days, often on the first day, seldom requiring more than a week or two.

Medicolegal

Sufficiency of Description of Injuries.

The Supreme Court of Wisconsin says that the plaintiff in the personal injury case of Hoffmann vs. Eastern Wisconsin Railway & Light Co., in a release which she executed a few days after the accident, stated that the injuries claimed by her as "being right limb contusion, head struck, shook up badly, and, further, by reason of said accident and collision I was otherwise bruised and injured." About ten days after the accident she commenced to feel a severe pain on her right side. She was examined by her physician and treated for some months to allay inflammation, when it was diagnosed as a trouble with one of her ovaries, and an operation was had, whereon the right ovary was found to be inclosed by what the doctor called a blood tumor, and to be seriously inflamed, so that it was necessary to remove it. The only question in the case was whether the release by its words covered the condition of the ovary, so as to have released damages therefor.

It seems to the court clear that the very specification of the injuries received, whether they limited the general words of release or not, sufficed to include all that for which the plaintiff sought recovery.

It was not necessary for the court to look in the specification for a description of the blood tumor or encysted ovary which the surgeons found in the plaintiff's body, necessitating the serious operation which they described, if the court found fairly included the direct injury to her body which, by natural processes of development, produced that result.

The words of particularization were: "The right limb contused, head struck, shook up badly, and, further, by reason of said accident and collision, I was otherwise bruised and injured." The attempt of the plaintiff apparently was to confine these words to the contusion of the right limb and the scalp wound; but the fact that the plaintiff was shook up badly was just as much particularized, and that she was otherwise bruised and injured apart from those particular bruises. The evidence disclosed that she was bruised about the abdomen in such a place as to be likely to have injured the ovary or any one of several of the internal viscera; also that rupture of blood vessels about the ovary might have resulted from the jar or shock; in short, from being "shook up," as the release said. It was claimed that these words must be deemed to refer to external injuries and not to internal; but the court thinks unreasonably, for every bruise causes more or less of internal injury.

The court's conclusion is that by the very terms of the release was described the injuries which the plaintiff received.

Death from Disease Following Physical Injury—Meaning of "Bodily Infirmity," "Sound Condition" and "Bronchitis"—Physician's Testimony.

The Supreme Court of Wisconsin says that the insured in the case of French vs. Fidelity and Casuality Company of New York held an accident policy which insured him "against bodily injuries sustained through external, violent and accidental means," and stipulated that, "if death shall result from such injuries within ninety days, independently of all other causes, the company will pay the principal sum of five thousand dollars." It was urged on behalf of the company that it did not appear that the death of the insured was the result of "bodily injuries sustained through external, violent and accidental means independently of all other causes." The proof was undisputed that the insured received an accidental injury to his leg causing an abrasion of the skin, that an infection started at this place, and that he died fifteen days later from erysipelas or blood poisoning. The contention was that the accidental injury of itself would not have resulted fatally, but that death was due to an independent intervening cause, namely, the germs which entered the system through the wound. It must be apparent, however, that but for the accidental injury there would have been no cause for infection; that, but for the abrasion, the disease germs could not have entered and produced the fatal result. The wound produced by the accident was, therefore, the proximate and sole cause of death.

The court must hold that where death results from disease which follows as a natural, though not the necessary, consequence of an accidental physical injury, it is within the terms of the accident policy; the death being deemed the proximate [the word proximate is here used in its legal sense.—Ed.] result of the injury, and not of the disease as an independent cause.

There being a warranty by the insured to the effect that he never had any bodily infirmity, that he was in a sound condition physically, and that he never had bronchitis, the court says that it must be presumed that the parties intended that the words should be understood in their ordinary sense when used in common speech. Bodily infirmity means a settled disease, an ailment that would probably result to some degree in the general impairment of physical health and vigor. It could not have been understood by the parties that by this statement the insured intended to warrant that during the 65 years of his life he had never suffered from any of the ills that human flesh is heir to. Temporary ailments from which there has been a full recovery, and which leave no perceptible effect, could not reasonably be included in this term. Bodily infirmity as used in an accident policy exempting the insurer from liability only includes an ailment or disorder of a somewhat established or settled character, and not merely a temporary disorder arising from a sudden and unexpected derangement of the system. A sound condition physically signifies an absence of bodily infirmity, and what has already been said applies to this statement. A sound condition physically means the same as sound health, which does not mean perfect health. Whether the insured was in a sound condition physically would depend on the circumstances of each case, and would be a question for the jury to determine on the evidence.

Nor can the court agree with the view of the trial judge that the proof in this case established beyond controversy that the insured had ever had chronic bronchitis, or that, if he had been so afflicted by the disease in an acute form, the policy was necessarily avoided. The object of the parties was to insure against disability or death from accidental injury. The present physical condition of the insured as affected by previous diseases was a natural subject of inquiry as bearing on the character of the risk and as tending to increase liability to accidents or of serious results from accidents. The information was doubtless sought and furnished with that purpose in the minds of both parties. Bronchitis, as a medical term, is defined by Webster as "inflammation, acute or chronic, of the bronchial tubes or any part of them." If the term is given its broadest significance, bronchitis would include every hard cold that affects the bronchial tubes, or any part of them.

The court can not assume that it was the intention of the parties to use this term in its broadest sense, as it would lead to results which are unreasonable, if not absurd. Such a construction should not be adopted unless enforced by the words employed. The court concludes that the word "bronchitis," as found in this policy, was used in its limited sense as meaning a chronic disease which would not readily yield to treatment, and which tended to impair the health and strength of the insured; that it did not include an acute attack from which he had fully recovered at the time the policy was accepted.

The testimony of the attending physician left it somewhat uncertain whether the disease had become so pronounced and settled as to permanently affect the health at the time the policy was accepted. Two other witnesses intimately acquainted with the insured, and who saw him almost daily for months before and after that date, had never heard of his having bronchitis, and testified, in substance, that he attended regularly to his work, and that his general health was good. It is presumed that, if the disease had become settled so as to impair the strength and health of the insured, it would have been perceptible to ordinary observation.

The testimony given by the attending physician would doubtless have been excluded if seasonable objection had been made. As it was received on the trial without objection, it was entitled to full consideration, but should not have been accepted as conclusively establishing the existence of the disease. The question should have been submitted to the jury on all the testimony on the subject

Original Wound Causes Death.

The Supreme Court of Nebraska says, on the appeal of Hamblin vs. State, that Hamblin shot a young woman, the ball entering the back of the region of the eighth or ninth dorsal vertebra, penetrating the spinal column, severing the spinal cord, and becoming buried and lodged in the anterior portion of the bone. This wound produced immediate, total and permanent paralysis of the whole of that portion of the body below it.

The woman was taken to a hospital where the surgeons, not being able to definitely locate the ball without making an incision, applied the *x*-ray, by which the location of the ball was determined, and an effort was made to extract it by enlarging the wound and chipping off and removing the fractured bones. It was discovered that the ball had passed through the spinal cord, completely severing it, and had become embedded in the bones of the inner portion of the spinal column. As the ball could do no further harm, it was permitted to remain.

The wound healed up, and, except as to the paralysis of the lower parts of the body, gave but little trouble. The vital organs performed their functions naturally, food was taken and digested, but, the intestines and bladder being rendered inactive, it was necessary that evacuations should be produced by artificial means. The bladder was relieved by the insertion of a glass catheter two or three times each day. After the healing of the wound in the back, the victim suffered little, if any, pain.

About four months after the shooting, while an attendant was using the catheter, it was, by accident, broken in two, and the severed end, about 2½ inches long, remained in the bladder. This was allowed to remain for some time, probably eight or ten days when it was removed by an operation which consisted of making an incision through the wall of the body and in the bladder. At that time bed sores had appeared upon the body; some of them having become gangrenous and the flesh sloughing off, others showing the discoloration caused by ecchymosis. The wound made in removing the broken catheter never healed, and soon thereafter the victim began to fail rapidly, and died about six weeks after the breaking of the catheter.

One of Hamblin's defenses was that the victim died, not from the effects of the wound caused by the ball, but that the cause of her death was the accident in breaking the catheter, and allowing it to remain in the body until inflammation and gangrene were developed to such an extent as to cause the death. In other words that a new and independent cause, itself producing death, intervened.

But the court holds that there was sufficient evidence to show that the gunshot wound was a mortal one, and that there was no escape from death therefrom, but that the exact time which the patient would live could not be stated. The lower portion of the body being paralyzed, a steady and continuous degeneration would follow, owing to the failure of nerve force and circulation, and recovery was impossible. At the time of the accident portions of the body had already sloughed off, and ecchymosis was visible in many places. This being true, the fact that the accident, and probably subsequent unskilful treatment, may have contributed to and even hastened death, would not relieve the accused from the criminality of his act, if it were criminal.

Where a mortal wound is unlawfully inflicted by one person upon another under such circumstances that, if death had immediately ensued, it would have been a felonious homicide, the fact that other causes, such as error or accidents in the treatment of the victim, may have contributed to or hastened death, will not relieve the accused from the criminality of his act; the real cause of the death being the felonious assault.

Current Medical Literature

Medical Record, New York.

May 30.

1 Case of Melena Neonatorum Cured by Transfusion. S. W. Lambert, New York.
2 *Differential Diagnosis of Meningococcus Cerebrospinal Meningitis from Other Types of Cerebrospinal Meningitis. H. W. Berg, New York.
3 A Plan for Reducing Infant Mortality in New York City. W. C. Phillips, New York.
4 *Correlation of Eyestrain and the Functional Neuroses. H. E. Smith, Norwich, N. Y.
5 Disturbances of Gastric Secretion. M. Gross, New York.
6 *Drainage of Wounds. R. W. Knox, Houston, Texas.
7 Ocular Tuberculin Reaction. T. B. Sachs, Chicago.

2. **Meningococcus Cerebrospinal Meningitis.**—Berg says that the diagnostic recognition of meningococcus cerebrospinal meningitis resolves itself into (1) the differentiation of this disease from a pseudomeningeal symptom-complex of toxic origin; (2) its differentiation from other types of cerebrospinal meningitis, be they bacterial in origin or those complicating organic cerebrospinal lesions. The essential symptoms necessary for the differentiation of cerebrospinal meningitis from toxic pseudomeningitis are numerous: Constitutional symp-

toms, chills, fever, slow pulse, temperature high or low, respiration slower than would be expected when temperature is high. Symptoms due to inflammation of the cord and meninges are stiffness of neck, opisthotonos, pain in spine, and extremities, surface hyperesthesia, difficult and frequent urination, constipation or diarrhea, incontinence of urine and feces; Kernig's symptom (the most valuable and reliable one that we have in cerebrospinal meningitis), skin eruptions and joint troubles, diminution of patellar and skin reflexes. The Babinski reflex is extremely unreliable. The symptoms due to inflammation of the brain and medulla and their meninges, and neuritis of the cranial nerves are: headache, slow pulse, hydrocephalic cry, tache cérébrale, vertigo, convulsions, delirium, coma, coma vigil, Cheyne-Stokes respiration, photophobia, inequality, dilatation or contraction of the pupils, ptosis, strabismus, optic neuritis, choked disk, atrophy of the optic nerves, iritis, iridochorioiditis, keratitis, conjunctivitis, panophthalmitis, deafness due to neuritis of the auditory nerve, paralysis of the facial and other cranial nerves, hemiplegia, monoplegia, paraplegia, and diminished or absent conjunctival reflex. Blood symptoms are an increased leucocyte count, chiefly affecting polymorphonuclears. The absolutely distinctive symptom, however, is the finding of the diplococcus by lumbar puncture. The cytologic examination of the fluid is important usually showing 90 per cent. polymorphonuclear leucocytes and 10 per cent. uninuclears. A large number of the symptoms are not present until the later stages, while many of the earlier symptoms are duplicated in toxic pseudomeningeal conditions. When the case is one of toxic pseudomeningitis the fluid obtained by lumbar puncture is sterile and clear. Microscopically a purulent turbulent fluid speaks for meningococcus cerebrospinal meningitis. A comparatively limpid, clear fluid containing flocculi, or fibrinous shreds, or a slender, white, coagulated column branching out at the top and base like a slender pillar supporting a capital, in a test tube half filled with clear cerebrospinal fluid, indicates tuberculous meningitis. It does not do to rest on these appearances however.

4. **Eyestrain and the Functional Neuroses.**—Smith epitomizes his paper as follows: The ocular conditions which give rise to eyestrain may be refractional, accommodative, or muscular. The result is loss of neuricity. The effects are remote and reflex, and may be expended on any organ, group of organs, the nervous system as a whole, or its separate divisions. It is the little refractional errors which give rise to the greatest trouble; poor vision and eyestrain are not concomitant conditions, but exactly the reverse. It is imperative to have the eyes of all children of school age examined under atropin; not only may health and comfort be conserved, but their whole future may rest on this simple thing. Refractional errors of high degree should be corrected, not because of any reflex disturbances, but to save the eyes from disease and to give their possessor better vision. The investigation of all obscure nervous phenomena should begin with the eyes; often it will be necessary to go no further. Typical sick headache is pathognomonic of eyestrain; if it is not cured, in 99 per cent. of the cases it is the fault of the refractionist. Finally, the disease can not be cured unless the remedy is applied. Nearly right glasses will surely aggravate the symptoms, and relief can be obtained only by mathematically correct lenses in mechanically perfect settings.

6. **Drainage of Wounds.**—Knox says that gauze and drainage tubes are excellent agents when indicated on account of the nature of the wound, but he advocates as the safest, best, and most effectual and unvarying measure in its results as a means of getting perfect drainage, the use of moist heat. The temperature of the dressing should be kept evenly and continuously about 125 F.

Boston Medical and Surgical Journal.

May 28.

8 *The Hospital in Relation to the Community. A. Post, Boston.
9 Case of Intravesical Cyst of the Ureter; Dilatation of the Ureter, with Very Slight Dilatation of the Renal Pelvis and Containing 28 Movable Calculi; Bacteriuria; Alkalinuria; Phosphaturia. E. A. Codman, Boston.

8. **The Hospital and the Community.**—Post describes the purposes of the hospital as (1) for the care of the sick; (2) for the protection of the community; and (3) as an institution of learning, not only for the education of undergraduates and postgraduates and of nurses, but also of the public in regard to hygienic habits and general principles. He discusses these points in detail. He urges the importance of the pathologic laboratory, and says that the function of the pathologist is not generally understood by the public. It is much broader than the mere examination of the dead body or morbid products, for it is through his work that the greatest modern advances are made. He points out for his lay audience that an autopsy is entirely separate from vivisection and demonstrates that education in regard to disease is impossible without autopsy. The dead body, formerly a living patient, becomes transformed into a relentless judge of the rectitude of the deductions made and the propriety of the methods used. Step by step the pathologist lays bare the details of disease hitherto hidden, and dictates to his staff the account which must forever stand by the side of that previous record made during life. The autopsy thus becomes the greatest critic in enforcing careful and thorough work on the part of the physician. A single autopsy is not enough, however, but a series of them is required, so that comparison and tabulation may bring out truths not evident from a single examination. He looks forward to a time when hospitals shall be given the right to postmortem examinations under certain restrictions. He describes the education of nurses and the effect of the training school in elevating the nursing profession. The presence of students in the wards he regards as a safeguard for the patient, by providing the physician with a critical audience tending to enforce care and accuracy in his work. He describes the method of administration of hospitals and speaks of the duty of the community, and especially of patients, toward the hospital.

New York Medical Journal.

May 30.

10 Management of Self-Limited Disease. W. B. Konkle, Montoursville, Pa.
11 Conditions Affecting the Proportions of Fat and Proteins in Cow's Milk. L. L. Van Slyke, Geneva, N. Y.
12 *Gonorrheal Rheumatism Cured by Seminal Vesiculotomy. E. Fuller, New York.
13 *The Kidney in Acute Infections. J. B. Huber, New York.
14 *The Jungle Plant (*Combretum Sundiacum*). W. D. Silkworth, New York.
15 Extraction of Cataract in Capsule. W. B. Marple, New York.
16 Operation for Advanced Ectopic Gestation Associated with Fibromyomata of Uterus. S. E. Tracy, Philadelphia.
17 *The Bladder in Tabes. J. B. Squier, New York.

12. **Gonorrheal Rheumatism.**—Fuller refers to his former articles recommending seminal vesiculotomy in gonorrheal rheumatism, and states that up to Feb. 1, 1908, he has performed the operation of seminal vesiculotomy 101 times without a death—23 times for the relief of gonorrheal rheumatism. In all the 23 patients the operation has had a profoundly beneficial effect on the rheumatism. All have left the hospital well or in a greatly improved condition. In all these patients there was a seminal vesiculitis to account for the focus from which the systemic absorption originated. Out of the 23 cases 17 patients were cured as a direct result of the operation and were well when last seen. Fuller has endeavored to exclude tuberculous cases by the use of the ocular tuberculin and tuberculin reactions. He would not operate if tuberculosis were present. He considers that his cases establish the efficacy of this form of treatment. He reports eight cases.

13. **The Kidney in Acute Infections.**—Huber discusses the pathologic influences bearing on the kidneys, their functions, the internal secretion of the kidney, the symptomatology and the pathologic changes. He describes Cabot's investigations and their effects in diagnosis. In regard to treatment he takes exception to the intemperate advice to drink as much water as possible, "gallons of it," with the idea of flushing the kidneys. The patient should drink as much as he desires and can comfortably dispose of, but to force fluid on him in unlimited quantities is a mistake, for it throws extra and unnecessary work, not only on the kidneys, but on the heart. It would be better to ease the kidneys by stimulating the other emunctories

—by diaphoresis and hydrotherapy, even by proctoclysis, though this would not materially lessen the cardiac and renal strain.

14. **The "Jungle Plant" in the Opium Habit.**—Silkworth refers to the extensive use of the "jungle plant" (*Combretum sundiacum*) in the Federated Malay States, as a cure for the opium habit. Its use is said to have been discovered by the Chinese woodcutters there. The plant is described by Sir George Young in his "Materials for a Flora of the Malayan Peninsula." Silkworth describes the method of making and using the infusion.

17. **The Bladder in Tabes.**—The indications for treatment, according to Squier, are to keep the bladder absolutely sterile and to re-establish by motor re-education its lost functions. This last is accomplished by passing a catheter each time after urination, drawing off the residual urine, if any, and introducing a measured quantity of a mildly irritating fluid (silver nitrate, 1 in 1,000) into the bladder, the patient making an effort to void it. He must be taught to make efforts at urination at stated times and always to try to evacuate the bladder to the last drop. A stronger solution (grains 1 or 2 to the ounce) may sometimes be instilled into the prostatic urethra with beneficial results. The vesical spasm is best relieved by passage of a cold sound. The patient's instruction in catheter sterilization is of the utmost importance.

Lancet-Clinic, Cincinnati.

May 23.

18 Pernicious Anemia. J. E. Greiwe, Cincinnati.
19 *Early Diagnosis of Cancer of the Uterus. R. B. Hall, Cincinnati.
20 Clinical Teaching of Surgery. J. U. Barnhill, Columbus.
21 Clinical Study of the Female Pelvic Muscles and Rectum. C. T. Souther, Cincinnati.
22 Prophylaxis and Treatment of Gonorrheal Conjunctivitis. M. Behrman, Covington, Ky.

19. **Cancer of Uterus.**—Hall urges the importance of early diagnosis, and gives some suggestions to aid in making it: Make a careful clinical history, omitting no detail regarding menstruation, discharge or odor. An offensive odor does not begin until the tissues are breaking down. Irritable bladder is an early symptom. Have an investigation on the occurrence of any unusual symptom during the cancer period. Cancer of the cervix, if present, will almost certainly be detected early, by examination. Cancer of the body is rare during menstrual life, and is more prevalent in women who have not borne children. The most common form is adeno-carcinoma. The progress of the disease at first is very slow. After the cessation of menstruation a watery discharge may set in; this becomes colored after a time. Backache and pain may be complained of, but the patient does not consider herself an invalid. In ten or twelve months the uterus will be enlarged. Such patients are often sent to the gynecologist as suffering from fibroids, but fibroids do not begin after the menopause, and if the patient had a fibroid before, the history of the last few years of menstrual life would indicate it. Hall has detected malignant disease of the fundus with the curette when only a small area has been involved. Epithelioma of the body of the uterus is the rarest of growths.

American Journal of Obstetrics, New York.

April.

23 *Significance of Pain in Pelvic Disease. E. Novak, Baltimore.
24 *Diagnosis of Non-puerperal Pelvic Diseases. H. J. Boldt, New York.
25 *Etiology of Acute Nonpuerperal Pelvic Infection. C. R. Hyde, Brooklyn, N. Y.
26 *Treatment of Non-puerperal Infections of the Pelvis. F. R. Oastler, New York.
27 Case of Impacted Breech Presentation Treated by Hebotomy. R. H. Pomeroy, Brooklyn, N. Y.
28 Temporary or Apparent Disproportion Between the Fetal Head and the Maternal Canal. M. McLean, New York.
29 *Disproportion Between the Fetal Head and the Maternal Pelvis and Its Management. J. D. Voorhees, New York.
30 Ectopic Pregnancy in Stump of Excised Tube, Causing Attacks of Intestinal Hemorrhage. H. N. Vineberg, New York.
31 Ear Disease in Infancy and Childhood. J. A. Kenefick, New York.
32 Use and Abuse of Salt Solution. E. A. Ballock, Washington, D. C.
33 *Chloroform versus Ether at Columbia Hospital for Women. T. Abbe, Washington, D. C.

23. **Pain in Pelvic Lesions.**—Novak, while not minimizing the importance of careful physical examination in pelvic disorders, says that a consideration of the character and distribution of the pelvic pain will often yield interesting and suggestive information. The nature of the disease should be ascertained, and not merely the advisability or otherwise of operation. The pain of pelvic disease is in a general way governed by the same laws that apply to the causation of pain in other viscera. One of the dangers of neglect of pelvic disease is the possible development of neurasthenia, with diffusion of pain to other parts and appearance of characteristic symptoms. The persistence of this neurasthenia is one cause of the continuance of unpleasant symptoms after operative measures. Hysteria manifesting itself by pelvic symptoms presents the same characteristics that distinguish it elsewhere. The removal of normal ovaries for pelvic pain is theoretically unjustifiable and clinically useless. So-called fibrocystic ovaries are frequently found in women in perfect health, hence caution must be used in attributing pelvic pain to such a condition. Intervention, if made, should be conservative rather than radical. "The gynecologist must learn to look on pain as the resultant of two factors, the lesion and the patient, and in order to arrive at an intelligent appreciation of the true signficance of pelvic pain, he must study both these factors with equal fidelity."

24. **Diagnosis of Nonpuerperal Pelvic Infections.**—Boldt says that it is not always possible to palpate the tubes. He describes various manipulative "wrinkles" in palpation, etc. The recto-vagino-abdominal method should never be lost sight of. It often gives success in diagnosis when other measures fail. Hydrosalpinges are always of secondary formation. The mesosalpinx has considerable bearing on the outline of a hydrosalpinx. The abdominal two-thirds of a tubal tumor may be located anywhere within the pelvis. The mobility depends on the extent and firmness of existing pelviperitonitic adhesions. In hydrosalpinx the tubes are seldom sensitive on bimanual examination. When they are it is due to local peritonitis. A large hydrosalpinx may be mistaken for an ovarian cyst, a not infrequent error, especially if the evolution of the hydrosalpinx is intraligamentous. In the event of extensive pelvi-peritonitis all the organs may become so matted together that a differential palpation is impossible. A pyosalpinx may so simulate a tubal pregnancy that no differential features can with certainty preclude error; this is especially true in some cases of tubal abortion. When an appendicitis calls for differentiation from a right-side salpingitis we must rely chiefly on objective symptoms, subjective symptoms being similar. Marked sensitiveness, however, with exudate in the iliac fossa, in addition to the objective symptoms of salpingitis, renders the diagnosis of a coexisting appendicitis certain. An interstitial purulent salpingitis with greatly hypertrophied walls, which has become displaced and then intimately adherent to some part of the corpus uteri, may be mistaken for a small subperitoneal fibroid. The predominating pelvic exudate of puerperal origin is parametric, whereas that of nonpuerperal origin is pelvi-peritonitic. It is always important to elicit a detailed history of any pelvic infection (such as gonorrhea) or of a traumatism from local treatment or a minor surgical intervention. In suspecting a pelvic infection to be tuberculous, tuberculous lesions in other parts should be looked for. Tuberculosis and gonorrhea may be coexistent.

25. **Etiology of Nonpuerperal Pelvic Infections.**—Hyde points out that, though the gonococcus is believed to be the most common cause of pyosalpinx, bacteriologic examination of tubes affected with a chronic or suppurative salpingitis rarely demonstrates its presence But its absence in 80 per cent. of cases is no proof that it should be excluded as a cause. Germs can perish in their own secretions if pent up. While the preponderance of tubal gonorrheal infection is recognized, the streptococcus and staphylococcus must be recognized as important etiologic agents. The *Bacillus coli communis* plays a relatively important part in the production of acute pelvic infection. The author concludes that acute pelvic infection is rarely primary, but more often a sequel of uterine and tubal disease.

26. **Treatment of Nonpuerperal Pelvic Infections.**—This must depend, according to Oastler, on: 1, Variety of bacteria; 2, mode and site of their entrance; 3, region and organs involved. The large percentage of infections being due to the strepto-

coccus, staphylococcus and gonococcus, these receive special attention. Eliminating puerperal infections, unclean instruments and manipulations are the chief means of infection through the pelvis. The treatment calls for: 1, Elimination of the source of infection by cleansing the infected locality by curettage, irrigation and drainage; 2, absolute rest for the part; 3, application of heat or cold to abdomen, followed later by hot douching and tamponing with glycerin as a base. Gonorrheal infection is peculiar in that 1, the inflammatory process almost never involves the general peritoneal cavity, and is, therefore, a local process; 2, the tendency is to become chronic or subacute. In treatment of the local focus of infection—generally the urethra, but may be the Bartholinian glands or the cervix uteri—reliance must be placed largely on (a) rest in bed, (b) proper drainage, (c) applications of silver salts and constitutional treatment, as for acute pyogenic infection, with alkaline sedatives to neutralize the urine. Drugs are of doubtful value. Of infections through abdominal extension the most common is that from appendicitis. The author also discusses tuberculous infection, chronic conditions, prophylaxis and convalescence.

29. **Disproportion Between Fetal Head and Maternal Pelvis.**—Voorhees says that craniotomy in contracted pelvis, if the child is alive, should never be the operation of choice. If the woman is in unfavorable surroundings and is already in such a poor condition after a protracted labor and bad management that infection is certain, the head should be crushed and extracted, even if the child is living. Also, if the child shows signs of dissolution by a rapid and weak fetal heart, if the head has sustained injuries from prolonged traction by the forceps, and if the indications are greatly against its being alive and healthy, a craniotomy should be done. But a crushed head should not be dragged through extreme distortion; a Cesarean section is safer. Symphyseotomy is an operation of the past. With pubiotomy Voorhees has had no experience. All these major operations can be avoided in minor and moderate degrees of pelvic deformity by late induction of labor. But the pelvis must not be too small or the child too premature. The baby should have reached the thirty-sixth week, or preferably the thirty-eighth. The conjugate should be over 8 cm. Voorhees considers the modified Champetier balloon the best and most certain method for inducing labor in any conditions.

33. **Chloroform vs. Ether.**—Abbe considers that on the whole not only is ether undoubtedly safer than chloroform, but that chloroform has no advantage in agreeableness if ether is given by the open method or preceded by nitrous oxid or ethyl chlorid. Yet in certain cases some one factor will overrule the general objections to the toxemia caused by chloroform and give it the preference. For example, in acute inflammation of the respiratory mucous membrane, ether irritation, unless modified by morphin or atropin, is entirely contraindicated; also in chronic inflammatory processes that are likely to be lighted up by ether. Operations on the air passages and mouth call for chloroform and diseased conditions of the blood vessels, atheroma, especially cerebral, aneurism, and plethoric and alcoholic subjects. In obstetrics it is permissible, but it must not be forgotten that even small quantities of chloroform may produce kidney lesion. Ether should be chosen if deep anesthesia is required.

American Journal of Medical Sciences, Philadelphia.

April.

34 *Hygiene of Medical Cases, Particularly in Hospital Wards. D. L. Edsall, Philadelphia.
35 *Nature and Management of Diabetes Mellitus. O. T. Osborne, New Haven.
36 *Importance of Early Detection of Aneurism of the Aorta. H. D. Arnold, Boston.
37 Carcinoma of the Mediastinum Simulating Aneurism. J. Perkins, Providence, R. I.
38 Cardiac Arrhythmia Due to Extrasystoles Originating in the Bundle of His. R. Mackenzie and W. S. Morrow, Montreal.
39 *Reasons Why Cholecystectomy Should Not Be Performed as Frequently as Is Advocated by Many Surgeons. J. B. Deaver, Philadelphia.
40 Perforation of the Gall Bladder During Typhoid Fever; Cholecystectomy; Recovery. A. P. C. Ashhurst, Philadelphia.
41 Diagnosis and Treatment of Syphilitic Lesions of the Nervous System. T. H. Weisenburg, Philadelphia.
42 *The Neurasthenia of Autointoxication. T. J. Orbison, Los Angeles, Cal.
43 *The Indican Reaction as Evidence of Enterogenic Intoxication. H. A. Houghton, Long Island, N. Y.
44 Treatment of Chronic Stenosis of the Larynx and Trachea. J. Rogers, New York.
45 Reaction of the Phagocytes of Elephant's Blood on the Bacilli of Tuberculosis. S. G. Dixon, Philadelphia.

34. **Medical Cases.**—Edsall has been watching the evidence of the transmission of infections of various kinds in medical wards, and is convinced that it occurs much more frequently than is supposed. The system used in medical wards with regard to infectious diseases is much more loose than that used in surgical wards regarding infection. The presence of "carriers" in medical wards requires more attention. His remarks apply to what have hitherto been considered non-contagious, or at most only slightly contagious, diseases. The customary regulations refer to only a few of the infections that may be introduced; they cover only a portion of the means of conveyance, and even that portion does not always consist of the most important sources of infection; for instance, while excreta, bedclothes and food utensils of typhoid patients are covered, the hands of nurses, internes, etc., are not subject to regulation. Then, no one in authority knows whether the regulations are carried out or not. The physician apparently takes less interest in his system than the surgeon does in his. Such improvements as have taken place have been largely due to the initiative of nurses. While isolation reduces the chance of direct transmission, it does not protect the nurses; while important, it is an incomplete solution. Edsall describes some of his experiences with ward infections, and details at considerable length the measures used in his wards to avoid the conveyance of infection, under the following heads: Infection of the food; dangerous results from infected milk; care of milk after delivery; precautions against infecting food in the ward; regulation of the working personnel of the ward; care of the patients' mouths; care of ward utensils; danger of typhoid infection of nurses; danger of typhoid infection of patients; secondary gastrointestinal infections in typhoid patients; outbreaks of diarrhea, hemorrhage and perforation; apparent transference of abdominal complications; the grouping of hemorrhages and perforations; the bearing of these observations on the general conception of typhoid; the transmission of causes of otitis media; infections of the skin; isolation and segregation; placing of infectious cases; danger from pneumonia; isolation and segregation of various other common infections; apparent effects of regulations; protection against flies; division of work among nurses and the more emphatic warning of nurses.

35. This article will be considered in the Department of Therapeutics.

36. **Aneurism of the Aorta.**—Arnold emphasizes the importance of early diagnosis of aneurism of the aorta for the greater possibility of its cure. He summarizes the important points in physical examination as follows: Include in the routine physical examination the determination by percussion of the area of dulness of the great vessels; if one finds an abnormal area of dulness, determine carefully the conduction of the heart sounds in this area; include in the routine physical examination the simultaneous examination of both radial pulses; examine for a tracheal tug in any suspicious case; be especially keen for any evidence by inspection or palpation; and, above all, keep aneurism in mind and remember to examine carefully by all available methods if there is the slightest suggestion in the history or symptoms, or from any physical sign, that an aneurism may exist. Thorough familiarity with the anatomic relations of the aorta to surrounding structures is of very great value. With the exception of the rare cases in which there is trouble with swallowing, the early symptoms of aneurism, manifested by pressure, are usually either pain or disturbance with the respiratory apparatus. The latter may come either from pressure on the air passages or from pressure on the recurrent laryngeal nerve. The symptoms frequently simulate those of heart disease, and their true meaning is learned, partly by failing to find a cardiac condition that will explain the symptoms, and partly by finding evidence of an aneurism. The picture of aortic aneurism in its earlier stages is not uniform, but varies widely with the position and size of the aneurism. There are no pathognomonic signs. The most

characteristic feature of one case may be entirely lacking in the next one. The x-ray is of use as confirmatory evidence, and as helping to differentiate aneurisms of the ascending and transverse arches at a very early stage. The detection of aneurism of the arch of the aorta requires no greater skill than the recognition of incipient tuberculosis.

39. **Cholecystectomy.**—Deaver fears that removal of the gall bladder is done too frequently and that the influence of the prevalent teaching in favor of cholecystectomy will be bad. The more gall-bladder surgery he does the less he is inclined to remove the gall bladder. He states his reasons, among which are the following: The gall bladder is more active as a reservoir during the longest interval between eating, which is during the night; it is a most useful organ by way of which to drain in certain septic conditions of the liver and biliary passages; in the absence of the gall bladder and in presence of hepatic emergency the surgeon will be obliged to drain the common duct or the hepatic duct itself—operations which may tax the skill of expert abdominal surgeons. When in doubt drain, even at the expense of a mucous fistula, and though it entail a second operation, rather than remove a gall bladder, which may recover. Mortality from drainage of the gall bladder is less than that attending its removal. The question of postoperative adhesions is a matter of greater moment after cholecystectomy. When only the fundus of the gall bladder is diseased it should be resected and the remaining part of the gall bladder drained. The actual indications for cholecystectomy are hydrops of the gall bladder, cancer limited thereto, and calcareous degeneration and fibrosis, chronic empyema (but in the acute form drainage may suffice), gangrene of the gall bladder, and cases in which the gall bladder, though healthy, contains many small stones that can not be removed or are imbedded in the mucous membrane; but no hard and fast rules can be followed.

42. **Neurasthenia or Autointoxication.**—Orbison considers it proved that the body does form poisons within itself, that they may be found in the urine, bile, venous blood (especially just before it gets to the liver), and in the arterial circulation itself; likewise that these poisons are taken up from the gastrointestinal tract and are constantly in the process of being excreted by the various emunctories. In the healthy man the outgo equals the amount formed, but in the presence of pathologic conditions, especially of the intestinal canal, the latter becomes a veritable culture tube and absorption takes place. The author reports eight cases of neurasthenia attributed to intestinal troubles and cured by corresponding measures. In these cases certain points stand out prominently: The first is a hereditary taint and neuropathic susceptibility. The second is the symptom of fear, in its various phases—so common in intestinal diseases. The third and most important, so far as treatment is concerned, is the constant condition of intestinal putrefaction that has had to be overcome before any relief was achieved; this was in many of the cases associated with insufficient elimination of urine. In cases of this kind there is often a hysterical taint engrafted on the original trouble and this must be considered in treatment.

43. **Indican Reaction.**—Houghton formulates the following working rules with reference to the relation of indican reaction to enterogenic intoxication, which he has used in his own practice very satisfactorily. Urinary indican is a product of intestinal putrefaction. There may be putrefaction without the production of indol, but there can not be indicanuria without putrefaction. A maximum excretion of indican, that is, an amount which on Folin's scale gives an index of 100 or over, may be safely relied on to indicate excessive intestinal putrefaction, and especially the intoxication arising therefrom. A maximum reaction which gives an index under 100 may be significant, but its interpretation should be strictly guarded by the general condition of the patient, that is, by the oxidizing and excretory capacity. A heavy indican reaction which markedly subsides under treatment undoubtedly indicates a lessening intoxication, but minor variations in the color index have no significance at present. No interpretation can be placed on a negative reaction, too many unsolved factors entering into the problem.

Annals of Surgery, Philadelphia.

April.

46 *Direction of the Jejunum in the Operation of Gastroenterostomy. B. G. A. Moynihan, Leeds, Eng.
47 *Transfusion and Arterial Anastomosis. R. Ottenberg, New York.
48 *The Thymus Gland Treatment of Cancer. F. Gwyer, New York.
49 The Parathyroid Glands. N. P. Geis, Brooklyn, N. Y.
50 *Acute Dilatation of the Stomach and Arteriomesenteric Ileus. W. B. Laffer, Cleveland.
51 *Removal of Gallstones from the Second and Third Portions of the Common Bile Duct. F. G. Connell, Oshkosh, Wis.
52 Reduction *en masse* of Strangulated and Non-strangulated Herniæ. E. M. Corner, London.
53 Diagnosis of Renal Disease and Sufficiency. B. A. Thomas, Philadelphia.
54 Multiple and Consecutive Operations on the Kidneys for Calculi. W. W. Babcock, Philadelphia.

46. **The Jejunum.**—Moynihan states that the results of different observers and of different methods of posterior gastroenterostomy show that there is no "natural direction" of the jejunum, and consequently no "best line" for anastomosis. One is, therefore, probably as good as another, provided that no twist be given to the gut at the time of anastomosis. His own choice is for the vertical line, but the main point is to choose for the anastomosis that part of the jejunum which is close to the flexure. This line can be directly approximated to the stomach without the gut being revolved on its longitudinal axis.

47. **Transfusion.**—Ottenberg reports his experiments on animals and describes his technic. He concludes that the chief dangers in transfusion are hemorrhage, thrombosis and narrowing of the lumen. He recounts his clinical experiences in two desperate cases of secondary anemia, in which the immediate results were satisfactory, though both cases terminated fatally from continuation of the orginal disease. He narrates the history of transfusion.

48. **Thymus Gland in Cancer.**—Gwyer reports 16 cases supplementary to those in his former paper (*Ann. of Surg.*, July, 1907), with 6 deaths. He discusses the causes of the fatalities, and realizes that the thymus treatment has not yet in itself proved curative. He thinks that in so complex a condition as cancer we may well look to a combination of remedies for the eventual control of the disease.

50. **Acute Dilatation of the Stomach.**—Laffer closes his article from the March number (Abstr. The Journal, April 11, p. 1221) with the following conclusions: Acute dilatation of the stomach is very fatal, 63.5 per cent. dying. It is not so rare as the literature would lead one to believe. The pathology and *modus operandi* of acute gastric dilatation and gastromesenteric ileus is not definitely known, but the experimental, clinical and pathologic evidence points to a primary innervation disturbance affecting the gastric nerves or their centers in the brain and cord. It has not been proved that the compression of the duodenum by the root of the mesentery is the primary cause of the so-called mesenteric ileus. The diagnosis may usually be readily made by having the subject in mind, especially where we have the presence of distention, vomiting of large amounts of greenish fluid, no rise of temperature, rapid pulse, great thirst, little abdominal tenderness, and increasing collapse. The passage of the stomach tube will usually establish the diagnosis. Treatment should consist of repeated gastric lavage, even when the patient seems moribund. No food or drink should be given by the mouth, but salt solution, transfusions and nutrient enemata should be prescribed. Patient should avoid the dorsal decubitus position and assume the knee-chest, abdominal and right lateral positions as much as possible.

51. Abstracted in The Journal, Aug. 31, 1907, p. 794.

Journal of the Indiana State Medical Association, Fort Wayne.

April.

55 *Sponges Left in the Abdomen. An Unusual Case Which Throws New Light on the Subject. M. F. Porter, Fort Wayne.
56 *Treatment of Acne Vulgaris. A. W. Brayton, Indianapolis.
57 Plastic Operations for Elongation of the Sciatic Nerve. J. R. Eastman, Indianapolis.

55. **Sponges in the Abdomen.**—Porter reports a case in which a patient apparently secreted portions of gauze in her vagina

after an abdominal operation, with the view of misleading her family attendant into the belief that they had been left in the abdomen after operation and were escaping through a fistulous opening. Porter uncovered the trick, and reports the case as possibly throwing a side light on the subject of some alleged cases of foreign bodies in the abdomen.

56. **Acne Vulgaris.**—Brayton points to the fact that acne is most prevalent at puberty. At this period the growth of hair on the pubes and other portions of the body indicates an increased activity of the entire pilosebaceous system, parallel to the development of the internal genital organs; the condition being the survival of a period when the whole body was hairy. He discusses the treatment—hygienic, dietetic, medicinal and local—strongly recommending the old mistura acidi ferri, or Startin's solution, in plethoric girls with costiveness, coated tongue and local hyperemia. The mixture is as follows:

℞.	gm. or c.c.			
Magnesii sulphatis	30			℥i
Ferri sulphatis		65		gr. x
Sodii chloridi	1	95	or	ʒss
Acidi sulphurici dil.	8			ʒii
Infusi gentianæ q. s.	120			℥iv

Local treatment he sums up as follows: 1. Wash the face well at night with cold or tepid water and good soap; tincture of green soap is desirable. Open with a sharp lance all pustules, scrape off the acne tops, use the comedon expressor, dry the face and whiten with the white lotion. 2. In the morning flick off the white powder with a soft towel. It is not then necessary to wash the face. Use the ointment of sulphur in the morning if the skin feels dry and harsh in spots or places or apply the lotion lightly if about the house. 3. On going out use the powder as a cosmetic and at night wash the face and begin the treatment again. Trivial as the complaint is, it causes considerable mental distress in young women in consequence of its effect on their personal appearance, and, therefore, deserves more careful attention than is ordinarily given to it.

Journal of the Michigan State Medical Society, Detroit.

April.

58 Carcinoma of the Pancreas. H. M. Joy, Calumet.
59 *Dementia Americana. W. A. Stone, Kalamazoo.
60 Serum Diagnosis in Typhoid Fever. C. M. Stafford, Detroit.
61 Case of Umbilical Hernia. H. B. Garner, Traverse City.
62 Movable Kidney. E. B. Smith, Detroit.
63 *Medical Fallacies. C. B. Fulkerson, Kalamazoo.
64 Plea for More Frequent Curettage Following Labor. C. H. Judd, Detroit.
65 Prostate Gland. E. C. Taylor, Jackson.

59. **Dementia Americana.**—Stone discusses the condition stigmatized by this epigrammatic term, traces its causation to racial and historic causes, and concludes with the following propositions: The degenerate and half-insane should receive recognition as such by the courts. Prisoners of this class should not be committed either to an asylum for the insane or to a penal institution; but there should be schools and institutions especially designed for their detention, care and training. The use of medical experts by the courts should follow the example of Michigan and Connecticut, which provide for the appointment of experts by the judges and their instructions to aid him rather than to be contestants in the case. All criminals should be passed on or examined by an alienist before being sentenced. All prisons and reformatories should be under the supervision and control of alienists and teachers rather than politicians.

63. **Medical Fallacies.**—Fulkerson writes an interesting folklore article on this subject and refers to the need for care and accuracy in the use of scientific nomenclature.

Iowa Medical Journal, Des Moines.

April.

66 Cancer of the Uterus. A. G. Shellito, Independence.
67 Relation of Gynecology to the General Practitioner. J. L. Scripture, Cresco.
68 Surgical Treatment of Displacements of the Uterus. W. R. Whiteis, Iowa City.
69 *Exfoliative Endometritis Complicated by Premature Expulsion of Embryo. L. H. Branson, Iowa City.
70 Bacteriology and Pathology of Syphilis, with a Few of Its Clinical Features. D. F. Crowley, Des Moines.
71 The Public and Private Hygiene of Gonorrhea and Syphilis. L. P. Piper, Des Moines.

69. **Exfoliative Endometritis.**—Branson discusses dysmenorrhea and its causation, and summarizes the differential diagnosis between the casts of exfoliative dysmenorrhea, early abortion and tubal pregnancy. She describes a case showing the difficulty of deciding between a dysmenorrheal cast and the product of pregnancy. Incidentally she believes that the case is suggestive of tubal participation in the function of menstruation.

Journal of the Arkansas Medical Society, Little Rock.

April.

72 Relations Between Physicians and Dentists. P. A. Skeen, Texarkana.
73 Relationship Existing Between Physicians and Nurses. T. F. Kittrell, Texarkana.
74 The Trained Nurse. I. H. Perkins, Texarkana.
75 When to Operate for Gallstones. Report of Cases. W. T. McCurry, Texarkana.
76 Indicanuria. N. Klein, Texarkana.
77 Tuberculosis of the Kidney. J. M. Taylor, Fort Smith.
78 *Importance of Fats in Infant Feeding. C. S. Merriman, Kansas City, Kan.
79 Esophago-Tracheal Carcinoma. J. Z. Sexton, Paragould.

78. **Fats in Infant Feeding.**—Merriman, without detracting from the importance of carbohydrates, proteids, etc., in food, insists on the evil results of a deficiency of fats in infant feeding, among which he names rickets (which a supply of good fat food will often cure), difficult teething, spasms, croup, eczema and varying skin diseases. The growing child demands a larger portion of fats than the adult. When a proper amount of fat is supplied its combustion spares the albumin, so that the entire energy of the proteids can be expended on tissue growth and nutrition.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London.

May 16.

1 Connective Tissue in Carcinoma and in Certain Inflammatory States That Precede Its Onset. V. Bonney.
2 *Influence of Pregnancy on Certain Medical Diseases and of Certain Medical Diseases on Pregnancy. H. French.
3 *Juvenile Tabes Dorsalis. S. Stephenson.
4 New Method of Restoring the Continuity of the Bowel in Cases of Excision of a Growth Low Down in the Sigmoid Flexure. J. P. L. Mummery.
5 *Diagnosis of Perforating and of Chronic Duodenal Ulcer. Sir J. F. H. Broadbent.
6 Method of Administering Solids in Cases of Gastrostomy. A. E. Maylard.
7 Electrical Treatment of Atonic Conditions of the Digestive System. R. Morton.

2. **Pregnancy and Medical Diseases.**—In his third Goulstonian lecture French takes up the relations of typhoid and pregnancy, considering incidentally the transplacental transmission of toxins, agglutinins and bacteria, the question of artificial delivery, and the transmissibility of other specific fevers from the mother to the unborn child. He discusses the effects on the pregnant woman of measles, pertussis, scarlet fever, chickenpox, mumps, diphtheria and smallpox, and the relations with pregnancy of cholera, plague, malaria, influenza, lobar pneumonia, Addison's disease, leukemia, diabetes mellitus, diabetes insipidus, myxedema and chorea.

3. **Juvenile Tabes.**—Stephenson summarizes the conclusions of Cantonnet (*Arch. d'Ophthal.*, November, 1907), based on an analysis of 90 cases of juvenile tabes, including a carefully observed one of his own in a lad of 15, which demonstrate a certain evidence of syphilis, inherited or acquired, in 65.6 per cent., or as great as in adult tabes. The sex incidence was, however, reversed. Stephenson has little doubt that a proportion (possibly large) of those cases in children in whom the sole obvious findings include amblyopia and optic atrophy are in reality instances of juvenile tabes. A more systematic examination of the nervous system in such cases would result in a more definite diagnosis. The association in a syphilitic child of bilateral simple optic atrophy with loss of knee jerks would by itself point to a provisional diagnosis of juvenile tabes, and suggest the need of a neurologist's examination. Another suggestive combination would be paralysis of an ocular muscle with loss of the deep reflexes in a syphilitic subject. Stephenson reports five cases.

5. **Duodenal Ulcer.**—Broadbent discusses the etiology of duodenal ulcer, the results of perforation, and the symptoms, and reports three cases illustrating respectively: 1, localization of peritonitis to the right flank; 2, general peritonitis; 3, formation of subphrenic abscess. He then deals with nonperforating ulcer and its sequelæ, describing the character of the pain, vomiting and hemorrhage, and dilatation of the stomach—a symptom of great importance. He reports five cases. The diagnosis is more accurately made by a careful consideration of the history and the chronic character of the symptoms than by physical signs, which are usually very indefinite. He discusses the differential diagnosis from gastric ulcer, malignant disease of the stomach, new growth at pylorus, and gastric crises from tabes dorsalis. Gastrojejunostomy is the only satisfactory treatment.

British Medical Journal, London.

May 16.

8 *Anatomy of the Pancreas in Relation to Its Diseases. A. W. M. Robson.
9 *Fractures of the Patella Treated by Mobilizing the Lower Fragment. J. L. Thomas.
10 *Ectopic Gestation, with Unusually Early Symptoms. E. A. Searle.
11 *Method of Obtaining Rapid Healing of Acute Abscesses. J. Phillips.
12 Tumor of the Orbit Removed Without Enucleation and Without Loss of Sight. G. Apthomas.
13 *Influence of Pregnancy on Certain Medical Diseases and of Certain Medical Diseases on Pregnancy. H. French.

8. **The Pancreas and Disease.**—Robson considers the anatomy of the pancreas in relation to its diseases under the following heads: Anatomy of the pancreas—histology; inflammatory changes; topography of the organ as affecting its surgery; its anatomy in relation to cystic disease; variation in its ducts in relation to its diseases; hemorrhagic pancreatitis; catarrhal jaundice, usually catarrh of pancreas; diagnosis of chronic inflammatory disease; chronic pancreatitis in relation to diabetes; operative treatment in chronic pancreatitis; pancreatic lithiasis, and cancer of the pancreas.

9. **Fracture of Patella.**—Thomas describes the following method of treating fracture of the patella when the upper fragment can not be brought down enough by traction. He made a long curved incision well down over the shin and chiseled off from without the tubercle of the tibia with the ligamentum patellæ attached, taking care not to detach the tendinous and periosteal attachments along the inner edge. By forcible traction on the lower fragment of the patella and its ligament, the fragments were brought into contact and their bared surfaces kept in apposition with two loops of silver wire. The tubercle of the tibia retained considerable strength of anchorage in its displaced position by the untorn fibrous attachments of the ligament along its inner side. The immediate result of mobilizing the lower fragment was satisfactory as was also the functional result in time.

10. **Extrauterine Pregnancy.**—Searle reports a case in which the symptoms of ruptured tubal pregnancy were diagnosed and operation done fourteen days after conception.

11. **Rapid Healing of Acute Abscesses.**—Phillips reports cases illustrative of the following method for which he claims as advantages rapid healing, speedy disappearance of constitutional symptoms, infrequent dressing, with economy in dressings and lessening of risk of secondary mixed infection. The method is as follows: 1. Cleanse skin as in operating on sterile tissues. 2. Make incision long enough to permit free and complete evacuation of pus and rub the pyogenic membrane clean and smooth with gauze wrapped round the finger. 3. Having emptied the abscess cavity as completely as possible, pack it tightly with gauze (the author uses dry 1 in 1,000 bichlorid gauze) and apply a wool dressing and bandage as firmly as possible. 4. In forty-eight hours remove packing and dress wound as though it were a simple incision; i. e., do not pack or drain, but simply fix a gauze and wool dressing firmly in place with a bandage. Change once in three or four days until incision is soundly healed, and it will be found that the sides of the abscess cavity unite promptly and that there is no outpouring of pus.

13. See abstract No. 2.

Medical Press and Circular, London.

May 13.

14 Early Diagnosis in Surgical Diseases of the Kidney, with Special Reference to Physical Methods of Examination. D. Newman.
15 *Foul Breath: Its Causes, Pathology and Treatment. A. Wylie.
16 Neuritis Consequent on Cirrhosis of the Liver. M. Klippel.
17 Surgical Knowledge and Treatment of Syphilis. D'A. Power.

15. **Foul Breath.**—Wylie points out that foul breath may be (a) purely subjective, (b) purely objective, or (c) perceived by both the patient and others. Of the first class he instances the "curious burning smell" complained of by patients with disease of the brain in the region of the temporosphenoidal lobe. He describes the different forms of fetor as: 1. The putrefactive type, resembling decomposing cheese, found in antral disease, and with caseous collections in the nasopharynx, tonsils, etc.; also in tertiary disease of the nose and pharynx. 2. The sulphuretted hydrogen type, in pulmonary gangrene, bronchiectasis. 3. The garlic type, in those taking bismuth or antimony, also present, of course, chiefly in garlic or onion eaters. 4. The sweetish type, in glycosuria, or beer drinkers, associated with the presence of yeasts. 5. The toxic or hepatic type, associated with bacteria, e. g., the *Bacillus butyricus*, found in bilious people and those who bolt their food. The common causes are: 1, diseases of the nose and accessory cavities; 2, imperfect deglutition; 3, oral and lingual affections; 4, diseases of teeth and gums; 5, diseases of tonsils; 6, chronic suppuration of middle ear; 7, nasopharyngeal affections; 8, diseases of lung; 9, foreign bodies in mouth, nose, pharynx or larynx; 10, constitutional causes. Each of these groups is discussed. The last group he subdivides into: (a) gastrointestinal derangements, (b) glycosuria, (c) menstruation, (d) lactation, (e) drugs, (f) occupation, (g) nervous diseases. The pathology is due to imperfect secretion of glands, mucous and albuminous; deficient leucocytosis and absence of lymphoid elements; action of bacteria—*Bacillus proteus, Spirochæta refringens, B. butyricus, B. coli communis, B. subtilis, B. fœtidus ozænæ, B. pyocyaneus, B. lactis erythrogenes.* The treatment, after measures directed to the removal of the cause, consists in frequent and thorough cleansing of the mouth and teeth, evacuation of lacunar accumulations, removal of hardened tonsils, treatment of gastrointestinal conditions, removal of foreign bodies, antiseptic ear drops in middle-ear trouble, removal of bacteria by solvent nasopharyngeal douches and mouth washes, with subsequent application of antiseptics by spray to the diseased mucous membrane, gentle stimulation by snuffs, etc. The author strongly recommends the frequent use of formic acid lozenges. The patient's confidence must be gained, especially in subjective conditions.

Clinical Journal, London.

May 13.

18 General Paralysis of the Insane. W. P. Herringham.
19 Syphilitic Disease of the Nervous System. H. Campbell.
20 *Mortality Statistics During the Last Half Century. S. Phillips.

20. **Mortality Statistics.**—Phillips closes in this issue his review of the mortality statistics in Great Britain from 1855 to 1905. As a result thereof he arrives at the following conclusions: 1. In 1905 as in 1855 diseases of the respiratory organs accounted for about one-quarter of the total deaths; phthisis has declined, but pneumonia has increased. 2. The apparent increase in deaths from diseases of the circulatory organs and the decrease in deaths from diseases of the nervous system may be accounted for by the transfer of apoplexy from the latter class to the former. The combined total of circulatory and nervous disorders does not differ greatly—200 in 1855 and 230 in 1905. 3. The tuberculosis total mortality is 42 per cent., but it is divided among various organs. 4. The enormous decrease in deaths from exanthemata is seen in the fact that in 1855 they caused 170 deaths per 1,000, in 1905 only 75. 5. Malignant disease shows a rise from 17 in 1855 to 60 in 1905. 6. The rise in diabetes mortality is as marked as that from malignant disease. 7. There is a greatly increased fatality from nephritis, shown by a rise from 16 to 30 per 1,000 between 1855 and 1905. The data are taken from a comparison of the tables of 1,000 deaths in 1855 and in 1905.

Glasgow Medical Journal.

May.

21 *Causation and Treatment of Diabetes. A. Lorand.
22 Record of a Year's Work in the Royal Samaritan Hospital for Women, Glasgow. J. N. Stark.
23 *Aneurism of the Hepatic Artery. W. Rolland.

21. **Diabetes.**—Lorand asserts the association of diabetes with excessive use of meat and sweets. Diabetes, like exophthalmic goiter, has an hereditary basis. The relation between diet and diabetes lies in the alteration by diet of the organs which play so important a pathogenic rôle in diabetes, especially the pancreas and thyroid. Meat particularly produces alteration in the thyroid. Lorand and Minkowski have made dogs diabetic by the removal of the pancreas, and subsequently examined their thyroids which showed colloid degeneration. The adrenals also play a rôle in diabetes. The various ductless glands stand in close relation to one another. The proper treatment of diabetes is prevention. It must be recognized in the initial stages. The urine should be examined after a test dinner of quantities of sweets and meat. In early diabetes a quantity of sugar will be found in the urine in two hours. When sugar rises above 0.1 to 0.2 per cent. an antidiabetic diet must be given. Variety is essential. To moderate amounts of meat, green vegetables, a few eggs (unless there is distinct albuminuria), kefir or kumyss on the third day, with some sour cream. One or two oranges may be given. The meat should not be too much, and only once a day. Graham bread should not be forbidden. Fruits containing little glucose—apples, peaches—may be used stewed. The diet should be more severe in light cases, and more lenient in severe cases. In severe cases it is not so much the sugar as the diacetic acid that should occupy our attention. When present in quantity it can easily be detected by the iron perchlorid test. Four drams daily in divided doses of sodium bicarbonate may be given in alkaline water after meals. In a number of cases Lorand has had good results from the serum of thyroidectomized animals—the indications being nervousness, excitement and insomnia.

23. **Aneurism of Hepatic Artery.**—Rolland gives a careful report of a case with half-tone illustrations and collates in tabular form the forty previously recorded cases.

Journal of Obstetrics and Gynecology of the British Empire, London.

May.

24 *Frozen Sections by Bumm and Blumreich and by Zangmeister—Is There a Lower Uterine Segment? A. H. F. Barbour.
25 One Hundred Consecutive Hysterectomies for Fibroids Attended with Recovery; Injuries of the Ureters. J. Bland-Sutton.
26 Intrauterine Death of the Fetus Occurring in Six Consecutive Pregnancies; Importance of Examination of the Fetal Tissues for Spirochæta Pallida. H. Williamson and E. L. Holland.

24. **Lower Uterine Segment.**—Barbour concludes his paper from the last issue. He holds that he has proved: 1. That there is a decidual-lined area below the retraction ring in his section; 2, that a shorter length of the cervix agrees with a greater thickness; 3, that in this case the retraction ring is some distance above the os internum; 4, that, therefore, there is here a lower uterine segment which is not stretched cervix but part of the wall of the body of the uterus.

Archives Générales de Chirurgie, Paris.

March, ii, No. 3, pp. 213-324.

27 *Study of Jejunostomy. X. Delore and C. Thevenet.
28 *Hemorrhagic Infarct of Intestines from Mesenteric Thrombophlebitis. P. Mauclaire and F. Jacoulet. Concluded in No. 4.

April, No. 4, pp. 325-436.

29 *Ultimate Results of Gastroenterostomy for Gastric Ulcer. D. Denéchau. First part in No. 10, 1907.
30 *Cancer of the Hepatic Duct and at Junction of Hepatic, Cystic and Bile Ducts. (Cancer du confluent hépato-cholédoco-cystique, etc.) A. Lapointe and Raymond.

27. **Jejunostomy.**—Delore and Thevenet believe that this technic is preferable for artificial feeding, especially in cases of cancer or ulcer of the stomach and fistula in stomach or duodenum. They describe their experience with jejunostomy and three cases of gastric cancer, in a number of cases of active ulcer and one of fistula into the stomach after an ulcer. They assert that jejunostomy is also preferable in burns from the action of caustics; gastroenterostomy does not allow the stomach to be left in peace as after jejunostomy, which is particularly advantageous in cases of diffuse corrosion of the stomach walls. Gastroenterostomy may be preferable for active ulcer if the lesion is in the pyloric region and is accompanied by pyloric stenosis.

28. **Hemorrhagic Infarct of the Intestine.**—This study reviews in turn infarct from obliteration of a vein, from obliteration of an artery or from both combined, and the various forms of each type. Mauclaire and Jacoulet summarize fifty-eight cases, including one from their personal experience.

29. **Ultimate Results from Gastroenterostomy for Ulcer.**—Denéchau found excellent results in 10 per cent. of 109 cases of ulcer of the stomach treated by gastroenterostomy; good results in 44 per cent., and improvement in 38 per cent. In 7 per cent. there was some complication or the old disturbances had returned. Thirty-two of his patients were men. The ultimate outcome depends on the condition of the gastric mucosa. The best results were obtained in cases of stenosis from a healed ulcer in the pyloric region without gastritis. The stomach after operation is still far from being normal. Nothing irritating should be allowed by mouth, merely a little water the first day, sips of milk the second, proceeding very cautiously. Bread and wine should not be allowed until after a long period of complete freedom from pain. These simple precautions, with repose for a time after the operation, will have a marked favorable influence on the ultimate outcome. Medical surveillance is necessary for a long time to insure good results.

30. **Cancer of the Hepatic and Cystic Ducts.**—Lapointe and Raymond summarize 32 cases of cancer of the hepatic duct, with operative intervention in 6, and 38 cases of cancer at the junction of the biliary ducts, with surgical treatment in 12. Cancer of the hepatic duct seems to be beyond the resources of surgery, but various types of anastomosis seem to be practicable for cancer at the junction of the hepatic, cystic and common bile ducts, and Kehr has reported a case of successful end-to-side hepatico-duodenostomy, with the patient still in good health after two years.

Bulletin de l'Académie de Médecine, Paris.

May 5, LXXII, No. 18, pp. 493-515.

31 *Diagnosis of Dysenteric Abscess on the Convex Aspect of the Liver. A. Chauffard.
32 *Experimental Carbon Monoxid Poisoning; Resuscitation with Oxygen. (Intoxication d'un animal par l'oxyde de carbone. Traitement immédiat par de grands volumes d'oxygène.) N. Gréhant.
33 Therapeutic Value of Sodium Bicarbonate in Stomach Affections. G. Hayem.

31. **Diagnosis of Dysenteric Abscess on the Convex Aspect of the Liver.**—Marcano diagnosed the abscess by the pain in the right shoulder, the leucocytosis with polynucleosis, and repeated *x*-ray examination. The first radioscopy was misleading. Repeated exploratory puncture is also useful. Zancarol was unable to discover the abscess in one case even with thirty punctures. In case of inversion of the viscera the diagnosis may be almost impossible, as in a case seen by Alvarez in which the patient was finally cured by resection of two ribs on the left side and evacuation of a large abscess in the liver.

32. **Oxygen in Treatment of Carbon Monoxid Poisoning.**—Gréhant has been experimenting with dogs intoxicated with carbon monoxid. The blood contained after 16 minutes only 4.5 per cent. oxygen and 19.1 per cent. carbon monoxid. The animal was then made to inhale pure oxygen, and by the end of two hours the blood contained 27 per cent. oxygen and no monoxid, and the animal was lively as soon as released. The oxygen must be used freely—hundreds of liters may be needed for man—and must be applied as early as possible, possibly supplemented by artificial respiration. A similar resuscitation was realized with a dog under the influence of morphin and then intoxicated with the monoxid, and brought to life again by insufflation of oxygen and rhythmic compression of the thorax, fifteen minutes after the animal had ceased to breathe.

Presse Médicale, Paris.

May 6, XVI, No. 37, pp. 289-296.

34 *Treatment of Facial Neuralgia with Local Injection of Alcohol. J. A. Sicard.

May 9, No. 38, pp. 297-304.

35 Diagnosis of Non-painful Lameness of Hip Joint in Children. (Boiteries non douloureuses de la hanche.) Desfosses and Ducroque.

34. **Treatment of Facial Neuralgia by Deep Injections of Alcohol.**—Sicard reports this treatment applied to 41 women and 22 men. He goes over much the same ground as Patrick and Hecht in The Journal, Nov. 9, 1907, giving illustrations of the technic, the point for injection and the anesthetic areas after injection of alcohol in the infraorbital, mental and supraorbital foramina. Previous surgical intervention rather detracts from the success of the alcohol injections. In other cases they gave perfect results, except in one case in which the needle could not be introduced into the foramen ovale, probably from some anatomic anomaly. Among the by-effects he has seen slight myosis, disappearing in about a month, but he noticed that the neuralgia alone induced myosis in 9 out of 44 cases before any injection of alcohol. The patients sometimes complained of a pricking or tickling in the tributary region, but this also vanished in less than a month. If the alcohol is not properly injected in the infraorbital foramen there is liable to be a tendency to paralysis of the nostril and upper lip, lasting for a month or two. He regards this "local alcoholization" as the chosen treatment now for all cases of facial neuralgia not of syphilitic, diabetic or malarial origin. It seems to be the only effectual remedy for tic douloureux. He adds that although this method, by its simplicity, its direct application without necessity for general anesthesia, the absence of any disfigurement, and the constancy of its successes, is demanded in trifacial neuralgia, it must not be regarded as a panacea for all neuralgias and especially for neuralgias of mixed nerves, as he has previously taught in an article in the *Revue Neurologique*, June, 1907, entitled "Dangers of Injections of Alcohol in the Sciatic Nerve."

Semaine Médicale, Paris.

May 6, XXVIII, No. 19, pp. 217-228.

36 Technic of Various Procedures for Serum Diagnosis of Syphilis. W. Fornet.

Archiv für klinische Chirurgie, Berlin.

LXXXVI, No. 1, pp. 1-276.

37 *Experimental Gastric Ulcer and Its Cure by Gastroenterostomy. P. Clairmont.
38 *Operative Treatment of Arteriovenous Aneurism. W. A. v. Oppel.
39 *Results of Operative Treatment of Cancer of the Large Intestine in 115 Cases. (Dickdarmkrebs.) J. Petermann.
40 *Surgical Treatment of Umbilical Hernia. (Nabelhernien.) M. Eschenbach
41 *Operative Treatment of Varices, Elephantiasis and Leg Ulcers. G. Friedel.
42 An Adenomyofibroma in the Wall of the Common Bile Duct. A. Volmer.
43 *Operative Treatment of Exophthalmic Goiter. (Morbus Basedowii.) P. Klemm.
44 Foreign Bodies in Stomach and Esophagus. (Fremdkörper im Magen und in der Speiseröhre.) Neuhaus.

37. **Experimental Gastric Ulcer.**—Clairmont experimented on dogs, ligating vessels, excising a scrap of mucosa, and cauterizing with hydrochloric acid. The resulting lesions never resembled a true gastric ulcer, and gastroenterostomy never displayed any curative action.

38. **Arteriovenous Aneurism.**—Oppel reports a case in which three operations under chloroform were performed within nine hours for an aneurism in the axilla, with prompt recovery. In a second case the aneurism was in the neck, and considerable air entered the jugular vein. Danger was averted by immediate tamponing and uneventful recovery followed. The technic is illustrated.

39. **Cancer of the Large Intestine.**—Petermann reports that 11 out of 29 patients on whom a radical operation was performed survive after two years, and are free from recurrence; 7 have survived more than three years. Excluding the operative mortality, 63 per cent. are still free from recurrence more than three years since the operation and three after an interval of seven years. The operative mortality has grown constantly less in recent years. The total experience with 115 patients is reviewed in detail.

40. **Umbilical Hernia.**—Eschenbach describes the preferred technic and his experiences with umbilical hernia in 44 women, 15 men and 6 children. Umbilical hernia tends gradually to increase in size, and operative treatment is practically harmless, while the permanent results are so good, he says, that early operation should be advised. Obesity and advanced years are no contraindication. Attempts at reduction should be very cautious as there is a special tendency to gangrene in these cases, judging from his experience.

41. **Spiral Operative Treatment of Varices, Elephantiasis and Leg Ulcers.**—Friedel gives an illustrated description of 14 cases and expatiates on the advantages of a spiral incision running from ankle to knee, with from three to seven turns, according to the severity of the cases. The spiral incision heals as a deep spiral scar, the ulcer lying between the turns. Under spinal anesthesia a segment of the saphenous vein in the thigh is resected and the spiral incision then made around the leg. In future he will make even more turns, as the results were highly satisfactory, all the veins being thus severed more than once, and the entire field being so extensively drained that all inflammation subsides and there is no possibility of recurrence. As the incision is made, the edges of the wound are drawn far apart and every vein ligated. The gaping wound is then tamponed and all granulations that may develop during the healing are cut off so that the wound will heal with a deep linear scar. He adds that the indications for operative treatment for these affections are materially enlarged by this spiral technic.

43. **Operative Treatment of Exophthalmic Goiter.**—Klemm relates the experience at Riga with 32 patients given operative treatment. There was no operative mortality, and out of 27 patients followed to date, from 15 months to 8 years, 25 are cured, one improved and only one not improved. He regards the disease as a complex of phenomena, the cause for which is the morbidly altered thyroid. The "exophthalmic" thyroid is characterized by dilatation of its arteries, and the vascular signs in the gland and elsewhere are the main features of exophthalmic goiter; the severity of the affection is determined by the extent and intensity of the vascular signs. All but five of his patients were women, and a family tendency was manifest in 28 per cent. In 27 cases the onset was insidious; in five it began with acute symptoms; one patient while traveling was suddenly seized with the pronounced syndrome. His cases are reported in detail and his impressions are summarized in the statements that exophthalmic goiter is essentially a toxic, trophic and vasomotor neurosis caused by abnormal metabolism in the thyroid. The essential symptoms are those of disturbed innervation of the vessels, what Kocher calls "vasculous" symptoms. The best treatment is by an operation, as this insures the quickest, the most certain and the most permanent cure. He advocates operative treatment as soon as the diagnosis is made. He operated at one sitting, excising half of the thyroid most involved, and ligating the vessels of the other side of the gland. No anesthetic was used except cocain for the incision. The patients were told beforehand that it depended entirely on them whether the operation could be carried through. They were not fastened in any way, but they kept duly still and said afterward that the pain of the operation was not bad; the worst was the fear of suffocation as the thyroid was lifted out.

Berliner klinische Wochenschrift.

May 11, XLV, No. 19, pp. 905-948.

45 *Acute Yellow Atrophy of the Liver in Syphilis. (Acute gelbe Leberatrophie bei Syphilis.) W. Fischer.
46 Normal Histology of Suprarenal Cortex. (Nebennierenrinde.) O. Stoerk.
47 "Touch" Percussion. (Zur Tastperkussion.) W. Ebstein.
48 Atypical Case of Disturbance in the Conduction of Impulses in the Myocardium. (Störung der Reizleitung im Herzmuskel.) G. Joachim.
49 Pathologic Metabolism in Gout. (Stoffwechselpathologie der Gicht.) W. Laqueur.
50 *Hemolytic Streptococci. (Hämolyse der Streptokokken.) F. Fromme and T. Heynemann.
51 Action of "Lactobacillin" and Yoghurt Milk. J. Leva.
52 Two Cases of Sarcoma of the Prostate. W. Veil. Commenced in No. 18.
53 Diagnosis of Localization of Brain Tumors. (Diagnostik der Hirntumoren.) E. Forster.

45. **Acute Yellow Atrophy of the Liver in Syphilis.**—Fischer reports a case of acute yellow atrophy of the liver in a robust, previously healthy man five months after infection with ap-

parently mild syphilis. The liver affection proved fatal in ten days. In this and in three other cases recently reported, search for spirochetes in the liver was unsuccessful. The affection is probably of toxic origin. Acute yellow atrophy of the liver in connection with syphilis has been observed in about fifty cases according to the literature; only ten of the patients were men, and the syphilis did not seem to be malignant in any instance.

50. **Hemolytic Streptococci.**—Fromme found typical hemolytic properties in forty-nine strains of very virulent streptococci derived from patients with severe puerperal fever. The discovery of hemolytic properties will, therefore, aid in the differentiation and prognosis of puerperal fever. His experience confirms the importance of isolating patients with hemolytic streptococci in the lochia.

Centralblatt für die Grenzgebiete der Med. und Chir., Jena.

April 18, XI, No. 7, pp. 241-288.

54 *Postoperative Lung Complications. A. v. Lichtenberg. Collective review. Commenced in No. 4.
55 *Operative Treatment of Neoplasms Compressing the Spinal Cord and Cauda Equina. H. Stursberg. Collective review. Commenced in No. 3.

54. **Postoperative Lung Complications.**—Lichtenberg reviews 221 articles on this subject in recent literature, and mentions with emphasis the very frequent occurrence of embolic pulmonary complications after operations in the lower half of the abdomen. Other lung complications are more frequent in operations on the upper half of the abdomen. His compilations from various clinics show that the highest mortality followed operations on the stomach, as also the largest proportion of fatal pulmonary complications (mortality 28.68 per cent., with 8.31 per cent. fatal pulmonary complications, in 2,175 operations on the stomach). Next come the operations on the biliary passages, with pulmonary complications in 1.92 per cent., and mortality of 12.66 per cent. in 1,042 operations. Then come 3,280 gynecologic operations with mortality of 7.83 per cent., and 1.52 per cent. fatal pulmonary complications. Then 3,526 goiter operations with 0.96 per cent. mortality and 0.42 per cent. fatal pulmonary complications. The smaller the absolute figure of the postoperative mortality, the larger the share of fatal pulmonary complications. Postanesthetic pneumonia seems to occur from the first to the fourth day, while hypostatic pneumonia does not develop until the sixth or ninth day. The latter is distinguished further by the lesser intensity of the pneumonic process and the localization in the lower lobes. Infectious pneumonia forms another group, for which a focus elsewhere is responsible. The fourth group includes the embolic pneumonias. Not all the unfavorable cases are placed on record and consequently the percentages are below the actual facts.

55. **Operative Treatment of Neoplasms Compressing the Spinal Cord and Cauda Equina.**—Stursberg gives the essential points of 141 cases, and tabulates them according to the localization of the tumor in the various segments. He advises operating even when the diagnosis is not quite certain, and opening the dura when palpation does not disclose the tumor.

Deutsches Archiv für klinische Medizin, Leipsic.

April, XCIII, Nos. 1-2, pp. 1-222.

56 *Genesis of Arteriosclerosis. Aufrecht.
57 *Periodic Febrile Conditions with Rheumatic Manifestations in Young Girls. (Rekurrierendes rheumatoides Ovulationsfieber.) G. Riebold.
58 Occurrence of Precapillary Phlebectasia on the Front and Side of the Chest, with Affections of the Circulatory and Respiratory Organs. C. Haeberlin.
59 Action of Temperature on the Mean Vital Capacity of the Lungs. K. A. Hesselbalch.
60 Total Capacity of the Lungs. Id.
61 Study of the Conditions in the Circulation in Infectious Diseases by Means of Blood Pressure. (Beurteilung der Kreislaufsverhältnisse bei Infektionskrankheiten mit Hilfe der Blutdruckbestimmung.) R. Dietschy and H. Hössli.
62 *Outline of the Heart with Various Valvular Defects. (Herzsilhoutte bei den verschiedenen Klappenfehlern.) T. and F. Groedel.
63 *Eventration of the Diaphragm. H. Arnsperger.
64 *Stomach Content with Gastric Cancer. (Carcinomatöser Mageninhalt.) H. Fischer.
65 *Pathology and Treatment of Diabetes Mellitus. C. Stäubli.
66 *Presence of Hemolytic Substances in the Stomach Content, and Their Importance for Diagnosis of Gastric Cancer. E. Grafe and W. Röhmer.
67 *Hereditary Form of Diabetes Insipidus. A. Weil.
68 Percussion. J. Plesch.

56. **Genesis of Arteriosclerosis.**—Aufrecht reports histologic research which confirms the assumption that inflammation of the vasa vasorum, leading to trophic disturbances in the media and intima, is the true origin of arteriosclerosis. The whole process is thus an arteritis, as we call any chronic affection of the kidneys "nephritis" even when it originates in the smallest vessels.

57. **Periodic Febrile Conditions With Rheumatic Manifestations.**—Riebold has previously described what he calls premenstrual or ovulation fever, which he ascribes to some focus of inflammation—pyelitis, tuberculosis, or some other morbid process. He describes six cases of recurring ovulation fever accompanied by rheumatoid symptoms and states that he has observed many others. No focus of infection could be found in any of these patients. The symptoms may suggest typhoid or acute articular rheumatism; salicylates do no good, and the joint manifestations are not marked. The blood in his cases was always sterile and its composition normal. Sweating and erythema were occasionally observed. In chronic cases the skin was thin and waxy, pale, dry and transparent. The hair fell out and nutrition suffered. He calls attention to the fact that the connection with menstruation seems to have escaped notice as the gynecologist seldom sees these cases and the general practitioner is only consulted for relief of the rheumatic symptoms. Among the theories advanced to explain the affection, he mentions perverted functioning of the ovary. In some cases there is tachycardia, and a permanent valvular defect may result. The periodicity of the attacks and of certain functions of the human organism in general, he thinks, deserves greater attention, and he adds that sooner or later internal medicine will have to take this physiologic periodicity into consideration more than is done at present.

62. **The Outline of the Heart with Valvular Defects.**—The outline of the heart varies with different valvular affections, as Groedel shows by several illustrations. It is possible to diagnose the special valvular defect by the shadow of the heart. A congenital heart defect can thus be readily differentiated. He gives a number of typical orthodiagrams to show the features of mitral and aortic insufficiency. With pure mitral stenosis the heart is comparatively small; the left ventricle is small, the left auricle is large. With mitral insufficiency the outline is enlarged in all directions.

63. **Eventration of the Diaphragm.**—Arnsperger relates a case in which he was able to diagnose this condition in a young woman, and describes the instructive points. Only ten cases have been diagnosed during life.

64. **Chemistry of the Stomach Content with Gastric Cancer.**—Fischer found abundance of the terminal products of the splitting of albumin, in contrast to the findings in the normal stomach. He shows how this explains the lack of free hydrochloric acid.

65. **Diabetes.**—Stäubli devotes fifty pages to a careful study of twelve cases of diabetes mellitus. In four cases remarkable fluctuation in weight was caused by retention of several quarts of water without visible edema or effusions. The patients merely looked a little plumper. Two other cases illustrate the remarkable way in which the conditions approximated normal as soon as the efforts of the organism in this direction were reinforced by regulation of the diet. Restriction of carbohydrates may have a very favorable action even in extremely severe diabetes with much acidosis. As a rule, ingestion of fat does not increase the acidosis bodies in the urine, but one of his patients displayed a striking dependence of the acetonuria on the amount of fat ingested. Large amounts of alcohol seem to have an inhibiting action on the acetonuria, but they affect the tolerance unfavorably. Some of the cases show the extremely unstable condition of the tolerance. Levulose, dextrose, etc., may have an injurious cumulative action. An intercurrent tonsillitis aggravated the diabetes in one case. One patient took the greatest interest in the question of the fluctuations in the elimination of sugar at different periods of the day, and study of this case showed periodical and regular variations in the output of sugar peculiar to the individual organism, besides the variations dependent on the diet. Closer

study of these periodical variations may determine the most propitious moment during the day for the intake of food. Among the other questions studied were the water metabolism, the influence of ingestion of albumin on the glycosuria, of carbohydrates and fat on the acidosis, of alcohol on the acetonuria, and of alkalies on the elimination of ammonia, total nitrogen and the acidosis bodies.

66. **Hemolytic Substance in Stomach Content.**—Grafe and Röhmer review 127 cases in which the stomach content was examined for hemolytic substances. None was found in 20 healthy persons; in 24 with ulcer of the stomach, and in 31 with other gastric affections aside from cancer. The findings were constantly positive in 19 cases of carcinoma verified by operations and in 17 clinical cancer cases, and in 14 out of 16 suspicious cases. These hemolytic substances act on human and animal blood even in the smallest proportions. The substance is a lipoid, and the essential element is probably oleic acid, issuing from the carcinomatous stomach walls.

67. **Hereditary Form of Diabetes Insipidus.**—Weil gives the history of five generations of a family with 219 individuals in which 35 of the members presented diabetes insipidus. The first set of diabetic parents had 60 per cent. diabetic children; 21.8 per cent. diabetic grandchildren; 54.1 per cent. diabetic great grandchildren, and 28.5 per cent. in the fifth generation. The general health did not appear to suffer, two of the diabetics dying at 92 and 87 respectively. Unless they took the desired amount of water before each meal, they could not eat; one boy of five drank 7 quarts of water a day, and between the ages of 20 and 30 they drank 15 quarts and more; after 50 the symptoms were somewhat less pronounced. Digestion was good and there were no other disturbances.

Deutsche medizinische Wochenschrift, Berlin.

May 7, XXXIV, No. 19, pp. 809-856.

69 Determination of Value of Antidysentery Serum. (Wertbestimmung des Dysenterieserums.) W. Kolle, O. Heller and V. de Mestral.
70 Technic of Opsonic Index. Strubell.
71 Albumin and Fat Diet in Treatment of Motor Insufficiency of the Stomach. (Eiweiss-Fettdiät bei motorischen Insuffizienz des Magens.) J. E. Cook.
72 *Alimentary Lactosuria in Stomach Affections. (Beitrag zur Kenntnis des Milchzuckers im Harn.) A. von Halasz.
73 *Early Plastic Restoration of Eyelids After Burns. (Frühtransplantation bei Verbrennungen der Augenlider.) Pfälz.
74 Farinaceous Foods for Infants and Their Influence on Metabolism. (Mehle und Mehlfütterungen bei Säuglingen.) H. Rietschel.
75 Technic of Serum Reaction in Syphilis. (Wassermann-A. Neisser-Brucksche Reaktion bei Syphilis.) W. Fornet.

72. **Alimentary Lactosuria in Stomach Affections.**—Halasz has examined 45 individuals in respect to their tolerance of lactose; 150 gm. dissolved in water were taken fasting, and the urine was examined after four hours and every two hours thereafter for eight hours. The gastrointestinal tract was normal in all these subjects, and there was no evidence of lactosuria in any instance. Autopsy in 24 of these subjects confirmed later the soundness of the digestive tract. In another group of 23 cases of cancer or ulcer in the stomach, alimentary lactosuria was constant in every case, with one exception. Even a smaller quantity of the lactose gave positive results in this group. His tests show that the liver scarcely participates in the utilization of lactose. In one case the lactosuria aided in the differentiation of gastric from hepatic cancer. He does not regard this test as of much diagnostic value, however, but merely as an interesting form of elimination of sugar in pathologic conditions.

73. **Early Restoration of Eyelids after Burns.**—Pfalz advocates transplantation of Thiersch flaps before there is any formation of granulations. As soon as demarcation of the eschar occurs, he covers the defect so extensively that there is no further chance for spontaneous cicatrization.

Fortschritte der Medizin, Leipsic.

Feb. 10, XXVI, No. 4, pp. 97-128.

76 Spastic Paralysis with Cortical Amblyopia. (Fall von Littlescher Starre mit kortikaler Amblyopie.) K. Liebe.
77 *Prodromal Epistaxis. E. Hummel.

Feb. 20, No. 5, pp. 129-160.

78 Trophic Disturbances After Severing of Posterior Roots. (Trophische Störungen nach Durchschneidung hinterer Wurzeln.) G. Köster.

March 20, No. 8, pp. 226-256.

79 Prevention of Vaccinal Affections in the Environment of Recently Vaccinated Children. A. Groth.
80 Venesection. (Aderlass und anderes Veraltete.) F. von den Velden.

March 30, No. 9, pp. 257-288.

81 Importance of the Ocular Tuberculin Reaction for the General Practitioner. E. Sobotta.

April 10, No. 10, pp. 289-320.

82 Multiple Infarcts in Kidneys with High Blood Pressure. (Multiple Niereninfarkte mit hohem Blutdruck.) Hürter.

April 20, No. 11, pp. 321-352.

83 Practical Experiences with Modern Methods of Phototherapy. (Neuere Lichtbehandlungensmethoden.) E. Hesse.

77. **Prodromal Epistaxis.**—Hummel warns that "idiopathic" nosebleed in elderly individuals is most frequently a symptom of contracted kidney or of arteriosclerosis, and should not be passed over lightly. He mentions some cases in which this warning epistaxis had occurred a few weeks before apoplexy. The epistaxis had been casually treated by tamponing without regard to the underlying trouble.

Medizinische Klinik, Berlin.

May 10, IV, No. 19, pp. 693-732.

84 *Treatment of Anemias. K. Ziegler.
85 Multiform Erythema as Symptom of Severe Constitutional Disease. R. Ledermann.

84. **Treatment of Anemia.**—Ziegler concludes his review of this subject by urging exact quantitative and qualitative analysis of the blood to recognize injurious influences and thus be able to divert them. Good results may be anticipated when the source of the trouble is known and can be combated, but in the absence of this, as in chlorosis, much can be attained by external and internal means, although in the severer forms the results are transient or *nil*. He explains the influence of mountain air in the apparent increase of the number of the red corpuscles as due partly to concentration of the blood by the passage of water into the tissues and the air expired. It is possible also that the red corpuscles mature faster under the influence of the different conditions in regard to sunlight and radiation—a phenomenon which is not necessarily accompanied by increased production. The layer of atmospheric air is so much thinner that certain effectual factors of the sunlight may make their influence felt in a more intensive manner. This assumption of more rapid ripening is sustained by what is observed with the Roentgen and radium rays, especially as radium rays are also evident in the sunlight. Mountain climate and the Roentgen rays can not be depended on exclusively, however, in treatment of severe anemic conditions; the regeneration that follows the action of the latter is comparatively slight and long in developing. Experimental and clinical experience has made it probable that perversion or lack of the functioning of certain glands with an internal secretion may influence the formation of blood unfavorably. The anemia itself is merely a symptom. Some advocate a mild course of treatment with male fern in every case of pernicious anemia of unknown origin. Grawitz ascribes the majority of cases of pernicious anemia to intestinal autointoxication, and daily rinsing out of the stomach and bowels may be useful in some cases; in others the gastrointestinal symptoms are merely the results of the anemia. Ziegler believes that iron and arsenic serve mainly as stimulants for the blood-producing organs, and also possibly for the glands with internal secretion. The slight injury they inflict on the cells stimulates them to regenerative processes. The effect is similar to repeated minute venesections. The principle is to begin with small repeated doses and only gradually increase them, and to interpose periods of suspension so as not to exhaust the regenerative forces. Transfusion of homologous blood has certainly a powerful regenerative influence on the production of blood. It may possibly supply active protecting substances, although there is the possibility that the healthy blood may not be isotonic with the anemic blood.

Münchener medizinische Wochenschrift.

May 5, LV, No. 18, pp. 945-1000.

86 Importance of Training the Fingers to Take the Place of the Eyes in Obstetrics. (Das "Auge des Geburtshelfers.") H. Sellheim.

87 Minor Technical Points in Biologic Blood Test. (Kleine technische Winke für die Praxis der Uhlenhuthschen Blutuntersuchung.) H. Merkel.
88 *Acute Overexertion of the Heart. (Akute Herzüberanstrengung.) Schott.
89 Proteolytic Action of Sterile Pus. (Proteolytische Wirkung des sterilen Eiters.) R. Hertz.
90 *Diabetes in Pregnancy as Indication to Terminate the Pregnancy. (Diabetes mellitus in graviditate.) A. Schottelius.
91 *Acute Yellow Atrophy of the Liver. (Aetiologie, Anatomie und Diagnose der akuten Leberatrophie.) Reichmann.
92 Origin and Treatment of Hernia. W. Koch.
93 *Hot Irrigation in Treatment of Venereal Ulcers. (Behandlung der venerischen Geschwüre mit heissen Irrigationen.) F. Zinsser.
94 *Gelatine-Saline Injections Against Intestinal Hemorrhage in Typhoid. (Gelatine und Salzwassereinspritzungen gegen die Darmblutungen beim Typhus.) K. Witthauer.
95 Sanatorium Treatment and Its Indications. (Heilstättenbehandlung und Anzeigen für dieselbe.) A. Frankenburger. Commenced in No. 17.
96 Stethoscope-Reflector-Mirror. (Praktisches ärztliches Untersuchungsinstrument.) Kretzschmar.

88. **Acute Overexertion of the Heart.**—Schott ascribes the contradictory findings by various investigators in respect to the effects of extreme competitive physical exertion to the fact that the skiagrams were not taken before and after in the identical position. He avoids this by bringing into line at each exposure the nipples, the mammary line and the middle of the thorax, each marked with a disc of lead glued to the spot. He describes his extensive research, all of which confirms the assumption that excessive physical exertion, carried to the point of noticeable throbbing of the heart and panting leads finally to acute dilatation.

90. **Diabetes in Pregnancy.**—Schottelius declares that the prognosis for both mother and child is bad. The fetus dies and is expelled after a few months, as a rule. If the pregnancy reaches term the children are poorly developed; hydrocephalus is common. Fully half of the women die in coma (Gaudard). He describes a case in which a pregnant woman of 29 was received at the clinic in profound coma. Eclampsia was diagnosed and she was delivered at once of a macerated fetus. The patient died half an hour later. In this and in Born's case the severe affection complicating the pregnancy had been overlooked by the attending physician. The only suspicious symptom, the increased thirst, had not been mentioned by the patient, but was remembered afterward by the family. In both cases the diabetes had evidently developed during the pregnancy. The prognosis in these conditions is particularly grave. The uncertainty of the outcome and the possibility of coma demand interference to remove the factor inciting or aggravating the diabetes, that is, the pregnancy. From 30 to 50 per cent. of the children are already doomed. The intrauterine death of the fetus renders the prognosis still more serious.

91. **Acute Yellow Atrophy of the Liver.**—Reichmann had occasion to study the development of acute yellow atrophy of the liver in a youth under treatment for keratitis. The first stage was mild, the liver gradually becoming enlarged, with general jaundice; the second stage came on with transient stupor followed in 72 hours with violent delirium and death in three weeks after the first symptom. The aim in treatment should be to prolong the first stage as long as possible to prevent the development of the second stage. The premonitory symptoms of the latter are the appearance of leucin and tyrosin in the urine and the depression or restlessness observed for one or two days before the outbreak of the delirium. Until the cause is discovered, treatment can be only symptomatic, with purgatives and analeptics.

93. **Treatment of Venereal Ulcers with Hot Irrigation.**—Zinsser irrigates the ulcer from three to five times daily with a jet of hot disinfectant solution. The douche jar holding 4 or 5 liters of a 1 to 4,000 solution of potassium permanganate, at a height of 2 or 3 meters, lets a stream 2 m.m. in diameter play on the ulcer. The jet of hot fluid thoroughly cleanses out all the crevices of the ulcer. The temperature should be as hot as the patient can bear, up even to 144 F. The floor of the ulcer is then dried with gauze, dusted with a thin layer of iodoform and packed with iodoform gauze. The tampon is then wet with camphor, over which hot linseed meal poultices are applied, frequently renewed. In severe gangrenous chancres this procedure is repeated every two or three hours. The patients can apply these measures themselves after the focus has been opened. The results have been good in several years' experience. They are the more striking, the more destructive the lesion. He thinks the benefits are due to the mechanical cleansing of the secretions, plus the destruction of the causal germs, plus the hyperemia induced.

94. **Gelatine and Salt Solution Injections in Typhoid Hemorrhage.**—Witthauer states that great benefit may follow subcutaneous injections of gelatine and salt solution in hemorrhage from the intestines in typhoid. He reports four severe cases in which this treatment proved effectual. He recommends injecting the gelatine every day or second day, repeating the saline infusion more frequently.

Wiener klinische Wochenschrift.

May 7, XXI, No. 19, pp. 675-708.

97 *G. van Swieten. O. Bergermeister.
98 Negative Reaction to Lecithin in Syphilis. M. Oppenheim.
99 Snapping Hip Joint. (Sogenannte schnellende Hüfte.) D. Pupovac.
100 Opsonins in Blood of Healthy Immunized Mothers and Newborn Infants. M. v. Eisler and M. Sohma.
101 *Nomatous Anthrax in Adults. (Nomatöser Brand.) A. Weiss.
102 *Secondary Parotitis. W. Kulka.
103 Results of Clamping Umbilical Cord. (Nabelabklemmung.) W. Meyer.

97. **G. van Swieten.**—The 150th anniversary of the Vienna Widows and Orphans' Fund of the local medical society was celebrated recently and its founder, van Swieten, was duly honored. Bergmeister here gives a sketch of his notable career.

101. **Nomatous Anthrax in Adults.**—Weiss reviews what has been published on this subject and describes a typical case in a iii-para of 37.

102. **Secondary Parotitis.**—Kulka reports a case of parotitis developing six days after a kick from a horse, injuring the left hypochondrium. The patient was a man of 22 and his brother had also had a similar experience several years before. The skin had not been broken, and it seems that mere concussion of the abdominal viscera is liable to entail an affection of the parotid and submaxillary glands on the same side. Transient glycosuria was also observed after the contusion. The parotitis healed after incision, application of a Bier suction apparatus and disinfection with peroxid of hydrogen.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

A Study of the Brains of Six Eminent Scientists and Scholars Belonging to the American Anthropometric Society, Together with a Description of the Skull of Prof. E. D. Cope. By E. A. Spitzka, M.D., Professor of General Anatomy, Jefferson Medical College, Philadelphia. Pp. 308, with illustrations. Paper. Philadelphia: American Philosophical Society, 1907.

Hydrotherapy. By Simon Baruch, M.D., Professor of Hydrotherapy in Columbia University (College of Physicians and Surgeons), New York. Third Edition, Revised and Enlarged. Pp. 544, with illustrations. Cloth. Price, $4.00. New York: William Wood & Co., 1908.

Handbuch der Biochemie des Menschen und der Tiere. Herausgegeben von Dr. Phil. et Med. Carl Oppenheimer, Berlin. Erste Lieferung, Mit 11 Abbildungen.. Pp. 160. Paper. Price, $1.25. Jena: Verlag von Gustav Fischer, 1908.

Thirty-second Annual Report of the New Jersey State Hospital at Morris Plains, for the Year Ending Oct. 31, 1907. Paper. Pp. 114. Trenton: John L. Murphy Publishing Co., 1908.

The Harvey Lectures, Delivered under the Auspices of the Harvey Society of New York, 1906-07. Pp. 314, with illustrations. Cloth. Price, $2.00. Philadelphia: J. B. Lippincott Co., 1908.

Why Worry? By George Lincoln Walton, M.D., Consulting Neurologist to the Massachusetts General Hospital. Pp. 275. Cloth. Price, $1.00. Philadelphia: J. B. Lippincott Co., 1908.

Constitution and List of Members of the American Association for the Advancement of Science. Published by the Permanent Secretary, 1907. Pp. 242. Paper.

Medizinisches Literatur-u. Schriftsteller-Vademecum, 1907-08. Herausgeber: H. Albert, Bibliograph. Pp. 637. Cloth. Price, $2.85. Hamburg 8: Frank & Scheibe, 1908.

Winning Foreign Markets, Department of Commerce and Labor. Bureau of Manufacturers. Pp. 256. Paper. Washington: Government Printing Office, 1908.

Righthandedness and Lefthandedness. By George M. Gould, M.D. Pp. 210, with illustrations. Cloth. Price, $1.25. Philadelphia: J. B. Lippincott Co., 1908.

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Addresses

THE TREATMENT BY REST, SECLUSION, ETC., IN RELATION TO PSYCHOTHERAPY.*

S. WEIR MITCHELL, M.D.
PHILADELPHIA.

I have asked the privilege of speaking to this representative body of physicians in regard to rest treatment and psychotherapy. No book or important essay on this latter subject fails to deal also with a method which originating here has been everywhere accepted. Professor Barker wrote that "it has helped to bridge the gap between neurology and psychology." I feel free, therefore, to discuss in connection with psychotherapy that treatment of the minor neuroses which has been characterized as "most fertile in opportunities for psychic therapeutics."

You will, of course, understand that I am speaking of what in America is known as "Rest Treatment" and abroad by my own name; I never labeled it. This treatment gave to our art a definite basal method of treating disorders in which before its invention the treatment, too, was, to say the least, disorderly.

In 1888 it was said by an English physician[1] of distinction to be "the greatest practical advance in medicine made in the last twenty-five years." Here it needs no defense. A neurologist of distinction[2] has written of it: "It is difficult at this day, more than a quarter of a century after Dr. Mitchell's first utterance on the subject, to appreciate the importance and the radical character of this innovation in therapeutics."

No such revolutionary method escapes or should escape comment and critical examination by the masters of medicine. Thirty-three years have gone by, and as concerns the rest treatment I am now in the position of a man who at the far limit of a debate is allowed the final chance to deal with the intervening comments on his original thesis.

In January, 1874, I developed for a single seemingly hopeless case, literally at a woman's bedside, the treatment by seclusion, rest, massage, full feeding and electricity. The intellectual process by which I evolved in three or four visits the details of this treatment is not without interest. At first I hardly realized the value of what I had found. There was an element of luck in the fact that this patient's case was ideally suited to the treatment it suggested. When confident of my success, in 1875, I told in lectures of what I had done; and in 1877, when more secure of my position, the new treatment of the neuroses was fully given to the profession in a little book. Before and long after these publications my statement of results was received here with incredulity and with such personal comment as I can well afford to forget. It found for some three years none to test its value until Professor Goodell first and Drs. Sutton and Perry later accepted it with the good judgment of men whom its novelty did not alarm or prejudice.

Five years passed before William Playfair in England began to use this potent method. He said of it before the British Medical Association: "I have nothing to add to this method and nothing to take away." I do not myself think of it as a thing mechanically changeless. Nor do I understand how physicians can, as in some western cities, turn over their cases for rest treatment to nurses who conduct what are called "Rest Houses."

Between Playfair's praise and the discovery by some of the later psychopaths that the chief value of my treatment lay in its psychotherapy there have been numberless criticisms.

My book on rest treatment was soon translated into seven languages. If the later of the eight editions and the comments in my two volumes of lectures and essays on neural disorders had been carefully read, I might in some respects have been more fairly dealt with, although as concerns the profession at large I have no reason to complain.

In reading the many essays and books on psychic treatment, and their general acceptance of and sequent criticisms on rest treatment, I am struck by the tendency to exaggerate the value of some one of the agencies used. For one it is the overfeeding; others insist on the ward bed-curtain isolation in every case of neurasthenia and hysteria; for some, hospital economy dictates limitation of the use of massage; and in France mental treatment is so elaborately insisted on as an essential of my method in all cases that I wonder how it can be adequately administered in their crowded wards, for to use psychic influence requires careful study of the individual mind and long visits.

The use of electricity is the feature most generally, by agreement, to be left out. But, except Camus and Pagniez and Dercum, no one adds that I said in my book that it was not a necessary adjunct, but that in the rare cases in which massage can not be used electric exercise of the muscles may be of value. It is to be remembered that electricity causes contraction of the muscular masses, and is, therefore, different from and in this respect superior to massage as giving a nearer approach to actual voluntary exercise without demanding exertion by the patient. Its effect on tissue changes has not yet been studied.

Of the singular criticisms of Professor Dubois I must say something, because his widely read opinions on psychic treatment have, as I think, been such as to retard rather than to advance rational mind treatment. After stating that my treatment recommends "rest in bed, isolation, overfeeding, and various other less important measures," he heads his next chapter: "Weir Mitchell Treatment; Modifications Which Ought to Be Made in It in Order to Be Efficacious." The "modifications" are somewhat complete.

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* Read before the American Neurological Association, Philadelphia, May 21.

[1] William Playfair.

[2] F. X. Dercum: Cohen's System of Physiologic Therapeutics.

M. Dubois says:

> I found that the monotonous occupation of running an electrode over a patient's body was a bore. Sometimes I stopped, and soon I perceived that a little philosophic counsel was more precious than half an hour's faradization.

And so he himself personally used the electricity and was bored. I do not wonder. Had he also used the massage in person a like report might have been made. Massage he defines as consisting of "gentle rubbing of the large muscular masses." There is delicate food for humor in his further criticisms, and humor is rare in medicine, except in some of the essays on psychic restoratives. "Next," M. Dubois writes, "I gave up in many cases absolute isolation." So do I, so did I, at need. "When," he adds, "my patients had not at the end of a week made sufficient gain in weight I was not disturbed by it; I did not send away the masseuse." Why should he? "I simply advised my patient to eat more. After a while I came to even dispense with rest in bed when the nutrition did not seem to me sufficiently bad to require this measure."

He says:

> This treatment, such as I conceive it, after having practiced it for a long time, is a treatment of psychotherapy made under the favorable conditions of rest, isolation and overfeeding. These measures are not always necessary, but are invaluable aids in serious cases.

In the comments which follow there is hardly a thought of value which is not somewhere in the successive editions of my book, even to my insistence on the use of milk at the outset as a preparatory diet, which he describes as having peculiar value.

I have read with care many other criticisms, but none quite so misleading as those of this cheerfully confident volume. It is pleasant to turn to the book on "Isolation and Psychotherapy" by Camus and Pagniez, pupils of Professor Dégerine. I am here dealt with more fairly and quoted fully.

Dubois regards rest treatment as chiefly an opportunity to psychically confess and influence a congregation of one, whom, meanwhile, you must feed in excess. Professor Dégerine considers that its best value is in the isolation it exacts and which is obtained in his wards by closely curtained beds, even in cases of ordinary neurasthenia. Here in the wards of the infirmary for many years we have isolated hysteria by screens—and that in such isolation there is novelty would amuse any former resident of the Infirmary for Nervous Disease. As concerns bed-curtain isolation a former patient, once hysterical, remarked:

> I wonder whether a patient's eyes are tested before the curtain is advised or not advised. Compulsory close seeing enrages me. I am rested by blindfolding myself, but irritated by a limited field of vision.

Much too much, as usual in French books, is made of priority, and here it is in regard to isolation.

Charcot is quoted as claiming for its use in *"l'hysterie et des affections connexes"* precedence of invention, but neither Camus and Pagniez nor I can find proof of this in his books. He was given to such claims, and I have twice before suffered in like manner at his, Charcot's, hands. I think it just, less on my own account than to American medicine, that I a little protest for even Camus and Pagniez have thought it worth while to claim for French medicine the original application of isolation in nervous disorders. To sustain this claim, they quote Pinel and Esquirol, but nowhere in their works can I find any competent support for this statement. By isolation these alienists meant separation of the insane from friends and family, but not the complete personal isolation I was first to counsel for the lesser neuroses and for the early treatment of various forms of insanity, a treatment now in common use. I have read with care all that Esquirol says in regard to isolation. He speaks nowhere of isolating the lesser neuroses. Isolation meant for him transfer to an asylum. He argues for this at great length:

> *On isole l'aliene dans une maison publique consacrées à recevoir plusieurs individus.* (p. 131, vol. i.)
>
> *L'isolement des alienes (sequestration, confinement) consiste à soustraire l'aliene à toutes ses habitude en le separant de sa famille: en l'entourant d'étrangers; en changeant toute sa manière de vivre.*

He thinks contact with other insane is useful, but that maniacal persons require to be kept alone. It is plain that confinement to the room, in bed, at rest, a measure so useful in many forms of mental derangement, was never in his thoughts. What he seems to have meant is that to isolate was to put the patient in a hospital. How all this can be construed into a claim for priority in the sense in which isolation is used in the rest treatment I can not see. It is, after all, a small matter, but one becomes a little impatient over these claims for originality with so little foundation. I made no such claim in my description of the rest treatment, except as regards a combination of several means to an end; but if there be value and novelty in having urged seclusion in the neuroses the merit is not French. With this mild reclamation, the first I have ever made in my life, I dismiss the matter with the remark that between isolation of the insane in asylums and that of hysteria and neurasthenia and grave mental disorders, as I advise it, there is in any point of view a difference so wide as to give originative value to my own insistence on the usefulness of personal seclusion.

In the recent flood of books and essays on psychotherapy I am credited by many writers as inventor of a methodical treatment in which there is no provision for the use of influential mind treatment, no positive directions. As concerns this I am more sensitive. To have added chapters of the commonplace advice of the big books on psychic medicine would have been to cloud my subject, insult the common sense of physicians and again illustrate the fact that as no surgical book ever made a surgeon, so none of these elaborate directions will ever make a psychotherapeutist. Mental medicine is most of it simple and yet temptingly open to elaborate description. I wrote of this adjuvant texts for sermons, but not sermons.

In my first edition I said:

> All the moral uses of rest and isolation and change of habits are not obtained by merely insisting on the physical conditions needed to effect these ends. If the physician has the force of character required to secure the confidence and respect of his patient, he has also much more in his power, and should have the tact to seize the proper occasions to direct the thoughts of his patients to the lapse from duties to others and to the selfishness which a life of invalidism is apt to bring about. Such moral medication belongs to the higher sphere of the doctor's duties, and if he means to cure his patient perma-

nently he can not afford to neglect them. Above all, let him be careful that the masseuse and the nurse do not talk of the patient's ills, and let him by degrees teach the sick person how very essential it is to speak of her aches and pains to no one but himself.

In "Diseases of the Nervous System Especially in Women" I wrote:

> With this first sense of ease comes the precious chance of the doctor for moral education. He can now point out that, however hard it was with failing powers to control emotion and suppress nervousness, it is easy to do all this when the physical condition is improving. This doctrine will be aided and enforced by the nurse, if a good one, and your patient will be constantly reminded that she is getting better physically and is expected to accomplish more and more in the way of self-restraint. If she fail you praise the effort. She is your whole audience, and this with an hysterical girl gives you great power.

It is a time-consuming business.

I said enough long ago of the immediate mental and moral influence of rest treatment as a whole. All treatment has more or less mental effect, but now we are to deal with what you say to the patient as well as what you *do*. There is first what the French book calls *suggestion*. What philologic perversity inflicted a new English meaning on a word which has in French a sufficiently bad character I do not know. Litré in his dictionary defines suggestion as "*insinuation mauvaise.* Or, 2, *Il se dit quelque fois enbonne part,*" as "*suggestion de la conscience.*" The synonym given is instigation. Johnson defines it: "Private hint, intimation, insinuation." Thus it means in French one thing, in English quite another. When you succeed in getting into a man's mind an idea or order which becomes influential without conscious thought on his part, that is the ordinarily accepted technical "suggestion" of some of the French writers. It is an unfortunate term. Beyond this lies the whole range of persuasion, counsel and many forms of appeal, all of which are more reasonably classed as suggestion by some writers.

In some crude shape the followers of Eddyism, mind cure, soul cure, faith cure, and so forth, find in suggestion, persuasion and variously reinforced appeals the means of occasionally relieving mild neurotic states or of inducing the victims to assert their belief in cures which have not been effected. Does this seem an incredible state of mind? I have seen it again and again.

There are, I find, not less than seven of these cults. They are alike in despising every other. Some exact precedent beliefs of one kind or another; others demand —nothing but a fee and attention. They are by no means to be ignored in our studies of mental phenomena. A vast mist of lies and suppressions of failure surrounds these people. When they rashly put themselves in print they are as of the dead for the logical minded; but the logical constitute a proportion of mankind I am unable to estimate arithmetically. Some of these means of influentially capturing belief and dollars appeal to my sense of the humorous. One is known as "soul massage." Between this and the delirious round of the Eddy lies a variety of creeds, well baited for the credulous, none without some sure appeal to folly, to the pride of untrained reason, to instincts of opposition, to love of mystery, or to vanity fed by the delusion that with certain fixed beliefs comes for the believer power to heal. These means no one can keep out of the hands of the charlatan and the mind healer; but surely it is an amazing fact that the undisciplined mind of the American so skeptical of Lourdes should have created under the influence of a female charlatan a new and even less rational Lourdes sustained on a basis of such amazing absurdity that over it the judicious can but grieve and the humorous sadly smile.

Perhaps I may best state my own views, the outcome of much experience, by considering the application of personal influence in its varied forms when dealing with the three genera of so-called functional neurotic disorders—neurasthenia, hypochondria and hysteria.

As I read, and I have read patiently, the wearisome detail of psychopathic analysis and treatment, I find a gathering belief that neurasthenia is always a malady of the mind alone—a psychogenesis. I know that it often has a background or a foreground of hysteria or hypochondria, but I also know that there is a goodly proportion of neurasthenia which has no more psychic origin or symptoms than has a colic. There are purely bodily neurasthenias. Three sets of experiences have taught me this. During our civil war some men became more and more easily tired by marches, then they became exhausted, and at last gave out utterly. They were often good soldiers who resented the charge of malingering. They were more easily cured than our male neurasthenics to-day, being entirely free from delusions or obsessions and amazingly perplexed by their condition. It was simply bodily exhaustion and something gone wrong with the mechanism of repair. Most of them got well and went back to the army.

My second experience was too personal for full record. In 1872 I had an attack of neurasthenia with grave insomnia. It was rapid in its march, and so complete that I could not ascend three flights of stairs without sitting down on the way to rest. I had no depression that was abnormal or unreasonable. My surprise at my condition was great, but I felt that I had thoroughly earned disaster. My psychic treatment should have come beforehand.

Another physician, an eminent president of this college, was for three years asthenic, with serious limitations as to the length of use of the mind and the body, but without any of the graver psychic effects or defects sometimes seen in cases of brain tire. This trouble followed an attack of heat exhaustion.

I have treated a large number of neurasthenics and need hardly assure you that there are many cases which are simple and which intrusive psychotherapy would surely injure. There are also patients in whom the mental disorder is secondary, a sequence, not a cause of neurasthenia. When, in man more often than in woman, this disorder of asthenia falls on those who, by heredity or temperament, are emotional or nervously unstable, we may have it complicated by a host of troubles which are of the nature of obsessions, depressions, and the whole range of hypochondriac illusions. There is, then, need for all the physician can command in the way of bodily treatment and of the mental influences of which I shall presently and briefly speak. The true hypochondriasis is a mental disease, often incurable, never to be mistaken, and not very common.

It is difficult to state with brevity my practical conclusions in regard to the disorder we call hysteria, and of the true basis of which we know nothing. I once collected all the theories concerning this disorder. Vain search. And still they come. One reads each new book on hysteria and, interested or puzzled, hopes to find in every novel theory some practical guidance. There is, alas, much bewilderment in labels. An able physician from the west told me of late of the interested eagerness with which he had read Janet's able lectures and struggled at last with the verdict of "disassociated personalities."

In certain cases of hysteria, insomnia, aphonia, bed cases, simulation of paralysis, a command, an order will sometimes produce abrupt cures. I have at times won these successes. Are they permanent? Rarely. A failure is apt to lessen confidence, and confidence in the physician is a valuable asset. For one success I have had many failures, but of failures we hear too little in the books on psychic treatment.

Besides the imperative order or assurance absurdly labeled suggestion, and which is presumed to imply no power or effort to discuss and decide, accept or reject, there is the whole gamut of human motives with which, as occasion serves, we may influence the minds of the neurasthenic, the hypochondriac and the hysterical. I said "as occasion serves." It is nearly always better to put off advice and long and helpful talks until the physical health is improving, for then we have hope with us, and because with return of bodily vigor there is always an increasing power of self-control over emotion. Then, at need, we may reason, implore, counsel, appeal to duty, affection, taste, desire for health and what it brings; and, as the case suggests, be a sternly judging moralist or the humorous comrade of the minute and despatch some sad symptom with the disguised counsel of a jest.

Neither is the highest range of appealing motives alien to my purpose. If I fail to dispel vain fears by reason, to make someone realize how certain attitudes of mind degrade character and how full of peril is the selfful attention to symptoms; if I fail thus, I see no reason why, if I do it honestly, I may not appeal to the highest code of conduct, or if I do not feel competent, why I may not call in the help of some one who can better make this forcible appeal. It is, as I see it, in such cases my duty as a physician to do the one thing or the other, and the physician who has never sought in such cases the aid of the clergyman must have missed some valuable assistance.

There is no scientific record of any case of organic disease having been cured by any form of influence exerted through the mind of the patient. It is clear that in all time in the past the lesser neuroses have been in some cases made well or relieved by influences exerted through the mind. As these influences never cure organic maladies nor true insanities, the miraculous, as an explanation may be excluded. Injurious physical, moral and mental habits help to create or keep up disease, whether organic or not, and whatever influence acting through the mind ameliorates these is in so far mental therapy, and thus whatever form of appeal aids a man to think and act rationally should come into use at need. One of the most powerful of those influences is for many a simple religious faith which teaches trust and belief in the physician and strengthens the will to do what is morally and mentally wholesome. The so-called suggestion used in induced hypnotic states is utterly outside of the true domain of the clergyman and if needed should be and remain a part of the therapeutic agencies in the hands of the physician alone.

Even the lower motives may be usefully employed. I have seen a woman who was starving herself recover appetite when told that being thin and wasted she was ugly, and that having been handsome she could again become so by eating largely. I find myself stating a case; I meant to confine myself to unpicturesque generalities.

Another form of appeal is to the sense of pain. I speak here with unreserve when I say that I have seen obstinate masturbation in hysteria in the young cured by whipping. I have seen violent angers in a woman resulting in wild hysteria cured by infliction of physical pain when every other method failed. Again I have seen obstinate kleptomanias ended by like means. I have advised it in rare cases. Is this a form of suggestion?

In hysteria it is sometimes easy by an act, a word, a question, to cause, alter, transfer a pain, a dysesthesia, etc. To cause such symptoms when present to promptly disappear altogether by an order is for me at least unusual. The ease with which symptoms may be planted and thrive is seen in the readiness with which a slight accident, a too frank statement, or a surgical examination may serve to create symptoms. For a long while too much was said of the ovary. Then the pathologic criminals were derelict kidneys. Just now the hooded clitoris is indicted. So much for the surgeon; and for ourselves an epidemic of enthusiasm as concerns psychic medicine just now occupies whole books and is the talk of dinner tables. It is having, I fear, a tendency to create the disorders in full proportion to the cures. A woman writes: "I have felt for years my need of some influence. Now I know it is suggestion. Do you use it?" Numbers of physicians seem to have found in suggestion, so called, mysterious and easy means of cure. I repeat that I am not so fortunate. Neither do I admit that hypnotism and hypnotic suggestion are of enough value to make them for the day or keep them for the future largely useful.

When in 1846 my father, Prof. John K. Mitchell, proved that somnambulism and what he called induced somnambulism, i. e., hypnotism, were identical and both morbid products, he related cases in which hypnotism caused grave results and was of the opinion that its range of utility was limited. He finally gave up, save in rare cases, the use of this doubtful measure and predicted that it would come and go as a therapeutic measure, but never be a part of the available means at the command of the general practitioner.[4]

This is the judgment expressed in his essay. He adds:

> Let me not, however, be understood as denying to mesmeric processes all medical value. Cases occur in which ordinary means fail and mesmeric action is useful. But they are few and far between. They are, so far as I can judge, functional affections of the nervous system of a temporary character or sympathetic irritations of a weak affinity. Exalted sensibility may be lessened or abated in a few persons by such means, and the ordinary feeling of a part may be so diminished in some cases as to admit of painless operations. The fewness of the "susceptibles" and the time and trouble necessary to find them must ever deprive mesmerism of a general value.[5]

I have in the past used hypnotism very often, but for many practical reasons neither in my clinic nor in my private practice do I now resort to it often. I find slower methods better and the results more lasting. Moreover, I have seen some rather appalling results from hypnotism, but there again I avoid detail.

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[4] Despite certain conclusions with which the modern observers disagree totally, Dr. John K. Mitchell's essay is invaluable for its singular examples of the power of suggestion in hypnosis, for the proof of the oneness of natural and induced somnambulism, and for the early demonstration of the existence of separate nerves for pain and touch.

[5] Five essays of different dates by John Kearsley Mitchell, Professor of Medicine, Jefferson Medical College, 1859. In one volume.

It were easier to handle this much debated subject of psychotherapy at length than to put briefly, as I have here done, what I wish to impress on you as the conclusions of long experience; but for all new methods in this direction I have a hearty intellectual welcome and an open mind. I most gladly read the elaborate and novel studies in psychologic diagnosis, the laboratory aids, the association tests, the mind-probing examinations. They are interesting and even fascinating, although at times men do seem to me to reach by wandering ways facts in individual human history more simply to be discovered by less cumbrous methods. I am tempted to assign to Professor Polonius the invention of one of these methods of psychic diagnosis.

"Thus do we of wisdom and of reach
With windlaces and with assays of bias
By indirection find direction out."

Much good will eventually come out of even the excesses of therapeutic enthusiasm, but who can as a practical physician fail of astonishment when a man like Dubois absolutely condemns all use of aperients in chronic constipation and in a chapter of singular folly tells elaborately how by mental attention alone to dispense with purgatives. When we are told also that for insomnia we are to rely on psychic treatment and are never to aid it with judicious use of drugs, one is apt to distrust the judgment of the writer as to other matters concerning which he is as positive. But here is where extreme psychotherapy has brought us. For the general physician the utility of much that has been written is doubtful, not because it is always valueless, but because in available forms it is already the mental property of men of common sense, or because no one can thus convey on paper any useful knowledge of the vast range of human individuality; for indeed the individual can never be so classified in books as to be surely fitted with his special psychotherapeutic needs.

Since speaking of the foreign critics I have read with interest a paper by Dr. Morton Prince on the use of educational methods in the neuroses. It is impossible for me to go at length into this paper. I have only space to say that I think a large part of the very kindly criticism of the rest treatment is answered by the thousands of cases of many forms of neurasthenia and allied disorders successfully treated by rest, etc., in the last twenty years by country physicians, men who knew no more about "educational treatment" and so on than is commonly known by intelligent and successful general practitioners. Here again I find a good deal which seems to suggest that the type of cases which fall into the hands of some men may have been different from the cases which fell into the hands of others, or, frankly speaking, was it locality? It is well to remember that there may be several ways of treating the various disorders of mankind. I have no doubt that very many cases of hysteria, neurasthenia with obsessions and the like have been cured by simple country doctors using full rest treatment and nothing else. You cure the body and somehow find that the mind also is cured. The histories of nerve wounds in war amply illustrate this truth. The hardy soldier becomes a timid, hysterical, petulant patient. With relief of pain and return of health of body and flesh and color he regains health of character—a common story, most illustrative.

May I be pardoned the emphasis of repetition if again I insist that my protest in this long paper is not against mental treatment, but only against exaggerated statements of what is to be obtained from its use. Labels are deceptively alluring and psychotherapy sounds most alluring. I have said that the self-importance conferred by the belief of the disciples of some of the cults of mind healing that they are in possession of powers which lift them above their fellows is one of the bribes which fosters these perilous creeds. There is some such risk for even the educated user of psychic methods. I should perhaps have better said, Is there not risk that occasional brilliant results may lead to the adoption of too general and exclusive psychic treatment? The man who sees at his order sleep come, the headache of years vanish, aphonia disappear, must be better self-guarded than some men if, feeling the sense of power, he quite escapes the moral danger of this tempting contribution to intellectual vanity.

In one or another form it is a world-old business. Psychic medicine in an extreme form was advocated in Athens some two thousand years ago.

In Plato's conversations Socrates says to Charmides:

> Even so there is no cure for the body apart from the soul; and the reason why so many diseases elude the physicians of Greece is that they know nothing of the soul, which ought to be their chief care, since if this be not sound it is impossible for any part to be well. For all things, both bad and good, not only in the body, but in every part of the man, have their starting point in the soul, whence they overflow in the same way as from the head into the eyes. First then and above all, the soul must be treated if the head and the rest of the body are ever to be made whole; and the cure of the soul is brought about by means of certain charms, which charms are good words. By these words temperance is begotten in the soul; and this once begotten and abiding there, it is easy to supply health to the head and the rest of the body. Let no one persuade you to treat him for headache with this medicine until he has first yielded up to you his soul to be treated by the charm, for just here the mistake is made in regard to men. They attempt to treat the body independently of the soul.

For "soul" we must here, I presume, read "mind" in the larger sense, but his general meaning is clear.

Therapeutics is subject to maladies, epidemic and endemic. I leave you to discuss my diagnosis; and a prognosis has already been more than hinted. Having said my say, I now obey the self-suggestion that I stop.

COOPERATIVE SCIENTIFIC INVESTIGATION.

ADDRESS OF THE CHAIRMAN OF THE SECTION ON OPHTHALMOLOGY, AMERICAN MEDICAL ASSOCIATION, JUNE 2-5, 1908.

WILLIAM H. WILDER, M.D.
CHICAGO.

I wish to express my appreciation of the high honor the Section on Ophthalmology of the American Medical Association conferred on me by electing me chairman for the present year. The Association is the largest medical organization in the world, and the Section on Ophthalmology has long been recognized as the best organized and most active and progressive of any of its numerous sections, and to be its chairman is an honor of which any ophthalmologist might well be proud. My illustrious predecessors in this office have set a standard of efficiency that is difficult to attain, and the steady improvement in the work of the section can be ascribed to the stimulus of the officers to induce the members to put into the section the results of their best work.

THE PRESESSIONAL PAMPHLET.

The officers of this year have thought it wise to follow the progressive precedent established two years ago in having all papers of the program printed and sent to members a sufficient time before the date of the meeting to insure a careful study of them, especially by those who wish to take part in the discussions. This plan, although in some respects having its disadvantages, has been commended by other sections and has shown its advantages in the years that it has been tried by eliciting more careful and comprehensive discussion.

FOREIGN GUESTS.

The custom that has been followed for several years of having some illustrious guest present an address before the section has been observed this year, and the officers felicitate the members of the section and themselves on having persuaded to be present and address us at this meeting that distinguished ophthalmologist, than whom none is more widely known and appreciated, Mr. E. Treacher Collins of London.

PROGRAM FEATURES.

The field of neurology overlaps that of ophthalmology at so many points that we have thought that nothing could prove more interesting and instructive than a joint meeting of the Sections on Ophthalmology and on Neurology and the presentation and discussion of certain subjects that in many respects are common to each department. Careful discussion of such subjects can not be otherwise than mutually helpful, and this is the reason for devoting one afternoon of our session to the neurologic-ophthalmologic symposium. For this four papers have been prepared, the discussion of the two neurologic papers to be opened by ophthalmologists, and that of the two ophthalmologic papers to be opened by neurologists.

Another feature of the program, on which the officers wish to place a great deal of emphasis, and for which they ask your indorsement, is in a way an innovation. We make a plea for the application of the principles of scientific research to clinical ophthalmology. A plea for organized effort of ophthalmologists in this country to work out certain questions that can only be answered by the accumulated experience of many men.

Many questions and problems in ophthalmology remain unanswered and unsolved. Some of them may not be answerable. Others are of such a character that they can only be answered inductively and after the accumulation of a vast amount of evidence and data. No one man can make observations enough to solve some problems, but a number of men working along previously determined lines may accomplish a great deal. To this end special committees consisting of a variable number of members, which could be increased as desired should be formed to consider certain subjects.

COMMITTEES FOR SCIENTIFIC INVESTIGATION.

Such committees should, of course, be selected with care and should be composed of men particularly interested in the subject and peculiarly qualified or fitted to conduct or carry on investigations and direct others in similar work. These committees would carefully outline a plan for the study of certain problems, so that all who were solicited to cooperate or who desired to make observations under the direction of the committee might work along the same line. The committee might increase its number if desired, so that for some subjects the number of colaborers might be unlimited, but all should work according to a preconcerted plan.

I take it the true scientist is one of the most unselfish of all human workers. The spirit of scientific inquiry and research that animates him makes him ambitious to discover some new truth or achieve some unaccomplished result. With some it matters little whether or not that new truth or new result has any immediate practical bearing on the welfare of mankind; indeed, if it has not they regard themselves on a little higher plane than the mundane scientists who hope to make an application of their discoveries. Be that as it may, the ultimate analysis will show considerable self-interest behind what appears to be the most altruistic effort. Your true scientific worker may not desire great pecuniary emolument, but he does desire—and he richly deserves—the credit and reputation for which he is laudably ambitious.

In such a scheme of cooperative scientific work, therefore, as I am outlining it should be remembered that all of the workers should receive their proper credit and meed of praise. The central committee on any given subject would collaborate and arrange the observations and investigations of the various workers and present their conclusions or progress of the work to this section either annually or after a period of years. Some subjects would require a number of years of continuous observation by many men, but when the results were presented they would completely eclipse the haphazard efforts of a casual investigator, and would be a contribution to scientific ophthalmology and a credit to this society.

VALUE OF COOPERATIVE INVESTIGATION.

I know of nothing more inhibitory to the growth of a medical man than desultory superficial clinical examination. Such a plan as this would stimulate interest, would be an incentive to careful study and record of cases, for each member would be eligible to a place among the coworkers of these committees if he had anything to offer. The Section on Ophthalmology would be, as it should be, one of the great educational forces in medicine in this country. The reports or papers contributed by such committees would furnish most interesting features of the programs of future years and would be looked to as authoritative. Such concerted efforts in clinical observations might accomplish as definite results along certain lines as does laboratory research along others. Many of the problems of ophthalmology as I shall refer to later are not to be solved by experimental research, and we shall still have to rely on clinical observation to work out their solution. But the material and time at the disposal of one man is comparatively small, and in relatively infrequent diseases the experience of one man is not sufficient to warrant final conclusions. It is in such questions that the accumulated experience of many men is of value, and this can be made still more valuable if all are working in concert and with certain ends in view.

In arranging the present program the officers of the section have had this idea in mind, and several members were requested to present papers on subjects that were thought to be suitable and promising for special investigation according to the plan outlined.

RELATION OF AUTOINTOXICATION TO EYE DISEASE.

The subject of "The Possible Relationship of Autointoxication to Certain Diseases of the Cornea and Uveal Tract" will be ably presented by Dr. de Schweinitz as a further contribution to the interesting work he has already done along this line. We must all recognize that this is a subject of great interest and importance to ophthalmology and should be studied more carefully than it has been. We must agree with his conclusion that "certain uveal tract and corneal affections should be sharply separated from the perfunctory examinations which they have only too often received, and from the equally perfunctory and insufficient therapeutic measures which have been accorded to them, and that the investigations along the lines indicated, which have also been urged by Elschig, Kraus, Spicer and others, should be commended and pursued." Such investigation might be pursued very profitably by a committee of coworkers under the direction of the able author of the paper.

THE EYE IN PREGNANCY.

The question of the etiology and prognostic significance of certain eye lesions occurring in the pregnant state is of great importance to the obstetrician as well as to the ophthalmologist. Is the albuminuric retinitis of pregnancy of renal or toxemic origin? Is the prognosis as grave in such cases? Have we any definite means of differentiating the retinitis or the neuroretinitis of pregnancy caused by a toxemia from that caused by a renal complication? Such questions suggest that this would be a fruitful subject for special investigation and observation, and it is considered by Dr. Hiram Woods in an able paper entitled "The Ocular Complications of Pregnancy."

TREATMENT OF GLAUCOMA.

A vexed question in ophthalmology, about which there is far from unanimity of opinion, is that concerning the treatment of simple chronic glaucoma. In the first place its pathology and pathogenesis are even more obscure, if that can be possible, than those of primary inflammatory or congestive glaucoma. While we are disposed to regard glaucoma as a disease, and it is so considered in most of our text-books, it is, to be exact, only a syndrome or symptom-complex. Because in so-called glaucoma simplex we have some of the manifest signs of this syndrome, many regard it in the same way as they do the inflammatory forms of glaucoma.

Future study may show them to be entirely different conditions, just as secondary glaucoma may have an anatomic basis quite different from that of the primary form. Lacking positive knowledge of the pathology and pathogenesis of the condition, the treatment is very largely empirical. If this be true as regards inflammatory glaucoma, it is particularly so in the simple chronic form in which one often observes a deep anterior chamber and no elevation of tension; and treatment of this condition by iridectomy is quite as empirical as that by miotics, sclerotomy or the recently-vaunted cyclodialysis.

This subject is, therefore, a peculiarly interesting one for future and prolonged clinical observation of a number of coworkers, and Dr. Posey, whose views are known to many of us, was invited to present it in a paper entitled "Miotics versus Iridectomy in the Treatment of Simple Chronic Glaucoma." I think we might very profitably divide ourselves into two friendly opposing camps for the purpose of making observations lasting over a period of years as to the relative value of these means of treatment, under the direction of such able leaders as Dr. William Campbell Posey and Dr. Charles Stedman Bull.

PARALYSIS OF EXTRAOCULAR MUSCLES.

Another subject that will require considerable observation and study before it is satisfactorily cleared up refers to the operative treatment of cases of paralysis of one or more extraocular muscles that have resisted other therapeutic means. The difficulties attending this are apparent, and, furthermore, the experience of one individual is not large enough to furnish enough data from which to draw positive conclusions. The interesting paper of Dr. Jackson on the "Principles Underlying the Operative Treatment of Strabismus" indicates points of treatment that should be followed up by concerted effort to determine whether it is possible to relieve such cases as paralytic squint by transference of impulses by lateral displacement of insertions of muscles.

RELATION OF TUBERCULOSIS TO OCULAR DISEASE.

Another subject the study of which could be pursued with great profit by a number of men working along prearranged lines is that of the possible relationship of tuberculosis to certain diseases of the eye, particularly to certain diseases of the cornea and uveal tract, the etiology of which is so indefinite and obscure.

It was my intention to present to the section an address on this subject, a large part of which I had prepared, but on further consideration I decided that I had no right to take up the time that would be required for such a presentation when there are so many interesting papers to hear and to discuss. Furthermore, I desired to lay before you this idea of special investigation of certain questions by committees appointed for the purpose. It may not be amiss, however, to offer a few thoughts and questions that came to me in my study of this topic that might be made matters for further inquiry and investigation.

The statement of pathologists that of all subjects that come to autopsy a large percentage, varying from 40 per cent. to 90 per cent., show evidence of active tuberculosis or of healed tubercular lesions, is surprising and must command our attention and cause us to wonder whether there is not more tuberculosis of the eye than has been commonly supposed.

FREQUENCY OF OCULAR TUBERCULOSIS.

The earlier statistics as to the frequency of tuberculosis of the eye must be regarded as rather misleading. For example, Hirschberg[1] reported that among 60,000 eye patients he had observed the disease twelve times. V. Milligan,[2] among 20,000 eye patients, observed one case. Machek[3] found four cases among 40,000 cases of eye disease. Eyre[4] found among 31,000 cases eleven of tuberculosis. Stephenson[5] found in every 1,500 eye cases one case of tuberculosis of the conjunctiva.

As Groenouw remarks, such statistics are not equally valuable, as with the growing knowledge of the subject the number of cases of tuberculosis of the eye is naturally increasing. Brejski holds that 10 per cent. of cases of parenchymatous keratitis are tuberculous, while Diez[6] estimates the percentage as high as 50 per cent. Haas claims that as high as 50 per cent. of all cases of iritis are tuberculous, and many observers, like Greef,

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[1] Berliner klin. Wchnschr., 1889, 551.
[2] Centralbl. f. Augenheilk., 1882, 193-195.
[3] Wiener klin. Wchnschr., 1894, 1065.
[4] Ophthal. Review, 1897, p. 225.
[5] Brit. Med. Jour., May 3, 1902.
[6] Zeitschr. f. Augenheilkunde, 1899, 435.

Michel and others, find by histologic examination evidence of tubercle in the uveal tract that was not apparent during life.

It is clear that there is need of careful observations along well defined lines and by means of definite tests to determine the etiology of certain eye diseases and to revise our statistics as to the frequency of tuberculosis of the eye.

It is impossible to make a histologic examination in every case, and in the eye as in other parts of the body tuberculous lesions may heal or become quiescent and the case never come to section. Even if it does, the bacilli may be so sparse as to elude discovery, as any one knows who has searched for them in such tissue. The diagnosis of tuberculosis is not difficult if the lesion is well marked and visible in the conjunctiva, iris or chorioid, or if tissue can be removed for examination and inoculation experiments. But there is a suspicion that such cases are not nearly so frequent as the obscure ones in which the lesion is not well defined, clinically at least, and whose etiology still puzzles us.

I refer to cases, examples of which we have all seen, of interstitial keratitis (non-syphilitic) phlyctenular keratitis, scleritis, sclerosing keratitis, episcleritis, iritis of the plastic and seroplastic type (without visible nodules and frequently recurrent), chronic irido-cyclitis, and irido-chorioiditis with no visible signs of tubercular nodules and going on to hyalitis, posterior synechiæ, plastic changes in ciliary body and iris and eventuating in blindness. Many of these cases we have been content to call rheumatic, gouty or even idiopathic, but there is need for a more careful study of a large series of them to make more accurate their etiology.

TUBERCULIN TESTS.

The subcutaneous injection of tuberculin in dosage of from 1 mg. to 10 mg. if necessary, and according to the method so carefully described by Koch, is unquestionably a valuable and very reliable test of the presence of tuberculosis. The evidence on this point is so great and so frequently confirmed as to be conclusive. Furthermore, the evidence is quite as conclusive that the test, when properly made, is without danger to the patient.

The cutaneous test of Pirquet is said to be of distinct value, but even more delicate and reliable, according to the numerous observers, is the ophthalmic test of Wolff-Eisner and Calmette, although the test occasionally shows some peculiar irregularities at times, as has been frequently observed.

Still more recently Hamburger[7] urges the great value of the puncture reaction—first described by Epstein and called by Escherich "stichreaction"—and he thinks it the most sensitive of all the tests with tuberculin. He agrees with Schick, who tested it in 120 cases of children, that it is a specific and a most valuable means of diagnosis of tuberculosis.

Granting all this, how much do such general tests for the presence of tuberculosis help the ophthalmologist in his diagnosis of obscure lesions of the eye? A distinct general reaction may be obtained after the application of such a test, but is it anything more than presumptive evidence that the ocular lesion is tuberculous? In certain cases a well-marked local reaction is also observed after the subcutaneous test, and this would seem to be a very positive evidence. Should we demand, however, such a rigid requirement in every case where we use this test before admitting that it is tuberculous?

The ocular and skin reactions have presented to pathologists new problems as to susceptibility and sensibility. An eye may not react to the first test but may react to the second instillation some days later. The eye of a tuberculous subject may show no reaction after several instillations of tuberculin, and yet that same eye may show vigorous reaction after a 3 mg. subcutaneous injection, as I have recently observed, general reaction being also well marked.

If the tissues and fluids of the body are so changed by the presence of products of tubercle bacilli that these reactions are caused, is it improbable that such products or toxins may be the cause of certain obscure eye lesions such as uveitis, scleritis, keratitis, etc., without any distinct tubercle formation? I am aware that Michel denies the existence of tuberculous iritis caused in this way, and that Stock's experimental work would indicate that no case of tubercular iritis could continue without the development of tubercular nodules.

Given an eye lesion, however, whose etiology is obscure by the exclusion of syphilis, rheumatism and other well understood causes, in a subject who reacts generally but not locally to the tuberculin test, we are warranted in proceeding with tuberculin therapy. Possibly the study of the opsonic index as a control during the course of the treatment may be of great value, but it certainly increases the difficulties. The results of von Hippel and others have been so encouraging that more work should be done along this line. I have been greatly surprised at some of the results I have had.

A more careful classification of cases and systematic study of them by a group of observers with large clinical material, working with preconcerted methods, should do much toward solving the problems of etiology and treatment of some diseases of the eye whose exact cause is as yet unknown.

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7. Wien. klin. Wchnschr., March, 1908.

Original Articles

AUTOINTOXICATION.

A FURTHER CONTRIBUTION TO THE POSSIBLE RELATIONSHIP OF AUTOINTOXICATION TO CERTAIN DISEASES OF THE CORNEA AND UVEAL TRACT.*

G. E. de SCHWEINITZ, M.D.

WITH GENERAL AND LABORATORY EXAMINATIONS.†

BY

Charles A. Fife, M.D.

PHILADELPHIA.

At a meeting of the Section on Ophthalmology of the American Medical Association in Boston, 1906, I presented a paper on "Autointoxication in Relation to the Eye,"[1] and as the subject appears to have excited some interest among certain of my ophthalmic confreres, it seemed proper to continue these investigations and to record the results thus far obtained by the report of a series of cases which may be regarded as types of some of the ocular diseases in which, at least, the suspicion is justified that they may, perhaps, interpret one of the manifestations of the presence of endogenous intoxication. For the general and laboratory examinations in the study of the patients whose histories are reported, I am in largest measure indebted to Dr. Charles A. Fife.

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* Read in the Section on Ophthalmology of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

† Laboratory examinations were made in the William Pepper Clinical Laboratory, Phœbe Hearst Foundation.

1. The Journal A. M. A., Feb. 9, 1907, p. 502.

It should distinctly be understood that if the detection and isolation of definite ptomains or toxins are necessary for the diagnosis of autointoxication, as is intimated by some authorities, then the cases which follow are not entitled to be regarded in any sense as ocular interpretations of nutritional or metabolic disorders. I am in entire accord with Alonzo Taylor that a loose interpretation of the facts of metabolism and their relation to disease should strongly be condemned, but believe, nevertheless, that presumptive clinical, laboratory and therapeutic testimony is worthy of consideration. Because the ocular conditions of the cases reported suggest a toxic state, because the constitutional symptoms in some of them are analogous to symptoms of chronic infections and gastro-intestinal diseases, and because the physical examinations of the patients were, in a measure, indicative of similar etiologic factors, there seems to be a certain justification for presenting them as worthy of consideration from the standpoint of autointoxication.‡

It should be distinctly understood that the influence of syphilis is definitely excluded as an etiologic factor in the cases which are utilized as types in this communication, and also tuberculosis, except that the tuberculin test was not used. The details of the laboratory and other examinations recorded in the original paper are omitted for brevity's sake.

REPORT OF CASES.

Case 1.—*Relapsing Sclero-Keratitis of Four Months' Duration; Clear Evidences of Gastrointestinal Decomposition and Faulty Nitrogen Metabolism.*—Mrs. A., aged 28, no children, no miscarriages, came for consultation on March 7, 1907.

Family History.—This is good in all respects, the patient coming from a long-lived family, the members of which have suffered from no heart, lung, liver, kidney, blood or nerve disease.

Personal History.—The patient has had measles, pertussis, tonsillitis once and influenza three times, but not in recent years, and none of the attacks was severe, and all were uncomplicated. Ten years ago she is said to have suffered from malaria, having been ill for two weeks. There is no history of typhoid fever or of scarlet fever, and none of diphtheria or rheumatism. Owing to a faulty position of the uterus, there is dysmenorrhea. During the past three years the patient has had six periods of unconsciousness, without convulsions, the symptoms indicating that the attacks were not epileptic in nature. They have usually been followed by the vomiting of large amounts of undigested food, which is said to have been very sour. Except for nausea, following indiscretions in diet, there are no dyspeptic symptoms. Constipation is moderate. The patient is of a nervous temperament, but leads a regular life; she drinks too much tea and coffee, and eats too much meat, taking insufficient exercise. Syphilis and tuberculosis are eliminated.

Eye History.—Ten years prior to her examination there was an attack of inflammation of the right eye, which is said to have been phlyctenular keratitis, but which probably was of the same nature as her present trouble. Four months ago the right eye was again attacked with inflammation, and again the diagnosis of phlyctenular keratitis was made. She then consulted an oculist, who evidently recognized the true nature of the case, and for three months she was treated with the usual local remedies, and took internally iron, arsenic and quinin, as occasions seemed to demand, without, however, any relief from the constantly recurring inflammations. These were always confined to the right eye, the left remaining normal.

Examination.—Examination of the patient's face, neck and throat, except for the evidences of anemia, was negative. The tongue was slightly coated, the heart and lungs negative, the chest long and narrow, the liver normal in size and position, the spleen normal and the right kidney easily palpable and movable. There was slight gastroptosis. Otherwise the abdomen was negative. The station was good; the knee-jerks were exaggerated.

Examination of the Eyes.—Uncorrected vision of O. D. 6/30. There was a general scleral injection, a little more condensed in the region of the ciliary body, which gradually assumed a coarser character in a large, triangular patch, chiefly placed over the region of the insertion of the external rectus. This patch had a slightly violaceous hue. The outer and upper triangular segment of the cornea was occupied by a delicate punctate haze, which was coarser nearer the periphery, and which apparently was situated beneath Bowman's membrane. At the outer margin of the cornea there was thickening of the episcleral tissue, and in one spot a small scleral node. Adrenalin bleached the general surface of the sclera, but failed entirely to blanch the more coarsely enlarged vessels in the denser patch of scleritis over the external rectus. The pupil dilated readily with scopolamin, and there was no discoloration of the iris. Fluorescein did not stain either the epithelium or endothelium. On the inner side of the cornea there were some old superficial scars, evidently the remnants of the inflammation of ten years ago. Ophthalmoscopic examination of this eye was practically negative, in so far as pathologic conditions are concerned, the optic disc being a vertical oval, of good color, and the retinal circulation normal in appearance. A faint nystagmus was demonstrable.

After one week of treatment, practically negative in its results, in so far as any relief of the patient is concerned, she was admitted to the University Hospital, and Dr. Fife requested to make the usual examinations. On the day of her admission the scleral injection was especially marked, and the punctate haze or infiltrate in the cornea very clearly evident, in addition to which there were about fifteen scattered white dots in the deeper layers of the cornea, somewhat resembling those seen in punctate keratitis, but evidently not situated on Descemet's membrane.

V. of O. S. 6/5; amplitude of accommodation 9 D.; media clear; fundus healthy in all respects.

Laboratory examinations included full investigation of the gastric contents, feces and urine. The details are omitted.

Remarks.—The interesting symptoms from the general standpoint were the fainting attacks, accompanied by the vomiting of large amounts of undigested sour food, especially when these were considered in connection with the laboratory findings. The wide variation in the character of the gastric contents, the one being hypoacid and the other hyperacid, was probably due to nervous influences, and these and the anemia were in all likelihood, in large part, dependent on the gastrointestinal decomposition products. The evidences of intestinal decomposition were the large amount of ethereal (conjugate) sulphates as compared with the preformed sulphates and the increase of indican. The large proportion of uric acid and of purin nitrogen to the total nitrogen suggested deranged metabolism.

Treatment and Its Results.—After consultation with Dr. Fife, the following line of treatment was suggested: Exercise, hot baths, the withdrawal from the diet of foods rich in purins and of easily decomposing foods; the administration of plenty of water before meals. Locally, the following remedies were used: Scopolamin, sufficient to maintain mydriasis; dionin, occasional subconjunctival injections of saline solution, hot compresses at stated intervals, and the usual flushings with boric acid.

The improvement was prompt and rapid, and at the expiration of three weeks the eye was almost white, and the corneal haze, although still present, lessened in density and extent.

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‡ In the paper presented to the Section on Ophthalmology a summary of those products detected by various analyses which indicate the presence of autointoxication was included. This is here omitted for the sake of brevity.

Corrected vision was now 6/6 with + 1 ⌢ + 1 c. axis 105. This improvement continued unimpaired for another four weeks, when, after the patient had returned home, there was a sharp relapse on June 18. Whether this was due to any indiscretion in diet or any relaxation in the strict regimen which had been ordered, we are not able to say. It yielded promptly to a renewal of the treatment. The eye became white and quiet and the extensive corneal opacity disappeared, with the exception of a somewhat kidney-shaped area, almost central, 5 mm. in length and 3 mm. in width, which, however, was not of sufficient density to prevent normal visual acuity with suitable glasses. The only internal medication was one of the preparations of iron, and this was given only in occasional doses. At the last examination, seven months after the patient originally sought advice, there had been no renewal of the ocular difficulty. Moreover, we know there has been none up to the present time.

Case 2.—*Bilateral Parenchymatous Keratitis Apparently Dependent on or Associated with Serious Indiscretion in Diet and Obstinate Constipation.*—Miss X., aged 17, applied for treatment on March 6, 1907.

Family History.—The patient's parents are living and healthy, as are one brother and two sisters. One brother died of intestinal tuberculosis at the age of 11 and another in early infancy.

History.—The patient had the ordinary exanthemata of childhood, had never had diphtheria, but until recent years was a great sufferer from tonsillitis, but has not had rheumatism. Formerly the patient suffered from dysmenorrhea, but at the present time menstruation is normal. She has always suffered from constipation, it being, as her mother expressed it, one of the troubles of her life. She has been a most imprudent eater of all manner of sweet stuffs, particularly of candy, pastry, cakes and the like, and has exhibited a really shocking disregard of proper diet. Syphilis and tuberculosis, except as noted in the family history, were excluded.

Eye History.—The original examination of the patient's eyes took place on May 10, 1902, when she came for the relief of frontal headache. Ophthalmoscopic examination at that time revealed in the right eye a small patch of old chorioiditis on the outer side of the disc, but in other respects the fundus was normal, as was the fundus in the opposite eye. After the correction of a moderate hyperopic astigmatism, which yielded normal vision, the asthenopia disappeared. This returned two years later, when it was found necessary to increase the strength of the cylinder. The headaches disappeared and the patient led a comfortable eye life until March 6, 1907, when she reported with the statement that for a couple of weeks she had suffered with what appeared to be a cold in the head, associated with a great deal of headache and some watering of the eyes.

Examination.—The patient is a small but well-formed girl, weighing 98 pounds as compared with 114 pounds four months previously. At the right apex, immediately below the clavicle, there was some prolongation of expiration and impaired resonance on percussion, most marked on lying down. The examination of the neck and throat, of the heart and of the abdominal organs yielded negative results. There was no rhinopharyngeal disease and no evidence of sinus infection. The teeth are sound and there was no pyorrhea alveolaris.

Eye Examination.—The left eye and a few days later the right eye exhibited a marked ciliary flush, and at the outer margin of each cornea a few small infiltrates, together with one or two minute nodes in the episcleral tissue. Within a week, with deepening of the scleral flush, a decided central interstitial infiltrate developed in each cornea, through which were scattered numerous saturated spots, the whole associated with marked photophobia, but without any very definite involvement of the iris and certainly no synechia. Edema of the corneal epithelium was evident. The conditions exactly represented those in the early stage of a parenchymatous keratitis. She was admitted to the University Hospital for treatment.

Laboratory examinations included examinations of the blood and urine.

Treatment and Progress of Case.—The patient remained in the University Hospital from March 29 to May 7, and the treatment consisted of a light diet, easily assimilated, with absolute abstinence from sweets, tea, coffee and fresh bread. Fruit was permitted in moderation. For a week, inunctions of unguentum hydrargyrum were used, and citrate of potassium was exhibited until the elimination of the solids in the urine reached the normal proportion. Calomel was used as a laxative. Locally, dionin, atropin and hot compresses were ordered.

The improvement was prompt, and at the expiration of the time noted the corneas were entirely clear, with the exception of a small area, crescent-shaped, at the lower and outer side of each of them, and the vision was normal in each eye. The patient gained 17 pounds in weight, and continued to maintain this weight until the beginning of the present year, when, after a relapse, in so far as diet is concerned, she having returned to the use of sweets, etc., the eyes flushed and there was a return of the photophobia. With the restoration of diet to normal and the regulation of the bowel action, which had previously been placed in a normal condition, there was a prompt disappearance of these symptoms. With a correction of the hyperopic astigmatism as follows:

O. D. + .50 ⌢ + .60 c. axis 165.

O. S. + .75 ⌢ + .25 c. axis 30, V. is 6/6 in each eye.

Remarks.—This case is inserted because it is an excellent example of one of the types of keratitis, associated, to use Mr. W. T. Holmes Spicer's phrase, with defective intestinal hygiene. It is true that the elaborate analyses made in connection with case 1 were not available, and therefore it is not possible to say from the laboratory standpoint that any of the indications of intestinal autointoxication were present. It can only be assumed that such a condition of affairs was possible, but it may be at least definitely stated that with the regulation of the diet and the elimination of the constipation, there was a more prompt disappearance of the corneal lesions, together with the restoration of absolutely normal vision, than one is accustomed to see in cases of this nature. To be sure, inunctions of mercury were used, but only for a comparatively short time, and while they may have had an influence, owing to their aplastic action, they do not appear to have been the largest contributing factor in the success of treatment. The treatment of this patient was, of course, that which any intelligent practitioner would institute, and, in a certain sense, the case does not belong to the series now under consideration, that is to say, in the absence of elaborate laboratory examinations to prove the presence of autointoxication. It is inserted because of the undoubted relationship of the development of the corneal lesions to dietetic imprudence and presumably to faulty metabolism, and because from the eye symptoms alone the lesions could perfectly well have been attributed to other well recognized causes. The importance of the administration of citrate of potassium in cases of this character, until the elimination of the solids in the urine reaches the normal standard, is worthy of mention.

Case 3.—*Disseminated Exudative Chorioiditis, Right Eye; Cataract, Left Eye; Faulty Nitrogen Metabolism; Probable Moderate Intestinal Autointoxication.*—Miss N. R., aged 26, referred by Dr. Murphy of Chicago applied for treatment on June 18, 1907.

Family History.—The patient comes from a long-lived family, among the members of which there are no hereditary predispositions. Both her parents are living, and her mother has had attacks of inflammatory rheumatism in her feet and hands for about ten years. Two sisters and three brothers are living. The mother has had no miscarriages. One brother had eczema at birth, one sister eczema from the eighth to the tenth year, and one brother is "not strong," apparently being a sufferer from gastric hyperacidity. One sister has twice had muscular rheumatism.

History.—The patient had three attacks of "diphtheria" when quite young. During the years following she was prone to sore throat and frequent attacks of tonsillitis, from which for the past six years she has been free. The patient has never suffered from influenza, scarlet fever, rheumatism or nervous disease, and does not readily take cold. Her first attack of eczema occurred in her sixteenth year, and since this date she has always suffered more or less from this skin affection. If she exercises freely, and she has done much horseback riding, the eczema is better, as it is also when she lives on a meat-free diet. She stays in bed about eight hours during the night, but is not a good sleeper, and has sometimes taken tablets for insomnia. Her appetite is good, but she is a rapid eater, and for the last six years has omitted meat from her diet list.

Eye History.—When 14 years old she had an attack of inflammation of her eyes, of what character is not definitely known; again an attack (in all probability chorioiditis or uveitis) when she was 21, and finally a third attack one year prior to her present examination. These attacks appear to have chiefly concerned the left eye. During the three weeks before she came for treatment there had been a rapid increase in the faulty vision of the left eye and the appearance of a white mass in the pupil space. These attacks of ocular inflammation had not been accompanied with severe pain. Muscæ had appeared before the right eye and vision had been somewhat blurred.

Examination.—The patient is a well-formed girl, of good proportions, whose mucous membranes are a little pale. The chest was well developed, the clavicles slightly prominent, the lung expansion good, although not quite so good at the right apex as at the left; no bronchial breathing and no râles, but the expiratory murmur was slightly higher pitched at the right than at the left apex. The heart was a trifle enlarged, the left border being in the mid-clavicular line, the right border at the right border of the sternum, while the apex was at the fifth interspace in the mid-clavicular line. There were no murmurs. The liver was just palpable and slightly tender. The gall bladder was not palpable. The right kidney was palpable, but not very movable, and there was moderate gastroptosis. In other respects the abdomen was negative. The station and reflexes were normal, and there was no glandular involvement and no evidence of syphilis or tuberculosis. The teeth were sound; there was no active rhino-pharyngeal disease and no sign of sinus infection.

Examination of the Eyes.—O. D. V. = 6/5, accommodation 7 D. There were no spots on the posterior layer of the cornea. The disc was an irregular oval, of good color, and surrounded by thick masses of chorioidal pigment. Up and in from the disc there was a large patch of pigmented retinochorioiditis, and throughout the eyeground smaller patches of disseminated exudative chorioiditis, none in an active stage. A few delicate vitreous opacities were demonstrable and very faint opacities in the periphery of the lens. V. of O. S. counts fingers at 25 cm.; white swollen cataract, showing the sectors of the lens plainly and still transmitting a faint reflex; no view of the eyeground. Marked contraction of the field in a circular manner.

LABORATORY EXAMINATIONS.

Blood.—June 20, 1907. Color, consistency and coagulability, normal; hemoglobin, 77 per cent.; erythrocytes, 4,610,000; leucocytes, 7,900.

Microscopic examination: Lymphocytes, 34 per cent.; large mononuclears, 1 per cent.; transitional, 2 per cent.; polymorphonuclears, 61 per cent.; eosinophiles, 2 per cent.; basophiles, none.

Gastric Contents.—June 19, 1907. Preliminary lavage; quantity removed, 92 c.c.; appearance, greenish; mucus, moderate amount; Congo test, present. Total acidity, 30 (0.10 per cent.); free HCl, 14 (0.05 per cent.); lactic acid, none; occult blood, none; bile, positive.

Microscopic examination: Mucus, present; starch, few whole; blood, none; pus, present; epithelium, gastric mucosa, fat and meat fiber, none; yeast, present; sarcinæ and Oppler-Boas bacilli, none.

June 25, 1907. Preliminary lavage, none; character of meal, Ewald; time meal taken, 8:30 a. m.; time meal removed, 9:25 a. m.; quantity removed, 40 c.c.; solid residue, 15 c.c.; appearance, well digested, yellowish; mucus, very little; Congo test, present. Total acidity, 56 (0.21 per cent.); free HCl, 24 (0.08 per cent.); combined HCl, 22 (0.08 per cent.); acid salts, 10 (0.03 per cent.); rennin, present; pepsin, present; lactic acid, none; occult blood, none; bile, present.

Microscopic examination: Mucus, very little; starch, well digested; blood, pus, epithelium, gastric mucosa, fat, meat fiber, yeast, none; sarcinæ and Oppler-Boas bacillus, absent.

Feces.—June 22, 1907. Hour stool passed 6 p. m., June 21, 1907. Period of passage, 57 hours then moved by a laxative. Consistency, liquid, some formed pieces; color, reddish brown; smell, somewhat offensive.

Macroscopic examination: Connective tissue, muscle fiber and fat, none; vegetable fiber and detritus, very little; mucus, few pieces; no blood, pus, occult blood, parasites, stones or other foreign bodies; reaction, alkaline; bile pigments, hydrobilirubin.

Microscopic examination: Mucus, present; no pus or blood; few epithelial cells; no muscle fiber or connective tissue; some vegetable fiber and starch cells; neutral fat present; fatty acids, present; soap, much; casein, none; crystals, few triple phosphates; parasites and bacteria, none.

June 24, 1907. Liquid, some formed pieces; reddish brown color; very offensive; odor ammoniacal.

Macroscopic examination: No connective tissue, muscle fiber, fat, detritus, blood, pus, parasites, stones or other foreign bodies; very little vegetable fiber, a few pieces of mucus; alkaline reaction; strong hydrobilirubin reaction.

Microscopic examination: Mucus, present; few epithelial cells; some vegetable fiber; no blood, muscle fiber, connective tissue or starch cells. No fat; many fatty acid needles; no soap; few triple phosphate crystals.

The above examinations are recorded to indicate the character of these analyses and the care under which they were made. All others are omitted.

DIET LIST.

	June 20. Gms.	June 21. Gms.	June 22. Gms.	June 23. Gms.	Total. Gms.	Average.	Nitrogen equivalent.
Orange	100	95	95	100	390	97.5	0.0
Bread	150	145	145	195	605	151.0	1.91
Oatmeal	22	22	22	22	88	22.0	.49
Egg	52	57	55	54	218	54.0	1.08
Chicken	140	120	100	118	478	119.0	3.68
Asparagus	100	118	105	118	441	110.0	0.34
Potato	145	145	105	150	545	136.0	0.54
Lettuce	115	175	127	145	562	140.0	0.16
Tongue	50	55	50	55	210	52.5	1.57
Apple	115	120	110	115	460	105.0	0.00
Rice	20	20	20	20	80	20.0	0.23
Butter	47	28	35	47	157	39.25	0.16
Salt	4	4	4	4	16	4.0	
Sugar	35	40	38	35	138	34.5	
Junket, oz.	8	8	8	8	32	8	1.38
Olive oil, oz.	1	1	1	1		1	
Lemon juice, oz.	¼	¼	¼	¼			
Water, c.c.	2,500	2,500				2,500	
							11.44

REMARKS.

The chief points of interest in the clinical history of the patient are the long periods of rheumatism from which her mother suffered, the eczema which attacked one brother and one sister, and the patient's frequent attacks of tonsillitis, as well as eczema, which was apt to be worse when her eyes were better, and *vice versa.*

From the laboratory findings it was evident that there was secondary anemia; that, except a little mucus and on one occasion bile, the presence of which was not accounted for, the analysis of the gastric contents revealed nothing distinctly abnormal; that analysis of the bowel contents revealed thorough digestion of meats and starches, poor digestion of fats, a moderate amount of mucus, an alkaline reaction and an offensive odor. The overdigestion and odor were probably accounted for by the constipation. There was an entire absence of pus, blood and parasites.

In the urine, the apparently marked retention of nitrogen, the high ammonia output, the relatively low urea, and the great variation in the uric acid eliminations, suggest deranged nitrogen metabolism.

Referring now to the question of intestinal putrefaction products, their evidence in the urine was a decidedly higher proportion of ethereal (conjugate) sulphates to the preformed sulphates. Specimens of urine collected after the patient had been on a very simple diet for some days failed to show any excess of indican, no phenol and no excess of urobilin; but two specimens examined later, when this strict diet was not followed, contained an excess of indican and a slight excess of urobilin. On one occasion, the volatile fatty acids were high, but not on other days.

Treatment and Progress of the Case.—In consultation with Dr. Fife, and based on his findings in the laboratory, the following treatment was suggested: Cutting down of nucleins as much as possible, allowing milk and eggs (the white of eggs better than the yolks) to be the chief protein to be ingested; large quantities of milk, or better still, buttermilk or kumiss, were ordered, but practically no meat, and especially no meat of growing animals, such as veal, or of any glandular organs, such as sweetbreads, liver, etc. Vegetables, with the exception of peas and round beans, and those vegetables which habitually disagreed with the patient, were ordered to be taken freely. The patient was directed to drink enough water to make the elimination of urine about two and one-half or three quarts per day, and every other day the lower bowel was to be flushed out, these flushings, of course, not to be continued indefinitely. Proper laxatives were ordered, as needed by the condition of the bowels. The only medicine ordered was small doses of potassium iodid, indicated by the general condition.

The improvement of this patient was rapid and satisfactory. Except for one day, after the examinations had been completed and the treatment had been ordered, there was no return of the blurred vision of the right eye and of the muscæ, which had been particularly alarming just prior to her examination. The gain in weight was rapid and satisfactory, and within a few months she had added 20 pounds to her weight. Five months later the secondary anemia had practically disappeared, the hemoglobin being now 87 per cent., and the red cells 5,000,000 per c.mm. There were some slight dyspeptic symptoms (referable to hyperacidity, and the urine on two occasions contained an excess of indican, suggesting putrefactive products of intestinal origin. These were corrected by a renewal of appropriate diet, which had been for the time being set aside.

Remarks.—In this patient we have the interesting opportunity of comparing the results of what may be called the usual treatment of chorioiditis and its relapses with a treatment which was largely diatetic and intended to correct faulty nitrogen metabolism and probable moderate intestinal autointoxication. What the line of treatment was which she received during the earlier attacks of chorioiditis, and particularly in those attacks which occurred in the year prior to her coming under our care, we are unable to say, except that she was treated by most competent physicians, who doubtless adopted well recognized therapeutic measures, but who did not succeed, or at least the remedies employed did not succeed, in checking the recurrences, which ultimately so disordered the nutrition of the chorioid of the left eye that cataract formed, and it was only when this cataract began to appear, as well as the muscæ before the right or better eye became definitely manifest, that she was driven to seek additional advice.

Now almost a year has elapsed, during which the dietetic regimen already referred to has been strictly followed, with, perhaps, only one or two lapses, and there has been no recurrence of inflammation in the neighborhood of the old patch of chorioiditis, nor the development of new areas of inflammation in this membrane. True, she has taken during this year a certain amount of iodid—no other remedy, except at intervals, iron; but she also took in the preceding year all manner of alteratives, and yet in spite of them the recurrences occurred, with the result of the forming of cataract. It may be urged that the process in the left eye was more widespread, and, if you choose, more malignant than that in the right eye, and therefore, the remedies did not have as good an effect in this eye as they had in the other one. Nevertheless, it would seem that a certain amount of credit should be given to the therapeutic regimen which was evolved by a scientific examination from the laboratory standpoint. That it did good can not be denied for an instant, as is attested by the gain in weight, by improvement in general nutrition and by the loss of secondary anemia. All things considered, we feel that this case is a fair demonstration of the value of studies along these lines, and that the results thus far attained fully compensate for the trouble and time which such examinations required.

Case 4.—*Relapsing Uveitis (Irido-Chorioiditis) of Ten Years' Standing; Irritative Nephritis; Autointoxication from Gastrointestinal Decomposition.*—Mrs. A. H., aged 26, the mother of one child, no miscarriages, applied for treatment Oct. 21, 1907.

Family History.—The patient's father and mother are living and well. Nothing is known of the maternal family. The paternal grandmother died of dropsy at the age of 79, the paternal grandfather at 60 of paralysis. There is no other history of heart, lung, nerve or constitutional disease in the family.

History.—The patient had measles, chickenpox, whooping-cough, all in mild degree, as a child. She never suffered from skin disease. At 6 years of age she had pneumonia, and on several occasions tonsillitis. The dates of these attacks are not obtainable. There is a history of muscular rheumatism, which occurred at frequent intervals, especially in the right shoulder. Lumbago is absent, and there is a vague history of pleurodynia. The patient has always "caught cold" easily. Menstruation was established at 14, and has always been regular and normal. From her seventeenth to her twenty-first year she was never very strong, working at this period very hard as a stenographer, with poor appetite and nervous disposition, and always very tired. At the age of 21 she married, and has had one child, now 2 years of age. Syphilis is definitely eliminated, and no evidence of tuberculosis has been uncovered. Calmette's test has not been used.

Eye History.—The patient's eye troubles began in 1898 or 1899, with an attack of uveitis of the right eye, which seems to have lasted for three months. This inflammation recurred in 1903, and in October of that year she paid one visit to the dispensary for diseases of the eye of the University Hospital, and the records show that there was a marked uveitis, with punctate keratitis and vitreous opacities confined to the right eye, the left one being normal. Vision at that time was 6/12. She was not seen again at this period, but reports that she had a number of relapses, until January, 1904, by which time the vision of the right eye was entirely destroyed.

The first intimation of inflammation of the left eye occurred in March, 1907, lasting only for about a week. In April of the same year, in association with blurred vision, muscæ appeared and synechiæ formed, which, according to her statement, were "broken up" by atropin. From June of that year until the late fall, she was under the constant care of a competent oculist, without, however, any definite relief, as the relapses were frequent and the results of therapeusis disappointing. She applied for treatment in the dispensary for dis eases of the eye of the University Hospital for the second time on October 12, 1907, and two days later was admitted to the hospital, where she remained until November 16.

Examination.—The patient is a woman of small frame, but well proportioned. Her tissues were soft and flabby and the mucosæ pale. There was no lesion of the skin; the throat and nasopharynx were negative, as were also the lungs. Lymphatic enlargement was not demonstrable. There were no cardiac murmurs, but there was marked accentuation of the second aortic sound. The liver and spleen were negative and there were no areas of definite tenderness in the abdomen. The right kidney was palpable and slightly movable; the reflexes and station were normal. The teeth and gums were sound.

Examination of the Eyes.—V. of O. D., light perception in the periphery, with obliteration of the perception of light in the center of the field. The tension of the eye was slightly below normal, the iris discolored and adherent to a totally cataractous lens of chalky appearance. V. of O. S. 6/12, the pupil dilated under the influence of atropin, and remnants of synechia could be detected around the entire periphery. On the posterior surface of the cornea, in the usual triangular manner, as well as in a more scattered disposition, were free deposits of small mutton-fat drops, the keratitis punctata of ordinary parlance. The vitreous was full of thick floating opacities, and the fundus could be studied with difficulty, the chief change being the unusual enlargement of the retinal veins. No definite patches of chorioiditis were discovered.

Laboratory examinations included analyses of the blood, gastric contents, feces and urine. Details are omitted.

Summary.—Commenting on these findings, Dr. Fife writes as follows: The urine measured for eight twenty-four-hour periods was never more than 900 c.c., the specific gravity fluctuating normally with the amount of urine. Each specimen contained a small amount of serum albumin, a distinct trace of nucleo-albumin, hyaline casts and cylindroids, and in three specimens a few granular casts. These findings, taken into consideration with the somewhat high blood pressure and the accentuated second aortic sound, would indicate kidney irritation, associated with arterial change. Whether this kidney lesion and the arterial tension are dependent directly on toxins can not be stated with definiteness.

The excess of indican, the presence of phenol, the slight excess of urobilin, the trace of acetone and the moderately high volatile fatty acids, suggest autointoxication from gastrointestinal decomposition products. This, however, was not confirmed by the determination of the conjugate sulphates in three specimens, the proportion of conjugate sulphates to preformed sulphates being 1 to 10, 1 to 9.4 and 1 to 12.2.

Referring to nitrogen metabolism, it may be said that the amount of urea is normal, but the uric-acid output was greater than the intake of uric-acid-forming substances would lead us to expect. This suggests an excess of endogenous purins, but only suggests it, as many more factors would be necessary to definitely confirm it. The total nitrogen output is less than the intake, allowing for a loss of about 1½ gms. of nitrogen in the feces. The chlorid output is less than the intake. This is probably dependent on nephritis. Dr. Fife makes special reference to the intestinal sand which he found in the stools, and which in at least one case of marked gastrointestinal autointoxication was a conspicuous feature. He also calls attention to the anemia of the secondary type and the hypoacidity of the gastric contents.

Treatment and Course of the Case.—After consultation with Dr. Fife, based on the analyses which have been submitted, a diet list was made out which as much as possible should contain foods of low purin content, but which do not decompose readily and are at the same time as rich in hemoglobin-forming properties as possible. Free drinking of water was advised, provided it did not increase the arterial tension, and the colon was flushed with large quantities of normal salt solution. Considering the character of the blood pressure, the secondary anemia and the possible changes in the arterial coats themselves, the administration of small doses of iodid of potassium was directed. Locally, the eye was treated with dionin, atropin and hot compresses.

By November 4 the patient was greatly improved, the vitreous opacity had in large measure absorbed, and the vision, after correcting half a diopter of astigmatism, was 6/7.5 and part of 6/6; and on November 16, or just a month after admission, she was permitted to go home and to discontinue the atropin.

All went well until the latter part of December, when there was a decided relapse and vision reduced to large letters by a free deposition of mutton-fat drops on the posterior surface of the cornea, and a rapid redevelopment of thick vitreous opacities. The patient was admitted again to the University Hospital on Jan. 2, 1908, and remained there for five weeks, again placed on as strict a diet as possible (which, however, had also been continued while she was at home, as had also the iodid of potassium), and treated with pilocarpin diaphoresis, which after the fourth sweat had to be discontinued on account of the intense nausea which it produced, and later with subconjunctival injections of saline solution, which acted very favorably. At the present time (March, 1908) there has again been some improvement. The vitreous, although far from clear, has lost most of its thick opacities and the keratitis punctata has disappeared. The unusually large retinal veins are still a marked ophthalmoscopic picture. Patches of chorioiditis are not visible. The vision is 6/12.

Remarks.—This case indicates that although it may be assumed that an autointoxication from gastrointestinal decomposition was present, and that its correction by suitable diet was followed by an exceedingly rapid improvement in a relapsing uveitis of distinctly malignant tendency, such treatment was not enough to prevent a recurrence. Evidently autointoxication is not the sole cause, although it may be a contributing one. What the toxin is which is responsible for the relapses has not been demonstrated, and we assert only that the intestinal intoxication as one factor is worthy of consideration, because the relapses appear to have been much more susceptible to correction that those relapses which had occurred prior to the establishment of this strict diet, and which were responsible for the destruction of the vision of the right eye.

It may be maintained that such searching examinations of the secretions as have been recorded in two of the preceding cases would be likely to reveal one or other of the conditions which are associated with intestinal autointoxication or faulty nitrogen metabolism in any patient who has for a long period of time been a sufferer from a chronic or relapsing ocular disorder. Therefore, the following case, which from the ocular standpoint belongs in the same class with those which have preceded it, but which, in so far as laboratory investigations are concerned, is excluded from it, is recorded.

Case 5.—*Relapsing Iritis (Uveitis); Entire Absence of Evidences of Autointoxication.*—L. W., male, aged 62, came for consultation Feb. 28, 1907.

Family History and Personal History.—Data in these respects are not recorded, as they have no bearing on the present question. The influence of rheumatism, tuberculosis and syphilis may be excluded.

Eye History.—Patient always myopic, has been wearing glasses since the age of 15. At the age of 22 he had an attack of iritis of an approximate duration of ten days. A second attack occurred at the age of 25, and from then on until about six years ago he has had an attack every two or three years, but during the past six years the attacks have manifested themselves every twelve to eighteen months. In 1897 iridectomy was performed on the left eye.

Physical Examination.—The patient is a spare man, with a small amount of adipose tissue, the muscles being moderately well developed. There was no distinct emaciation, the bones were small, the mucous membranes a little pale and slightly cyanotic; the head and neck were negative, the chest long and narrow, but of good expansion. The lungs were negative. The heart area was very slightly enlarged. There were no murmurs, but the second aortic sound was moderately accentuated. The abdominal organs were normal in size and position, the glands negative and the reflexes and station normal.

Eye Examination.—V. of O. D. with — 2.50 c. axis 105, 4/15. The pupil under the influence of atropin was a vertical oval, 5 by 4, the anterior chamber deep and the lower and inner and outer margins of the pupil were fringed with gray exudate. There was a slight perinuclear haze and some pigment on the capsule of the lens, together with a fine deposit of dots on Descemet's membrane. Remnants of synechia were visible at the outer part of the pupil. In the vitreous moderately developed string-like opacities were visible. The disc was a horizontal oval, with a scleral ring broadening below into a superficial crescent. There was general epithelial chorioiditis, and in the macular region there were delicate grayish-white lines, with small pigment dots and smaller white dots. The tension was normal and the field of vision normal. V. of O. S., with — 6 D., fingers at 24 inches. There was a narrow upward coloboma, with well-placed edges, and the pupil transmitted a red reflex. To a mass of lymph just behind and above the pupil the margins of the coloboma were adherent. The iris was tremulous; there was no rise of tension and no view through the cataractous lens of the fundus.

The usual laboratory examinations were made.

Remarks.—Commenting on the results of laboratory examinations, Dr. Fife points out that the urine examination was practically negative. On the first two days of observation equilibrium of nitrogen metabolism was not established, the intake being greater than the output and the patient normally gained one pound in weight, but on the third day the equilibrium was just about established with a weight variation of only two ounces. It will be noticed there is no increase in ammonia nitrogen coefficient, in the volatile fatty acids, or in the proportion of the sulphates; no phenol, acetone, excess of indican or urobilin. The uric acid and purins are perhaps a little high and the urea a little low, but nothing in the urine suggests autointoxication. The amount of albumin was so slight that it could scarcely be detected with the heat and acid test and not at all by the contact test. Examination of the feces was negative, the digestion of all food elements being good. Occult blood was present, probably due to rare meats.

The patient did not remain for treatment, and therefore the subsequent history of the case can not be given. It is quoted only, as before stated, as an example of entirely negative results in so far as the discovery of intestinal autointoxication is concerned, and, indeed, as the discovery of any toxin or infection may have been responsible for the relapsing iritis.

Case 6.—*Central Exudative Chorioiditis of the Right Eye of the Plastic Type, with One Patch of Peripheral Retino-Chorioiditis; High Irregular Astigmatism; Furunculosis; Questionable Autointoxication.*—L. L., a boy, aged 15, came for consultation on March 31, 1906.

Family History.—The patient's father and mother are living and the father is in good health; the mother in recent years has been a chronic neurasthenic. Two brothers are living and healthy. The family history of more distant date is fairly good, and the grandparents lived to old age. One uncle died of Bright's disease. There is no reason to suspect specific taint in any of the blood relatives.

History.—The patient has always been a fairly healthy boy, having had scarlet fever, but of moderate degree. There is no history of tonsillitis and none of rheumatism. In August, 1907, but more than a year after the eye troubles began, furunculosis was evident, the active pustules being chiefly situated on the right side of the face and also on the arm, and these lasted, coming in various crops, until December of that year.

Eye History.—For the earlier data of the patient's eye conditions I am indebted to the courtesy of Dr. Posey, whom he first consulted April 18, 1902, for asthenopic symptoms, which were relieved by the correction at that time of a simple hypermetropia, which yielded normal vision, and there were no pathologic ophthalmoscopic changes. Three years later, with a renewal of the asthenopic symptoms, an astigmatism of half a diopter against the rule was discovered after atropin mydriasis, and later, following an attack of acute catarrhal conjunctivitis, there was a tendency to spasm of the right ciliary muscle and the astigmatism had increased to double the quantity. Four months later, in association with a renewal of the asthenopia and a marked increase of the astigmatism of the right eye, which was now + 1.75 D. axis 5, a granular condition of the right macula was first noted. Again, five months later the patient returned with metamorphopsia and decided macular chorioiditis was evident, although at that time the vision was still normal, but the astigmatism had risen to 2.25 D. axis 180. A month later vision had fallen to 5/6, and in spite of restriction in the use of his eyes the chorioiditis had apparently increased.

Examination.—The patient is a well-formed boy whose nutrition seems to be exceedingly good and whose weight is 115 pounds. A careful examination by his physician at that time, Dr. Louis Starr, failed to reveal any organic lesions, but only such conditions as in general terms suggested lithemia, to which diathesis he was entitled by direct inheritance. The teeth were sound and the rhino-pharynx healthy.

Eye Examination.—V. of O. D., counts fingers at 50 cm., this marked reduction of vision having taken place within a month prior to his examination. The ophthalmometer revealed an astigmatism of 6 D., there were no deposits on the posterior surface of the cornea, thick opacities floated through the vitreous, the disc could be seen only dimly, but appeared not to be swollen, the retinal veins were large and irregular, and the center of the eyeground directly in the macular region was occupied by a large, circular, greenish-white exudate pushing forward into the vitreous from 3 to 4 D. above the level of the eyeground and gradually sloping into its surrounding area. The field of vision was normal in its periphery, but in the center there was a scotoma corresponding to the chorioidal deposit just described. Far in the periphery of the same eyeground in the outer and lower outer region there was a very large area of pigmented retino-chorioiditis.

V. of O. S., after the correction of half a diopter of astigmatism against the rule, was normal, and the ophthalmoscope failed to reveal any pathologic lesions. The patient was admitted to the Orthopedic Hospital, where for two days there was a slight rise of temperature, never going beyond 100 F., and subsequently returning to normal, where it remained.

LABORATORY EXAMINATIONS.

Only the blood and urine were examined. The former was normal in all respects, and the latter gave an average specific gravity of 1.014, was amber in color, alkaline in reaction, and showed a persistent increase of indican. Casts were not discovered. Unfortunately, none of the thorough examinations of the urine previously reported were made, nor was there any analysis of the gastric contents or of the feces.

Treatment and Progress of the Case.—The treatment consisted in the internal administration of iodid of sodium, daily diapnoresis in a cabinet bath, light massage and a strict diet, with the elimination of all sweets, pastries and easily decomposed foods. At the expiration of five weeks, during which period sixteen vapor baths were taken, the vitreous was entirely clear, the greenish exudate in the chorioid had contracted, although it was a little more elevated and had assumed a somewhat cone shape, the apex of which was + 5 D. It now became surrounded by a ring of erosion twice as wide as the retinal vein. No change was visible in the peripheral patch of retino-chorioiditis, which was certainly of ancient date. Vision was now with some difficulty 6/60 and eccentric. The boy was taken from school, sent to live in the country and given only from time to time small doses of biniodid of mercury.

Little or no change took place in the eyeground, except a gradual absorption of the greenish exudate, which now became pigmented on its margin, while the collar of erosion widened. Occasionally, fine hyalitis was visible. Little by little, with widening of the eroded collar, the central areas of exudate disappeared until at the present time the sclera is exposed in a white patch and the vision remains as before, approximately 6/60 eccentrically.

During the summer of 1907, as previously noted, furunculosis appeared. At this time the patient was under the care of Dr. E. G. Beardsley, who reports the urine to be normal in every respect, as well as the blood, namely, erythrocytes, 5,200,000, leucocytes, 7,200. There was a slight increase in the polymorphonuclear neutrophiles. Dr. Beardsley, referring particularly to the acne pustules on the face, writes as follows: "I have been interested in observing the relation of the opsonic index of the serum of the blood to the various strains of staphylococcus which I have from time to time isolated from the acne lesions. When the index was first estimated it was decidedly low, being 0.51, and varied from time to time, but never reached a point above 0.62, except following the injections of cultures of the germ in question. The treatment of the acne lesions by bacterial vaccines proved disappointing, although there was improvement at first, the index rising above 2.2, but with almost total disappearance of the local lesions. With the discontinuance of the vaccines, however, the resistance of the serums dropped back to below 1 and a few new pustules appeared."

During the period of the acne eruptions there was no marked change in the right eye nor in the left, but on their disappearance in December, 1907, the patient began to complain of blurred vision in the left eye, with asthenopia, some epiphora and some dread of light. These symptoms, ordinarily unimportant, were alarming on account of the history of the right eye. With absolute cessation of eye work, a two weeks' period of atropin mydriasis and the internal administration of Fowler's solution and renewal of a stricter diet, they disappeared and the vision became accurately normal in the left eye. At present there are no signs in any portion of the left eyeground of any chorioidal disturbance.

Remarks.—Except for a persistent increase of indican during the period of active chorioiditis, there were no signs of intestinal fermentation, but also no elaborate examinations of the urine or of any other of the secretions of the body were made. Moreover, the treatment was that ordinarily applied to cases of chorioiditis of this type plus the regulation of the diet, with special elimination of food-stuffs known to be unhealthy. In other words, the treatment did not differ from that which may be called routine in cases of this character. It is recorded here for the purpose of calling attention in a later paragraph to the relationship of the furunculosis to the chorioidal changes.

CONCLUSIONS.

I come now to consider what conclusions may be deduced from the studies just presented.

1. Is there any known disease of any of the histologic systems of the eye which of itself would justify the inference that an intestinal autointoxication is present? Certainly not, because, in the first place, we have no definitely certain knowledge of any specific intoxication depending upon the non-elimination of metabolic products, and, in the second place, the clinical pictures of ocular diseases, for example, of the uveal tract, may be identical, although their etiology may be widely different.

2. Have laboratory examinations isolated any definite toxin to the influence of which could be attributed any of the diseases of the eye at present under consideration? They have not. Hence, if such a criterion of the diagnosis of an autointoxication is necessary, as I have already stated, none of the cases recorded could be regarded as expressions of metabolic disorders.

3. Is it worth while, negative answers having been given to questions 1 and 2, to pursue the line of investigation in the cases under consideration? It would certainly seem so. At least we find or do not find the evidences of intestinal putrefaction and become acquainted with the patient's nitrogen metabolism. If the metabolism is abnormal it may be restored to the normal by a dietetic regimen, which could not be worked out in the absence of the data furnished by such examinations, with brilliant results, as, for example, in Cases 1, 2 and 3, and striking, if not brilliant, in Case 4.

What I particularly wish to emphasize is that while there must be, again to quote Taylor, no loose interpretation of the facts of metabolism and their relation to disease, certain uveal tract and corneal affections should be sharply separated from the perfunctory examinations which they have only too often received, and from the equally perfunctory and insufficient therapeutic measures which have been accorded to them, and that the investigations along lines already indicated, which have also been urged by Elschnig, Kraus, Groyer, Stephenson, Spicer, Cross and other writers, should be commended and pursued. As Dr. Goldthwaite recently stated in a most scholarly and illuminating address on the treatment of non-tuberculous joint affections, investigation of each case and not routine medication is what is required. If, as he has demonstrated, many cases of non-tubercular infectious arthritis, formerly vaguely attributed to rheumatism, are really due to foci of infection in the accessory sinuses, the teeth, the tonsils, and possibly to bacterial activity in the intestines, and that removal of such foci opens the way to cure, the same may be true of the ocular diseases now being considered. Indeed, we well know that some of them, notably cases of uveitis, are caused by infections which pass from the pharyngeal ring, the tonsils, the alveolar processes and the air sinuses.

To make our investigations complete we should add to them such data as may be gleaned from chemical examinations of the body secretions, notably those of the kidney and the intestinal tract, but these examinations must be thorough, and in order to indicate the thoroughness and care with which they should be undertaken, the detailed laboratory results have been recorded.

Finally, I wish to call attention to another matter, which has not escaped the attention of other clinicians, and to which I have[3] made reference on another occasion, namely, a certain relationship which exists between the outbreaks of uveal tract disease, notably chorioiditis, and lesions of the skin. This was a noteworthy feature in Case 3. In this patient when the skin affection was evident the eyes were better, and *vice versa*. Among those patients to whom reference is made in a previous paper, one for example, had in the right eye a localized plastic chorioiditis near the macula. Two years later an exactly similar lesion developed in the fellow eye, and again two years later a sharp attack of herpes zoster, and on this occasion the chorioid remained unaffected. In another patient plastic chorioiditis appeared to alternate with an attack of eczema of the face, while in the last case recorded in the present series, during the development of facial furunculosis, the eye was quiet, but on the subsidence of the furunculosis the earliest symptoms of chorioidal change began, which yielded, however, very promptly to active treatment, without the development of pronounced lesions in this membrane. This association of eczema, herpes zoster, acne and chorioidal disease appears to be more than a coincidence. If it be true that an intestinal intoxication may sometimes be interpreted in an effort of elimination by the development of a skin disease, for instance, one of the three named, is it not probable it may have a similar interpretation by the development of a chorioiditis or uveitis, and that sometimes the toxin is responsible for the skin lesion and on another occasion in the same patient for the uveal tract affection?

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[3] Ann. Ophth., 1906, xv, 513.

DISCUSSION.

Dr. Casey A. Wood, Chicago, said that in a recent report of the Congress of Internal Medicine in Vienna, Dr. Osler commented on the fact that a great majority of the papers, at least 75 per cent., there presented were on bio-chemical and allied subjects. If it be true that these metabolic processes in the body have attracted so much attention in internal medicine the ocular apparatus could not entirely escape. Dr. Wood said that it seems to him that we have a distinct basis for belief in the theory of autointoxication. He uses the word "autointoxication" as Dr. de Schweinitz referred to it, not simply to describe poison of the intestinal tract, but to speak of those processes which take place as a result of a vicious or irregular metabolism. Up to the present time we have not a better term to employ. As long ago as 1873 Horner held that in toxic amblyopia the poisoning of the optic tissues by alcohol and tobacco was not brought about by these substances *per se*, but by some other complicated compound which he was not able to isolate, resulting from the effect of these poisons on the intestinal tract. The British school has long held that the treatment of such diseases as chorioiditis lies in the treatment of the system generally, and particularly the treatment of the intestinal tract. Some years ago while Dr. Wood and Dr. Turck were experimenting on the effects of intestinal poisons on the systems of dogs, they were able, by isolating the poisons in the tract and injecting them under the skin of the lower animals, to produce effects similar to those which go under the name of indigestion. Another curious thing was noticed—a certain percentage of the dogs began slowly to lose their sight and in a number of instances became totally blind. Investigation of the optic nerve made in several cases showed an ordinary simple optic atrophy. In regard to the relation between the skin and the chorioid, in some very obscure forms of chorioiditis we are obliged to fall back on the assumption that in syphilis or struma, we may have an exudate or an eruption on the chorioid, as we have on the skin. Such lesions as we would not pay attention to perhaps on the skin, when appearing on the chorioid become serious.

Those who have read Dr. de Schweinitz's paper will see that an enormous amount of work has been done by him and we have here a combination of the work of the ophthalmologist and internist. It heralds that day when the dietetic treatment of the diseases due to defects of metabolism will show itself in definite doses of food intended to meet definite conditions of the system.

Dr. Edward Jackson, Denver, said that his own impression is that when we have excluded tuberculosis and carefully followed out the idea of autointoxication the diagnosis of a very large proportion of these extremely obscure cases of uveitis will be assigned to a proper category. To illustrate its importance he mentioned two cases: One was in a man of 39, a traveling man, who gave a history of two attacks of uveitis. Iridectomy had been done on one eye. There was a scar and the surgeon who had done the operation desired to enucleate the eye. The scar bulged for some time and then gave no further trouble. That patient was studied, not with the same minuteness as in Dr. de Schweinitz's cases, but with some care, was placed on a diet and his constipation controlled and he steadily improved. Eighteen months later, while traveling, he began to have trouble with the other eye and came home about two weeks after it had commenced with interstitial keratitis, which gradually extended reducing his vision to 2/69. On the same regimen improvement commenced and continued. He has had no attack now in three years. The other case was in a man, who in the last twenty years had had six attacks of iritis in the right eye and in the last eight years had had five attacks in the left eye. Vision in the right eye was reduced to 4/30 and in the left to 4/8 when he came. By changing his manner of living, taking the proper amount of exercise, particularly walking, preventing constipation, and, more than anything else in his case, absolute starvation when the attack commenced, the continuance of the trouble was prevented, so that since 1901 he had had no severe attack.

Dr. Lucien Howe, Buffalo, said that it occurred to him a long time ago that it is possible, in some cases of heterophoria for example, for us to determine whether the condition is due to some gastrointestinal trouble or not. He did what most of us do, had some expert make the examination, but after that had been done a number of times he made the examination himself. After providing himself with the apparatus he found that examination of the stomach contents was something every one of us could do in a rough way, at least with a degree of exactness that would serve as the basis for an opinion.

Dr. Melville Black, Denver, said that Dr. de Schweinitz was to be complimented on the completeness with which these cases were studied. He said that it seems to him that for years we have been groping in the dark when assigning the etiology to many chronic ocular lesions and it is only by vigorous research for the cause of such affections that we shall be enabled to depart from empiricism. Faulty metabolism, whatever that means, to our several minds, means to him a change from the normal in cell activity, both in cell nourishment and cell elimination. What underlying conditions are at work in the production of the cell change is very hard to determine. We can never learn by empirical medication.

Dr. Arnold Knapp, New York, said that he had had the opportunity of having a number of patients examined in the way Dr. de Schweinitz suggested and the results had not been at all definite. This was not mentioned to criticise the investigations of Dr. de Schweinitz but simply to emphasize the difficult problem with which we have to deal. We have, first of all, to have the aid of an expert physiologic chemist. At the same time, although his conclusions have not been definite, he thinks, unquestionably, these are the lines that will furnish the means of clearing up some of these obscure uveal diseases and at the present stage of our knowledge we should be content with observations.

Dr. Oliver Tydings, Chicago, said that coming into this special branch of the profession rather in late in life, after doing a general practice first, a thing that impressed him was that some of the attributable causes of these diseases are surely not the correct ones. One case, about six years ago, which made a very decided impression on him, was that of a patient with uveitis who had been going from bad to worse in the hands of one of the most expert men of this city. He gave the history of most obstinate constipation and a rectal operation cleared up in twenty-four hours more than all the other methods had been able to do in almost that many weeks. The presence of these unknown toxins, which produce these effects, are found in those who eat too much and in those in whom the elimination is deficient because of some anatomic defect. This particular case was one of the latter class. There is another class of cases, about which he had questioned Dr. de Schweinitz two years ago in Boston. He thinks we have good reasons for believing that in retinitis pigmentosa a toxemia produces the hemorrhage. If toxemia in other conditions will produce hemorrhage why not a toxemia from the intestinal tract. We have neuroretinitis due to kidney disturbance.

Dr. Hiram Woods, Baltimore, said that the whole tendency of modern investigation was leading back to principles of treatment that were empirically established in books published one-half or three-quarters of a century ago. We find in some of the old text-books allusions to the necessity of paying attention to the *prima via*, as it was called, and the cases that come under our observation fall largely in that line. Dr.

Woods said he has seen four cases of chorioiditis in young girls associated with amenorrhea. After mercury and iron had failed and a sensible gynecologist had been consulted and had refused to make an examination, the girls were put on a scant diet and the intestines flushed out with great improvement in the condition, more than had been accomplished in weeks of ordinary treatment.

Dr. Woods said that a few years ago he saw a pronounced case of chorioiditis in which the etiology was obscure until the boy passed a segment of tape worm, which was followed by improvement, with restoration of vision, except for a scotoma at the site of the exudate. Two cases have been observed within the past few years in which there were vague intestinal symptoms, intestinal indigestion, and finally symptoms that pointed to chronic appendicitis and a chronically inflamed appendix with adhesions. The real explanation may be that the appendicitis was a coincidence to the general intestinal condition. It is a large field and promises if properly studied the raising of a great many mysterious things from the "idiopathic" waste basket.

Dr. Leartus Connor, Detroit, said that the general practitioners have accused us of holding them as distributors; the position that Dr. de Schweinitz puts us in is that we shall turn over to the expert internist a certain number of cases for treatment in eye conditions; in other words that we shall reciprocate, which should produce a feeling of good-will all around. The interesting thing that we have before us is that the matter is made to appeal to our modern scientific methods to-day more definitely, and it is hoped there will be a larger number of these cases benefited. The intestinal tract is only one part of the cause. There are cases in which disturbances of the heart and vascular system play an important part.

Dr. Walter Pyle, Philadelphia, said that if there is any trite subject in ophthalmology it is the relation of systemic disorders to ocular diseases. It is not new. He fully appreciates the efforts made in physiologic chemistry, but he believes that those who will follow out the work along these lines will be sadly disappointed in the results. He has had numerous examinations made without any definite results. In Moorfield's Hospital patients used to be examined as to the condition of the bowels and given a purge, in fact for many years the men never treated a patient until after steps had been taken to produce elimination and prevent overeating and consequent poisoning. He does not think ophthalmologists can become internists. His patients come from the general practitioner and the idea of the ophthalmologist examining the gastric contents is out of the question. It requires skill to do it properly. We are, he said, in danger of getting the cart before the horse and if we keep on in that way, rather than remaining specialists and acquiring special skill, we will become general ignoramuses because it is impossible to cover the whole field.

Dr. G. E. de Schweinitz said that Dr. Knapp was entirely correct in his statement that these examinations could not be made in a perfunctory manner and he was correct in saying that the results were frequently disappointing, but he hoped it would be understood that if there was one thing that he tried to make plain, it was that this is a piece of work the investigation of which must be in the hands of an expert. There was no ophthalmologist, with whom he had the honor of being acquainted, who had such skill. There was as yet no definite toxin that produced any disease, unless it was the acidosis of diabetes. He did not believe any physician would object to having his patient subjected to this sort of analysis if desirous of understanding the case. It would only indicate a possible line of research and gives a suggestion as to the line of therapeutics that should be followed in conjunction with the internist.

To Kill Flies.—Delamare has found very useful a 10 per cent. solution of formol placed in a few plates in the room. It attracts and kills flies and mosquitoes. The fluid should be renewed every few days. A small night lamp standing in one of the plates helps to attract mosquitoes at night. (*Arch. de Med. Militaire*, 1908, No. 4.)

TONSILLECTOMY IN CHILDREN UNDER GENERAL ANESTHESIA—A HOSPITAL OPERATION.*

EDWIN PYNCHON, M.D.
CHICAGO.

In early life the faucial tonsils are detrimental chiefly when, owing to their size, they serve as an obstruction to respiration. Tonsillotomy as ordinarily done generally corrects this feature of obstruction.

Previous to the past decade but little attention was paid to the faucial tonsils, particularly in young children, except when they protruded beyond the pillars. Latterly it has become recognized that non-protruding or submerged tonsils, even in young children, may be the cause of much trouble.

The protruding tonsil may also be of such size that a material portion thereof lies beneath the plane of the faucial pillars. In such case it may be said to be semi-submerged. Where this occurs, ordinary tonsillotomy becomes only a decapitation and thus the remaining base constitutes a submerged tonsil.

Submerged tonsils often have a considerable size, which becomes manifest when the patient is made to gag, at which time they bulge out so as nearly to touch, even though the fauces may seem sufficiently roomy when the throat is in repose.

In children, wherein the tonsils are relatively large as compared with the small faucial space, such submerged tonsils may be more or less obstructive to nasal respiration and are thus a causative factor in otitic disturbance.

Additionally, owing to the increased area of mucous membrane distributed throughout the crypts, and the natural harbor these openings afford for bacterial invasion, the exanthematous diseases, to which children are so subject, have a much greater field to play on, thereby increasing both the severity and mortality therefrom. Furthermore, through pathologic excretion from the crypts, combined with the impaired nasal respiration, derangement of both the pulmonary and gastrointestinal tracts is induced.[1]

Another consideration of even greater importance, which has of late been emphasized by different observers,[2] is the fact that the route of entry for tuberculosis has been proved to be not infrequently through the crypts in both the faucial and pharyngeal tonsils. We thus see the futility of allowing to remain any portion of these crypts as is generally done after ordinary tonsillotomy. Many other systemic troubles, as rheumatism and cardiac or renal disease, have been traced directly to pathologic tonsils.[1, 2] Cervical adenitis is generally due to diseased tonsils.

The consensus of opinion among those who have most to do with tonsil work is progressively trending toward tonsillectomy versus tonsillotomy.

The advocates of radical removal are encouraged by a growing disregard for the so-called physiologic function of the tonsils, which seems to be a negative quantity, indorsed by the clinical fact that no bad results are ever traced to their complete removal, and additionally that such procedure is always followed by physical improvement.

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* Read in the Section on Laryngology and Otology of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

[1] Turck: New York Med. Jour., Nov. 23, 1893. Ballenger: Medicine, Nov. 1, 1897. Winslow: Maryland Med. Jour., May 13, 1899. Mayer: The Tonsils as Portals of Infection, The Journal A. M. A., Dec. 2, 1899. Packard: Philadelphia Med. Jour., April, 1900. Pynchon: The Degenerate Tonsil, The Journal A. M. A., March 21, 1903. Solenberger: New York Med. Jour., Sept. 15, 1906.

[2] Ullman: Medical News, Jan. 26, 1901. Wood: Am. Med., Oct. 3, 1903. Goodale: Boston Med. and Surg. Jour., Sept. 13, 1906. Robertson: Certain Facts Concerning Faucial Tonsils, The Journal A. M. A., Nov. 24, 1906.

Of course, it must be noted in passing that at the time of the operation any other concurrent mal-conditions, as adenoid vegetations, which may be present should also be corrected. The occasionally reported recurrence of adenoids after curettement is probably to a large extent due to a failure to thoroughly remove the faucial tonsils at the time of the adenoid operation.

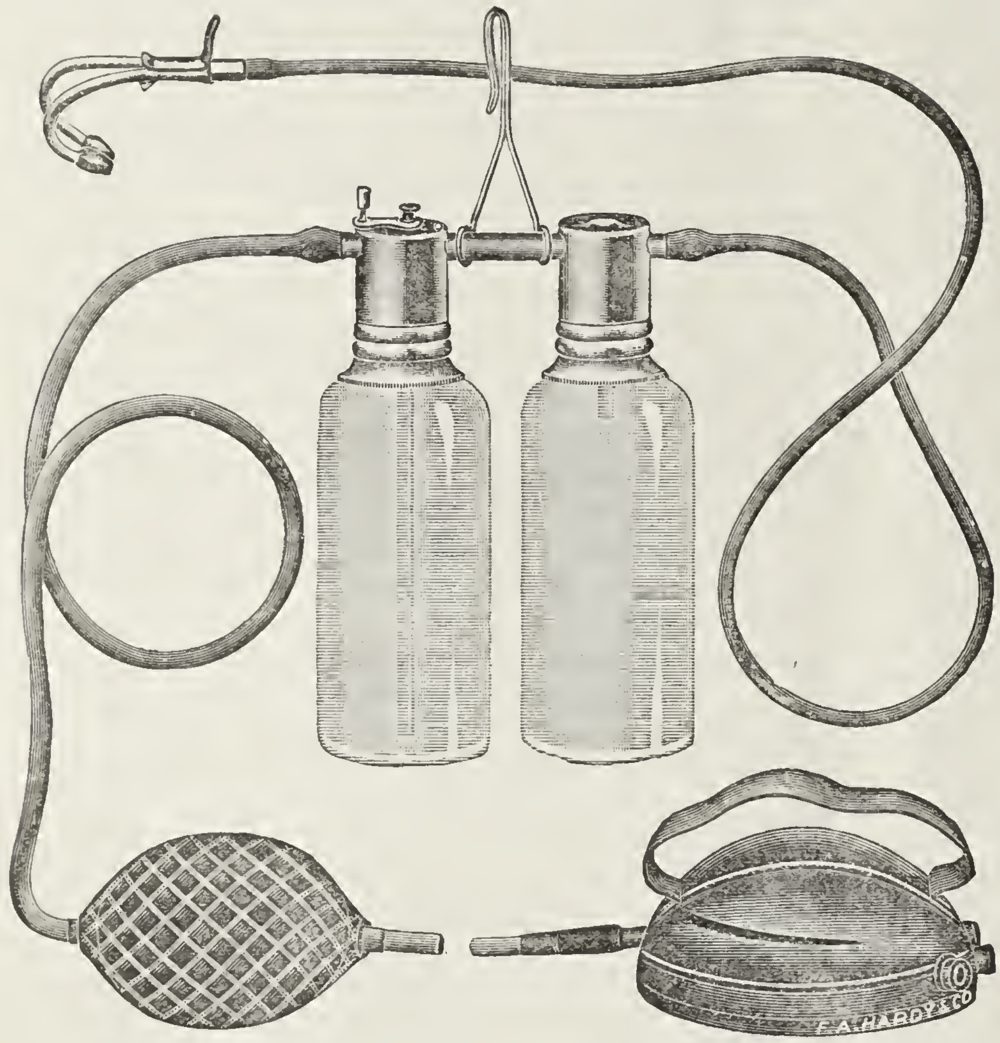

Fig. 1.—Anesthesia apparatus (one-third actual size).

Aside from the natural difficulty of operating in a deep cavity, the opening to which in a small child is none too large, and the depth of which seems to be intensified by the relaxation from the anesthesia, we have other difficulties to contend with:

a. Operating in the channel of respiration, which must not be occluded by blood or otherwise.

b. Occupying a field jointly with the anesthetist, who should always be given preference.

c. Operating on a patient who may often be said to be semi-asphyxiated from defective respiration whereby the blood has become overladen with carbon dioxid and underoxygenated for possibly several years, thereby increasing both the difficulty and danger of the anesthesia.

d. Operating in close proximity to important vessels, and at all times in a region rich in blood supply, necessitating a field more or less obscured by blood.

e. Operating in a field the nerves of which when irritated may by reflex action through the pneumogastric unfavorably affect the heart's action.

Hence the operator has both his mind and hands well occupied, apart from the constant attention to the action of both heart and lungs, which is required of him and the anesthetist jointly.

In fact, the difficulties in doing a radical tonsillectomy under general anesthesia are far more numerous and perplexing than those which are met in doing, for example, an appendectomy; therefore, the importance of the tonsil operation should not be underestimated, as has so often been the case, for it can justly be classed among the major operations in surgery.

It is an unfortunate fact that the importance of operation on the tonsil has been greatly under-estimated by both physicians and the public, and too low an estimate placed on the feature of compensation. This, of course, is largely due to the ease with which the projecting portion of a tonsil can be clipped off with a tonsillotome. Such procedure, though, has no relationship to a complete removal of the tonsil which latter-day teachings have clearly proved is the proper thing to do.

I will now describe my method of operating, whereby I secure, in addition to perfect anesthesia, good illumination, a comparatively bloodless field and a complete removal of the tonsils.

The hospital operating-room offers many advantages over the best facilities for operating which can be had at the patient's home; hence the operation when possible would better always be done at a hospital.

In order to be properly prepared for the anesthetic I direct that on the second day preceding the appointed time of operation the patient's diet be cut down one-half, and at night a sufficient quantity of the effervescing solution of the citrate of magnesia be taken to insure free alvine evacuation. The quantity required is, of course, regulated by the age of the child.

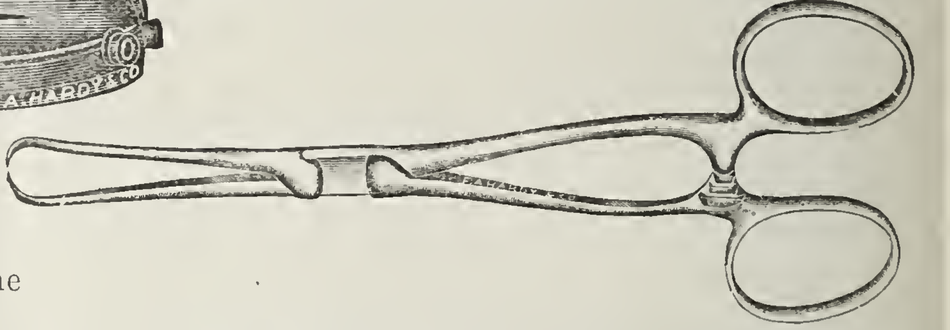

Fig. 2.—Tongue forceps (one-half actual size).

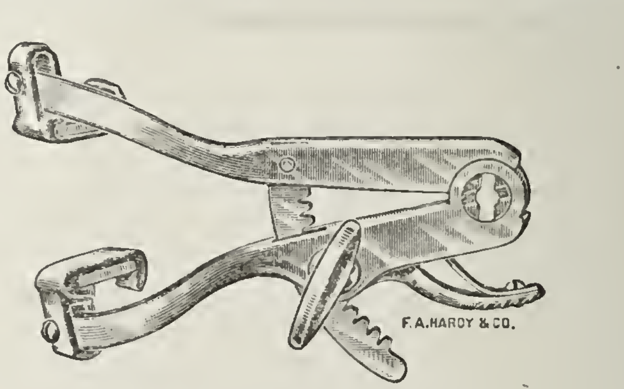

Fig. 3.—Author's mouth gag (one-half actual size).

For the next day, being the day before the proposed operation, I direct a further reduction in diet to about one-half of the quantity of food taken the previous day. At night the aperient is repeated. If, additionally, a full colonic flushing be administered it can not be otherwise than beneficial.

My preference is to have the patient taken to the hospital the evening of the day before operation. When this is done a proper attention to the diet is assured and the colonic flushing can be administered by the nurse who is familiar with the procedure. On the day of the operation no food at all is to be taken, provided the operation is done during the forenoon, as is my custom. In this way the usual annoyances and occasional danger of anesthesia are practically avoided. Water is freely allowed until within two hours of the operation.

In some cases the patient has been taken home a few hours after the operation. My preference is for the patient to remain in the hospital from 36 to 48 hours after the operation, particularly if at the same time an adenectomy has been performed.

About one-half hour before the operation a full dose of morphin with atropin is administered, the dose being regulated by the age of the child.

As an anesthetic I have frequently employed the A. C. E. mixture with great satisfaction when given by the open or drop method. The reported bad results from chloroform in this line of work causes it to at present be in disrepute. Latterly I have employed ether in all cases. An ideal method is the use of nitrous oxid, followed by ether.

After sufficient anesthesia is secured with the use of the mask, and when the operation is about to be begun, I substitute for the mask the anesthesia apparatus shown in Figure 1, the bulbous tips of which are tightly pressed against the anterior nares while the foot-bellows is sufficiently operated to keep up the anesthesia. To meet the requirements of different ages, two or three sizes of this nasal tip are needed. The first bottle is nearly filled with ether, while the second bottle contains only air. Air is carried through an inlet tube to the bottom of the first bottle, and bubbles up, absorbing the ether, next passes through the second bottle so that no liquid can be carried into the nose, and then, as it can not otherwise escape, is forced from behind the soft palate. In this way the anesthesia is prolonged indefinitely, regardless of the position of the patient's head, and the

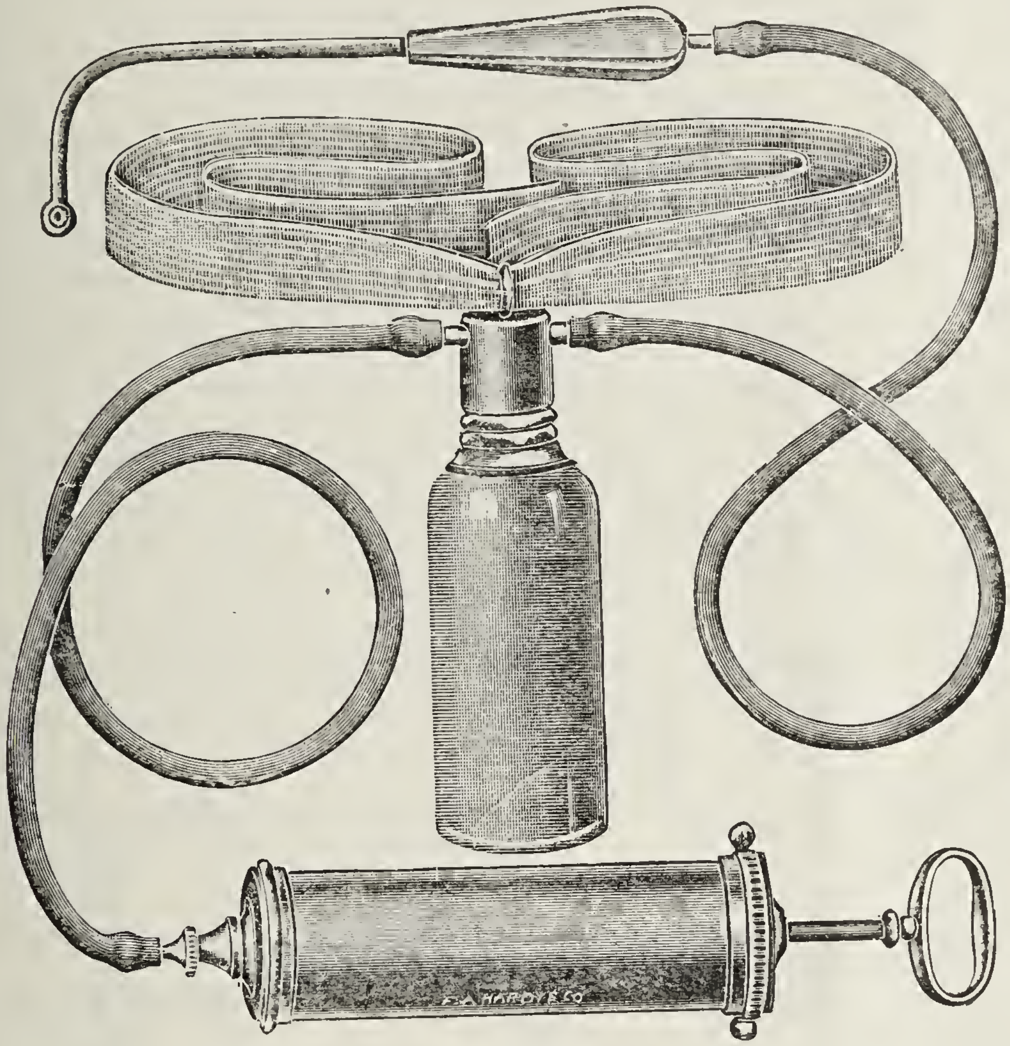

Fig. 4.—Author's blood aspirator (one-third actual size).

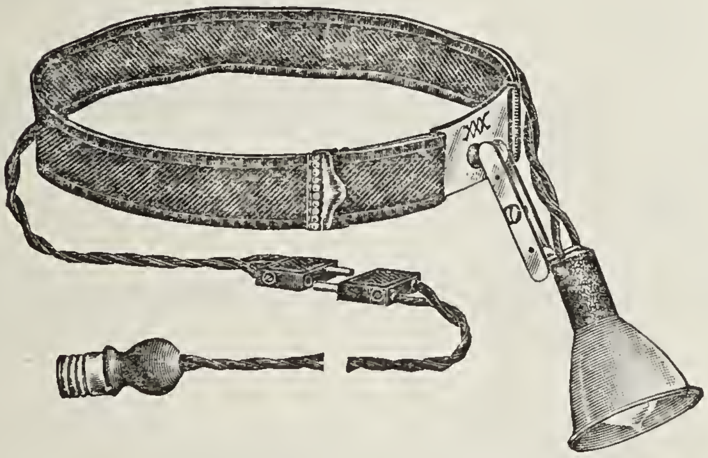

Fig. 5.—Electric head lamp (one-sixth actual size).

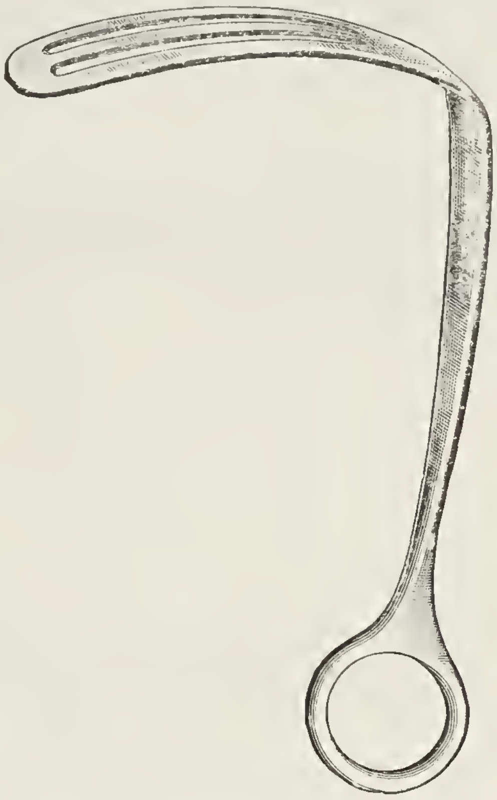

Fig. 6.—Author's tongue depressor (three-fifths actual size).

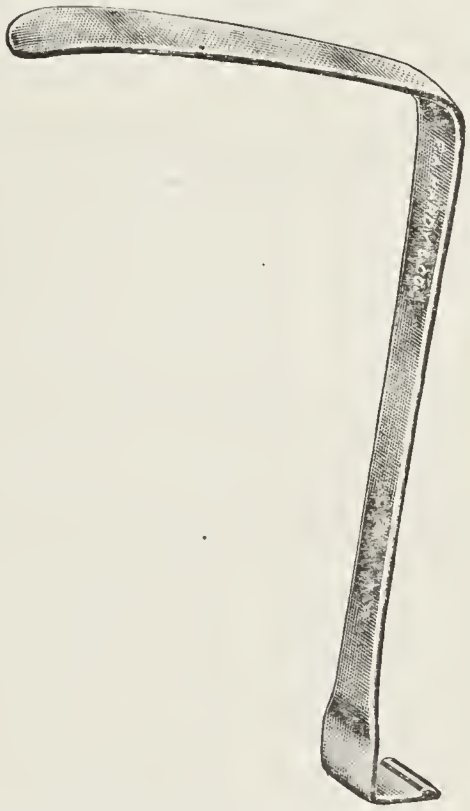

Fig. 7.—Soft palate retractor and baby tongue depressor (three-fifths actual size).

operation is not interfered with. In its use the compression bulb becomes distended, serving as a reservoir to counteract the intermitting character of the air current supplied by the bellows, and additionally can at any time be compressed if an extra volume of etherized air is called for to intensify the anesthesia.

In the construction of this device I wish to give full credit to the device employed by Dr. T. W. Brophy in his staphylorrhaphy work. I have succeeded in both simplifying and cheapening the Brophy device and, in place of the tube which he passes through the nose, have substituted the Y-shaped nasal tip, which is more suitable for this work.

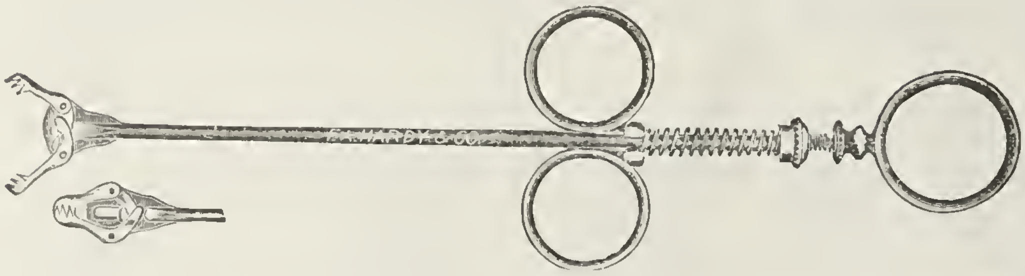

Fig. 8.—Author's three-ring tonsil forceps (one-half actual size).

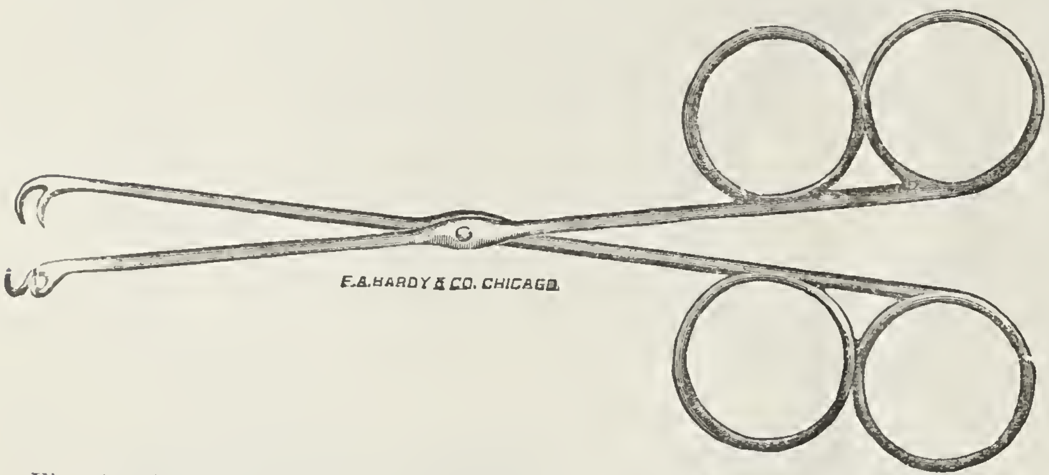

Fig. 9.—Authors No. 1 four-ring tonsil forceps (two-thirds actual size).

Another improvement which I have added is a lever on the top of the first bottle, which can be put in three positions. When in the first position all air entering the bottle is carried through the long tube to the bottom of the ether as before mentioned. When the lever is swung to the second or midway position a small opening is made in the top of the tube so that a portion—about one-sixth of the incoming air—is allowed to escape without passing through the ether, thereby diminishing the percentage of the anesthetic. When the lever is swung further, or to the third position, another and larger hole in the tube is additionally made, whereby all, or nearly all, of the incoming air passes to the second bottle without passing through the ether; hence the percentage thereof is still further diminished. Furthermore, as the lever is being swung from the second to the third position, the escape of air gradually increases and consequently the percentage of the anesthetic is correspondingly diminished. In this way, by operating the lever and increasing or diminishing work with the bellows, the anesthesia can be easily maintained at the desired degree.

The heating of the anesthetic employed has been recommended in order to increase the safety of its use. Since with this device practically all of the air inhaled by the patient is that furnished therewith, and since all of this inhaled air is forced through the nose, its elevation in temperature to a correct degree is secured by the physiologic action of the nose. In the same way the normally required humidity is secured. Additionally, as all exhaled air escapes through the mouth, the possibility of rebreathing is eliminated, which is one of the drawbacks of the mask; and, furthermore, since by the use of this device the work of the anesthetist is not interfered with, the great disadvantage of interrupted administration, which is of necessity associated with the use of the mask in the operation under discussion, is avoided. Lastly, it may be noted that, as the ingoing stream of etherized air is constantly escaping from behind the soft palate, it tends to prevent blood entering the postnasal space, thus assisting the aspirator in its removal.

As one of the pronounced symptoms which calls for the operation under consideration is mouth-breathing, which, as before mentioned, is so detrimental to the physical welfare, particularly through its unfavorable effect on the pulmonary tract, does it not seem to suggest an explanation of the reason why lung complications may follow general anesthesia during which there is prolonged mouth inhalation from a mask of air chilled by the evaporation of the anesthetic, and devoid of that required preparation for the lungs which recent study of nasal physiology has proved to be so essential?

While chloroform is credited with being a circulatory depressant, I am disposed to believe that all inhaled anesthetics are primarily respiratory depressants when so freely given as to cause asphyxia,[3] and that safety is best secured by mechanical mixture of the anesthetic vapor with air, thereby doing away with any call for oxygen gas, the use of which in combination with the selected anesthetic has been so earnestly advocated by different writers.

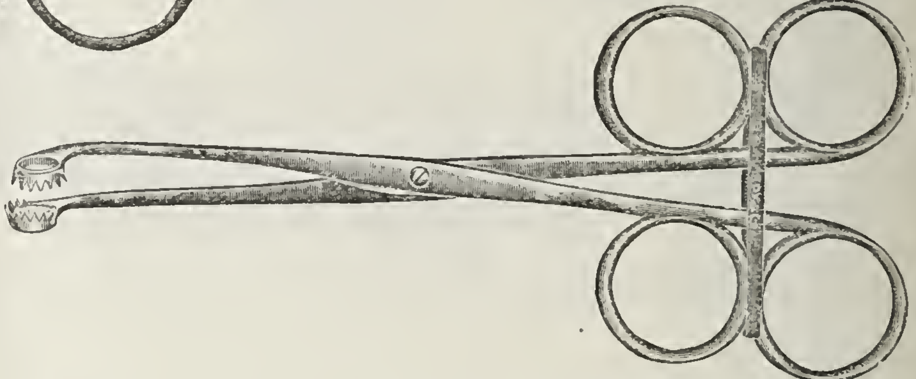

Fig. 10.—Author's No. 2 four-ring tonsil forceps (one-half actual size).

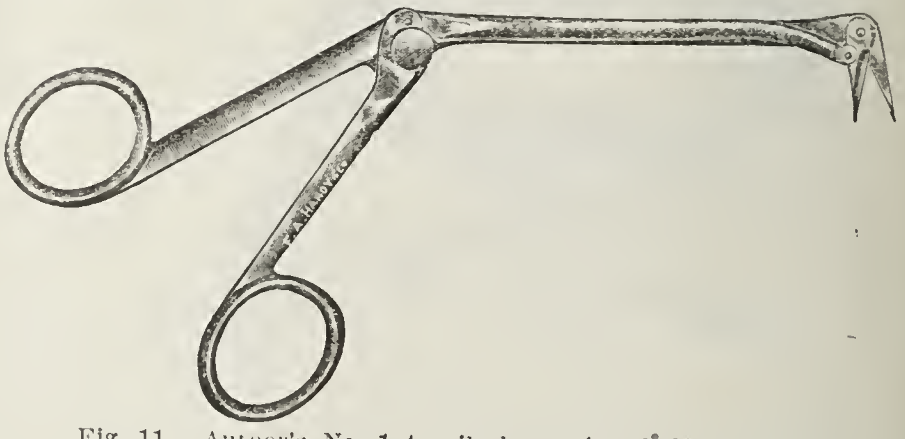

Fig. 11.—Author's No. 1 tonsil shears (one-half actual size).

The device described has been planned to meet all of the several requirements as outlined.

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[3] Pynchon: Med. Monograph, February, 1899.

As a tongue forceps, should one be required by the anesthetist, I wish to recommend the one shown in Figure 2. With this forceps the dorsum of the tongue is grasped about one inch back from its tip, by which hold, as traction is applied chiefly to the top of the tongue, the epiglottis is better elevated and the frenum of the tongue is not pulled against the lower incisors. Furthermore, as no through and through piercing of the tongue is made, there is no after-soreness complained of. Its small size, simplicity and cheapness can also be praised. I give this brief description, as its use does not seem to be generally known.

For holding the mouth open I employ the gag shown in Figure 3, which engages the incisors instead of the molars; hence does not slip, and when properly placed retains its position without further attention. It can be placed on either side of the mouth to suit the operator's convenience. By pressure on a releasing lever the gag immediately closes for removal.[4]

At the beginning of the operation the end leaf of the operating table is lowered and fastened at a slope of about 45 degrees from the bed of the table, thus serving as a suitable rest for the patient's head so as to give the so-called "head down" or Rose's position. Some operators turn the head to one side or the other to assist the escape of blood. I prefer to have the head in straight line with the body, and face uppermost, so that the position is not changed for operating either tonsil or for the succeeding adenoid curettement when required. For the removal of blood I depend entirely on aspiration and find it all-sufficient.

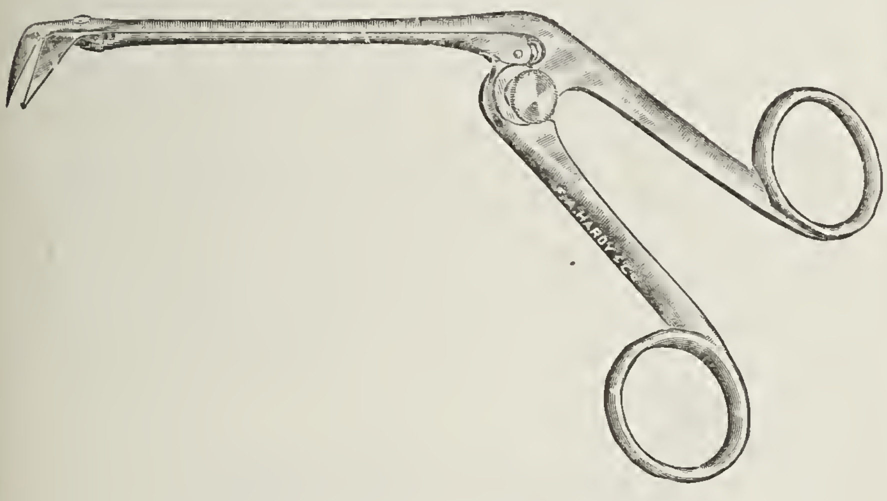

Fig. 12.—Author's No. 2 tonsil shears (one-half actual size).

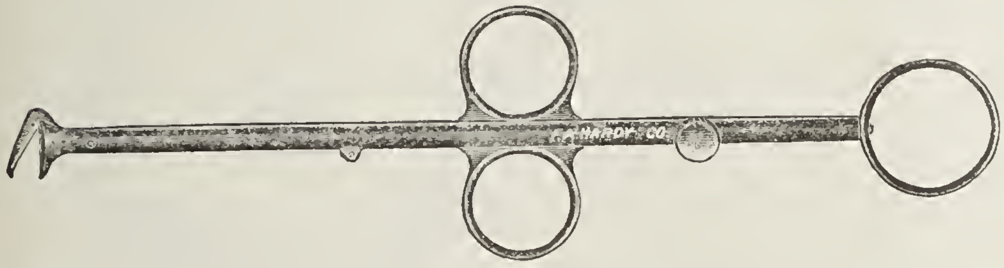

Fig. 13.—Author's semitonsillotome (one-half actual size).

In Figure 4 is shown the form of aspirator which I have found to be most satisfactory. It is suspended by the tape about the neck of the assistant who, while holding down the tongue with the tongue depressor in one hand, can with the other hand handle the aspirating tip by which all blood is from time to time removed as required. The exhaust is produced by the pump, which is operated by a nurse. The most satisfactory pump I have found is the large-sized Bier exhaust pump. Previous to its adoption I experimented for a long time with different other devices, such as rubber suction-balls and water-aspirators. The former lacked sufficient power, while the latter proved unsatisfactory because the available water pressure was insufficient owing to the operating rooms being generally on the top floor. Moreover, the device shown has the advantage of greater simplicity, compactness and cheapness, combined with utility.

If compressed air of sufficient pressure, from 40 to 60 pounds, for instance, were available in hospital operating rooms, my compressed air aspirator[5] with suitable tip could be employed with even greater facility, the escaping air meantime assisting toward the better ventilation of the operating room.

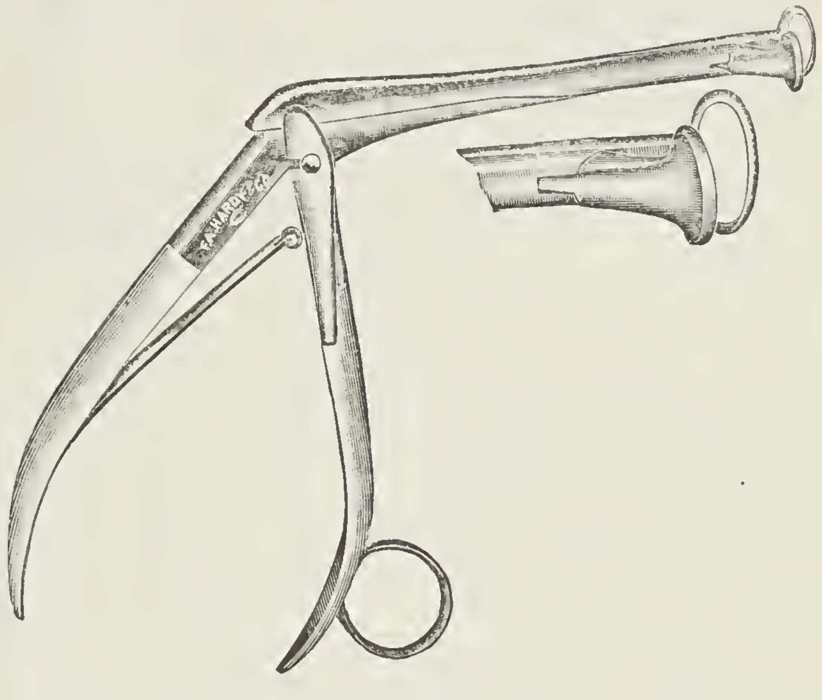

Fig. 14.—Author's tonsil punch (one-half actual size).

In this way by the use of aspiration the operative field is kept free from blood, giving an advantage to the operator as well as to the patient, for, between the tilt given the head and the prompt removal of blood and saliva by the aspirator, no fluid finds its way to the larynx or trachea to interfere with respiration. Furthermore, as there is no swallowing of blood, there is no after-vomiting from this cause whereby secondary hemorrhage might be induced. In fact, between this method of aspiration and the method of anesthesia described, including the preparatory treatment employed, no nausea or vomiting has been observed in any of the cases so treated, nor has there afterwards occurred any pulmonary complications.

In order to do good tonsil work, good illumination is of prime importance. Reflected light from a head mirror is unsatisfactory, owing to the fact that the focus of light is so easily lost by change in position of any one of three points: a, the patient; b, the mirror or operator's head, or, c, the source of illumination, particularly if it be a lamp held by an assistant or nurse. For these reasons betters results are attained by an electric head-lamp worn by the operator.

In Figure 5 is shown a head lamp previously described,[6] which I have found satisfactory.

In Figure 6 is shown the tongue depressor which I most often employ. As conditions differ, no one depressor will answer in all cases; therefore, it is wise to have other forms at hand. One necessary feature is a short handle so as not to touch the patient's chest. In one case, that of a baby less than 1 year of age, I found the handle of my soft palate retractor (Fig. 7) to be just right.

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[4] Pynchon: The Laryngoscope, December, 1904.

[5] Pynchon: Tr. Am. Acad. Ophth. and Oto-Laryngol., 1906.

[6] Pynchon: Illinois Med. Bulletin, January 1907.

In tonsil work a correct forceps is of the greatest importance, and the form required varies with the conditions present. When the tonsil projects somewhat beyond the plane of the pillars it may be easy to grasp it with any forceps selected, but in the case of a flat or fully submerged tonsil, the surface of which is generally soft and friable, a forceps with special characteristics is required. After many experiments I have perfected the one shown in Figure 8. This forceps has the desired delicate shaft combined with a three-ring handle and terminating with wide opening, toothed and pointed blades. Lastly, in grasping it is spring-actuated, being both automatic and self-retaining.

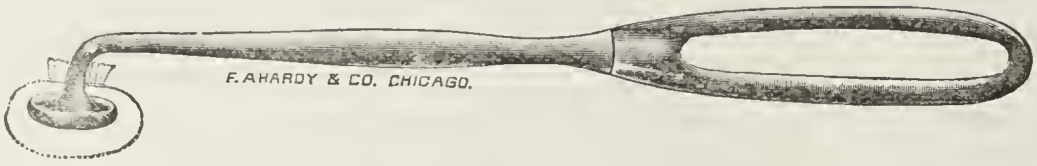

Fig. 15.—Author's tonsil presser (one-half actual size).

When the tonsil protrudes somewhat and is rounded and not friable I prefer the four-ring forceps shown in Figure 9 and previously described.[7] In case the tonsil is disposed to tear, or when after finishing the operation some small shreds or points remain, which can best be grasped by wider toothed jaws, I employ the forceps shown in Figure 10. Both this and the previously described forceps can be made self-retaining by placing an elastic band about the handles as shown in Figure 10.

For complete removal of the tonsils the choice must lie between the knife and the shears, and the latter offers the advantage of more easy cutting. Much has been said by earnest advocates in favor of the cold snare. The fact is that when complete removal of a submerged tonsil is to be accomplished by the use of the cold snare it is necessary to precede its use by a quite liberal dissection of the tonsil, so as to free it thoroughly from its pillar attachments, the rear and forward incisions being united at the top so as freely to open the supratonsillar fossa. The dissection, in fact, must be as deep as is the deepest portion of the bottom of the tonsil, for, on being tightened, the wire loop cuts in the line of least resistance, which is generally a straight line, and will not make a curved cut to conform with the shape of the tonsil base; therefore, with the use of the snare, unless preceded by free separation at both sides and top, more or less tonsillar tissue is pretty sure to be left. My conviction is that when such extensive preparatory separation with cutting instruments is necessary the operation would better be completed in the same manner.

The shears I employ are shown in Figures 11 and 12, and are of my own design. By use of the Grünwald shaft and handles the shears occupy but little space and possess great strength, while both points are sharp, so that the tissue can be readily punctured as with a knife. A feature of great importance is that the moving blade is so attached and pivoted that when being closed it is pushed against and on the fixed blade, thereby insuring the maximum cutting power. These shears cut downward, one cutting in the line of the shaft and the other at right angles thereto.

Objection may at first be made to the small size of these shears, which, for different reasons, I prefer to those patterns of larger size which are so generally employed. The removal of a tonsil may be appropriately compared with the removal of a tumor of similar size from any other point on the surface of the body, in which case no surgeon would favor removal by a single slash, as is done when a tonsil is removed by large scissors or a tonsillotome. On the contrary, such tumor would be removed by the surgeon to a large extent by the process of dissection with either a scalpel or scissors. Why, then, should not a tonsil, located necessarily in close proximity to important blood vessels, and so shaped that its complete removal must leave a pronounced and rounded concavity, be also removed carefully and by dissection as is any tumor? Having for years followed such plan in removing tonsils from adults by electro-cautery dissection,[8] and having become thoroughly convinced of its being the ideal method, I wished to follow, as far as practical, a similar method in the operation under discussion; hence I adopted the use of small scissors by which accurate dissection can be accomplished. Another feature of importance thus attained is the ease with which they can be used when operating on infants. In a child under 1 year of age, in which the smallest sized tonsillotome would have been too large, the shears described proved to be admirable and effective.

In working I practically follow the same lines followed in the electro-cautery dissection operation, the tonsil being drawn well forward toward the median line so that all cutting is done in plain sight and never at the bottom of the concavity.[7] After the tonsil has been nearly removed by the use of these shears, so that only a pedicle at the bottom remains, I complete the operation with my recently devised semitonsillotome (Fig. 13). After the scissors operation, should any rough or projecting points remain, they can be smoothed off by the use of a tonsil punch (Fig. 14).

While recovering from the anesthetic the patient is made to lie on his side with no pillow under the head.

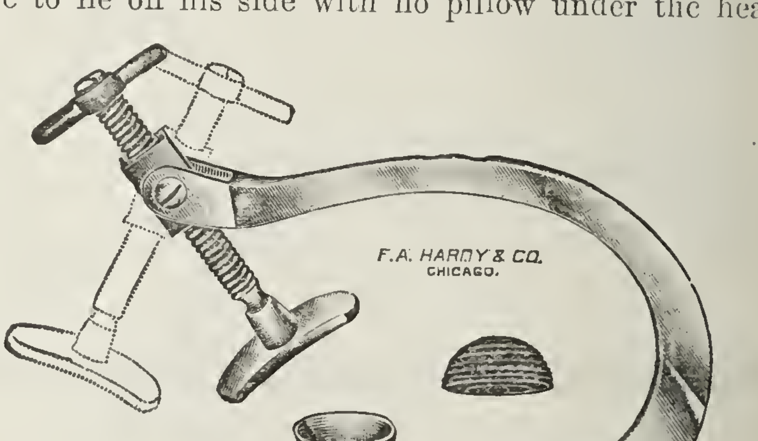

Fig. 16.—Author's tonsil hemostat (one-half actual size).

The hemorrhage usually ceases soon after the completion of the operation, though the operator should be provided with two or three long hemostat forceps. By retracting the anterior pillar with a suitable hook all of the surface of the wound can be inspected so that any bleeding vessels can be grasped and sealed by torsion. In some cases, where no particular bleeding vessel can be found, and where there is a persistent oozing, apparently from the entire surface of the wound, it can be generally checked by strong pressure applied for a minute or two. In Figure 15 is shown a convenient form of instrument for the application of brief pressure.[9]

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[7] Pynchon: Illinois Med. Jour., September, 1906

[8] Pynchon: Removal of Tonsillar Hypertrophy by Electro-Cautery Dissection, THE JOURNAL A. M. A., Nov. 22, 1890.

If a more prolonged pressure is required a tonsil hemostat may be employed, such as shown in Figure 16. While I have had occasion to use this instrument a few times with adults there has been no call for so doing with children or in the operation described.[7] In children the hemorrhage is usually of short duration after a complete removal of the tonsil.

After complete removal of a submerged tonsil by any method, as a deep depression is made, there is generally a considerable degree of soreness until the depression is partially filled by the healing process. This soreness is largely due to the fact that the wound is not sufficiently cleansed by the use of gargles or a hand atomizer. Recently I have satisfactorily substituted in their stead the use in all cases of a one-half ounce hard-rubber post-nasal syringe by which both sufficient force and a spray stream is secured.

I advise the half-hourly or hourly use of this syringe, employing a 2 per cent. solution of sodium bicarbonate, that is, a heaping teaspoonful to the half-pint of water; or still better and more agreeable, a 25 per cent. solution of some one of the pleasant vegetable antiseptics, to which the soda is added.

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DISCUSSION.

Dr. W. H. Roberts, Pasadena, Cal., considered it refreshing that at last a physician has arisen with sufficient courage to call removal of the tonsils, a hospital operation. He agreed in advocating tonsillectomy rather than tonsillotomy. The latter for partial removal of the diseased gland often causes great suffering to the patient; when the entire gland is removed only good results follow. Intestinal tract and stomach should be emptied before the operation. Chloroform should never be used, for fear of the status lymphaticus. Dr. Roberts uses a gag which gives more operating room and is less liable to injure the teeth than Dr. Pynchon's instrument. He advocated the upright position of the patient at operation, notwithstanding an unfortunate case in a neighboring city in which peroxid of hydrogen was used to check the hemorrhage and the foam of the peroxid caused the child to suffocate necessitating a rapid tracheotomy. He has followed this method for five years, and in his experience no other plan has so few disadvantages. The patient is anesthetized in the prone position, always with ether. When fully anesthetized the patient is gently lifted into the operating chair and the Brophy apparatus is used through the nose. He has used it about a year and it works very satisfactorily in maintaining anesthesia. After inserting the gag the direct daylight falling over the shoulder into the patient's mouth is all that is required for illumination, obviating all lights of any other description. The pillars and tonsils are thoroughly swabbed with 1 to 1,000 suprarenalin solution until blanched and the dissecting is begun. The assistant with long handled sponges keeps the field clear of blood, and there is generally very little bleeding. Traction is made on the tonsil with forceps, and after freeing the pillars he uses a Beers, Kyle or Douglass knife, depending on the case. He palpates with the finger and sees that all adhesions are severed and the tonsil properly loosened. It is hardest to free thoroughly the posterior pillars, and unless that is done there is danger of removing a portion of the posterior pillar with resulting cicatricial contraction. He uses the Krutz modification of Peter's snare, with No. 8 piano wire, and has no difficulty in taking out the tonsil in its capsule if the dissection is thorough. The hemorrhage can be thoroughly controlled by pressure.

Dr. J. A. Stucky, Lexington, Ky., emphasized the one point that tonsillectomy and adenoidectomy, as they are, and should be, done, are not minor surgical operations. To do this operation in the home or in the office, allowing the child soon afterward to be taken home, is unsurgical and dangerous. Tonsillectomy is the most underestimated and underpaid and yet the most useful operation in surgery, and it is the duty of the Section on Laryngology and Otology to emphasize that this is not a minor operation. He does not approve of the upright position, nor of that with the head back and down. He can not operate that way so well as with the patient on the side with the head down. He is not fully convinced that tonsillectomy is required in every case. A thorough tonsillotomy, the upper two-thirds of the tonsil being removed, the supratonsillar fossa emptied and adhesions all broken up, seems to him about enough. He rarely finds the lower lobe of the tonsil diseased. Besides the danger of the anesthesia in this operation is the other danger of hemorrhage. He knew there was not a man present who did not feel he was capable of dealing with any tonsillar hemorrhage in a thoroughly equipped hospital; but outside of a hospital he deals with it with one hand tied behind him.

Dr. Wolff Freudenthal, New York City, could not believe an adenectomy to be a major operation; nor did he consider a tonsillectomy a major operation in spite of all the facts. When the tonsils protrude well in front of the pillars he clips them off, and if he has had 1 or 2 per cent. of failures among the thousands operated on, he thinks that is not much. But if the tonsils are embedded between the pillars, or there is a history of rheumatism or abscess formation, or, if it is in grown-up children or adults, he does a tonsillectomy as thoroughly as he possibly can. Radical tonsillectomy is in his experience not necessary in every case.

Dr. C. F. Welty, San Francisco, said he precedes the anesthetic with morphin and atropin hypodermically. That helps wonderfully, not only in preventing the formation of mucus, but in keeping the child quiet after the operation. The speaker thought Dr. Pynchon had described too many instruments; instruments get lost. The operation can be done very successfully and very easily, as follows:

The tonsil is to be grasped with a right-angled tonsil forceps fenestrated to the very tips, then drawing the tonsil well into the mouth, with a Kyle knife with the round tip cut off and sharpened, cut into the mucous membrane—not into the pillar—just where the membrane joins the tonsil. Dissect it out with the finger or any blunt instrument, put on the snare and take out the tonsil at once. Just before beginning the incision he injects hypodermically about a dram of 1 to 8,000 of adrenalin. This keeps the field comparatively bloodless. After the tonsil has been taken out there is considerable blood, but by working with two forceps, the assistant holding down the tongue with straight forceps, the operator using the curved, the tampon is kept in as long as there is hemorrhage. He has found a 50 per cent. solution of silver nitrate, neutralized by salt solution, to relieve very much the pain coming on two or three days after operation.

Dr. J. W. Murphy, Cincinnati, has tried most of the methods that have been brought forward from time to time for removing the tonsils and he has about decided that the best method is that of a thorough dissection. He regards it as a major operation; anything but a minor one. As to choice of anesthetics, he invariably uses chloroform in children. He does not believe an anesthetized person should be made to assume the upright position at any time, regardless of the anesthetic, as he believes it to be dangerous. Daylight would be very unsatisfactory in Cincinnati. He does not believe in adding to the risk of his anesthetic by giving a hypodermic injection, no matter what.

Dr. F. C. Todd, Minneapolis, said that the position that he uses has the advantage of getting rid of the danger incident to the use of chloroform in the upright position, but with all the advantages of that position. He has the patient lie flat on the table and turn the head backward at an abrupt angle while he sits in front of the patient, operating with the patient's head upside down. Thus the bleeding goes into the roof of the mouth and can be readily mopped away; it can not get into the larynx, which is one of the disadvantages of the upright or side position. With this position daylight or artificial light may be used. The bleeding he has found largely a matter of use of instruments, sharp or blunt, and here would lie his objection to some of Dr. Pynchon's instruments. The entire tonsil can be removed with dull instruments, peeling it out and pushing the pillars back, and then completing the enucleation.

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[9] Pynchon: The Laryngoscope, February, 1905.

Dr. William L. Ballenger, Chicago, said that if the tonsil is diseased remove the whole of it, if possible, not a part of it. As to hemorrhage, Dr. Todd had stated that he thought sharp instruments reprehensible because of the greater liability to hemorrhage. Dr. Ballenger has seen a patient exsanguinated in ten minutes and in bed for three weeks following the use of the snare. He has been using a simple scalpel for two or three years, and has met with less hemorrhage than by any other method tried, and he has it sharpened every time before using. Secondary hemorrhages have to be taken into consideration. If we have a crushed wound there is much more liability to sepsis, and therefore the destruction of the clot in the vessel after crushing, than after a clean cut wound. Furthermore, if the tonsil is removed with a sharp instrument and with the capsule intact there is very little cutting to be done. The operation practically consists in separating the pillars deeply. The rest of the dissection is in cutting a few fibers back of the tonsil and severing it at its base.

Dr. F. E. Auten, Belleville, Ill., said that total extirpation is the only thing. There is no argument for a tonsillotomy. Even if there were there is a greater argument for a tonsillectomy. Do not remove part of a diseased mass. We can not get reduction of the anterior cervical nodes if we leave a part of the tonsil mass; if we remove the whole of a tonsil, in a large part of the young patients we shall get a great reduction in the enlarged anterior cervical nodes. He advocates tonsillectomy and thinks the method described by his predecessor the best. Nevertheless credit must be given to Dr. Pynchon for being the first man to remove the tonsil as a whole.

Dr. C. M. Robertson, Chicago, said that regarding the anesthetic used in removing the tonsils, in most cases we had to deal with children between the ages of, probably, five and ten years; rarely with adults. One could not get a child five years old to submit to the injection of a dram of adrenalin solution and probably a dram or two of cocain. It is true that children take chloroform better than grown people, but chloroform is dangerous—so much so that in Chicago very few use chloroform. Ether is admirable if the operation is to be prolonged over a minute or two. It was astonishing to him none of them had mentioned the different forms of gas—ethyl chlorid or nitrous oxid. If we wish to take out the tonsil and are a little dilatory about it we can produce anesthesia, remove one tonsil and allow the patient to come out from the anesthesia and the bleeding to cease and then give it again and remove the other gland. It is his experience with adrenalin that late hemorhage is worse.

In regard to the question of primary hemorrhage, he has never seen one in his life in tonsillectomy. Tonsillectomy is the only standard operation. He was speaking not of the obstructive tonsils, but of the tonsils that need to be removed because they are infected. Any operation will do on an obstructive tonsil—one with the finger nail, as some gentleman advocated, but that is a savage method and so far behind the times that we do not even consider it. Operations with short instruments, with scissors, such as Dr. Pynchon has exhibited here, are all right, and with a very small one he does not see but what that is an admirable way to do it. Dr. Ballenger uses a scalpel, and that is a very good way. The only thing Dr. Robertson could say about all these forms of operation is that they mutilate the parts more than is necessary. It seemed to him if we are going to bite off a portion of the body by doing it in one bite we are just that much ahead.

Dr. W. B. McClure, Lexington, Ky., throws the responsibility on the anesthetizer up to the operation, and then divides it with him. He thinks it would be just as reasonable to dictate to the microscopist what instrument he should use in determining the character of a pathologic specimen, as to direct the kind of anesthetic.

Dr. C. H. Baker, Bay City, Mich., finds that it is easy to enucleate the tonsil with the finger, after it is freed from adhesions to the pillars. It is also an easy operation in many adults. He has been removing tonsils for about eighteen years, mostly with ordinary curved scissors. The tonsil is seized with a double-toothed volsellum forceps bent at an angle, and is cleared from top to bottom. He uses a wash bottle with an atomizer bulb to drive air on to, not into, the chloroform; it passes through another tube into the mask, which does not fit the face too closely, but allows air to pass under the mask in addition to the air which goes over with the chloroform. He has had no bad results with the method.

Dr. B. R. Shurly, Detroit, believes that the operator should take the responsibility of every detail of this operation of tonsillectomy. In all children he tries, wherever possible, to do a tonsillectomy, and he believes that we have instruments that we can use to the very greatest advantage, but what instruments to use is a question of the development of the individual technic; for his own work he has found a retracting forceps best. It is of the greatest importance that it shall be a grasping forceps that will hold the tonsil until it is enucleated—by the snare preferably.

Dr. Joseph C. Beck, Chicago, believes that a great deal of this difference in the matter of technic, as spoken of by Dr. Pynchon, depends on the pathology of the tonsil to be removed—whether it is soft and mushy, or a fibrous tonsil. That must be considered in the method pursued. He would do a tonsillotomy sometimes in tonsil cases Dr. Freudenthal had mentioned. He attempts, however, to do a complete tonsillectomy, and his method is that of Dr. Ballenger, with adrenalin and cocain. In children the snare is used to complete the operation; in adults the knife is used for the whole operation. He controls hemorrhage by grasping and twisting the artery which is usually at the junction of the middle and lower thirds.

Dr. Thomas, Peoria, said it is a great mistake to do so many of these operations in the office. We should do them in the hospital, and should consider them major operations, and then we will soon gain a fair compensation for the work and responsibility taken. He thinks laparotomy an easier operation. When operating in the throat the blood pours out, interferes with the view and with the operator's work, and adds a point of responsibility and worry not present in the case of an abdominal operation.

Dr. Edwin Pynchon said that the paper did not consider all phases of the surgery of the tonsil, as some seemed to think. The title of the paper had nothing to do with tonsillotomy, but had something to do with tonsillectomy in children under general anesthesia, and as a hospital operation. The discussion had wandered outside of that. As regards this operation of cautery dissection he never recommended it as an operation in children. He had said that he had employed it in children. He did not recommend it in children less than 15 or 16 years old.

As regards the gag, this is a modification of the Ferguson instrument. The Ferguson gag engages the molars. The trouble with that gag is that it slips and requires an assistant to hold it in position. This gag of his can be put between the incisors and does not have to be held, and if used properly there is no trouble in connection with it. As regards light, he had not found daylight in Chicago very satisfactory; consequently he would rather depend on a light that does not vary. As to the position, what he desires is to get a position that will be the same for both tonsils and adenoids, and this position which has been so generally used in England he believes to be all-sufficient. The only difficulty with the Rose position is that the blood drops into the pharynx, but with his method of getting out the blood there is no difficulty whatsoever. He believed the soreness after tonsil work is due not so much to the method used as to the size of the hole remaining after the operation, and to the fact that that hole is not and can not be properly cleaned by the patient. Gargling doesn't do it. So lately he has been prescribing a hard rubber post nasal syringe to be introduced into either tonsil cavity to cleanse them so that the soreness is materially diminished. As regards the hypodermic, he has used atropin and morphin in a portion of his cases. The principal advantage of atropin is that it diminishes salivation. He does not care for the salivation so long as he has a method of taking care of it, and the aspirator does it. This matter of aspiration of fluids into the lungs has been one of the causes of danger or difficulty from the use, particularly, of ether. As regards chloroform, he has used it for a good many years and has had no accidents. He has been lucky, maybe. He has used all the care he could, but his Waterloo might come some time, and with the present feeling about the matter if he should have a fatality with chloroform he would be much more blamed than if it had occurred with ether.

MARRIAGE AND INTERMARRIAGE OF TUBERCULOUS SUBJECTS.

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The propriety or impropriety of the marriage of persons affected with tuberculosis depends largely on the influence of heredity in the production of the disease. The factor of heredity has been discounted to a considerable degree since Koch, in 1882, discovered the true nature of the disease. Since then more and more importance has been attached to the element of communicability. Possibly the pendulum of thought has gone a little too far in this regard and too much emphasis has been laid on the contagious nature of the malady and too little on heredity as the predisposing cause.

THE FACTOR OF HEREDITY.

It is well that the equilibrium be maintained in the battle now being waged against the plague, and that none of the causative influences be overlooked. After admitting all that has been said and written in regard to contagion and environment, we are still forced to recognize heredity, or, if you please, an inherent weakness or impaired vital resistance, as one of the most potent factors with which to be reckoned. In spite of our wishes and reasonings to the contrary we are, in a measure, what our progenitors were. There is no escape from the unerring law of nature that the characteristics of the fathers and mothers, be they physical, psychic, moral or pathologic, are indelibly stamped on their offspring.

I shall not undertake to prove this. I shall not give an array of statistics, nor call on history, nor introduce new evidence to show that the posterity of tuberculous subjects are far more liable to the disease, and that it is more difficult of treatment than when it occurs as the result of other and more immediate causes. I believe, however, that after admitting and endorsing all that is known of the proximate causes, such as contagion, bad sanitation, overcrowded tenements, the depressing effect of other diseases, alcoholic and other excesses, the factor of hereditary predisposition outranks any one of, if not all, these in contributing to the propagation of this disease. This opinion has been held and is held to-day by eminent biologists and a recent statement made by Mr. Pearson of London sustains this view of the subject.

The force of heredity being an admitted fact, how shall we deal with it? To put a stop to the propagation of human beings who bring with them to the arena of life the peculiar liabilities or susceptibilities to the disease that will sooner or later cause their untimely exit from the drama of human affairs, would seem, to a rational mind, not the last, but the first undertaking in any campaign waged for the extermination of the disease.

WHAT SUCH CONTROL IMPLIES.

To attempt to do this involves interference with the marriage relation; it conflicts with what for ages has been deemed the finer sensibilities of sentiment, and invades the sacred precincts of love. It makes puerile much of the poetry and song of the ages, and turns romance into stern reality; it does away with the dogma that matrimonial alliances are made in the spirit world; it injects confusion into the social realm and runs counter to long established habits and customs. It is a great task beset with many difficulties, yet a cause so just that the pressing needs of the hour force medical men, humanitarians and political economists to consider the question seriously. Ought a man or woman afflicted with consumption to marry, even though the opposite mate is healthy? All science and experience answer that they ought not, for the unfortunate subject of the disease is liable to infect the husband or wife by contagion and to transmit to the children the peculiar weakness which will cause them to fall a prey to the disease.

If a tuberculous man marries a healthy woman he subjects her to the danger of contracting the disease, and *vice versa.* This in itself ought to be a sufficient reason to prevent such alliances even if the evil stopped at this point.

DANGER TO THE OFFSPRING.

We are now engaged in trying to prevent the spread of the disease by the enactment of state and municipal laws against spitting and against personal contact with tuberculous patients and also by the erection of special hospitals or wards for the tuberculous. We urge sanitary inspection of schools and recommend that children with the disease shall be forbidden to attend school, that nurses and even physicians, that are known to be tuberculous, should not practice their professions. Yet the closest intimacy and personal contact, that of the marriage bed, and the daily and hourly contact with the diseased husband or wife is unrestricted and no voice is raised to prevent the worst of all causes for the dissemination of the disease. We hardly dare to invade the household and dictate the management of family matters. We should try, however, to prevent the establishment of such a dangerous source of infection by insisting that celibacy is the only sane and safe condition for anyone who has the disease, and to bring about by education and legislation a reformation in the public mind on the subject.

If the danger of tuberculosis occurring in the offspring is so great when *one* parent has the disease, it is intensified fourfold when *both* parents are tuberculous. The offspring of such an alliance is almost solely at the mercy of the disease. It might be possible for children having only one tuberculous parent to escape, and it is admitted that they frequently do, especially if that parent be the father. But if both parents are tuberculous at the time children are begotten, such children will have small, if any, chance of escape.

It has been noted by the most casual observer that the children of this class come into the world with the cachexia well marked, many dying in the first few months of some form of tuberculosis. Others may live until puberty, and a few may lead a semi-invalid life and drag out a weary existence terminating before the meridian.

THE FACTOR OF SEXUAL INTERCOURSE.

There are other subjective reasons, also, that should prevent consumptives from marrying. It is generally admitted that sexual indulgence is injurious to persons afflicted with the disease, and it is urged as one of the difficulties of the home treatment of patients that they frequently will indulge their passions to excess and that such indulgence is detrimental. Tuberculous subjects often have an inordinate desire for sexual gratification and the overindulgence but hastens the progress of the disease. For their own welfare, then, to say nothing of the welfare of others, such individuals should not marry. It is especially injurious to women afflicted with the disease to bear children. The vital energies spent in childbearing and lactation need to be conserved in the interest of the woman in order that she may battle with the disease in her own system.

What can be done to remedy this evil? How shall victims of the disease be prohibited from entering the married state and from propagating their species? Something may be accomplished by education. A small percentage of the people will listen to reason and will conform to well defined precepts. But it must be confessed that but a small minority can thus be influenced to deny themselves for the common good. If mankind could be induced to abandon selfish purposes and each strive for the common advancement of the race, if all were prompted with a desire to serve rather than be served, willing to suffer rather than to entail suffering on others, then this problem, as well as many others, would have been solved long ago.

EDUCATION AND RESTRICTIVE LAWS.

But from the beginning of time until now this characteristic has not been a prominent one in the history of the race, so that it has been found necessary, for the progress of civilization and the protection and benefit of society, to govern man by law. There must be restrictions thrown around his conduct, that his native savage instincts shall be abridged, and that such of his practices as are inimical to the public welfare shall be abolished. In his baser self it is true the individual has ever protested against law on the ground of personal liberty, and no advancement has ever been attempted that did not provoke his indignation and was denounced as an infringement of his personal freedom. Law in its final analysis is, and always has been, a curtailment of individual rights. Man is free from the operation of law so long as his actions do not interfere with the welfare of his kind; thus far may he go and no farther.

We conclude, then, that if the marriage of a certain class entails disease on posterity and that, such disease being communicable, the descendants that result from such marriages are a menace to the community at large, the marriage of such persons ought to be interdicted by law.

A FEDERAL LAW PROBABLY NECESSARY.

I do not intend to suggest the enactment by the government of a prohibitory statute in this regard, nor attempt to describe the operations of such a law, but I am disposed to believe that to be effective national legislation would be necessary; and owing to our complex society and the present status of popular feeling the time is perhaps hardly ripe for the experiment. But steps should be taken to impress on the public mind the folly of permitting the marriage of consumptives and the impossibility of stamping out the disease so long as the victims of it are multiplied by the inevitable law of heredity. There must be a limitation to the propagation of consumptives or of individuals so strongly predisposed to it that they are almost sure to contract it or a hundred years from now the war against it will have just begun.

THE NEED OF EDUCATION.

Let us then inform the public by distributing circulars of information written in language that can be understood. Public exhibitions have a large influence on the public mind; school and home training is important and public lectures create interest as perhaps nothing else can. Physicians in their close contact with the home should certainly impress the young people of the danger of the marriage of consumptives and strongly oppose it. Then, some time in the future, when the beneficial effects of education are manifest and sanitary laws properly executed have curtailed the ravages of the disease, for the incorrigible ones who will not be governed by reason, let the dignity and majesty of the law be invoked. Thus can we teach them that it were better for a few to practice self-denial than that many should suffer for their indulgence.

We should not look on celibacy as a punishment in these cases. Indeed we insist that for the patient's own welfare it is far better not to marry. Thousands of persons voluntarily live in single blessedness and make themselves useful citizens and appear to extract as much comfort and pleasure from life as many who take the matrimonial vows.

Tuberculous subjects should be taught in the most impressive way that to marry and intermarry will inevitably bring much sorrow to the household, that they will but hasten themselves into untimely graves to leave behind them, perchance, a sickly posterity that will be liable to succumb to the disease. Let us instil high ideals in the minds of the young people. That their purposes in life should be to bless and elevate mankind, that the temporary joys of the marriage of diseased persons are soon to be overshadowed by thick clouds of sorrow and disappointment. Better endure the loneliness, and even the stigma, of single life than to behold the destructive sequel that follows in the wake of marriage in such cases.

It was the custom of the ancient Greeks to destroy the idiotic and mentally unsound; as a result they became a nation of the most profound scholars of the pagan world. The intellectual impetus given the world by their philosophers is felt to this day. The ancient Germans destroyed their physically deformed and weak offspring, the diseased and old were abandoned to their fate; the result was a race of Teutonic giants, compared with whom the neighboring peoples were as pygmies, and before whom the well ordered Roman legions paled and trembled and fled. The blood of these sturdy men circulates in the Anglo-Saxon race, the most renowned people of the world.

If the victims of disease are prevented from propagating their species, by the close of the present century, science will have stamped out the most fatal and dreadful maladies that afflict the race. Nemesis ever in pursuit of the hapless victims of hereditary influences would cast a shadow no longer over the pathway of human progress, and mankind would come into possession of its own. Three score and ten years would be regarded as soon enough for man to lie down to rest, centenarians would linger a while longer to behold the beauties of the old earth, rejuvenated and purified by sanitary law, while hand in hand the leaven of civic righteousness operating in the moral and social world would purify and ennoble the lives and consciences of men and life would partake of the joys and transports of Eden restored.

THYMIC ASTHMA, WITH REPORT OF A CASE OF THYMECTOMY AND RESECTION OF ENLARGED THYROID IN A CHILD 23 DAYS OLD.

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WHEELING, W. VA.

The treatment of enlargement of the thymus is mainly medical, by arsenic, mercurials, tonics, air, light, etc. X-ray treatment has not as yet given definite results. Operative treatment is indicated in abscess; or, in case of simple enlargement, tracheotomy may be required to prevent suffocation. Castro reports one case in which life was prolonged somewhat by tracheotomy. Rehn secured more permanent relief by opening the neck and drawing the gland upward, so as to relieve the trachea. It was suspended by sutures in its new location and recovery followed. Jackson of Pittsburg after securing temporary relief by tracheotomy, extirpated the thymus with permanent recovery.[1]

This is all that the latest and most extensive work on surgery has to offer on the treatment of a condition at once very dangerous and fairly frequent; most of the other text-books do not mention the subject at all, and judging from the dearth of literature[2] on this topic it certainly looks as if surgeons had neglected this most important field. It is, therefore, very necessary that each case operated on, whether successfully or not, should be carefully watched and reported, so that we may be enabled to formulate the rules for surgical interference and work out a technic dealing most advantageously with the different problems involved in the operation.

ANATOMY AND PHYSIOLOGY OF THE THYMUS.

The thymus develops during fetal life as a tubular protrusion from the third gill-cleft on either side, thus forming a double organ stretched out between the thyroid and the upper limits of the heart. These epithelial tubes then are encroached on by the surrounding vascular tissue growing into the epithelial masses, thus dividing the gland into lobes and lobules and crowding the epithelial elements more and more until there are only remnants of them in the form of the so-called "Hassal's corpuscles." In the meantime the vascular stroma is invaded with lymphatic tissue, so that at birth the gland consists largely of this tissue, similar to that of the spleen or lymphatic glands. During the period of greatest activity, that is, up to the second year, this lymphatic tissue is most prevalent, while in years after it is slowly replaced by fatty tissue.

The thymus grows rapidly during intrauterine and the first two years of extrauterine life, when it is composed of two flat lobes, joined in the middle by a delicate vascular connective tissue; at this time it is of a yellowish-pink color, moderately soft, and enclosed in a thin capsule. It is situated in the upper and anterior mediastinum, being in close relation with the trachea, arch of the aorta, pulmonary artery, superior vena cava, both innominate veins, the recurrent laryngeal and pneumogastric nerves, and also the upper part of the pericardium and apices of the lungs, with all of which it is connected by delicate fibrous bands. Usually it reaches up into the episternal notch, but not necessarily so, not even when enlarged. Its normal dimensions and weight vary considerably, so that it is at times not an easy matter to tell whether the gland is enlarged or not.

The physiologic function of this organ is still shrouded in more or less mystery, but according to the best authorities it seems to have something to do with the production of leucocytes and also with the growth of the body.

Albert Katz found at the postmortem of sixty-one children, dead from various causes, that the thymus was present in all; while Bourneville found the gland absent in twenty-five out of twenty-eight mentally weak children; so that, while we do not know a great deal about the functional importance of this organ in the human being, we have as much cause for treating this gland with the same respect on the operating table as we have in regard to the thyroid, and as the matter stands to-day it certainly seems a wise plan to leave a part at least of the gland behind.

THYMIC ASTHMA AND THYMUS DEATH.

Since Kopp first described enlargement of the thymus in connection with the sudden death of certain children who had been suffering from dyspnea the literature on this subject has become quite voluminous. Thymic asthma, so-called, is due no doubt in most cases to the pressure of an enlarged thymus gland on the trachea, although it is probable that the pressure on the other structures connected with the gland, as the large venous trunks, the pneumogastric nerves, etc., take part in producing the characteristic symptoms. The thymus in these cases has been usually found to be simply hypertrophic, although any other enlargement, tubercular, syphilitic, inflammatory, or even simple congestive, is liable to produce the symptoms.

The difficulty naturally increases with the size of the organ and also with its position. Where the gland does not reach clear up into the sternal notch the trachea is less liable to be compressed; as the anteroposterior diameter of the upper aperture of the chest cavity is only, on an average, one to two centimeters, it is evident that after the passage of all the structures enumerated above as passing through this opening there is very little room left for an enlarged thymus. Moreover, this aperture is formed by a ring of bones and cartilage which does not yield even on forcible traction.

SYMPTOMS.

In well-developed cases of thymic asthma we find the symptoms of a stenosis of the air tract somewhere between the larynx and the bifurcation of the trachea; inspiratory and expiratory stridor, as a more or less audible whistling respiration; retraction of the supraclavicular, infraclavicular, and intercostal spaces during inspiration; inspiratory dilation of the nostrils, and more or less cyanosis and restlessness. Most any time these symptoms may assume a most dangerous character, the respiration becoming extremely labored, the patient becoming blue or almost black. Consciousness is lost, convulsion may set in and, with a rapid, weak pulse, death may follow in the course of a few minutes.

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[1] Keen, W. W.: Surgery: Its Principles and Practice.

[2] I found the following references on this subject: Jackson, Chevalier: THE JOURNAL A. M. A., May 25, 1907. Warthin, Alfred Scott: Internat. Clin., i, Series 17. Buck: Reference Handbook of Medical Sciences. Kocher: Encyclopädie der Gesamten Chirurgie; Ann. Surg., November, 1906. Kirkes: Handbook of Physiology. Sojous: Internal Secretions.

Potts reports four cases where children died with the symptoms of suffocation within two minutes after the insertion of a tongue-depressor. A child may show very slight symptoms of difficult respiration, and suddenly in the midst of a crying spell or during an exciting play become cyanosed and perish with symptoms of suffocation. According to one writer there are annually in London alone about 1,000 deaths of little babies from "overlaying;" how many of these children might have died from thymic asthma? Inspection and palpation are as a rule negative in thymic enlargement, except where the gland is quite large and forms a visible and palpable swelling in the suprasternal notch. Percussion often brings out an abnormal dulness over the upper part of the sternum, while auscultation may show diminished breathing and abnormal tracheal sounds. The voice is generally unchanged, except that it may be weak. The fact that in a case of obstruction to respiration the usual intubation gives no relief, while the intubation with the use of a long tube removes the stenotic symptoms, would point to the thymus as the cause of the obstruction. Chevalier Jackson was enabled, by the use of a bronchoscopic tube introduced by tracheotomy, to see directly the narrow slit to which the trachea was reduced by the pressure of the enlarged gland; but of all the diagnostic means the radiogram is the most trustworthy. The enlarged gland throws a shadow different from that of the normal gland in that it reaches farther to the side of the vertebræ and merges into the shadow of the heart in a convex line instead of in a rather straight line.

TREATMENT.

The condition being such that a child with a large thymus may suffocate at any moment, it is very plain that surgery, and prompt surgery at that, is the only rational procedure. The medical treatment may bring down a syphilitic enlargement in time, but it surely will not reduce a simple hypertrophy far enough to keep the patient safe until this reduction is accomplished. Some authors advise us to keep a child of this kind quiet, see that it does not throw the head back, keep it from crying and excitement, keep away infectious diseases, etc. All of this is very nice, but who can watch an otherwise healthy child day and night for years in its every movement?

Operation with the view of removing the offending organ seems to me the only treatment to be thought of, and in the few cases where this was carried out the results certainly have been all that could be expected. But there is still that class of cases left in which there are no symptoms whatever, until suddenly and without warning a child is seized with a suffocating attack and expires before help can be had. I venture to say that in a considerably greater number of cases of sudden death in children than we imagine at present the thymus is in all probability to blame. In cases of this kind we are utterly in the dark until after the catastrophe, and the only way to prevent such deaths would be a systematic radiographic examination of children.

I have been able to collect notes on seven cases of operative interference in thymic asthma.

Rehn's two cases.—In the first, Rehn pulled the gland up from the mediastinum and fastened it to the sternal fascia. Cure.

In the second he had considerable trouble, as the gland could only be removed piecemeal during expiration. Cure.

Fritz Koenig's two cases.—In the first, a part of the gland was removed and the rest fastened to the sternum. Cure.

In the second, Koenig resected the left lobe and added deep tracheotomy with no result, so he removed later on, the lobe completely and enlarged the aperture of the thorax by resecting the sternum. Attacks have not recurred up to date of publication.

Perrucker's case.—Trachea was exposed by a long vertical incision through the isthmus of the thyroid. The enlarged thymus was pulled up and removed. Cure.

Chevalier Jackson's case.—The patient was operated on in two stages. Tracheotomy was first performed with introduction of a long tube down past the obstruction. Four weeks later the gland was enucleated with the finger, the stiff tube preventing a dangerous compression during the manipulation.

My own case.—*Patient.*—James D., aged 23 days, was brought to the hospital on March 29, 1908.

History.—Father and mother are and have always been well. There is nothing of importance in the family history of either. The baby was delivered by the aid of forceps, after a rather tedious labor, lasting eight hours. Right after delivery it was noticed that the respiration was labored and there was a decided stridor present. This respiratory difficulty lasted in a moderate way for about two weeks, when suddenly the child would be seized with attacks of a suffocating character, throwing the head backward, the inspiration and expiration becoming alarmingly difficult, and the pulse becoming rapid. The baby then became deep blue and was evidently dying, but by cold applications to the head and neck the attack would pass over and the baby revive. These attacks continued with greater or less severity until the baby came to the hospital, referred to me by Dr. Quimby, who was called to see the patient on March 28, immediately after an attack. He examined the baby very carefully, but could find nothing abnormal, except a considerable swelling appearing in the region of the thyroid gland which he, very naturally, took for the cause of the stenosis.

Examination.—The baby, after its arrival at the hospital, presented the following status: Well-developed male child, weighing about twelve pounds. Respiration markedly stenotic; both inspiratory and expiratory stridor. Retraction of supraclavicular and infraclavicular and intercostal spaces during inspiration. Slight cyanosis. Pulse 110. Respiration 25. In the middle line, immediately below the larynx and slightly to the left, a round smooth swelling, about the size of an English walnut, slightly movable from left to right and more so up and down with the larynx on deglutition. The skin over the swelling freely movable and of normal color; no enlarged veins and apparently no pain on manipulation.

Diagnosis.—Parenchymatous goiter. The supposition that this was the cause of the dyspnea seemed natural. However, if this was so, then the slightest pressure over the thyroid enlargement would close the trachea completely, and this experiment failing, it occurred to me that an enlarged thymus might be the cause of the trouble. There were, however, no changes observable either by inspection, palpation or percussion and auscultation further than the symptoms of tracheostenosis. I asked Dr. Quimby, therefore, to take a radiograph, and this cleared up the diagnosis immediately.

Operation.—The baby was then given chloroform in very sparing doses, a transverse incision was made over the upper edge of the sternum from the insertion of the cleidomastoid of the one side to that of the other, saving, however, the insertion itself. The trachea was then cleared between the sternal notch and thyroid gland and, by insertion of two silk loops, was held ready for a tracheotomy at a moment's notice. The gland was then searched for and was seen to move up and down with the respiration as a round yellowish-pink body;

this was seized with very slender catch forceps and pulled upward. By so doing, however, the dyspnea at once became great, and it was evident that the gland could not be pulled through the bony ring of the chest aperture without causing alarming compression of the trachea. I tried to pull the sternum forward with the aid of stout hooks, but it was unyielding. I then split the manubrium in its middle by a vertical incision with a bistoury and was now able, with tenacula, to pull each half of the sternum sufficiently forward to allow the coming manipulation to take place without special danger to the trachea. The next step consisted in freeing the capsule of the enlarged thymus from the surrounding structures by working a curved director slowly and cautiously over the whole surface, dividing the delicate fibers holding the gland in place. The left half of the gland was now removed in three or four parts, the tissue breaking very readily. A small piece of the left lobe was left for physiologic reasons. The right half was then lifted out from the mediastinum and removed *in toto*. The bleeding was rather insignificant and was stopped with a gauze packing. Immediately after the delivery of the gland the respiration became perfectly easy and peaceful. Each lobe of the gland measured 1½ by 1 by 1 inch, so that the two lobes together formed an organ about 1½ inches long, 2 inches wide and 1 inch thick. Microscopic examination showed simple hypertrophic and no other pathologic change. Attention was now paid to the thyroid enlargement. The upper flap was dissected back together with the platysma as far as the larynx; the fascia binding together the sternohyoid and sternothyroid muscles was split vertically from larynx to the sternal notch, the muscles stripped back on either side and thus the thyroid exposed to full view. The enlargement was found to belong to the left lobe and this was resected in the following way: A needle armed with chromicized gut was thrust through the parenchyma close to the posterior capsule, thus saving parathyroid glands as well as the recurrent laryngeal nerve, and the gland was tied off in three sections, a piece as large as a small walnut being removed altogether. The upper flap was now drawn down and sewed to the lower with horsehair and a small gauze drain inserted into the thymic recess led out through the middle of the incision.

Postoperative History.—The baby stood these two operations admirably; there was no shock nor fever and the wound healed by first intention. On the eighth day after operation the patient was discharged and has been very well up to the present time, having gained three pounds since the operation.

SURGICAL CONSIDERATIONS.

The operation should be performed as soon as a diagnosis is made, the radiographic method being the most reliable of our diagnostic means. A tracheotomy should be provided for in every case, but avoided if possible on account of the danger of infecting the mediastinum. The upper chest aperture should be temporarily enlarged by the splitting of the sternum, if during the operation the dyspnea is increasing at all; in this way it will be possible to avoid tracheotomy in a number of cases. General anesthesia should be used, as it is very difficult to operate on a struggling child.

THE CONJUNCTIVAL TUBERCULIN REACTION.*

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Since the original articles of Wolff-Eisner, Vallée and Calmette appeared describing an inflammatory reaction of the conjunctiva following the instillation of tuberculin solutions into the conjunctival sac, a wealth of literature has accumulated in regard to the experiences of various investigators with this important test. Many that have employed the test have most enthusiastically proclaimed it simple, reliable and absolutely harmless. Unfortunately others have had less satisfactory results from its use and have stated that it is unreliable as a diagnostic measure and at all times dangerous, entailing risk of serious ocular damage.

Notwithstanding the condemnation which it has received it seems, judging from the literature, that the test is of great value and one that will be used extensively. Inasmuch as definite conclusions may be drawn only from data obtained under different conditions, I have felt it worth while to add my observations to those already recorded.

In my cases I have employed a ½ or 1 per cent. solution of Koch's old tuberculin, the dilution being made with sterile distilled water or more commonly with sterile physiologic salt solution. I have studied in all 189 individuals—109 adults and 80 children. I shall discuss the results in children and adults separately.

THE REACTION IN ADULTS.

The results in sixty-eight adults either tuberculous or probably so are shown in Table 1.

TABLE 1.

Condition of Patient.	Stage.	No.	+	0
1. Positively tuberculous, (bacilli in sputum)	Incipient	6	5	1
	Moderately advanced	21	16	5
	Far advanced	22	12	10
	Total	49	33	16
2. Probably tuberculous	Incipient	7	4	3
	Moderately advanced	3	3	0
	Far advanced	9	4	5
	Total	19	11	8

No case was considered positively tuberculous unless tubercle bacilli were demonstrated in the sputum, even if the case gave unmistakable evidence of disease. Of the tuberculous or probably tuberculous about 65 per cent reacted positively. That the incipient and moderately advanced cases show a higher percentage of reactions than those far advanced has been observed by many. My results also illustrate this fact as shown in this summary:

Stage.	Number. Examined.	Per cent. of Reactions.
Incipient	13	69
Moderately advanced	24	79
Far advanced	31	51

The test was tried in forty-one individuals who either were suffering from some non-tuberculous lesion or were normal. The results are given in Table 2.

TABLE 2.

Condition of Patient.	No.	+	0
Typhoid fever	14	7	7
Pneumonia	2	..	2
Unresolved pneumonia	1	..	1
Influenza	1	..	1
Gonorrheal arthritis	4	..	4
Cerebral syphilis	1	..	1
Tertiary syphilis and aneurism	1	..	1
Aortic aneurism	1	..	1
Emphysema and bronchitis	2	1	1
Emphysema and asthma	1	..	1
Bronchitis and valvular disease	1	..	1
Pernicious anemia	1	..	1
Sciatica	1	..	1
Empyema	2	..	2
Myocarditis	1	..	1
Angiocholitis	1	..	1
Diabetes	5	..	5
Normal	1	..	1
Total	41	8	33

It is very noteworthy that of fourteen cases of typhoid fever seven, or 50 per cent., reacted positively. S. Cohn[1] first called attention to the fact that typhoid patients frequently responded to this test, noting eight positive reactions among twelve cases examined. Levy[2] observed one positive reaction in three cases of typhoid. He states that in the positive cases examined by himself and those of Cohn and Eppenstein the patients were convalescents, all febrile cases failing to respond. My observations were made on febrile cases only, hence it is apparent that the reaction may occur during the active stages of the disease as well as in convalescence. Cohn explains the reaction in typhoid on the score of a hypersusceptibility on the part of the typhoid patient to the bacterial albumin in the tuberculin.

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*From the Department of Research, Chicago Tuberculosis Institute.

[1] Berlin. klin. Wchnschr., 1907, No. 47.

The results obtained in this series of cases support the views held by many that the conjunctival tuberculin test when properly applied is of value in the diagnosis of tuberculosis. It is more reliable early in the disease than in the advanced stages. The reaction is not specific and is not of service in the differential diagnosis between typhoid fever and tuberculosis simulating typhoid fever. In no case should a positive conclusion be based on the result of this test alone.

THE REACTION IN CHILDREN.

In conjunction with Dr. Ethan A. Gray I have applied the conjunctival tuberculin test to eighty children in the Chicago Nursery and Half Orphan Asylum. The children ranged in age from 6 months to 14 years.

A thorough physical examination was made of each child. Signs regarded as possible evidence of tuberculosis—either latent or active—were: Imperfect development, loss of weight, supra- or infra-clavicular depressions, flat chest, winged scapulæ, palpable cervical or axillary glands, scars from previously infected glands, dilated venules over suspicious areas, deficient respiratory action, prolonged high pitched expiration over the apices, râles at the apices, vertebral bronchophony or whisper, imperfect percussion note over the apices.

When all of these signs were absent the case was considered non-tuberculous. When one or two were present it was regarded as suspicious. If several were demonstrable it was classed among the very suspicious. The results of our examination are given in the following table:

TABLE 3.

Age of Patient.	Condition.	No.	+	..
From 6 months to 2 years (incl.)	Normal	7	..	7
	Suspicious	8	..	8
From 3 years to 6 years (incl.)	Normal	8	..	8
	Suspicious	14	..	14
	Very suspicious	1	1	..
From 7 years to 14 years (incl.)	Normal	8	..	8
	Suspicious	23	6	17
	Very suspicious	10	5	5

It will be noted that there was no positive reaction in twenty-three perfectly normal children. With increase in the evidences of tuberculosis there is an increase in the percentage of positive conjunctival reactions. This fact is well brought out by the following summary:

Condition.	No.	+	Per cent. +
Normal	23	0	0
Suspicious	45	6	13½
Very suspicious	12	6	50

These results indicate that the conjunctival reaction when present in a child is an additional evidence of tuberculosis. Comby,[3] after testing 300 children, concluded that the conjunctival reaction is of great service. Four positive and six negative cases examined by him came to autopsy and in each case the result of the test was confirmed.

VERY SEVERE REACTIONS.

As stated, some consider the tuberculin conjunctival test dangerous because of the occasional appearance of very severe reactions and suggest that it should be abandoned or its use much restricted for that reason. It seemed worth while to examine the literature to determine, if possible, the frequency of the very severe reactions. In this attempt I have met with much difficulty inasmuch as many authors have made only incomplete reports, omitting essential details. Two preparations of tuberculin have been commonly used, namely, precipitated tuberculin (Calmette's) and diluted old tuberculin.

Precipitated Tuberculin.—Calmette advised the precipitation of the tuberculin with 80 per cent. alcohol, thus avoiding the irritating action of glycerin and other substances present in tuberculin not essential to the test. The precipitated tuberculin has been prepared by many investigators for their own use. The great majority, however, have used solutions made from tablets, or serum tubes, put out by different laboratories, the chief of these being the Pasteur Institute in France, the Höchst Laboratory in Germany, and the laboratory of Parke, Davis Co. of Detroit. I have found no direct criticism of the French and American preparations. That originally placed on the market by the Höchst laboratory was determined to be at least ten times too strong, since the weight of the dry powder was used as the basis for dilutions and not that of the original tuberculin solution. The firm now recommends that when their dry preparation is used a 0.1 per cent. solution and not a 1 per cent. should be employed.

Old Tuberculin. — Eppenstein[4] instilled into many eyes a drop of a 2 per cent. glycerin solution and reaction did not follow. He concluded that the presence of glycerin in old tuberculin would not be irritating to the eye. MacLennan[5] made a similar experiment, using a solution of 1 per cent. phenol and 1 per cent. glycerin. Reactions did not follow. Wolff-Eisner[6] states that the precipitated tuberculin contains the same poisons as the original old tuberculin. Many now recommend the use of a 1 per cent. solution of old tuberculin—Wolff-Eisner,[6] Treupel,[6] Schröder and Kauffmann[6]—and if the contained glycerin and other substances do not complicate the result it would seem for many reasons to be the best preparation for the work.

I have tabulated the results of various observations as they bear upon this question of very severe reactions. It must be stated that by a very severe reaction is meant one in which the conjunctivitis is accompanied by chemosis, keratitis or corneal ulcer; cases followed by general reaction unless accompanied by very severe local inflammation are not included in this review. The results obtained by the use of the precipitated tuberculin as first recommended by the Höchst Laboratory were by no means mild, as is well shown in Table 5.

TABLE 5.—HÖCHST ORIGINAL PRECIPITATED TUBERCULIN.

Author.	Number. Examined.	Per cent. Tuberculin.	Very Severe.	Remarks.
Klieneberger	61	1. (10 %)	5	Authors regard all due to the preparation used.
Wiens and Gunther	12	1. (10 %)	4	
Wiens and Gunther	38	.5 (5 %)	2	
Total	111		11	

It will be noted that 10 per cent. of the cases in which this preparation was used gave very severe reactions. Schmidt also reported a severe reaction, and

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[2] Deutsch. med. Wchnschr., 1908, No. 3.
[3] Presse Méd., 1907, xv, 64, p. 506.
[4] Med Klinik, 1907, No. 36.
[5] Brit. Med. Jour., 1907, ii, 1643.
[6] Münch. med Wcshnschr., 1908, No. 2.

Wolff-Eisner and Wolff considered this preparation too strong. The results following the employment of Koch's old tuberculin are given in Table 6.

TABLE 6.—DILUTIONS OF KOCH'S OLD TUBERCULIN.

Author.	Number Examined.	Per Cent. Sol.	Very Severe.	Remarks.
Schröder and Kauffmann...	77	1	0	"Entirely harmless."
Mainini	100	5	0	"Entirely harmless."
Levy	330	2 and 4	2	Once or twice noticed severe reaction following the use of 4 per cent. solution.
Mac Lennan.	25	1	0	
Kohler	175	1, 2 and 4	0	
Schenck and Seiffert	100	1, 2 and 4	3	Following use of 4 per cent. solution.
Schenck ...	100	0.5	0	
Clark	189	0.5 and 1	0	
Total.....	1096		5	

In this series five very severe reactions occurred and these followed the employment of 4 per cent. solutions. The harmlessness of the more dilute solutions is apparent.

The next table (7) includes results from the use of precipitated tuberculin (Calmette's).

TABLE 7.—PRECIPITATED TUBERCULIN.

Author.	Number Examined.	Per cent. Sol.	Very. Severe.	Remarks.
Meille	18	1	0	
Mac Lennan...	57	1	0	
Mac Lennan...	20	0.5	0	
Eyre, Wedd and Hertz	138	1	0	
Stephenson....	30	1	0	
Nance and Swift	22	1	1	P., D. & Co's prep. There was previously a phlyctenular ulcer of other eye.
Smithies and Walker	242	1	1	P., D. & Co.'s prep. One mg. T. A. given subcutaneously previous to instillation.
Total	527		2	

In many reports the details were incomplete and these are given in a separate table (8).

TABLE 8.

Authors.	Number Examined.	Per cent. Sol.	Very. Severe.	Remarks.
Etienne	150	?	0	
Rénon	28	1	3	Preparation not stated.
Wolff	64	0.5 & 1	2	Preparation not stated.
Napier	?	?	2	In both cases tuberculin given previously.
Downes	22	?	0	Preparation not stated.
Baldwin	137	?	0	Preparation not stated.
Total	401		7	

Omitting those cases in which the original Höchst preparation was used and those recorded by Napier, who did not mention the number examined, we have 2,024 cases in which number occurred twelve very severe reactions. Five of these followed the instillation of a 4 per cent. solution of tuberculin. Those reported by Napier, Smithies and Walker were probably due to the use of subcutaneous injections previously or subsequently and the results were due to acquired hypersusceptibility. In 918 cases in which a 1 or 0.5 per cent. solution of Koch's old tuberculin or precipitated tuberculin were used but two violent reactions occurred—about 1 to 450.

Lapersonne[7] investigated six very severe reactions and concluded that this test is not a source of danger to the eye, and the rare cases in which accidents have occurred simply call for some counsels of prudence. He says that a thorough examination of the eye should first be made. In all but one of the six cases which he investigated there was pre-existing disease of the cornea. In no case was vision impaired. Morax[8] thinks it is only dangerous to previously diseased eyes.

Calmette[9] states that by using sterile solutions and by employing irrigations or compresses in those cases which react sharply or longer than usual serious consequences can be avoided. Previous disease of the eye, he thinks, demands the advice of an ophthalmologist, and the test should not be used in the aged. Delorme,[10] however, considers hypersusceptibility the underlying factor in violent reactions, and since this can not be predicted the test must be considered a dangerous procedure.

It is obvious, then, that the views on this phase of the subject are various, probably to a great extent because different strengths of tuberculin and different technics have been employed. The conclusions to be drawn from the tables of results are that if a 0.5 or 1 per cent. solution is employed, preferably of original old tuberculin, in individuals free from previously diseased eyes there will be little danger. Hypersusceptibility, if natural, can not be foretold; acquired hypersusceptibility—by repeated instillation into the eye, or subsequent subcutaneous injection of tuberculin, should be avoided where possible, for it has been the experience of many that reactions under such circumstances are very frequently severe. Cohn,[1] Levy,[2] Rosenau and Anderson[11] give indisputable evidence that a positive reaction following repeated instillation into the same eye is not of diagnostic worth, but is simply an evidence of acquired hypersusceptibility, an additional reason why second instillation should be abandoned.

In conclusion I desire to thank Dr. Ethan A. Gray and the resident staff of Cook County Hospital for their kindness in offering material for the investigation of this test.

Clinical Notes

LIGATION OF PORTAL VEIN FOR HEMORRHAGE DURING OPERATION ON HYDATID CYST OF THE LIVER,

WITH A STUDY OF THE RELATION OF URINARY EXCRETION TO HEPATIC FUNCTIONS.

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The object of this communication is to report and place on record the history of a case in which the portal vein was ligated during an operation for hydatid cyst of the liver. So far as we have been able to ascertain, the case is unique in surgical history. As there were practically no disturbances of nutrition following the operation, and as the patient made a prompt and satisfactory recovery, a series of investigations was undertaken to see what, if any, abnormalities existed in the daily excretion of urine.

Patient.—A woman, 38 years of age, was admitted to the Roosevelt Hospital suffering from an epigastric tumor with periodic attacks of pain in the right hypochondriac region.

History.—This was negative up to three months before admission. At that time the patient had suffered from an acute attack of pain in the region of the gall bladder, associated with nausea and vomiting. Following this attack there had been a slight jaundice, which soon disappeared. Since that time the patient has suffered from similar attacks on a number of occasions, the pain, however, being more centrally located, and the point of greatest tenderness being just beneath and to the right of the ensiform.

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[7] Presse méd., 1907, xv, 797.
[8] Bull. et mém. Soc. Méd. d. hôp. de Par., 1907, 3, xxiv, 1313.
[9] Bull. de l'Acad. de Méd., Feb. 4, 1908.
[10] Bull. de l'Acad. de Méd., Feb. 11, 1908.
[11] THE JOURNAL A. M. A., March 21, 1908, 961.

Examination.—The temperature was found to be normal; pulse 88. Blood examination showed 7,000 leucocytes; polynuclears were 76 per cent., lymphocytes 23.5 per cent., eosinophiles 0.5 per cent. An oval, elastic tumor was easily palpated in the mid-line, midway between the ensiform and the umbilicus. The tumor was deeply seated, apparently fixed to the deeper structures, and was moderately tender to pressure.

Diagnosis.—This rested between an echinococcus cyst of the left lobe of the liver and an abnormally located gall bladder.

Operation.—Under general anesthesia an incision was made, extending from the ensiform to a point one inch below the umbilicus. When the peritoneal cavity was opened a large oval mass was seen presenting in the mid-line and pressing upward the gastrohepatic omentum and stomach. The gastrohepatic omentum seemed thickened and highly vascular. A distinct sense of fluctuation could be felt within the tumor, which was apparently fixed to the interior surface and posterior border of the liver. The right free border of the lesser omentum was felt, and the duct and hepatic vessels were palpated. To avoid these structures, an incision was made through the gastrohepatic omentum, exactly in the mid-line of the body, over the center of the tumor, which exposed a smooth gray structure, which was supposed to be the fibrous envelope of the tumor. A large exploring needle was introduced through this fibrous structure, and clear fluid withdrawn. On the withdrawal of the needle, an active hemorrhage took place from the small opening. When an attempt was made to control this by hemostatic forceps a larger rent was made, which resulted in a very copious flow of dark-colored blood. The hemorrhage was temporarily arrested by digital pressure, and, dissecting away the superficial tissues, it was found that the structure which was supposed to be the fibrous capsule of the tumor was in reality a large vein, nearly 1 cm. in diameter, passing upward from the region of the pancreas to the transverse fissure of the liver. The caliber of the vein had evidently been much encroached on by the growth of the tumor, over which it passed in a flattened and ribbon-like condition. The vein was under a good deal of tension from the upward pressure of the tumor and its walls were exceedingly friable. Two careful attempts to suture the wound were made with fine silk and a minute round needle. As soon as the pressure was removed and blood coursed through the vessel, the stitches were torn out and the hemorrhage recurred. The vessel was finally doubly ligated, above and below the seat of injury.

As it was impossible to remove the tumor or to bring it to the surface of the wound in such a manner as to unite its fibrous capsule with the abdominal wall, after packing off the intestines and all of the surrounding peritoneal space with a large mass of handkerchief gauze, the cyst was freely opened and its fluid contents siphoned off. After this the gauze was removed and a large rubber drainage tube was securely sewed into the cyst opening. This was surrounded by a small mass of gauze packing, which extended from the surface of the tumor to the abdominal wall. The wound was closed, with the exception of that point through which the tube and packing emerged. The operation was a long one, and was followed by a considerable reaction.

Postoperative History.—The temperature rose on the following day to 103 degrees and later to 104 degrees. The pulse was very rapid, but of good quality. The patient suffered only slight pain, and was soon able to take food in abundance.

The first dressing occurred on the third day, when the cyst was irrigated with normal salt solution, and a large amount of cloudy fluid and daughter cysts removed. At the second dressing, two days later, the cyst was washed out with a 1 to 8000 solution of nitrate of silver. This was repeated every day, the strength of the solution being gradually increased until a solution of one part to two thousands was employed. The result of this was to cause a marked shrinkage and opacity of the daughter cysts, which were washed away, and continued to appear in the washings for some three weeks. The packing surrounding the tube was removed during one of the early dressings, but the tube was retained for five or six weeks, until the quantity of secretion from the cyst cavity had been reduced to a very small amount.

The wound was then allowed to heal by granulation. The temperature remained between 101 and 104 degrees for three weeks, and then gradually came down to normal. With this exception the patient presented absolutely no signs of illness or interference with normal nutrition. In fact, she has gained steadily in weight and color, and from being an anemic and emaciated invalid has grown into a fairly robust and healthy woman.

During her convalescence the blood was frequently examined. On the day following the operation the leucocytes were increased to 17,000, polynuclears 72 per cent., lymphocytes 27 per cent., eosinophiles 1 per cent. One week later the white count showed 27,500 with 86 per cent. polynuclears. From this time the white and polynuclear counts gradually fell to the normal. On the twenty-first day after operation the record shows 8,000 leucocytes and 70 per cent. polynuclears. At no time was the number of eosinophiles above 1 per cent.

The pulse and temperature remained markedly elevated after operation for fourteen days without any sign of wound infection or retention of secretion in the cyst. After the fourteenth day both pulse and temperature, though somewhat irregular, gradually fell to normal. From the twenty-eighth day after operation until the patient's discharge on the sixtieth day, the temperature was practically normal, pulse from 72 to 96.

The patient was last examined six months and fifteen days from the date of her operation. Her weight had returned to the normal; her appetite was fair, and her general condition excellent.

A careful examination of the abdomen and thorax failed to reveal any evidences of tumor, enlargement of the liver or encroachment on the pleural cavities. The wound was solidly healed.

The patient's urine in twenty-four-hour samples was examined for a period of about a month during convalescence. In this portion of the work most of the observations were made under Dr. Gies' direction by Dr. D. R. Lucas.

Color, odor, reaction, volume, specific gravity and total solids of the daily urine were normal for the diet the patient was receiving. Coagulable protein, abnormal quantities of reducing substance (sugar), diacetic acid, hemoglobin, bile acids and bile pigments could not be detected in any sample of the urine. Acetone in slight amounts was detected in only a few samples. There were no noteworthy facts connected with the quantitative elimination of total nitrogen, urea, uric acid, creatinin and phosphate; the daily amounts of these constituents were well within normal limits.

Special attention was given daily to determinations of the amount of ammonia nitrogen in the urine. The Folin method was used for this purpose. While the proportion of the ammonia nitrogen in the total nitrogen was fairly high during the early period of convalescence, when the ingested protein was relatively small in quantity, it soon fell to a moderate and normal proportion.

These facts pertaining to the urine indicate strongly that the normal chemical effectiveness of the liver was not appreciably diminished by the surgical procedure to which the patient was subjected. The normal color of the urine and the absence from the urine of biliary constituents and hemoglobin show that the bile formation and reabsorption were undisturbed. The non-occurrence of coagulable protein and sugar in the urine indicates directly that prompt absorption and assimilation of digestive products from the alimentary tract were not appreciably impeded. The normal urinary amounts and proportions of urea and ammonia make it evident that urea formation in the liver proceeded without hindrance.

The only explanation of this failure to observe marked changes in the nutrition of the patient seems to us to be that in the gradual growth of the tumor from below upward the portal vein was carried away from its normal position toward the mid-line, and that as a result of increasing pressure and the associated stretching of the vein its caliber became gradually reduced and the collateral circulation was thereby established, which at the time of operation was so near complete that the diversion of the small amount of blood which was then passing through the obstructed vessel caused no perceptible increase in symptoms. This theory was strengthened by the fact that in the first incision one or more very large subcutaneous veins were encountered in the region of the umbilicus, such as are often found in advanced cirrhosis of the liver or after the performance of Narath's operation.

61 West Forty-eighth Street.

A SUBSTITUTE FOR THE MOVABLE STAGE TO BE USED WITH THE MALTWOOD FINDER.

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PHILADELPHIA.

In microscopic work, especially in studying blood or bacteriologic slides, some sort of "finder" is a very necessary part of the equipment. Any one who has used the vernier scale which accompanies most movable stages will agree that this is a rather unsatisfactory method of noting down an exact locality on a slide for further examination. The slightest disturbance of the relation existing between microscope and movable stage destroys the value of the reference figures completely. In carelessly covering the microscope with a bell jar, for example, the movable stage may be struck and moved, and all one's past trouble is wasted.

Another objection to registering with the vernier scale is that the same microscope must be made use of each time. For these reasons I have been using the Maltwood finder and find it very much more convenient. This is a finder that has been in use for a number of years but is not widely known. It consists of a heavy glass slide three inches in length, in this respect corresponding precisely with the ordinary slide, on which a network of a large number of small squares, each containing two figures arranged one above the other, so that each square has a different combination, has been placed (Fig. 1). These squares have been photographed on the slide.

1 1	1 2	1 3	1 4
2 1	2 2	2 3	2 4
3 1	3 2	3 3	3 4

Fig. 1.—Illustrating a small portion of the Maltwood finder showing the plan of figure combination.

All Maltwood finders are made interchangeable, the squares being placed exactly in the same place on each slide. In using this finder the methods is as follows: If on looking over a slide with the help of a movable stage a cell or some similar object is seen which one desires to examine at some later time, the slide is carefully removed, the Maltwood finder substituted without disturbing the movable stage, and the square which is found in the center of the field on focussing on the finder is noted down. In order to make sure that the proper reading has been made the finder and the slide should be substituted one for the other several times, when on focussing the same field on the slide and the same square on the finder should appear.

Suppose the reading to have been $\boxed{\frac{13}{23}}$, then later, when the particular field or cell that it is desired to find again is sought, this process is reversed. Put the finder under the microscope and locate the square $\boxed{\frac{13}{23}}$, place it in the middle of the field, then remove the finder and substitute the original slide, again without disturbing the movable stage, and on focussing the looked-for field or cell should be found in view. This takes but very little time and has the advantage that a slide can be sent to any one having such a finder, with the request that he examine such and such a field, giving the numbers of the particular square to which reference is made.

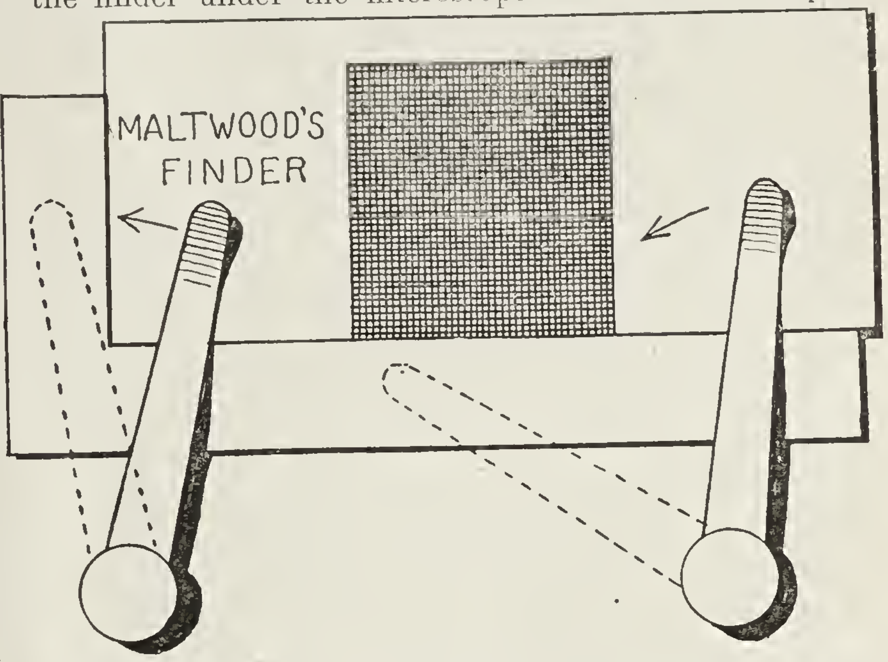

Fig. 2.—Showing brass right-angle devised to take the place of the angle furnished by the movable stage; the Maltwood finder in position. The two clips of the microscope stage are shown, with dotted lines demonstrating how they can be moved from the finder or slide to the brass right-angle in order to hold it steady.

Having often had the wish to use this finder on microscopes without movable stages I devised a simple little right-angle of brass that could easily be carried in the pocket with the finder and which could be substituted at any time for a movable stage, as the only purpose that the movable stage serves in this connection is to afford an angle into which the slide and the finder will fit.

The illustration shows this right-angle and demonstrates how the clips on the microscope can be moved from the finder or slide, to hold the right angle steady, while the slide or finder are being substituted one for the other. The illustration also shows the size of this right angle which has been found to be most serviceable. The strip of brass from which the right angle is cut should be about one-sixteenth of an inch thick.

By means of this simple little device it is a very easy matter to arrange a demonstration of slides under a large number of microscopes in a very short time, often less than a minute being required for each specimen. In finding particular fields for photomicrographic reproduction this right-angle has proved itself to be very useful.

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MENTAL THERAPEUTICS, OLD AND NEW.

The recent wave of emphatic insistence on the influence of the mind over the body and of the power of mental therapeutics to heal many of the ailments of which women—and some men—complain has recalled attention to an old subject so vividly that we are glad to have the privilege of printing this week[1] Dr. S. Weir Mitchell's summary of American medical contributions to this subject. There is a tendency on the part of many to think that the mental healing which has now become such a staple subject of discussion at church meetings and in the daily newspapers and periodicals of all kinds is something novel. Its association with the term "new thought" seems to stamp it as a recent discovery in human knowledge. Dr. Weir Mitchell's paper does away with any such notion as this by showing the element of mental therapeutics that has always been applied in the rest cure and by calling attention to the fact that mental healing is almost as old as the history of human thought.

As a matter of fact, whenever in history there develops a popular interest in psychologic problems this feature of mental therapeutics bobs up serenely as a novelty. Nearly twenty-five hundred years ago Plato, in one of his "Dialogues," made a speaker, who was for the moment in a critical mood as regards the physicians of the day, say: "This is the great error of our day in the treatment of the human body that physicians separate the soul from the body." Many other striking expressions occur in Plato's "Republic," especially in that portion in which, after having dwelt at some length on gymnastics and their value to health, he touches on disease. It is rather manifest that in certain ways of the city life of the Athenians, the passing of their old simple modes of living and the tendency to luxury which had crept in with the spread of Athenian power beyond the narrow confines of the original little city, had given rise to nearly the same set of social evils, and these in turn to very similar individual complainings as at the present time. Here, for instance, is a significant expression which one can well imagine in the mouth of a modern critical sociologist: "'Well,' I said, 'and to require the help of medicine, not when a wound has to be cured, or on occasion of an epidemic, but just because, by their lives of indolence and luxury, men fill themselves like pools with water and winds, compelling the ingenious sons of Asclepios to give diseases the names of flatulence and catarrh; is not this, too, a disgrace?'"[2]

After some discussion in the "Republic" with regard to the curious treatment of these diseases for which Plato makes one of the interlocutors say, "these are certainly strange new-fangled names for disease," there are some further expressions to show how the great master of Greek philosophy realized the influence of suggestion in producing disease symptoms. He is confident that in the old days many of the diseases that exist in his time did not exist, or at least people did not complain of them, because they were not so conscious of themselves. He says this will not be hard to understand "if you bear in mind that in former days, as is commonly said before the time of Herodius, the guild of Asclepios did not practice our present system of medicine which may be said to educate diseases." He even quotes the example of a physician who, being unable to cure his own malady, passed his entire life as a valetudinarian. "He could do nothing but attend on himself and he was in constant torment whenever he departed in anything from his usual regimen, and so dying hard by the help of science, he struggled on to old age." It is evident from the form of expression that Plato had some idea even of the physician hypochondriac who will not let himself be persuaded that he is better, but nurses his ills on until the end.

Plato was not the first to discuss this subject, for Hippocrates frequently suggests the influence of the mind over the body and the necessity for a physician securing the confidence of his patient if he wishes to do him good. Thinking physicians have always insisted on this. A typical example is Sydenham, the great father of English medicine, sometimes called the modern Hippocrates. A story is told of his sending a man to a distant town in England to take the waters there. The patient, after a long journey, found to his disgust that there were no healing springs near the place. When he returned in wrath to Sydenham the great English physician told him that his reason for sending him was in order to get his mind off his ills. As a matter of fact, the man was so much improved that he realized the value of the prescription himself. At all times since, the influence of the mind over the body has been emphasized in English medicine.

We are not, therefore, discussing the influence of mind on body for the first time, nor getting at the power of suggestion as a new thought. These ideas are very old. It is well to realize this in order to obviate certain dangers in a movement of this kind. There is always a risk of reaction after fads such as this now attracting attention with regard to mental therapeutics, and especially when the religious element is so much emphasized.[3] An exaggerated importance is attached to them; too much is expected from them. Inevitable disappointment follows and, as a constant consequence, even the truth that is in them fails to be properly appreciated. Physicians have always employed the influence of the mind, consciously or unconsciously, in their therapeutics. Perhaps they have not always used it so much as it might have been used. On the other hand, their conservative attitude toward it is likely to do much more good than the present tendency which surely makes for an overvaluation of the influence of the mind in the cure of disease. Real disease, founded on true organic change, is, as Dr. Mitchell says, never influenced by mental healing. This must be remembered and must be insisted on if we would not see a series of disappointments that will apparently make mental therapeutics of less value than they actually are. We do not wish in any way to belittle the influence of the mind on the body in thus warning with regard to its limitations. But we do wish to call attention to the fact that it is not new, but as old as thoughtful men and that the phases of overattention have been followed by phases of too great inattention because of failure to give it its proper place.

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[1] Page 2033.

[2] From Jowett's translation.

THE RELATIONSHIP OF HUMAN DIPHTHERIA TO SIMILAR DISEASES OCCURRING IN DOMESTIC ANIMALS.

That diphtheria may be conveyed from the lower animals to man and reciprocally from man to the lower animals is a very old and general belief, and in a recently published review on the epidemiology of diphtheria Dr. Sambon[1] of the Liverpool School of Tropical Medicine has brought forward the evidence supporting this belief. The simultaneous occurrence of diphtheria epidemics in man and of epizootics of a similar nature in animals has been observed again and again in all ages and places. The epidemics of Naples in 1618 and that of Paris in 1743 are reported to have followed epizootics of the same nature, and Noah Webster in 1800 described the occurrence of fatal angina in man synchronously with a "pestilence among cats which swept away those animals by thousands." Membranous affections which closely resemble human diphtheria, even to the frequent occurrence of paralysis in the animals recovering from the disease, have been described in cattle, horses, sheep, swine, rabbits, dogs, cats, and particularly in birds, "avian diphtheria" frequently occurring in epidemic form among birds of all kinds, especially pigeons and doves. There are several accounts of epidemics of human diphtheria in the literature which seem to establish the relation of these epidemics to the previous or simultaneous occurrence of diphtheria in birds or fowls in the same locality. Sambon also cites as a possible incident of this kind the Biblical account[2] of the feast of quails sent to the Israelites by a wind from the sea, which was immediately followed by a great plague.

Despite the plentiful accounts of relationship between human diphtheria and the occurrence of an anginal disease in birds and domestic mammals, the importance of such disease in the lower animals for the occurrence of human diphtheria is by no means established. While it is well known and universally recognized that the bacillus of human diphtheria has a wide range of pathogenicity for lower animals, yet the bacteriologic studies that have been made on the epizootic anginal diseases have not shown the presence of the true Klebs-Loeffler bacillus as the specific cause of such epizootics. These organisms, however, have been cultivated from animals associated with patients with diphtheria, and the rôle of these animals as at least occasional carriers of the disease seems to be well established; this is especially true of cats. Certain veterinary pathologists hold to the view that the epizootic form of diphtheria in birds and animals is entirely unrelated to human diphtheria, being due to distinct and specific organisms that are not related to the Klebs-Loeffler bacillus, but the evidence in support of this attitude does not seem to be entirely convincing.

The status of the question seems to be about the same as was the relationship of bovine to human tuberculosis before Koch's bombshell stirred up investigation on this subject that led to what seems to be a satisfactory agreement among most of the pathologists and bacteriologists. It is to be hoped that Dr. Sambon's vigorous championship of the affirmative in the question of human and epizootic diphtheria will have a similar salutary effect on this problem.

LEPRAPHOBIA.

It would be well indeed if some discriminative knowledge of infections could be impressed on the laity. A great deal has been done in this regard both by articles written for the public and by popular lectures; but the general consciousness has obviously not yet been adequately permeated with the subject. There is here, as elsewhere, "a long interval between the purely intellectual acceptance of a truth and its practical application." The public should definitely grasp that very many micro-organisms are not only harmless but even essential to human life; that among those which cause disease no two are precisely alike in their pathogenic activity, which may range from extreme virulence down almost to innocuity; that the modes of infection are distinctive in each case, as by the air, or in the food, or by contact, and that the virulence of any given germ is often diminished by such factors as the length of its life history. The latter is particularly the case regarding the bacillus of leprosy. Possibly this disease was, many centuries ago, markedly infectious and dangerous to the community; if so this property has since become greatly modified. The ancient history of leprosy should not be the basis of our present-day conduct regarding it. There is now no reason for superstitious dread of the leper, and certainly no occasion for treating him with brutality.

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[3] "Fads in Mental Healing," editorial in THE JOURNAL, June 13, 1908, 1987.
[1] Lancet, April 18, 1908, p. 1143.
[2] Numbers xi, 31-34.

It is *apropos* that we have at hand some observations[1] of Dr. C. S. Braddock, some time chief medical inspector to the Siamese government. Dr. Braddock has had abundant opportunity to study leprosy. He was never able to get a single history of any one having acquired leprosy directly from another; he found that many persons were associated with lepers for long periods without contracting the disease. In the Far East there is very little fear of lepers, who are not segregated. The disease, while it certainly is not contagious in the sense that the exanthemata are so, is, however, probably communicable through the secretions of the sufferer. The wisest and quite adequate prophylaxis is no doubt practiced in Norway, as described by Ricketts.[2] Originally all lepers were confined in institutions; now only indigent ones and those who can not be suitably cared for at home are required to enter an asylum, where they live under the best possible conditions. The others may remain at home, with the understanding that they sleep alone and if possible have separate rooms; that their clothing, linen and eating utensils be used by no one else; that proper precautions be taken in the washing of their clothing; their dressings and bandages are to be burned. Under such regulations the number of lepers in Norway has decreased from 2,870 in 1856 to 577 in 1900.

From time to time a leprosy scare arises in this country, as when a year or so ago a sufferer from this disease was driven about as if he had been a dangerous animal until his life was almost lost by the treatment he received; in one community a threat was made to lynch him. Another, and more recent, instance was that of a Russian girl who had been taken from Buzzard's Bay to New York to be deported as a leper. Yellow journalism here found an opportunity, which was, of course, not to be foregone, to inflame and prejudice the popular mind. Thus it was stated that the railway and steamship lines would have nothing to do with this girl—and this was probably so considering the absurd phobia which prevails regarding this disease. A purely imaginative touch was that "at one time the immigration authorities almost had decided to buy a small vessel, bring the young woman to this city, and then burn the craft." A schooner was found to carry her as a single passenger, but the crew became panic-stricken at this. There were "mutinous murmurings in the forecastle," according to the newspapers, and the master "had to threaten and cajole the crew in order to work the vessel into port." When this dreadful voyage had been accomplished despite such difficulties, "rowboats drew near to run an errand or make a sale to passenger or crew. 'Leper!' whispered the men of the crew, indicating the woman sitting on the deck. The boats scattered like a school of fish when a shark's fin cuts the water. And so the converted yacht Ramona tugged at her anchor chains all last night, a dreaded derelict of fearful import to the boats that came curiously near and then drew off again."

Such reading as this must be intensely dreary and depressing to the humanitarian who likes to think of modern progress and the Christian civilization of this twentieth century; and how occasionless are such things!

INSANITY OR HOMICIDE.

It is gratifying to find that the Supreme Court of the State of New York, in rendering a decision in the Thaw case, has taken a stand which will tend to clear the ground in regard to what is aptly, if somewhat irreverently, termed the "insanity dodge" so often utilized. It has of late been an increasingly common occurrence for a person accused of murder to claim exemption from the penalty of the law on the ground that he was insane at the time of the commission of the crime, although he recovered his reason with remarkable celerity as soon as a verdict of acquittal was rendered. The law very properly refuses to recognize any plea as a justification for murder except that of self-defense. The man who has once shown that he becomes unbalanced enough under provocation to be unable to keep himself from violating the law gives evidence by that very act of the possibility within him of other murders in the future. Whether technically or legally guilty of murder or not, such an individual is a constant danger to society and should be confined under proper surveillance. Under a rational interpretation of the law, punishment is inflicted not only as an atonement for the specific offense committed, but also for the prevention of future crimes and the safeguarding of society.

INCREASING STATURE OF THE JAPANESE.

A Scotch physician and ethnologist, Dr. Munro, resident in Yokohama, says that the stature of Japanese young people of both sexes is increasing, and that this increase has become more noticeable since they have become accustomed to use benches and chairs, instead of squatting on the floor, as was formerly the custom, in the public schools. While not expressing any positive opinion on the subject himself, he says that many able men in Japan are inclined to believe that the Japanese stature will be further increased with the more general abandonment of the squatting habit. It is by no means impossible that there is some truth in this view and that attention to posture in early life may tend to a better physical development. The Japanese people have shown themselves not lacking in physical vigor and endurance, and with a larger frame they may be able to exceed their former records. There are, of course, many other factors influencing stature; the question of subsistence, the exhaustion of wars, and even the nature of the soil all may have their influence on the growth of a people, aside from the effects of racial peculiarities.

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[1] Some Random Notes on Leprosy in the Far East: N. Y. Med. Jour., May 9, 1908.

[2] Ricketts (H. T.): Infection, Immunity and Serum Therapy, p. 451.

Medical News

CONNECTICUT.

Society Meetings.—At the one hundred and sixteenth annual meeting of Tolland County Medical Association, held in Rockville, the following officers were elected: President, Dr. James Stretch, Stafford Springs; vice-president, Dr. Isaac P. Fiske, Coventry; secretary-treasurer, Dr. Eli P. Flint, Rockville; councilor, Dr. Thomas F. Rockwell, Rockville; censors, Drs. Frederick W. Walsh, Rockville; Cyrus E. Pendleton, Hebron; and Frank L. Smith, Stafford Springs; and county reporter, Dr. Cyrus B. Newton, Stafford Springs.——At the annual meeting of New London County Medical Association, held in Norwich, Dr. Morton E. Fox, Uncasville, was elected president; Dr. George H. Jennings, Jewett City, vice-president, and Dr. Edwin C. Chipman, New London, clerk——At the one hundred and sixteenth annual meeting of Fairfield County Medical Society, held in Bridgeport, the following officers were elected: President, Dr. David C. Brown, Danbury; vice-president, Dr. Samuel Pierson, Stamford; secretary, Dr. Frank W. Stevens, Bridgeport; treasurer, Dr. James D. Gold, Bridgeport; councilor, Dr. Gould A. Shelton, Shelton; censors, Drs. William J. Tracey, Norwalk; Edward M. Smith, Bridgeport, and William S. Randall, Shelton; delegates to the state society, Drs. David C. Brown, Danbury; William S. Randall, Shelton; George H. Noxon, Darien, and Drs. Frank W. Stevens and John W. Wright, Bridgeport.——At the annual banquet of Norwich Medical Association, held recently, Dr. W. Tyler Browne was elected president; Dr. Newton P. Smith, vice-president, and Dr. L. F. La Pierre, secretary.——Windham County Medical Association, at its one hundred and fifteenth annual meeting, held at Putnam, elected the following officers: President, Dr. Robert C. Paine, Thompson; vice-president, Dr. John Weldon, Willimantic; secretary-treasurer, Dr. James L. Gardner, Central Village; delegate to state society, Dr. Rienzi Robinson, Danielson; censor, Dr. Clarence E. Simonds, Williamantic, and councilor, Dr. Charles C. Gildersleeve, East Woodstock.

ILLINOIS.

Physician Found Guilty.—Dr. Albert L. Hughes, Macon, charged with securing money by false pretenses, is said to have pleaded guilty, June 2, and to have been sentenced to imprisonment for 30 days in the county jail and to stand committed until he had paid a fine of $10 and costs.

Smallpox.—On June 8 five cases were reported in Joliet.——A number of cases of mild type have been discovered at Mackinaw, and the whole village is reported to be under quarantine.——The disease is reported at Bradley, Kankakee County.——Five new cases have appeared in Elgin.

Personal.—Dr. J. Earle Meloy and wife, and Dr. Babcock Meloy, Lincoln, sailed for Europe, June 20.——Dr. and Mrs. Virgil Pinkley, who have been visiting relatives in Girard, have left for their home, Guanajuato, Mexico.——Dr. Martha Anderson, Bloomington, has been appointed resident physician in the Daily News Sanatorium, Chicago.——Dr. and Mrs. George W. Bronson, Streator, leave for Europe, July 20.

Chicago.

Hospital Incorporated.—The Calumet Hospital Association has been incorporated with a capital stock of $10,000 by Sorens Norsman, Gerhardus J. Stuart and Gerrit Pon.

Physicians' Club.—The West Side Physicians' Club has been incorporated by Drs. B. H. Breakstone, Sam'l Metcoff and W. M. Rightmann, for social purposes and scientific investigation.

Personal.—Dr. Otto J. Stein has resigned as professor of diseases of the ear, nose and throat in the Illinois Medical College.——Dr. and Mrs. Morton Snow have left for their new home in Nashville, Tenn.——Dr. and Mrs. Philip S. Doane and family sailed for Europe, June 18.

Contagious Diseases.—During the week ended June 13, 497 cases of communicable diseases were reported, as follows: Measles, 227; diphtheria, 94; scarlet fever, 67; whooping cough, 41; tuberculosis, 40; chickenpox, 17; typhoid fever, 9; and diseases of minor importance, 4. During the week an increase in diphtheria, whooping cough and tuberculosis was noted and a decrease in measles, typhoid fever and chickenpox.

The Annual Epidemic of Tetanus.—The department of health, in its bulletin this week, devotes considerable space to the Fourth-of-July celebration and the annual epidemic of tetanus, gives the cause of the disease, and the proper method of treatment of Fourth-of-July wounds, and announces that it will supply tetanus antitoxin for the treatment of all suspicious injuries for the two weeks preceding and succeeding the Fourth of July.

Deaths of the Week.—To the total of 509 deaths reported during the week ended June 13, tuberculosis contributed 79; violence (including 10 suicides) 50; pneumonia, and heart diseases, each 36; diarrheal diseases 32; nephritis, 30; nervous diseases, 27; cancer, 24; the four chief diseases of childhood, 23; and typhoid fever, 7.——The deaths numbered 26 more than for the preceding week, but 62 less than for the corresponding week of last year.

KENTUCKY.

Milk for Consumptives.—The Kentucky Antituberculosis Association has appropriated $2,500 to buy ten cows for its local sanatorium.

Society Meeting.—At the annual meeting of the Larue County Medical Society, held in Hodgenville, May 28, Dr. Isaac L. Wyatt, Buffalo, was elected president; Dr. David W. Gaddie, Hodgenville, vice-president; and Dr. William E. Rodman, Hodgenville, secretary.

Physicians Win Suit.—In the Fleming Circuit Court the jury returned a unanimous verdict for the defendants in the case of Browning vs. Drs. Charles R. Garr and John C. S. Brice, in which the defendants were sued for alleged malpractice in setting a fractured femur.

Personal.—From the list of the American Committee of the Sixteenth International Medical Congress, which appeared in The Journal of June 13, the name of Dr. Lewis S. McMurtry of Louisville was inadvertently omitted.——Dr. Willis W. Ranshaw has been elected health officer of Covington.

MARYLAND.

Smallpox.—Two additional cases of smallpox were reported June 12, in the local outbreak on the Patapsco River, near Baltimore, making a total of 21 patients in the isolation camp.

Bequest to Sanatorium.—Under the will of Mrs. E. E. Stansbury, a sum estimated at about $10,000 has been left for the erection of a cottage at the Eudowood Sanatorium for Consumptives, near Towson, Baltimore county.

Tuberculosis Hospital Dedicated.—The Jewish Hospital for Consumptives was dedicated June 11, with appropriate ceremonics. It is situated near Reisterstown in Baltimore county, and is the gift of a Baltimore merchant, Mr. Jacob Epstein, who donated $35,000 for the purpose. Announcement was made during the ceremonies that another Baltimore merchant had given $8,000 for a cottage for advanced cases of tuberculosis.

Baltimore.

Medical Journal Election.—The Medical Journal Company met June 11 and re-elected its old board of officers for the ensuing year. Dr. Horace M. Simmons is secretary-treasurer and general manager of the company.

Hospital Organized.—The Charity Maternity Hospital has been organized in St. Louis, to meet the need for a legitimate lying-in hospital. Dr. John C. Morfit is president of the institution; Dr. John Young Brown, vice-president, and Dr. David Foster, secretary and physician-in-chief of the consulting staff.

Personal.—Dr. G. Lane Taneyhill has been elected treasurer of the General Alumni Association of the University of Maryland; Dr. Joshua W. Hering has resigned from the board of trustees, and Dr. B. Merrill Hopkinson has been elected his successor.——Dr. George Reuling left for Europe, June 17, to attend the ophthalmologic convention in Heidelberg.

MASSACHUSETTS.

Club Raided.—As a result of the raid on the Physicians' and Surgeons' Club, Boston, recently, Dr. William R. Brown, an officer of the organization, is said to have pleaded guilty and to have paid a fine of $50 imposed on the club. The license of the club is said to have been revoked.

Bequests.—By the will of the late Mrs. Sarah W. Burbank, a trust fund of $450,000, of which she had been beneficiary, goes to the city of Fitchburg for the erection of hospital buildings and the maintenance of Burbank Hospital.——The Lowell General Hospital will be the principal beneficiary under the will of the late Carrie C. Hilton, if the trustees accept the conditions. The will provides that a valuable piece of property shall be held in trust for the benefit of the hospital, on condition that the trustees pay Agnes Herrick $360 a year during life, and a similar sum to Mary Garrett, a niece, during her life.

MICHIGAN.

Free Dispensary.—A new free dispensary for treatment of diseases of the throat and chest is to be established by the Detroit Free Throat and Chest Dispensary, which filed articles of association, May 19. The dispensary will be located at Adams avenue, near Hastings street, and will be in charge of Dr. Ernest L. Shurly.

Elections.—Dr. Michael P. Fenelon has been elected president; Dr. Harry W. Long, vice-president; Dr. William A. Lemire, secretary; and Dr. Ferris Summerbell, treasurer, of the Escanaba Physicians' Club.——Dr. Charles G. Jennings has been re-elected vice-president, and Dr. Edwin S. Sherill, secretary-treasurer of the Detroit Society for the Prevention of Tuberculosis.

MISSOURI.

Gift to Skin and Cancer Hospital.—Dr. G. F. Barnard, one of the directors of the St. Louis Skin and Cancer Hospital, out of his high personal esteem for Dr. M. F. Engman, and appreciation for his services to the hospital, and his work accomplished there, has given $100,000 to the institution. This gift makes possible the building of a fine hospital. The name of the institution will be changed to the Barnard Free Skin and Cancer Hospital, and it will remain, as before, entirely for charity patients.

NEW JERSEY.

Vital Statistics for May.—The total number of deaths reported to the Bureau of Vital Statistics during the month ended May 16, was 2,602, a decrease of 532 as compared with the preceding month, and of 386 as compared with the corresponding month of last year. The greatest decrease in mortality was noted in persons aged sixty years or over. The following are the chief death causes: Tuberculosis, 408; diseases of the nervous system 319; pneumonia, 253; diseases of the circulatory system, 214; nephritis, 202; diseases of the digestive system, 195; diseases of the respiratory system, 176, and cancer, 112. Of the communicable diseases, scarlet fever caused 46 deaths; diphtheria, 41; typhoid fever, 28; measles, 27; cerebrospinal meningitis, 24, and whooping cough, 23.

Change of Front.—At the fortieth annual meeting of the West Jersey Homeopathic Medical Society, held in Camden, May 21, resolutions were adopted inviting to membership in its organization all reputable practitioners of any school of medicine. The resolutions are as follows:

> Whereas, It would be exceedingly beneficial if the entire medical profession of all shades of belief and practice could work interestedly for the prevention, relief and cure of disease; and,
>
> Whereas, We, the members of the West Jersey Homeopathic Medical Society, accept the definition of homeopathy as adopted by the American Institute of Homeopathy, viz.:
>
> "A homeopath is one who adds to his knowledge of medicine a special knowledge of homeopathic therapeutics and observes the law of similars, and all that pertains to the great field of medical learning in his practice by tradition, by inheritance and by right," and
>
> Whereas, The sole object of this society is the improvement of the professional attainments of its members and the discussion and establishment of scientific truths having reference to the practice of medicine; and
>
> Whereas, It is now, as it always has been, the endeavor of this society to maintain an open forum for the discussion of all live issues in medicine, and for the proving or disproving of all promising themes or procedure in the medical world, therefore, be it
>
> *Resolved*, That we invite to our membership, without restrictions as to belief or practice, all reputable legal practitioners who may desire to promote the same objects; and be it
>
> *Resolved*, That a copy of these resolutions be sent to the secretary of every medical society in South Jersey.

Charitable Bequests.—By the will of the late Mrs. Jane B. Shain, the Atlantic City Hospital, the Children's Seashore Home, and the Mercer Memorial Home each receive $1,000. By the will of the late Nathan Haines, a provisional bequest of $5,000 is made to the Burlington County Hospital and one of $5,000 to the Children's Home, Mount Holly.

NEW YORK.

Bovine Tuberculosis Bill Passed.—The Lansing bill, embodying a plan under which the State Department of Agriculture will inaugurate a campaign against bovine tuberculosis, passed the Assembly by a vote of 101 to 7. The Senate voted to cut the appropriation from $200,000 to $125,000.

Efforts to Suppress Bovine Tuberculosis.—Informal conferences were held at Albany on May 26 by leaders of the legislature to consider the advisability of increasing the appropriation for the campaign against bovine tuberculosis. Governor Hughes expressed himself as being in entire sympathy with the State Department of Agriculture in its attempts to suppress this affection. He had vetoed the bill presented because it had certain administrative features which seemed to him objectionable. Commissioner Pearson is at present working on a new bill. Massachusetts, which has only one-ninth as many cattle as New York, has appropriated $80,000 a year for the inspection of its cattle, while New York has been getting only $59,000. A request for $100,000 will be made. Four veterinarians connected with the Bureau of Infectious and Contagious Diseases of Domestic Animals have been sent into the field to inaugurate the campaign. Under strict instructions they will make only physical examination of suspected cows and send daily detailed reports to the department. The tuberculosis test will not be used, as this seems to have been found unreliable as well as costly and cruel. There are forty requests for the visit of veterinarians already filed in the office of the Department showing the willingness of the farmer to cooperate with the department in eliminating this scourge. The plan of action outlined in waging this war against bovine tuberculosis is based on the results of the experiments of Dr. V. A. Moore, professor of pathology, bacteriology and meat inspection of the New York State Veterinary College of Cornell University.

New York City.

School of Preventive Medicine Needed.—Dr. Ditman in the current number of the Columbia Quarterly, gives details of a plan for a school of preventive medicine, sanitary science and pure health, which it is hoped will be established at Columbia University.

Lowest Death Rate for the City.—The death rate for the week ended June 7 was 14.41 per 1,000 of population, which is the lowest in the history of the city. The nearest approach to this was for the week ended Oct. 29, 1904, when it was 14.46, and that ended Nov. 11, 1905, when it was 14.61.

Hospital Asks Aid.—St. Mark's Hospital, owing to heavier demands than usual during the past year, has a floating indebtedness of $5,000 and numerous improvements are necessary. An appeal has been sent to all the large banking houses in this city for subscriptions in order to keep the institution open.

Very Low Death Rate.—The city's death rate for the week ended May 30, was the lowest for any week since 1895. The number of deaths was 1,335 and the rate 15.75 per 1,000 as against 16.36 for the corresponding week of last year. There were 12 deaths from typhoid fever as against five for the same week of last year, and 149 deaths from heart disease, against 92 for the same week last year.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended June 6, 1,322 cases of measles with 17 deaths; 498 cases of scarlet fever with 22 deaths; 440 cases of tuberculosis with 161 deaths; 268 cases of diphtheria with 25 deaths; 45 cases of typhoid fever with 7 deaths; 25 cases of whooping cough with 5 deaths; 7 cases of cerebrospinal meningitis with 5 deaths; and 171 cases of varicella, a total of 2,776 cases and 242 deaths.

Osteopaths Win Temporarily.—The Appellate Division of the Supreme Court in Brooklyn has sustained the decision of Justice Dickey recognizing osteopathy as a regular school of medicine. Dr. Charles Bandel had a death certificate made out by him refused by the Health Department on the ground that he was not a physician in good standing. Justice Dickey issued a mandamus to the effect that he was a physician in good standing, and that the Health Department should accept his certificate of death. The case may be carried to the Court of Appeals.

Commencements.—The commencement exercises of Long Island College Hospital were held on June 9. Prof. John A. McCorkle conferred degrees on a class of 85.——Cornell University Medical College held its tenth annual commencement on June 9. President Jacob Gould Schurman, in addressing the alumni, said that it was no easy problem to secure students of superior endowment and attainments. Unless they did solve this problem they were in danger of being dragged down by the accumulated weight of mediocrity. Beginning with this year only college graduates in arts and sciences would be admitted to this school. If time showed that college graduation is not an adequate method of selection, it would be necessary to devise supplementary tests, such as a scrutiny of the evidences of ability and attainment which a college record afforded.

OHIO.

Hospital Opened.—Without formal ceremony, the new Springfield City Hospital was opened May 14, and six patients from the temporary hospital were transferred to the charity wards.

Ill and Injured.—Dr. Lark Moon, Columbus, is reported to be critically ill.——Dr. Albert H. Lane, Dayton, was thrown from his buggy, May 24, and sustained a comminuted fracture of the leg.——Dr. W. C. Houston, Hamilton, has been ill in

Mercy Hospital with erysipelas for two weeks, but is now improving.

State Medical Board Wins Victory.—The State Board of Medical Registration and Examination won a victory, May 16, when the petition of Emil Justin Rose, that the board be restrained from preventing him from practice in the state and that the board be compelled to issue certificate, was dismissed, and the temporary restraining order dissolved. Judge Dillon upheld the right of the board to refuse a certificate if it deemed it necessary.

Commencements.—At the annual commencement exercises of the Toledo Medical College, May 26, a class of 3 was graduated.——The commencement exercises of Starling (Ohio) College, Columbus, were held May 20, when a class of 70 was graduated. The principal address was delivered by President W. O. Thompson of the Ohio State University.——The annual commencement exercises of Cleveland College of Physicians and Surgeons, Medical Department, Ohio Wesleyan University, were held May 20. Prof. Richards Parsons delivered the doctorate address, and a class of 20 was graduated.

Personal.—Dr. Chalmer N. Hatfield, Fostoria, has been appointed local surgeon of the Columbus, Hocking Valley & Toledo Railroad, vice Dr. T. T. Rosendale, resigned.——Dr. John M. Thomas has been reappointed surgeon to the Ohio State Penitentiary, Columbus.——Dr. and Mrs. Charles W. McGavran, Columbus, sailed for Europe May 23.——Dr. J. C. George, Columbus, has been appointed a member of the medical staff of the Dayton State Hospital.——Dr. Thurston H. Rowles, Cambridge, who is about to move to Shadyside, was given a farewell banquet by the Guernsey County Medical Society, May 22.——Dr. Herman C. Tihess has been made a member of the Akron board of review.——The Physicians' Committee of Elyria Memorial Hospital Association has re-elected the following officers: Dr. George D. Nicholas, chairman; Dr. Charles T. Tucker, secretary; and Drs. Orlando T. Maynard, William B. Hubbell, and Charles H. Cushing, Elyria; Dr. William C. Bunce, Oberlin; and Dr. Olney B. Monosmith, Lorain, advisory board.——Dr. Minor M. Jacobs has been appointed district physician of Hamilton.

Cincinnati.

Commencement.—Miami Medical College celebrated its annual commencement exercises, June 1, when the doctorate address was delivered by President Charles Miller of Lima College, and a class of 16 was graduated.

Personal.—Dr. Thaddeus A. Reamy, who was suddenly taken ill in Zanesville with uremia, is reported to be improving rapidly.——Drs. John E. Griewe and Mark A. Brown have been placed in charge of the new medical ward of the City Hospital.

Jansen in Cincinnati.—Dr. Albert Jansen, the German ophthalmologist and otologist was the guest of honor of Dr. Christian R. Holmes at the dinner at the latter's home in Avondale, May 31, when 75 members of the local profession met the distinguished savant.

Alumni Election.—At the annual meeting of the Miami College Alumni Association, June 1, Dr. William H. Campbell was elected president, and Dr. Edwin M. Craig, Norwood, secretary-treasurer. The association celebrated the fiftieth anniversary of Dr. William H. Taylor's incumbency as professor of obstetries.

OKLAHOMA.

Medical Bill Passes Both Houses.—After a hard-fought battle senate bill No. 189 was passed, many of the provisions desired by the State Medical Association being first cut out. The substitute for section one was adopted, which enlarges the state board of medical examiners to nine and does not permit any school to have a majority on the board.

Pass the Dispensary Bill.—Both houses of the legislature have passed the state dispensary bill, which provides for a dispensary in every town of 2,000 or more, and every county seat. In these dispensaries liquors may be obtained only on physician's prescription that the liquor is necessary for medical purposes. The physicians of Canadian county, Hobart and Kiowa county, Oklahoma county, Marshall county, Sapulpa county, Alfalfa county, and Ottawa county, have agreed not to write prescriptions for intoxicating drugs as long as the law stands as it now is.

State Society Meeting.—The Oklahoma State Medical Association held its sixth annual meeting at Sulphur, May 12, 13, and 14, electing the following officers: Dr. Bascom J. Vance, Checotah, president; Drs. Floyd E. Warterfield, Holdenville; Walter C. Bradford, Shawnee, and Thomas S. Booth, Ardmore, vice-presidents; Dr. Eugene O. Barker, Guthrie, secretary-treasurer (re-elected); Drs. Charles S. Bobo, Norman, and Ulbus L. Russell, Oklahoma City, delegates to the American Medical Association; and Drs. J. Asa Walker, Shawnee, and J. H. Stapler, Krebs, alternates.

Personal.—Dr. J. H. Stolpher, Coalgate, chairman of the section on state medicine of the state medical society, recently appeared before the state legislature by invitation and delivered an address on "Sanitation."——Dr. R. M. C. Hill, McLoud, has been re-elected professor of principles and practice of medicine in Oklahoma Medical College, Oklahoma City.——The house of Dr. A. B. Davis, Sneed, was burned to the ground, May 10, with a loss of $10,000.——Dr. J. Howser, Vici, was not killed as originally reported, but was seriously injured in a tornado, which did great damage in northwestern Oklahoma, May 10.

OREGON.

State Society Meeting.—The Oregon State Medical Association will meet July 1, 2, and 3, in the rooms of the Commercial Club, Portland.——Besides the members of the Association who will have papers, Drs. George W. Crile, Cleveland, Ohio; Thomas C. Witherspoon, Butte, Mont., and others, have promised to take part in the program. One of the features of the meeting will be a public session at which matters concerning public health will be discussed. Prominent clergymen, lawyers and business men will be asked to discuss sanitary matters from a lay point of view, while members of the state boards of health of the Pacific Northwest, will present papers suitable for publication in the lay press, and a general discussion will be invited. This feature, it is hoped, will help to a better mutual understanding between the physicians and the public, and, if successful, will probably be made a feature of annual meetings hereafter.

PENNSYLVANIA.

Diphtheria Stops Telephone.—Diphtheria closed the Bell telephone exchange of Bloomsburg June 9, as seven of the operators were ill with the disease.

Personal.—Dr. John W. Goodsell, New Kensington, has been appointed surgeon for Peary's Arctic expedition.——Dr. Dorothy Donnelly, Conshohocken, has been appointed resident physician in the Philadelphia General Hospital.

Meat Dealer Fined.—The state sanitary live stock department secured the conviction of a meat dealer of Allentown, June 12, for selling diseased meat. The defendant was supported by the dealers of his vicinity and contended that the state law is unconsitutional. The defendant was fined $25 and costs .

Philadelphia.

Personal.—Dr. L. Webster Fox had the degree of LL.D. conferred on him by Dickinson College, June 9.——Dr. Ernest La Place will sail for Europe, June 25.——Dr. F. P. Horan has returned from Vienna.

Error in Report.—Dr. William H. Howell, dean of the Medical Faculty of Johns Hopkins University, delivered the address to the graduating class of Jefferson College at the annual commencement, and not Dr. Ira Remsen, as was stated in The Journal of June 13.

Bequests.—The will of the late Susan L. Littell devises $2,000 to the Germantown Dispensary and Hospital for the endowment of a free bed for girls.——The will of the late Wills Irwin bequeaths $250 to the Little Sisters of the Poor and $100 each to St. John's Orphan Asylum and St. Agnes Hospital.

Medical Club Reception.—The quarterly reception of the Medical Club of Philadelphia was held June 12. The following were the guests of honor: Dr. William L. Estes, Bethlehem, president of the Medical Society of the State of Pennsylvania; Dr. Albert M. Eaton, president of the Philadelphia County Medical Society; Col. William C. Gorgas, Medical Corps, U. S. Army; Surgeon-General Walter Wyman, P. H. and M.-H. Service; and Health Commissioner William A. Evans, Chicago.

Health Report.—The total number of deaths reported for the week ended June 13 was 404. This is a decrease of 37 from the previous week and a decrease of 34 from the corresponding week of last year. The principal causes of death were: Typhoid fever, 7; scarlet fever, 5; whooping cough, 5; diphtheria, 4; consumption, 49; cancer, 25; apoplexy, 16; heart disease, 35; acute respiratory disease, 36; enteritis, 22; appendicitis, 5; acute nephritis, 7; Bright's disease, 37; gangrene, 5; premature birth, 14; congenital debility, 8; old age, 9; suicide, 6; accidents, 11; measles, 15, and marasmus, 5.——There were 165 cases of contagious diseases reported with 16 deaths, as compared with 143 cases and 16 deaths reported in the preceding week.

Jewish Hospital Report.—At the annual meeting of the Jewish Hospital Association, May 31, the report submitted showed that 6,498 patients were treated in the hospital during the past year. The total number of days' support furnished during the year amounted to 115,864, and the cost of maintenance was $114,122.28. This is an average of $1.76¼ per patient per day. There were 17,891 prescriptions compounded and 503 major operations were performed. Receipts from all sources amounted to $148,195.42 and the expenses were $31,449.57 in excess of the above amount. The balance in the investment account was reported to be $449,897.25. ——The cornerstone of the Pennsylvania Building (nurses home and surgical ward) of the Jewish Hospital was laid June 2.

TENNESSEE.

Journal of the Tennessee State Medical Association.—At its last annual session the Tennessee State Medical Association decided to issue its transactions as a monthly journal rather than in a bound volume as heretofore. The first issue of the new journal has been received. It is in small magazine form and contains forty-eight pages of reading matter, with cover. The initial number is taken up with the official proceedings, including the excellent address of the president. It is in every way a creditable journal and undoubtedly will be the means of doing much toward bettering conditions for the medical profession in Tennessee. The secretary of the state association, Dr. George H. Price, is the editor of the journal.

GENERAL.

Pharmacopeia Trustees Meet.—The eighth annual meeting of the board of trustees of the United States Pharmacopeial Convention was held at Boston, May 23 and 25. Those present were Dr. James H. Beal, Scio, Ohio; Mr. Charles E. Dohme, Baltimore; Mr. Frederick W. Meissner, Laporte, Ind.; Dr. Joseph P. Remington, Philadelphia; Mr. S. A. D. Sheppard, Boston; Dr. Henry M. Whelpley, St. Louis, and the secretary, Dr. Murray Galt Motter, Washington, D. C. Dr. Horatio C. Wood of Philadelphia was absent, owing to illness. Dr. Remington reported progress on the work of printing the Spanish translation of the United States Pharmacopeia. A special committee, consisting of Remington, Beal and Sheppard, was appointed to devise ways and means of placing the Spanish edition on the market. The annual election resulted in the reelection of the officers and committees, as follows: Chairman of the board, Charles E. Dohme; executive committee, James H. Beal (chairman), J. P. Remington and Charles E. Dohme; auditing committee, H. M. Whelpley (chairman), S. A. D. Sheppard and F. W. Meissner. It was decided to publish a Digest of Comments on the Pharmacopeia, Eighth Revision. This will be similar to the Digest of Criticisms of the Pharmacopeia, Seventh Revision, but larger and more complete. The chairman of the committee on revision was instructed to proceed with the preparation of the manuscript. S. A. D. Sheppard, chairman of the special committee on recommendations to the convention of 1910, presented a lengthy report of progress, which was discussed and laid over for final action at a subsequent meeting.

FOREIGN.

Indian Medical Congress to be Held at Bombay.—According to the *Indian Medical Gazette*, it has been decided to hold another Indian Medical Congress in Bombay in February, 1909. Lieut.-Col. Jennings of the Indian Medical Service is the secretary of the proposed congress.

Medical Society Organized in Assam.—At a meeting of medical men held at Jorhat, Assam, in December, it was agreed to organize a medical society as a branch of the British Medical Association. Dr. Hewan of Cinnamara was elected first president, and Dr. Murray, Lumding, secretary.

Regulation of Advertising of Proprietaries in Switzerland.—The board of health in the canton of Zurich has notified all the periodicals published in the canton, including the daily papers, that the advertising of drugs and remedies for certain affections is forbidden, unless a special permit is presented with the "copy" for the advertisement. This permit is obtained by the would-be advertiser after a sample of his remedy, in the original package, has been analyzed by the board, his methods investigated, and the proposed advertisement inspected. A special fee for this is also imposed. R. Bing of Basle relates this in a letter to the *Deutsche medizinische Wochenschift*, adding that these measures in Zurich are excellent and worthy of imitation elsewhere.

Fine for Quack Practices. The nature faker, Mistelsky, of Berlin, treated a woman for advanced cancer, assuring her that he could cure her, and exacting a large fee in advance. He was sued for fraudulent practices, after the death of his patient, and the prosecuting attorney asked a sentence of imprisonment for eighteen months, but the court merely imposed a fine of $250. Our exchanges comment that this is not the proper way to deal with such institutions as Mistelsky's. He has two registered physicians in his employ, one being the Dr. H. Fischer who sued the Munich medical weekly for damages for referring to him as the "pitiable hireling of a quack"—the case was described in these columns recently. Mistelsky's income is said to be enormous, and, it is said, cash penalties make little impression on him—a long term of imprisonment is the only means to reach such cases.

LONDON LETTER.

(From Our Regular Correspondent.)

London, May 30, 1908.

Munificent Gift for the King's Hospital Fund.

Lord Mount Stephen, whose name is already associated with many benefactions, has added a gift to the King's Hospital Fund, that will yield an income of $3,500 a year. This brings Lord Mount Stephen's total contributions to the fund up to $150,000 a year and raises the total income of the fund from investments to $300,000. The career of Lord Mount Stephen is one of the most striking romances of the Colonies. The son of a Banffshire carpenter, he herded cattle as a boy. He then went to Aberdeen to learn the drapery trade. He emigrated to Canada and became a successful merchant in Montreal and then a bank director and railway magnate. He helped to build the Canadian Pacific Railway and became its chairman. He is now one of the richest men in the world and was the first Colonial peer. Some time ago he distributed $2,500,000 among his relatives, preferring, he said, to see them enjoying life now instead of waiting till after his death.

A Typhoid Carrier.

A remarkable example of the "typhoid carrier" has given rise to questions in Parliament. An outbreak of typhoid fever in a district of Glasgow was traced to milk supply obtained from a farm. A woman employed on the farm was found to harbor the typhoid bacillus although she had suffered from typhoid fever as long as 16 years ago.

Fortunes Amassed by Patent Medicine Vendors.

A daily paper recently gave a list of the amounts of the estates of various patent medicine vendors which have been valued for probate in recent years. The English estate of the proprietor of "Dr. Williams' Pink Pills" was valued at $6,500,000. The proprietor of "Beecham's Pills" left a fortune of $430,000; Hanyside, the owner of a "consumption cure" disposed in his will of property of the value of $700,000. One of the proprietors of the "Bile Beans" left $335,000. But it must be remembered that these vast sums do not represent the whole estates of these persons, but only the estates subject to probate duty in this country. Further, in nearly all cases, the deceased had only a part interest, so that his estate by no means represented the value of the business.

The Housing of Work People.

As stated in a former letter, the housing of the working class is a problem which has attracted considerable attention recently, and the government has introduced into the House of Commons a bill dealing with town planning and housing. Mr. Maddison, a labor member moved, "That immediate steps should be taken to secure proper sanitary housing accommodation for work people employed on works of construction and other occupations of temporary character." Mr. John Burns, president of the Local Government Board, on behalf of the government, heartily accepted the motion and pointed out that long before the motion was put on paper the Local Government Board had taken practical action to secure the object aimed at. He estimated that there were in the United Kingdom 100,000 men, women and children engaged in work of the nomadic type. The sleeping accommodation provided was foten very defective. Many navvies were crippled with rheumatism from having to sleep out of doors.

Medical Examination of Locomotive Engineers.

The death of an engineer on the foot plate of an express train, a few minutes after leaving Newcastle, has drawn attention to the necessity of medical supervision of the health of men engaged in this work. At the inquest, it was found that he died from fatty degeneration of the heart and the coroner suggested the desirability of a periodical examination of engineers and firemen.

Therapeutics

[It is the purpose of this department to outline an up-to-date management of disease, to suggest scientific treatment for diseased conditions, and to present prescriptions that are simple, useful and palatable. Prescriptions are written in both the metric and apothecaries' systems, but the amounts of the ingredients are NOT exact translations of one system into the other, but quantities convenient for pharmacist and physician. It should be understood that solids are weighed in grams or fractions of grams, while liquids are measured in cubic centimeters; that a teaspoon holds five cubic centimeters, i. e., more than a fluidram, hence a 100 cubic centimeter preparation will contain twenty doses.]

Gamboge.

Gamboge is the dried gum resin obtained from a tree growing in Asia. It is orange red (when powdered, a bright yellow color), waxy, somewhat porous, without odor, and of an acrid taste. This preparation consists of a gum and a resin (cambogic acid about 70 per cent.), and a volatile oil. It is soluble in water and alcohol.

Gamboge is a very strong cathartic, resembling elaterium, only less active. It stimulates the muscular coat of the intestine, causing active peristalis, and increases the secretion of the intestinal glands, but does not increase the amount of bile. The movements caused by it are large, soft and watery, and if the dose is large or not modified by some accompanying drug, there is considerable pain and griping, and there may be vomiting. Although it acts principally locally, and, therefore, is mostly excreted by the bowel, some of it is absorbed and acts as a diuretic, and it may at times render the urine yellow. On account of the griping that it causes it is rarely used alone, but is combined with other cathartics. The only official use that it has is as a part of the compound cathartic pill, each of these pills containing 0.015 gram (1/4 grain).

Though gamboge has been used in cardiac dropsy, as an anthelmintic and as an active cathartic, there is no good reason why it should ever be used or should be made official. All that it can do medicinally can be done better by elaterium.

If it is desired to administer it, the dose is 0.15 gram (2 grains) of the powder.

Scammony.

Scammony is a gum resin obtained from the root of a vine growing in western Asia and in some of the islands of the Mediterranean. It occurs in irregular pieces, varying in size and is of a brownish-black color, although the pieces may be covered with a grayish-white powder. The cut surface has a luster, and thin fragments may be slightly translucent. It has a cheese-like odor, and a slightly acrid taste. It contains about 80 per cent. of a glucoside (scammonin, the active principle). This drug was long known to the ancients as a cathartic. Scammony resembles jalap in its action, but stimulates the muscular coat of the intestines more actively, causing, in large doses, violent peristalsis, with griping, nausea and vomiting. It is said not to increase the secretion of the intestinal mucous membrane as much as some others of the vegetable cathartics. The upper part of the intestine is most affected by this drug, and it can cause sufficient irritation to produce inflammation, and in large doses may even cause death. The movements are loose and watery, and in this repect it resembles elaterium. It seems to increase the secretion of the bile, but it is not absorbed, and its action is a local one.

Scammony is not used alone, but in combination with other cathartics, and is one of the many ingredients of the compound cathartic pill. The only possible excuse for the compound cathartic pill is that it combines a series of active vegetable cathartics in small doses; a full cathartic dose of many of the single ingredients would cause too intense an action. As a matter of fact there is no excuse for ever using either scammony or gamboge, as both are too irritant to the mucous membrane of the intestines, and it is hardly justifiable to use even small doses.

The only official preparation is:

RESINA SCAMMONII, resin of scammony. When powdered this is of a grayish-white color, of the characteristic odor and taste of scammony. The dose is 0.20 gram (3 grains), best administered in pill or capsule. The resin of scammony is said to be identical with the resin of jalap, another proof that scammony is not needed.

This preparation of scammony is an ingredient of the compound extract of colocynth, the extract containing, besides colocynth and scammony, aloes, soap and cardamom. This compound extract of colocynth is also an ingredient of the compound cathartic pill, and we have the medieval polypharmacy and absurdity of an official pill (the compound cathartic pill) which contains colocynth, aloes, scammony, soap, cardamom, calomel, jalap and gamboge. The official vegetable cathartic pill is as absurd; it contains colocynth, aloes, scammony, soap, cardamom, hyoscyamus, jalap, leptandra, podophyllum and peppermint.

It should be remembered that if a laxative drug is needed these active cathartics should not be used, as they can not be given frequently without causing irritation and inflammation, and when their administration is stopped the constipation is aggravated. On the other hand, if a purgative is needed, one should be selected that will not produce inflammation. and if the ordinary cathartics, as calomel, castor oil or salines, or if desired, a large dose of the simple vegetable cathartics as rhubarb, aloes or senna, does not give satisfactory results, an irritant, strong cathartic is contraindicated, as there may be obstipation or obstruction, and it could do harm.

Diabetes Mellitus.

Dr. Oliver T. Osborne, New Haven, Conn., in the *American Journal of the Medical Sciences*, April, 1908, discusses the nature and management of this disease. He makes a distinction between diabetes mellitus and glycosuria, the former being the disease or condition in which the urine does not become free from sugar on any dietetic or medicinal treatment, while glycosuria is a temporary functional alimentary or nervous disturbance. While a frequently occurring glycosuria may be a danger signal as a forerunner of the real disease of diabetes mellitus, still, if the sugar can be made to disappear from the urine by a change in the diet, that disease is not present, but the presence of sugar in the urine shows that there is an insufficiency of the organs taking part in the glycogenic function, viz., the pancreas, suprarenals or liver. An insufficiency or an improperly correlated activity of any one of these three organs may cause sugar to appear in the urine. A temporary glycosuria may be caused by "phosphoric, lactic and hydrochloric acids, phosphorus, arsenic, and by carbonic oxid poisoning." Glycosuria may also occur as a complicating disturbance in Graves' disease, exophthalmic goiter, and during the administration of thyroid extract, showing that too much thyroid stuff in the circulation can cause glycosuria. Various disturbances in the brain can cause, reflexly, glycosuria which will disappear if the disturbance is removed.

During starvation and on a rigid proteid diet in diabetes mellitus acetone soon appears in the urine, with sooner or later diacetic acid and later beta-oxybutyric acid, the last being often the derivative of the other two products. These are danger signals and acidemia is imminent and diabetic coma will soon be in evidence. The free administration of carbohydrates will cause the acetone and diacetic acid to disappear, although the excretion of sugar will be increased; it is not the amount of sugar in the urine that is momentarily dangerous. It seems demonstrated that the greater the amount of proteid diet with absence of carbohydrates and the greater the amount of fat ingested, the more acetone will appear in the urine, while the greater the amount of carbohydrates ingested the less acetone will appear in the urine.

"Diabetic coma is not due to the acetone or to the glycosuria, but is due to the diminished alkalinity and finally acid condition of the blood, and this is due largely to the beta-oxybutyric and diacetic acids." The warnings that such a condition is imminent are headaches and increased nervous irritability. The urine may show at this time a large amount of ammonia which is probably formed by the increased acids in the urine breaking up the alkalies.

This chemical pathology of diabetes mellitus shows that it is unjustifiable to withdraw starches and sugars rapidly from the diet of a diabetic, as toxic acidemia may be the result. Consequently the diminution of the carbohydrates should be gradual. If by such diminution the sugar disappears entirely from the urine, it shows that the patient has not yet, at least, the real disease, and by care of his diet he may gradually develop a tolerance for sugars and starches and may, after months, return to a normal mixed diet.

The first diet of a patient having glycosuria should be rigidly proteid with the exception of a slice of bread three times a day. On this diet the patient's urine should be examined every few days not only for sugar but for diacetic acid. The test for this acid is quickly made by adding a few drops of a 5 per cent. solution of ferric ammonium sulphate to a test tube containing a small amount of the urine to be tested. If a crimson color develops, diacetic acid is present, and the more the acid the deeper the color. If diacetic acid is absent, acetone is generally also absent, and beta-oxybutyric acid can be considered not produced. The diet may then be further modified, after ten days or more, to two slices of bread a day, and if the urine remains free from diacetic acid, later to one slice of bread a day, and if the sugar entirely disappears and no diacetic acid is found, the diet may be continued thus rigid for some weeks, and then little by little the starches increased to the point of sugar tolerance, i. e., just under what will cause sugar to appear in the urine. On the other hand, if diacetic acid is found in the urine, carbohydrates should be given immediately and freely, as in no other way can coma be averted. During this dietetic treatment of diabetes plenty of water should be allowed the patient, although he should not pour down a glassful every time he is thirsty, but water should not be largely restricted, else the skin does not keep up its activity and various undesired skin complications occur. Some alkali should be given freely, as a gram (15 grains) of sodium bicarbonate, three times a day, after meals, or Vichy, or some other alkaline mineral water. In other words, the tendency of the system is to an overproduction of acid under the diet advised, and hence alkalies should be given to counteract such tendency.

To overcome the loss of weight which takes place under a nearly pure proteid diet, butter, cream, olive oil and perhaps cod-liver oil, should be freely administered unless acetone is found in the urine, when the fats should be reduced.

If sugar persists in the urine in spite of a rather rigid diet, it shows that it is made from proteid metabolism. Consequently it is no longer advisable or even justifiable to withhold absolutely the starches and sugars, since under such a diet in true diabetes mellitus the patient is not only in danger of acidemia and coma, but his consumption of large amounts of proteids soon disturbs the functions of other organs. Also he emaciates, feels cold and is generally miserable. It is, therefore best, having found that the disease or condition of diabetes mellitus is present, to allow him a little starch at each meal. He may have a potato at one meal, a little oatmeal at another, and a slice of bread at a third, and if he is cold and chilly, an occasional lump of cane sugar will do him no harm, and may do him some good. Osborne emphasizes the fact that a rigid diet in diabetes mellitus has caused many deaths and is dangerous, and that glucose in the urine of itself is not dangerous. A careful individualizing of each patient as to the diet that causes him to be less thirsty, that causes a diminished output of urine, that keeps his weight normal, that does not cause indigestion, and that keeps his skin in good condition constitutes the successful treatment of diabetes mellitus, and such a patient may live for years on such a carefully arranged diet.

Theoretically, the feeding of pancreas preparations should be of advantage, and it is true that diabetic patients may sometimes take care of more carbohydrates while taking pancreatic digestive ferments. However, it does not seem to modify or ameliorate the condition, and in most instances such treatment is absolutely worthless.

Suprarenal has seemed to Osborne many times to stimulate the organs concerned in sugar metabolism to do better work. In repeated instances he has found that the administration of suprarenal substance by the mouth has allowed patients to take more carbohydrates without sugar appearing in the urine in instances of dietetic glycosuria. He has also seen diabetic patients do better with suprarenal treatment than without it.

Of the various drugs lauded as of advantage in diabetes mellitus, no one of them, though possibly temporarily of advantage, should be given any length of time or can be given any length of time in this long-continued chronic disease without doing harm. This applies to salicylic acid, salol, antipyrin and all benzoate and guaiacolate combinations. Osborne does not believe that arsenic is ever justifiable in the treatment of diabetes mellitus.

There is no question that opium in any form, best perhaps in the form of its alkaloid codein, will diminish the output of sugar, but it is not the sugar output that is injuring the patient, and no patient can take a preparation of opium without sooner or later developing the opium habit and having all the disagreeable symptoms due to its continued use: constipation, loss of appetite, drying of the skin and nervous disturbances.

If coma is considered to be imminent, carbohydrates and alkalies should be given in large amount, and perhaps no alkali is better than the bicarbonate of sodium in two-gram doses (30 grains), in water, every hour for several doses. If the danger is past the diet should be liberal, with the free use of starches, until the urine is again free from diacetic acid. However, when coma is pending it is often impossible to prevent its occurrence, and the treatment of such a condition is the prevention, viz., the patient should receive, if seen in time, such a diet as to minimize the occurrence of coma.

If coma has developed, venesection may be done, with the withdrawal of considerable blood and the administration of bicarbonate of sodium solutions. Such treatment has often caused the awakening of the patient, but, unfortunately, relapse to fatal coma generally occurs.

℞.

	gm.			
Gland. suprarenal. sic....................	10		or	ʒiiss

Fac capsulas 50.

Sig.: One capsules three times a day, after meals.

Or:

℞.

	gm.			
Gland. suprarenal. sic....................	10		or	ʒiiss
Ferri reducti	2	50		gr. xl

M. et fac capsulas 50.

Sig.: One capsule three times a day, after meals.

In diabetic coma it is, perhaps, inadvisable to transfuse as strong solutions of bicarbonate of sodium as have been advised, and sodium carbonate seems unjustifiable. After the withdrawal of a certain amount of blood in this condition of acidemia it is perhaps better to inject into the veins solutions that approximate normal blood plasma rather than either physiologic saline solution (i. e., 0.9 of 1 per cent. sodium chlorid solution) or saline solutions with a large amount of bicarbonate of sodium. The following is Ringer's solution, which may be used for this purpose:

℞.	gm.			
Sodii chloridi	9			gr. cxxxv
Calcii chloridi		24	or	gr. iv
Potassii chloridi		42		gr. viss
Sodii bicarbonatis		20		gr. iii

M. et fac chartulam 1.

Sig.: To be added to a quart (1,000 c.c.) of distilled, or at least boiled, water.

The above may be made into sterilized tablets and kept ready for use.

Pharmacology

THE BROADER AIMS OF THE COUNCIL ON PHARMACY AND CHEMISTRY.

TORALD SOLLMANN, M.D.
Member of the Council, Professor of Pharmacology and Materia Medica at the Medical Department of Western Reserve University.
CLEVELAND, OHIO.

(*Continued from page 1995.*)

XIII. THE "READY-TO-WEAR" PRESCRIPTION.

Sometimes I wonder what therapeutics would be like had there never been a "ready-to-wear" prescription—the type of compound formula which is supposed to fit the "average, typical case" like a ready-made suit of clothes—the symbol of that convenient, mechanical, all-but-automatic, system which treats that non-existent entity, the disease apart from the patient.

But this is idle speculation, for the system exists, flourishes even; in fact, it is forced on the medical student and pursues him throughout his professional life—and he is a hero who escapes it altogether! The blame generally is laid on the antiquated and inadequate methods which have so generally prevailed in the teaching of materia medica and the allied branches. I concede that this tends to foster the mechanical system, and the seeds of this system are sown somewhat later. Even the best and most careful preparation will scarcely suffice to prevent altogether the development of this seed when it is scattered broadcast in the prevailing fashion.

PRESCRIBING BY NUMBERS.

To the young man, entering with enthusiasm and fair resolutions on his practical medical career through the door of the hospital or dispensary, what an inspiration it must be to learn that the materia medica, pharmacology and therapeutics, good, bad or indifferent, which he has studied with so much pains, is best retired to some inconspicuous corner of his brain, and that prescribing henceforth is to be reduced to a system of numbers—Formula 1 for this; Formula 2 for that, and so on. "Theirs not to reason why." It is all so beautifully simple, and makes no call whatever on brain-substance.

What is the result? He masters the numbers—the ingredients do not concern him—completes his practical study of applied therapeutics as it is practiced, not taught, in the wards; leaves the hospital, rents an office and in due course of time patients come to him. Unlike some hospital patients, they are in a position to insist that they be treated, and not simply "studied." Our young doctor falls back—on what? On his therapeutic experience? If it has been acquired by the above system, it is a minus quantity; the numbers of the hospital formulary do not pass as the current coin of extra-hospital prescribing. On the formulas themselves? He does not know them and does not understand them—nobody does; they are ready to wear, fitting perhaps the ideal disease and misfitting the living patient.

In this extremity along comes a friend in need, a friend indeed—the detail man. He, too, has formulas, plenty of them, and some are even numbered! Our fledgling can again feel at home. Of course he does not understand these formulas any more than he did the others; neither does the detail man understand them; nor the druggist, or insurance agent, or piano salesman who invented, or copied, or "improved" them—but then, what does that matter? They, too, are ready to wear, guaranteed to fit any "case" just as snug and shapely as a coffee sack.

THE MAGIC OF A LABEL.

Wonderful are the things which these mixtures will do! If the doctor is of an inquiring turn of mind, and remembers or looks up what the constituents of these mixtures are known to accomplish when used alone, and compares this with what they are said to do in this mixture—he will find himself at the threshold of a new world of knowledge! Chloral alone, in large doses, is generally considered a pretty dangerous drug; but by mixing it with cannabis indica—another dangerous and uncertain drug—and a little bromid, and labeling the mixture "Bromidia," it becomes as harmless as sugar. Digitalis constricts the blood vessels; but by adding a placebo and the label "Anasarcin" or "Anedemin," it suddenly dilates them. Squills has been tried and found wanting as a reliable cardiac tonic; but by a similar process it becomes superior to digitalis. Acetanilid has not thus far been discovered in any plant; but by adding some powdered celery seed and the label "Labordine" it becomes a "purely vegetable antipyretic." No one would deny the good points of saline cathartics; still they do not cure everything. By mixing them and adding the label "Sulpho-Lythin" these limitations, however, entirely disappear. Mixtures of ferments are found to digest each other; this is "theory;" by adding some flavoring and coloring matter and the label "Lactopeptine" they are regenerated and "secure results by stimulating impaired function and activating gland secretion;" this is "common sense" (?) and "rational therapeutics" (?). But why continue the list?

"SYNERGISM"—THE OPEN SESAME.

In all these mixtures the properties of the ingredients have been profoundly altered: Important but undesirable side actions have been eliminated; unimportant but desirable side actions have developed prominence; new actions have been added; unknown principles have been isolated; synthetic products have become vegetable—and the magician's wand which has effected these transformations is—what? Synergism! A fine word to conjure with. That there is such a thing everyone acknowledges; but does the "synergistic whole" suffice to render chloral harmless, morphin-hyoscin safe, digitalis vasodilating, or acetanilid "vegetable"? Incidentally there is also such a thing as antagonism of drugs—a fact which is sometimes lost sight of by "ready-to-wear" prescribers.

Synergism and antagonism are fine subjects for scientific study and experimentation, and for "theses" and advertisements—but *they* are not the magic. Battle & Co., would not concede that any mixture of chloral and cannabis is safe but their own; and according to the Labordine Pharmacal Company, theirs is the only vegetable acetanilid. The Aladdin's lamp that effects these marvelous changes is nothing more or less than—the coined name *plus* the manufacturer's assurance *plus* the doctor's gullibility—another inspiring fact, when one considers the extensive use of the ready-to-wear proprietary mixtures.

(*To be continued.*)

The Irony of Fate in Attempts at Enlightening the Public.

O. Neustätter relates in the official organ of the German Antiquackery Society that recently he inadvertently contributed to the foundation of a rampant quack establishment. One of his patients, at Munich, saw on his desk a quack's circular, and they discussed together the ways and tricks of charlatans, Neustätter taking great pains to enlighten his patient as to the evils and swindling practices of quacks. The patient brought him again and again various circulars and quack advertisements, and finally one of a magnetic institute which taught the science of magnetic healing and hypnotizing in a few hours for $40.

The patient was not seen again, but behold! the daily papers soon contained the blatant announcement of a new Institute for Suggestion Therapy for all kinds of nervous affections, youthful indiscretions, rheumatism, etc., and the proprietor was—Neustätter's former patient. He had been wealthy at one time, but had lost his property by his drinking habits, and he learned to see in this quack business a means of replenishing his coffers. He treated one woman for headaches and charged her $250, which she had to pay under menace of a suit for, as Neustätter remarks, the German law sets a maximal tariff for registered physicians, but charlatans can charge what they like. He says that he is now doing penance in sackcloth and ashes for he has actually thus been instrumental in founding a new quack establishment while he was preaching an antiquackery sermon.

The inconsistency of the law, however, is what is really responsible for such evils, he adds. The heading of his communication in the *Gesundheitslehrer*, February, is "The Irony of the Law"—*Die Ironie des Gesetzes oder Aufklärungsfolgen.*

Correspondence

Native Labor in the Tropics.

Denver, Colo., June 10, 1908.

To the Editor:—The article, "The White Man in the Tropics," by C. L. G. Anderson of Washington, D. C. (The Journal, May 30, 1908, page 1780), was a masterly review of the conditions relating to the white man and the inhabitants of the tropics, but having been a resident of the torrid zone for a number of years, I am inclined to take exception to some statements in reference to the labor conditions. For instance, the following:

> It is astonishing that the United States adopted this useless and discarded labor (the Jamaican negro) to build the Panama canal. After three years' trial of the West Indian negro, the canal commission has been forced to replace him with the Spaniard, the Italian, the Hindu and the Greek.

This, in some instances, but by no means all, is true, but it is not for climatic reasons that these laborers have been replaced by others, but on account of lack of knowledge of the method of working the West Indian negro. Most of the large construction work in the tropics is directed by white men. These men—managers, foremen and superintendents—have attempted to work the West Indian the same as they direct a gang of laborers in a northern climate. This can not be done. That the native of the tropics is the best man to work in the tropics was, I believe, shown in other parts of Mr. Anderson's article. That all work in these regions must be done by these men is being made more evident every day. Take the West Indian laborer from his own country, transplant him to a foreign soil, in the tropics, and with the right kind of supervision he will do more work than two of any other nationality.

May I give an illustration? Three hundred Jamaican laborers were employed on one section of a railroad being constructed in Ecuador. They were supervised by a well-known construction man of Virginia, who had worked American negroes for years, and was accounted a good man in every way. It was utterly impossible for him to accomplish anything with the Jamaicans.

A Jamaican laborer delights, perhaps, to talk and argue more than anything. Under this man's supervision they would spend, at least, half the time jabbering, arguing and "sweeting the boss." This constructor gave it up in despair.

A white man who had worked the Jamaican laborers for sixteen years and was familiar with conditions, was employed to take charge of this gang. The very first day he understood the difficulties of the other man. Watching them closely for a few hours while they were attempting to argue various questions, and watching them start, but never finish, little fights among themselves, he went up to two of the leaders, called the rest of the men around, and told these two men, in the presence of the rest, that he would give them fifteen minutes to settle their argument by a genuine fight. This, naturally, with a negro, was not what they wanted, but the white man emphasized his statement with a pick handle, forced the two men to a combat for fifteen minutes, with all the rest as an audience, and then quietly told them now to go to work. Under this man's supervision these men became one of the best gangs on this construction work, which employed over 5,000 men. It was simply the man's knowledge of the West Indian conditions which enabled him to get the work out of them.

In my own case, before I became acquainted with the Jamaican laborers, I was detailed to go into the heart of the Andes and build a hospital. Timber was to be cut from the surrounding mountains. After using all available material it was necessary to go a mile or more to get a piece 30 feet long, 12 inches square. I had enough negroes to pick it up and carry it to the hospital with the greatest ease, but I spent at least two hours moving it about 100 yards. With no possible persuasion could I make the men exert a united effort and walk away with it. After exhausting my patience a negro who had been a "headman" or foreman in Jamaica, told me he would take it there for me. He immediately started the negroes singing an old chanty called "O! Sally Brown," and in a remarkably short time my timber was in position at the hospital. These illustrations give the keynote to the failure of the native laborer to work in the tropics under white supervision.

Again, as to their physical condition: The native negro, fed on his natural diet, is at his best. All native laborers, working in the tropics under control of white men, are usually overfed. An English surgeon described the same conditions which he found in India as "unaccustomed plenty." As physician in charge of a tropical plantation, where the men were doing hard work, I gave them meat three times a week, but soon found to get best results I had to cut it down to once a week. I also found that the Spanish peons, never having been accustomed to food and meat in plenty, would gorge themselves, secrete what they couldn't eat, to resurrect the putrid meats several days later. This, of course, gave rise to many cases of illness, which incapacitated the men for work. On page 1783 Mr. Anderson states: "Formerly, service in the tropics was looked on as almost certain death." While this was true formerly, at present in the tropics, where the white man has taken supreme control, it is as safe as our own country. In our own cities, if the same conditions prevailed which formerly prevailed in the tropics, our death rate here would equal theirs. The Canal Zone under Dr. Gorgas is a sample of what can be done to make the tropics healthy and suitable for the white man. While I believe in Mr. Anderson's article, in its general trend, experience has taught me that a white man can live successfully in the tropics as soon as sanitary conditions are made such as he has been accustomed to, and that the native of the tropical zone is the only laborer to be successfully used there. To get best results from either white or black each must live under his own native conditions, with the brain of the white man dominating that of the black.

R. S. Irwin, M.D.

Not Connected with the American Antituberculosis League—A Correction.

Charleston, S. C., June 8, 1908.

To the Editor:—In a recent copy of The Journal, May 23, 1908, page 1725, the report from the South Carolina Medical Association reads as follows: "A committee, with Dr. J. L.

Dawson of Charleston as chairman, was appointed to organize a branch of the American Antituberculosis League." This is a grievous error. The committee of which I was appointed chairman is to organize an antituberculosis league under the auspices of the National Association for the Study and Prevention of Tuberculosis, and is in no way connected with the American Antituberculosis League. The mistake was a clerical error on the part of the official stenographer. Please make this correction.

John L. Dawson.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Cooperation of Physicians in Municipal Health Work.

In a recent number of the *Virginia Medical Semi-Monthly*, Dr. E. C. Levy, chief health officer of Richmond, Va., discusses the relation of the medical profession to the work of city health departments. This subject is of growing importance and should be carefully considered by the local medical society in every large city. An abstract of Dr. Levy's paper follows:

> The department of public health of a modern city deals with matters far more intricate than those which come within the province of any other municipal department, and can not be administered in the same manner as the other branches of the city government. Owing to the intangible character of much of the work it is difficult to make the average alderman understand its importance and value, and it is, consequently, difficult to secure funds. The same difficulty obtains in securing proper laws and ordinances. The greatest difficulty, however, lies in controlling disease and preventing unnecessary and premature deaths in a city of many thousand people of different races, occupations and social attainments. The assistance which the local health officer can secure from the medical profession is indispensable, but it must be intelligently applied, otherwise it may constitute a danger instead of a blessing.
>
> The principal work of the physician to-day is the prevention of diseases. By working in harmony with the health authorities, the individual physician can accomplish far more with less expenditure in time and energy than he can by working alone. The simplest way of helping the health department is by conforming to the health ordinances of the city. Physicians, as a class, are lax in reporting deaths, births and contagious diseases. Yet accurate statistics on these subjects are absolutely necessary. Many physicians do not appreciate the importance of birth and death certificates. Physicians' reports on contagious diseases form a vital link in the chain of evidence which indicates the spread of such diseases. Lack of these reports may seriously hamper the health department. The general public misunderstands the real functions of a department of health and must be educated to a proper understanding of its importance. In such an enlightenment of public opinion the individual doctor may be of the greatest assistance. It is, therefore, important that physicians should not mislead patients or allow them to be misled regarding the causes of deaths. Proper measures of personal hygiene in which the family physician can be the chief instructor will do much to reduce the range of preventable diseases. The physician of the future must be thoroughly qualified for the work which will be demanded of him. He must be proficient in diagnosis, and must be a competent hygienist. The health authorities and the physicians must work hand in hand.

State Association and Public Health Matters.

The *West Virginia Medical Journal* in its June number gives an account of the recent meeting of the state association and makes the following statement, which is sufficiently noteworthy for reproduction:

> For the first time in its history, the state association was officially recognized as an important factor in the public affairs of the state. A committee appointed at a recent extra session of the legislature for that purpose appeared before the state association to confer on the matter of a state tuberculosis sanitarium, and to ask that a committee be appointed from its membership to advise and assist the legislative committee in the formulation of plans for such an establishment. This is a most auspicious beginning of what we trust will be a continued, although too long delayed recognition of the power and usefulness of our association in matters of public and state concern.

It is certainly a gratifying evidence of improving conditions when the state legislature realizes the necessity of competent and reliable information on health matters, and invites the state association to confer with it for the good of the public. The sooner such conditions are obtained in every state, the sooner will it be possible to improve health conditions and to eliminate, so far as possible, all unnecessary and avoidable disease.

Chiropractic Bill Fails.

The "chiropractic" bill recognizing the so-called chiropractics as licensed practitioners of medicine has been defeated by the Oklahoma State Senate.

Pure Food Inspection Hampered by Lack of Funds.

The annual report of the executive committee of the State Board of Health of South Carolina states that the task of carrying out the provisions of the pure food and drugs act of the state has been assigned to the State Board of Health, but that no appropriation was made for this purpose at the time the bill was passed. At the last session of the legislature an appropriation of $1,000 was secured. This amount is ridiculously inadequate, and the members of the board have appealed to the members of the state association to use their influence with members of the legislature to have the amount increased at the next session. No better commentary could be desired on the attitude of many of our state legislatures, as well as on the need of education of our law makers as to the importance of the preservation of public health. An appropriation of $1,000 to secure pure food for the people of the state for an entire year is as futile, and just about as sensible as would be the appointment of a single policeman to protect the property of the state. Pure food and good health can be had, but like all other things worth having, they can only be obtained at a reasonable and commensurate cost.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES.

DR. JOHN H. BLACKBURN, DIRECTOR.
Bowling Green, Kentucky.

The following additional societies have adopted and are now conducting the course of postgraduate study, making a total to date of ninety societies which are following it.

GEORGIA.
Cobb County.

ILLINOIS.
McDonough County.
St. Clair County.

IOWA.
Centerville Club.
Linn County.
Webster County.

LOUISIANA.
Jackson Parish.

MISSISSIPPI.
Adams County.
Forrest County.
Jones County.
Leflore County.

PENNSYLVANIA.
Washington County.
Westmoreland County.

TEXAS.
Brown County.

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Tenth Month.

DISEASES OF LIVER AND GALL BLADDER.

First Weekly Meeting.
- Anatomy of Liver and Gall Bladder.
- Physiology of Liver and Gall Bladder.
- The Chemistry of Bile.

Second Weekly Meeting.
- Acute Yellow Atrophy of Liver.
- Pathology of the Gall Bladder and Ducts.
  - Cholecystitis.
  - Cholangitis and Carcinoma of Bile Passages.

Third Weekly Meeting.
- Cholelithiasis: Etiology. Symptoms.
- Amyloid Disease of the Liver.

Fourth Weekly Meeting.
- Carcinoma of the Liver: Pathology. Symptoms and Diagnosis.
- Cirrhosis of the Liver.

Monthly Meeting.

Jaundice.
Diagnosis and Treatment of Cirrhosis of Liver.
Medical Treatment of Gallstones.

First Weekly Meeting.

Anatomy of Liver and Gall Bladder.

Liver: Situation, surface form, important relations. Shape, volume, dimensions. Weight, color, consistence. Surfaces, lobes, fissures, capsule of Glisson, ligaments. Blood supply; trace portal vein to inferior vena cava; trace hepatic artery. Lymphatic vessels and glands. Nerve supply.

Microscopic Anatomy: Lobule, cells, blood vessels, ducts. Trace ducts from origin to common duct.

Gall Bladder: Shape, size, situation. Fundus, body and neck. Important relations. Blood supply, nerves and lymphatics. Microscopic structure; three coats.

Physiology of Liver and Gall Bladder.

1. Secretion of bile. Increased flow; causes, hemolytic agents. Effect of bile, of secretin, section of nerves. Function of gall bladder. Ejection of bile into duodenum. Bile as an excretion.
2. Formation of glycogen. Quantity in liver, causes of variation in quantity. Effect on amount of glycogen, (a) of carbohydrates, monosaccharids and disaccharids, (b) of proteids, (c) of fats. Function of glycogen, changes occurring in glycogen, effects of exercise and starvation on glycogen.
3. Formation of urea. Sources of urea, probable changes in proteids.

The Chemistry of Bile.

Color, reaction, specific gravity. Bile pigments; origin, color, of each, reabsorption, Gmelin's reaction. Bile acids, sodium salt of each. Reabsorption, probable effect. Effect on cholesterin and fats. Cholesterin, probable source. Lecithin. Bile as an antiseptic.

Book Notices

Typhoid Fever. By George C. Whipple, Consulting Engineer, with an Introductory Essay by William T. Sedgwick, Professor of Biology, Massachusetts Institute of Technology. First Edition. Cloth. Pp. 407, with Illustrations. Price, $3.00. New York: John Wiley & Sons, 1908.

The object of this book is to give the essential facts in relation to the spread and the prevention of typhoid fever. There is a most interesting introduction by Prof. W. A. Sedgwick of the Massachusetts Institute of Technology which shows very succinctly that typhoid fever is a disease of defective civilization and that for every case of typhoid some one should be educated rather than hanged as suggested by some. Mr. Whipple's book greatly facilitates this education. Professor Sedgwick also points out the great merit of the English physician William Budd in conclusively showing so long ago as 1873 that typhoid fever is a decidedly contagious disease, a fact that probably is not sufficiently appreciated by many physicians even to-day. Turning now to the contents we find that Mr. Whipple's description of the symptoms, bacteriology and immunology of typhoid fever is clear and correct with adequte detail for the purpose in hand. The chapter (iii) on the typhoid patient as a focus of infection presents admirably the various and devious ways in which the disease may be spread by the single patient. It defines, further, the duties of the various persons especially concerned in the prevention of this spread: The physician, the nurse, the household, and the public health officers. The chapters on the typhoid fever bacillus at large and the various lines of defense against it contain exceedingly valuable information that covers the ground thoroughly. At the same time the subject is presented in a very readable and simple way and in such terms that no intelligent person will have difficulty in understanding it. The chart showing the transmission of typhoid fever and the means of protection displays the present knowledge on these subjects in a most ingenious and comprehensive manner. This chart will prove helpful in giving instruction in regard to typhoid fever. The special attention of health officers of railroads and of steamboats is directed to Mr. Whipple's statements in regard to the disposal of fecal wastes on trains and boats. Other chapters deal with typhoid fever statistics, the distribution of the disease, epidemics—their history, investigation and control—the influence of public water supplies and of milk supplies on the typhoid fever death rates in cities and the financial aspect of typhoid fever. Sixteen appendices are devoted to special topics, e. g. disinfection, corrected death rates, examination of water for typhoid bacilli, bacteriology of the blood in typhoid fever, many of the appendices being standard articles by the other persons previously published everywhere.

Mr. Whipple has rendered a large service by writing this book, for we are sure it will prove a powerful weapon in the fight against typhoid fever; it certainly is the most important contribution to the literature on typhoid fever yet made by an American engineer. The subjection of typhoid fever is the special joint task of physicians and engineers. In the past the professions here represented have not cooperated so closely as the public welfare demands. The physician is more concerned about the individual patient while the sanitary engineer studies the needs of communities at large, the two supplementing each other in the effort to reduce typhoid fever to the minimum. The absolute necessity for full cooperation and mutual understanding in this work is one great lesson of Mr. Whipple's book. Every practicing physician should read the book in order to get a clearer and fresher conception of the larger duty he owes to the community at the same time as he watches anxiously the course of typhoid fever in his patient. He should put the book in the hands of nurses, of members of the household in which typhoid fever occurs, and he should recommend it to all interested persons in order to promote such conditions of cleanliness that typhoid fever soon shall cease to be a national disgrace as illustrated only too painfully well by the list of epidemics discussed by Mr. Whipple.

Panama and Back. By Henry T. Byford, M.D., Pp. 384. Chicago: W. B. Conkey Co.

Those who expect to find this a guide to Panama—how to get there and how to get back again—will be disappointed. It is nothing of the kind. It is a record of experiences and impressions; that is all. And Dr. Byford has given us these experiences and impressions with a dry humor and wit that make their reading a pleasure. Without becoming monotonous, he goes into the minutest personal details and philosophizes on everything imaginable. He discusses the negro question and religion; the engineering problems connected with the Panama Canal, and Chicago architecture; tropical diseases and table manners. His experiences were many and varied, including a shipwreck on a sandbar, a voyage in an overcrowded and unsafe fruit boat, and taking a shower bath with a quart of water in a washbowl. Incidentally he describes the Pan-American Medical Congress, which met by instalments at Panama, and the way the Panamanians spent the $25,000 that was appropriated for the entertainment of the congress. But with it all he has given us a book both instructive and entertaining. One lays it down with a wish that there were more of it, and that the author would soon write another book of similar character.

Lecons sur les Troubles Fonctionnels du Coeur (Insuffisance Cardiaque—Asystolie), par Pierre Merklen, Médecin de l'hôpital Laennec. Paper. Pp. 428. Paris: Masson et Cie, 1908.

Cardiac insufficiency in all its forms is considered at great length; for example, the varieties which arise as a result of various valvular lesions and of muscular weaknesses and of pulmonary and renal diseases. Arrhythmia and tachycardia are also fully discussed, and several lectures are devoted to asystole of the right heart. The last lectures treat of cardiac asthma, acute pulmonary edema and angina pectoris. The author discusses all the functional disorders in great detail. The clinical pictures are clear, and the analysis of cases and exposition of phenomena complete. He constantly points to the indications for treatment which gives his lectures an interesting practical character. His teachings are fully abreast of the times, and teem with new and original ideas. Readers of French will greatly enjoy this book.

Association News

PROCEEDINGS OF CHICAGO SESSION.

(*Continued from page 2013.*)

SECTION TRANSACTIONS.

Those who desire copies of the 1908 Transactions of any of the sections should order them at once, as printing is about to commence. Only enough are printed to supply the demand, and each year some persons order too late to be supplied. It is to be remembered that one may give a permanent order for Transactions—that is, his name is put on the list and the Transactions of the sections specified are sent, from year to year, until the order is canceled. Address orders to the American Medical Association, 103 Dearborn Avenue, Chicago.

MINUTES OF SECTIONS.

The minutes of the proceedings of the twelve sections at the fifty-ninth annual session, held at Chicago, June 2 to 5, 1908, are as follows:

Section on Practice of Medicine.

Tuesday, June 2—Afternoon.

The Section was called to order at 2 p. m. in Sinai Temple by the Chairman, Dr. C. F. Hoover, Cleveland.

The Chairman read his address, entitled "Paroxysmal Hemoglobinuria."

Dr. Frank A. Jones, Memphis, read a paper on "Clinical Manifestations in Cardiovascular Disease."

Dr. James B. McElroy, Memphis, read a paper on "Cardiac Aneurism, with Report of a Case Associated with Mediastino-pericarditis." Discussed by Drs. Preble, Herrick, Hoover, Butler and McElroy.

Dr. Frank Smithies, Ann Arbor, read a paper on "Clinical Aspects of Certain Mediastinal Tumors." Discussed by Drs. Coleman, Lambert, Babcock, Herrick and Smithies.

Dr. W. H. Hewlett, San Francisco, read a paper on "Clinical Observations on Absolutely Irregular Hearts." Discussed by Drs. Babcock, Hirschfelder, Thayer, Wells, Allen, McCaskey and Hewlett.

Dr. John A. Witherspoon, Nashville, read a paper on "Malignant Septic Endocarditis." Discussed by Drs. Billings, Gilbert, Jones, Fussell, Smithies and Witherspoon.

Wednesday, June 3—Morning.

Dr. L. F. Bishop, New York, read a paper on "High Arterial Tension of Nervous Origin, with Diagnosis, Consequences and Treatment."

Dr. Joseph Eichberg, Cincinnati, read a paper entitled, "The Factors in the Estimation of Blood Pressure, with a Special Reference to the Tonometer of von Recklinghausen."

These two papers were discussed by Drs. W. Forest Dutton, Pittsburg; N. S. Davis, Chicago; Arthur D. Hirschfelder, Baltimore; I. J. Wolf, Kansas City; Joseph L. Miller, Chicago; Wright, Akron; C. F. Hoover, Cleveland; L. F. Bishop and Joseph Eichberg, Cincinnati.

The Chairman appointed a Nominating Committee as follows: Drs. H. W. Hewlett, San Francisco; Alfred Stengel, Philadelphia, and Frank A. Jones, Memphis, Tenn.

Dr. H. D. Arnold, Boston, read a paper entitled, "The Physics of Physical Signs, with Special Reference to the Respiratory Murmur." Discussed by Drs. Jack, Buffalo; Sewell, Denver; Walter E. Scott, Adel, Iowa; Edwards, California, and H. D. Arnold, Boston.

Dr. Clifford B. Farr and Dr. Edward H. Goodman, Philadelphia, presented a paper entitled, "Clinical Value of the Quantitative Estimation of Pepsin, with Special Reference to the Mett and Ricin Method." Discussed by Drs. John H. Musser, Philadelphia; M. Lichty, Cleveland; Williams, New York; Nathan Rosewater, Cleveland; and Edward H. Goodman, Philadelphia.

Dr. Arthur D. Hirschfelder, Baltimore, read a paper on "The Importance of Recent Studies on the Circulation for the Practice of Medicine." Discussed by Drs. W. S. Thayer, Baltimore; G. W. McCaskey, Fort Wayne, Ind., and A. D. Hirschfelder.

Dr. G. W. McCaskey, Fort Wayne, Ind., read a paper entitled, "The Viscosity of the Blood and Its Clinical Significance." Discussed by Drs. S. P. Black, Pasadena, Cal.; Henry B. Hemenway, Evanston, Ill.; Gooodman, Chicago; Nathan Rosewater, Cleveland; F. J. Hultgen, Chicago; L. F. Bishop, New York, and G. W. McCaskey, Fort Wayne, Ind.

Wednesday, June 3—Afternoon.

This was a joint meeting held with the Section on Pathology and Physiology. For the proceedings see minutes of Section on Pathology and Physiology, page 2091.

Thursday, June 4—Morning.

The meeting was called to order by the Chairman, Dr. C. F. Hoover, at 9:30 a. m.

The Nominating Committee made the following report: Chairman, Dr. Joseph L. Miller, Chicago; secretary, Dr. Wilder Tileston, Boston; Orator on Medicine, James B. McElroy, Memphis; delegate, Dr. George Dock, Ann Arbor; alternate delegate, Dr. W. S. Thayer, Baltimore.

On motion of Dr. W. S. Thayer, Baltimore, the Secretary was empowered to cast one ballot for the election of the officers nominated.

Dr. Nathan Rosewater, Cleveland, read a paper entitled, "Disguised Starvation."

The Chairman said that it had been suggested by several men that a modification of the program of the meeting of the Section would add very much to the interest of the Section, facilitate discussion and increase the number of men who could serve on the program. He said that he would be glad to hear any motion or suggestion regarding the method of procedure by which this could be brought before the Section.

Dr Edward F. Wells, Chicago, said that it was clear that a section as large as the Section on Practice of Medicine of the American Medical Association, with a program containing forty papers, did not represent the proportion it should; that if it did represent the proper proportion, according to the present arrangements, it would be a physical impossibility to have them all read in the time allotted. It seemed to him that a further extension and presentation of papers might be made. He merely suggested that a certain number of selected papers be read as at present; that a certain number be printed in full, but with good abstracts, to be followed by an oral discussion of five or ten minutes' duration. These abstracts should be printed and presented to the members of the Section in advance of the session. Another division of the papers might be printed in full with discussion. Such papers might be full of details, of experiments, of observations, etc. He suggested that the number of papers be limited to eighty or one hundred, and that one-third be placed in one class, one-third in another and one-third in another.

He moved that the Chairman appoint a committee to consider this question and to report on it at the next session. He suggested also that this committee consist of ex-chairmen and ex-secretaries of the Section. This question was so broad and intricate, requiring the consideration of so many points, that he suggested that the committee report at the next session.

The Chairman said that the committee, as he understood, could report at its convenience.

The Secretary said that the Section officers had realized for some time that there should be a change made in the program. A number of men throughout the country were doing excellent work in medicine, and it had been impossible to accept desirable papers from them. Dr. Miller said that each year the Section officers had had applications from one hundred men, asking to present papers before the Section, and the majority of these papers had to be excluded because of the limitation of forty papers to each meeting. If they allowed twenty minutes for the presentation of each paper, and a proper amount of time for each paper to be discussed, it would be too much for the program.

The Secretary said that all this meant that there should be a change made in the program allowing of six, eight or ten-minute papers; this would allow more good men on the program. He thought that it would be a good idea if some arrangement could be made by which a paper could be presented in abstract form; then a number of men could discuss it, and still a larger number of papers be presented. An increase in the number of papers was a thing to be desired.

Dr. William S. Thayer, Baltimore, said that he would like to point out that if this method were adopted it would be necessary to know before the time of session what men would attend the session of the Association, and of their adherence to this Section. Those desiring to attend should notify the authorities; then the abstracts of papers could be sent them prior to the session. Dr. Thayer said that this was what was done in the international congresses.

Dr. Wells' motion was carried.

The Chairman appointed the following men to serve on this committee: Drs. George Dock, Ann Arbor; Alexander Lambert, New York; Allen A. Jones, Buffalo; Edward F. Wells, Chicago.

Dr. Henry Buswell, Buffalo, read a paper on "A Case of Syphilitic Infection of Fourteen Years' Duration with Protracted and Unusual Febrile Symptoms." Discussed by Drs. Joseph L. Miller, Chicago; William J. Butler, Chicago; Charles G. Stockton, Buffalo; William S. Thayer, Baltimore; C. F. Hoover, Cleveland, and Henry Buswell.

Dr. Walter Bierring, Iowa City, read a paper entitled, "Remissions in Pernicious Anemia and Their Significance." Discussed by Drs. Charles G. Stockton, Buffalo; William S. Thayer, Baltimore; Alfred Stengel, Philadelphia; Adolph Th. Paulson, Chicago; W. M. McCabe, Nashville; Hugo A. Freund, Detroit; J. A. Witherspoon, Nashville; Meyer, St. Louis, and Walter Bierring, Iowa City.

Dr. Douglas Vanderhoof, Richmond, Va., read a paper on "Clinical Method for Determining the Sodium Chlorid Content of the Blood and Other Body Fluids." Discussed by Dr. Elliot P. Joslin, Boston, and Dr. Vanderhoof.

Dr. Harry Goodall and Dr. Elliot P. Joslin, Boston, presented a paper entitled, "Experiments on a Salt-Free Diet and Salt Metabolism, with Especial Reference to Diabetes Mellitus." Discussed by Drs. Alexander Lambert, New York; J. M. Allen, Liberty, Mo.; G. M. McCaskey, Fort Wayne, Ind., and Elliot P. Joslin.

Dr. R. H. Bellamy, Wilmington, N. C., read a paper on "An Epidemic of Pellagra." Discussed by Drs. William S. Thayer, Baltimore; John C. Dawson, Charleston, S. C.; Alfred Meyer, New York, and R. H. Bellamy.

Dr. Christopher Graham, Rochester, Minn., read a paper on "Gastric and Duodenal Ulcer." Discussed by Drs. W. J. Mayo, Rochester, Minn.; Fenton B. Turck, Chicago; J. M. Allen, Liberty, Mo.; Sippy, Chicago; Elliot P. Joslin, Boston; G. W. McCaskey, Fort Wayne, Ind.; Judson Daland, Philadelphia; M. Milton Portis, Chicago, and Christopher Graham.

Dr. Heinrich Stern, New York, read a paper entitled, "Researches Concerning Compensatory Diarrheas." Discussed by Dr. George N. Jack, Buffalo.

Dr. Edward F. Wells, Chicago, said that the committee appointed desired to make a preliminary report and, in the absence of the chairman of that committee, Dr. Dock, he would present it. It was as follows:

Your committee, in presenting this preliminary report, is of the opinion that a fair presentation of conclusions and recommendations of the subject of program methods which you have delegated to it would require much prolonged consideration that a full report should be presented to the Section at its session next year; meanwhile your indulgence and assistance are asked. At this time, however, the committee will make some suggestions which are thought useful to the Section officers for their consideration in preparing the program for the ensuing year. These are, broadly, as follows:

At the discretion of the Section officers there should be included in the program the following classes of papers:

A. A series of symposiums, each consisting of not more than three papers, the presentation of which shall be limited to not more than twenty minutes each, with discussions limited to not more than ten minutes for the first, and five minutes for each subsequent speaker.

B. A series of well-selected papers on highly important separate subjects, the presentation of which shall not exceed twenty minutes each, with discussion limited to ten minutes for the first, and five minutes for each subsequent speaker.

C. A series of short papers, the presentation of each to be limited to ten minutes, with discussions limited to five minutes to each speaker.

D. A series of papers to be presented in full abstract, the reading of which shall not exceed five minutes, with discussion limited to five minutes for each speaker.

E. A series of highly scientific research papers, to be printed in full, and distributed to members on request, at least two weeks before the meeting, with written discussion, not exceeding four hundred words presented to the Secretary on the opening day's session, to which the author of the paper may have access, with an allowance of ten minutes for him to present his position and reply to the written criticisms filed.

The practical application of these suggestions is left to the untrammeled good judgment of the Section officers, offering the hearty cooperation of the committee, and requesting such cooperation on their part and on the part of the members of the Section, in the consideration of the entire problem, and in the formulating of conclusions for presentation at the next annual session.

In conclusion, it is the sense of the committee that while rules and regulations may aid in furnishing the work of the Section they can not supplant the personal attention, judgment and discretion of the Section officers, but that on them in their preparation and management of the program and the conduct of the section work will largely depend the successful session.

In this connection it is recommended that fully accredited members make use of their prerogative in rising to a point of order whenever time is trespassed on by members in the presentation of papers or in their discussions.

GEORGE DOCK, Chairman.
ALLEN JONES,
ALEXANDER LAMBERT,
EDWARD F. WELLS, Secretary.

The report was adopted.

Dr. Ralph S. Lavenson, Philadelphia, read a paper on "Acute Hemorrhagic Necroses of the Suprarenal Bodies." Discussed by Drs. S. Marx White, Minneapolis, and Ralph S. Lavenson.

Drs. S. Marx White and Chelsea C. Pratt, Minneapolis, presented a communication on "Trichiniasis, with Report of Nine Cases." Discussed by Drs. William S. Thayer, Baltimore; S. R. Pietrowicz, Chicago; Joseph L. Miller, Chicago; Alfred Meyer, New York; James B. Herrick, Chicago, and S. Marx White.

Dr. Alfred Stengel, Philadelphia, read a paper on "Modifications of the Clinical Course of Typhoid Fever Under the Influence of Menstruation and the Successive Menstrual Epochs; Treatment." Discussed by Dr. Philip Marvel, Atlantic City, and Dr. Childs, Kansas City.

Dr. H. Bascom Weaver, Asheville, N. C., read a paper entitled, "Tuberculin Therapy; Its Indications and Practical Application in the Treatment of Tuberculosis." Discussed by Drs. Koessler, Chicago; William Litterer, Nashville, Tenn., and H. Bascom Weaver, Asheville, N. C.

FRIDAY, JUNE 5—MORNING.

On motion of Dr. Johnson, Chicago, the Secretary was instructed to thank the congregation of Sinai Temple for the meeting place furnished the Section.

Dr. L. W. Ladd, Cleveland, read a paper on "Serum Treatment of Meningitis."

Dr. Lewellys F. Barker, Baltimore, and Dr. Frank J. Sladen, Baltimore, presented a paper entitled, "Report of a Series of Cases of Meningitis."

These two papers were discussed by Drs. W. S. Chase, Akron, Ohio; Johnson, Chicago; Edward F. Wells, Chicago; Joseph Eichberg, Cincinnati; Koessler, Chicago; D. E. English, Millburn, N. J.; O. M. Gilbert, Boulder, Colo.; L. W. Ladd, Cleveland, and Frank J. Sladen, Baltimore.

Dr. Hugo A. Freund, Detroit, read a paper entitled, "Pathology, Diagnosis and Treatment of So-called Hodgkin's Disease." Discussed by Drs. George Dock, Ann Arbor; Walter Bierring, Iowa City; John M. Swan, Philadelphia; George Douglas Head, Minneapolis; Edson B. Fowler, Chicago, and Hugo A. Freund, Detroit.

Dr. J. W. Shankland and Dr. William Engelback, St. Louis, presented a paper on "The Diagnostic Value of the Cutaneous and Conjunctival Tuberculin Reaction." Discussed by Drs. Gerald Bertram Webb, Colorado Springs; Frank Smithies, Ann Arbor; H. Bascom Weaver, Asheville, N. C.; John M. Swan, Philadelphia; Frederick T. Lord, Boston; Hugo A. Freund, Detroit; S. Marx White, Minneapolis; George Douglas Head, Minneapolis, and William Engelback, St. Louis.

Section on Obstetrics and Diseases of Women.

TUESDAY, JUNE 2.—AFTERNOON.

The Section was called to order at 2 p. m., in Second Presbyterian Church, by the Chairman, Dr. Walter B. Dorsett, of St. Louis.

Dr. W. P. Manton, the Secretary, presided during the reading of the Chairman's address on "Criminal Abortion in Its Broadest Sense." Discussed by Drs. Wathen, Carstens, Putnam, Holmes, Abrams, Henry, Lewis, Prof. A. Martin, Drs. Yarros, Lawrence, and Dorsett.

Dr. F. F. Lawrence of Columbus offered a resolution to the effect that the Section on Obstetrics and Diseases of Women recommend to the House of Delegates the advisability of establishing some system of instructing the youth of the country concerning the important and sacred rôle of the generative organs; that the Section urge its Delegate to give the matter his best support in the House of Delegates; and, further, that a committee be appointed to consider the advisability of publishing a journal for lay subscribers which shall disseminate truth and counteract the falsehood of many publications now extant. Seconded and carried.

On motion of Dr. C. C. Frederick, Buffalo, a resolution was adopted, requesting the House of Delegates to appoint a standing committee to be called the National Committee on Criminal Abortion with the duty of investigating the laws on criminal abortion on the statute books of the different states and territories of the United States, and of requesting all state and territorial medical societies to appoint like committees to cooperate in the enactment of new and adequate laws governing criminal abortion.

The papers read at this meeting constituted a symposium on Cesarean section.

Prof. J. Pfannenstiel, Kiel, Germany, presented a paper on "Abdominal Cervical Cesarean Section."

Dr. J. M. Trigg, Shawnee, Okla., read a paper entitled, "Cesarean Section, with Report of Two Cases."

Dr. W. H. McPherson of New York City contributed "Abdominal Cesarean Section as Performed at the Society of the Lying-in Hospital in the City of New York, with an analysis of 186 Cases."

These three papers were discussed by Dr. Wathen, Prof. A. Martin, Drs. De Lee, Fry, Watson, Carstens, Reid, Frankenthal, Stone and McPherson.

Dr. E. E. Montgomery of Philadelphia read a paper entitled "Three Procedures for Entering the Abdominal Cavity—the Vaginal, the Vertical Abdominal, and the Pfannenstiel; the Indications for, and Their Relative Advantages and Disadvantages." Discussed by Drs. Boldt, Hall, Gellhorn, Thienhaus, Betts, Campbell, McCowan, and Montgomery.

Dr. Manton moved that one or more members of the Section on Obstetrics and Diseases of Women be appointed by the Chairman to represent the Section in cooperation with the Association's General Committee on Nomenclature and Classification of Diseases. The motion was seconded and carried and the Chairman appointed Drs. E. E. Montgomery of Philadelphia, and B. R. Schenk of Detroit.

Wednesday, June 3.—Morning.

The meeting was called to order at 9:15 by the Chairman, Dr. Walter B. Dorsett.

Dr. Henry T. Byford of Chicago read a paper on "The Preparation and After-Treatment of Abdominal Section." Discussed by Drs. Craig and Hall.

Dr. C. C. Frederick of Buffalo read a paper entitled, "The Care of Patients After Abdominal Section, with Especial Reference to the Length of Time They Should Be Kept Recumbent." Discussed by Drs. Boldt, Rees, Prof. A. Martin, and Dr. Frederick.

Dr. Hunter Robb of Cleveland contributed a paper entitled "Ruptured Tubal Pregnancy: When Shall We Operate?" Discussed by Drs. Frederick; Carstens; Massey; Hall; Noble, Indianapolis; Gilliam; Banga; Prof. A. Martin; Drs. Campbell; McDermott; Thienhaus; Cohen; Henry; Stone; and Robb.

Dr. H. G. Wetherill of Denver read a paper on "Obstetric, Septic and Anesthetic Toxemias." Discussed by Drs. Cohen, Fry, and Wetherill in closing.

A paper on "Diphtheritic Genital Infection Simulating Puerperal Fever," was read by Dr. William Cuthbertson of Chicago. Discussed by Drs. Keyes, Gallant, and Cuthbertson.

Wednesday, June 3.—Afternoon.

The meeting was called to order at 2:30 by the Chairman.

Prof. August Martin, Greifswald, read a paper on "Genital Tuberculosis." Discussed by Drs. Boldt, Montgomery, Byford, Gilliam, Barrett, Massey, and Professor Martin.

Dr. I. S. Stone, Washington, read a paper on "Development of Malignancy in Operation Wounds." Discussed by Drs. Boldt, Wetherill, Gellhorn, Massey, Craig, and Stone.

Dr. Fred J. Taussig, St. Louis, read a paper on "Uterus and Stomach: Their Anatomic, Physiologic and Pathologic Relationships." Discussed by Drs. Carstens, Craig, and Taussig.

Dr. Channing W. Barrett, Chicago, read a paper on "Bowel Complications Following Gynecologic and Obstetric Operations." Discussed by Drs. Craig, Gilliam, Jack, and Barrett.

Dr. Charles Lester Leonard, Philadelphia, read a paper on "The Expectant Treatment of Ureteral Calculus: Its Indications and Results."

Dr. Edgar Garceau of Boston read a paper on "The Treatment of Urethral and Renal Pelvic Inflammation by means of Antiseptic Injections."

These two papers were discussed by Drs. Young, Barrett, and Leonard.

Thursday, June 4.—Morning.

The meeting was called to order at 9 a. m. by the Chairman.

Dr. A. Ernest Gallant, New York, read a paper entitled "The Corset for Movable Kidney and Associated Visceral Ptoses." Discussed by Drs. Daland, McLean, and Gallant.

Dr. Henry O. Marcy, Boston, read a paper on "The Suture: Its Place in Surgery." Discussed by Drs. Jack, Gilliam, Gallant, and Marcy.

Dr. Henry D. Fry, Washington, contributed a paper entitled "A Plea for Prompt Evacuation of the Uterus in the Treatment of Eclampsia." Discussed by Drs. Laura H. Branson, Sprigg, Boldt, Yarros, Cohen, Carstens, Martin, Jewett, Wathen, and Dr. Fry.

Dr. Thomas B. Eastman, Indianapolis, read a paper on "The Conservative Surgeon and the Symptomless Uterine Fibroid." Discussed by Drs. Andrews, Boldt, Pantzer, Lawrence, Carstens, and Eastman.

Dr. H. J. Boldt, New York City, read a paper entitled, "The Non-Surgical Treatment of Uterine Displacements." Discussed by Drs. Hall, Gellhorn, Goldspohn, Van Hoosen, Gallant, Hinche, Henry, and Boldt.

Thursday, June 4.—Afternoon.

The meeting was called to order at 2 p. m., by the Chairman. The election of the following officers was announced by Mr. I. S. Stone, Washington, Chairman of the Nominating Committee: Chairman, Dr. Walter P. Manton, Detroit; Vice-Chairman, Dr. H. G. Wetherill, Denver; Secretary, Dr. C. Jeff Miller, New Orleans; Delegate, Dr. J. H. Carstens, Detroit; Alternate, Dr. Channing W. Barrett, Chicago.

Dr. Benjamin R. Schenk, Detroit, read a paper on "The Treatment of Uterine Fibromyoma Associated with Marked Anemia." Discussed by Drs. Craig and Byford.

A paper entitled, "Report of a Case of Traumatic Rupture of the Uterus and Bladder During Labor at Full Term. Hysterectomy, Repair of Bladder, Recovery," by Drs. John Young Brown and Percy H. Swahlen, St. Louis, was read by Dr. Swahlen. No discussion.

Dr. George Gellhorn, St. Louis, read a paper entitled "Abnormal Secretion from Mammary Glands in Non-Pregnant Women." Discussed by Drs. Henry, Cohen, De Lee, Hincke, and Gellhorn.

Dr. Daniel H. Craig, Boston, read a paper on "The Menopause." Discussed by Dr. Henry.

Dr. Rudolph Wieser Holmes, Chicago, read a paper on "Ablatio Placentæ: Premature Detachment of the Normally Situated Placenta." Discussed by Drs. De Lee, S. Strauss, McCown, Harter, Marshall, and Holmes.

Dr. L. J. Hirschman, Detroit, read a paper entitled, "Prolapse of the Rectum and Sigmoid Flexure Following Hysterectomy." Discussed by Drs. Dorsett, Gilliam, and Hirschman.

Dr. D. Tod Gilliam, Columbus, read a paper on "The Adjustable Canvas Chair as an Aid in the Murphy Treatment of Diffuse Suppurative Peritonitis." No discussion.

Dr. S. Strauss, New York City, read a paper on "Serum Treatment of Carcinoma." Discussed by Drs. Watkins, Harter, and Strauss.

On motion of Dr. W. O. Henry, Omaha, a vote of thanks was extended to the trustees of the Second Presbyterian Church for the use of the room in which meetings were held.

Dr. Walter B. Dorsett, retiring Chairman, introduced the new Chairman, Dr. Walter P. Manton, who spoke in reply.

On motion of Dr. W. O. Henry, a vote of thanks was extended to the retiring Chairman, and to the Section officers.

Section on Surgery and Anatomy.

Tuesday, June 2—Afternoon.

The Section was called to order by the Chairman, Dr. Rudolph Matas, at 2 p. m., in Orchestra Hall.

The recommendations made by the Executive Committee with reference to changing the name of the Section to Section on Surgery, and electing three Vice-Chairmen, were referred back to the committee.

The Chairman, Dr. Matas, made introductory remarks.

A paper entitled "Results of Transplantation of Blood Vessels and Organs," was read by Dr. Alexis Carrel, New York.

Dr. C. C. Guthrie, St. Louis, presented a paper on "Physiologic Aspects of Blood-Vessel Surgery."

Dr. Rudolph Matas, New Orleans, read a paper entitled, "Recent Contributions on the Surgical Treatment of Aneurism by the Intrasaccular Method (Endoaneurismorraphy)—A Statistical Summary."

A paper on "A Successful Ligation of the Innominate Artery, with Presentation of Patient," was read by Dr. William Britt Burns, Memphis, Tenn.

These four papers were discussed by Drs. J. E. Sweet, Philadelphia; J. F. Binnie, Kansas City, Mo.; D. D. Lewis, Chicago; J. A. Danna, New Orleans; Steiner, Lima, O.; George W. Crile, Cleveland; Alexis Carrel, New York; C. C. Guthrie, St. Louis; W. B. Burns, and Rudolph Matas, New Orleans.

Dr. James E. Moore, Minneapolis, read a paper on "Local Applications in Surgery." Discussed by Drs. H. A. Royster, Raleigh, N. C.; Howell, Columbus, O.; A. J. Ochsner, Chicago; T. J. Conley, Chicago; J. B. Murphy, Chicago; Robert F. Weir, New York; A. D. Bevan, Chicago; J. N. Jackson, Kansas City, Mo.; Connelly, Minnesota; Parker, Chicago; and James E. Moore.

A paper on "Bier's Hyperemia" was read by Dr. Jorn F. Binnie, Kansas City, Mo. Discussed by Drs. M. G. Seelig, St. Louis; V. J. Baccus, Chicago; Allison, Indianapolis; D. N. Eisendrath, Chicago; J. B. Murphy, Chicago, and J. F. Binnie.

WEDNESDAY, JUNE 3.—MORNING.

The Section was called to order at 9 a. m.

A joint meeting was held with the Section on Laryngology and Otology.

Drs. Harvey Cushing, Baltimore; C. H. Frazier, Philadelphia, and Frank Hartley, New York, gave lantern slide demonstrations on "Cranial Technic."

A paper on "Intracranial Complications of Ear and Nose Diseases," was presented by Drs. James F. McKernon and C. G. Coakley, New York.

These four papers were discussed by Drs. J. B. Murphy, Chicago; Jensen, Berlin; V. J. Baccus, Chicago; Willy Meyer, New York; Robert F. Weir, New York; Harvey Cushing; Frank Hartley; C. H. Frazier; James F. McKernon, and C. G. Coakley.

A paper entitled "The Thyroid and the Parathyroid" was read by Dr. Herman Tuholske, St. Louis. Discussed by Drs. C. H. Mayo, Rochester, Minn.; and A. J. Ochsner, Chicago.

By special permission, Dr. Lloyd, New York, read a communication from Dr. Edebohls on "Renal Decapsulation."

WEDNESDAY, JUNE 3.—AFTERNOON.

The Section was called to order at 2 p. m.

Dr. George W. Crile, Cleveland, delivered the Oration on Surgery, "The Cancer Problem."

A paper on "The Diagnosis at Operation Between Chronic Ulcer and Cancer of the Stomach," was read by Dr. F. B. Lund, Boston.

Dr. William J. Mayo, Rochester, Minn., read a paper on "Ulcer of Duodenum."

These two papers were discussed by Drs. Alexander H. Ferguson, Chicago; Van Buren Knott, Sioux City, Iowa; Parker Syms, New York; W. B. Leggett, New York; F. B. Lund; and W. J. Mayo.

A paper on "Surgical Diseases of the Pancreas," was read by Dr. John B. Deaver, Philadelphia.

Dr. W. D. Haggard, Nashville, Tenn., read a paper on "Pancreatitis in Its Relation to Gallstone Disease."

These two papers were discussed by Drs. Arthur D. Bevan, Chicago; Carl Beck, Chicago; W. L. Rodman, Philadelphia; William H. Wathen, Louisville; John B. Deaver; and W. D. Haggard.

A paper entitled "Is Death in High Intestinal Obstruction Due to Absorption of Autotoxic Glandular Secretions?" was read by Dr. J. W. D. Maury, New York.

Dr. Miles F. Porter, Fort Wayne, Ind., presented a paper entitled, "A Case of Chronic Peritonitis with Complete Obstruction Caused by Numerous Transverse Constrictions of a Previously Undescribed Character Throughout the Intestine."

These two papers were discussed by Drs. William H. Welch, Baltimore; Floyd McRae, Atlanta, Ga.; Clifford U. Collins, Peoria, Ill.; and G. W. MacCaskey, Fort Wayne, Ind.

THURSDAY, JUNE 4.—MORNING.

The Section was called to order at 9:30 a. m.

A paper on "Artificial Respiration in Its Physiologic Aspects" was read by Prof. Edward A. Schäfer, Edinburgh, Scotland.

A paper entitled, "Present Status of Surgery of Thoracic Cavity and the Significance of the Author's Method of Preventing Pneumothorax," was presented by Prof. F. Sauerbruch, Marburg, Germany.

Drs. Samuel Robinson, Boston, and N. W. Green, New York, presented papers entitled, "Artificial Intrapulmonary Positive Pressure: Experimental Application in Surgery of the Lung."

These four papers were discussed by Drs. H. H. Janeway, New York; Willy Meyer, New York; Fell, Buffalo; John Smyth, New Orleans; J. B. Murphy, Chicago; V. J. Baccus, Chicago; M. B. Tinker, Ithaca, N. Y.; Prof. Edward A. Schäfer; Prof. F. Sauerbruch; Dr. Samuel Robinson; and Dr. N. W. Green.

A paper on "Surgical Importance of Cervical Ribs," was read by Dr. John B. Roberts, Philadelphia. Discussed by Dr. J. Clark Stewart, Minneapolis.

THURSDAY, JUNE 4.—AFTERNOON.

The Section was called to order at 2 p. m.

The report of the Anesthesia Commission was presented by Dr. J. G. Mumford, Boston.

Dr. J. L. Yates, Milwaukee, read a paper on "The Effects of Normal and Abnormal Variations in Peristalsis on Peritoneal Absorption." Discussed by Drs. E. Wyllys Andrews, Chicago; A. J. Ochsner, Chicago; and Dr. Yates.

A paper entitled, "Intestinal Anastomosis; Presentation of a New Simple and Aseptic Method," was read by Dr. Frank B. Walker, Detroit, Mich. Discussed by Dr. F. Gregory Connell, Oshkosh, Wis.

Dr. J. E. Summers, Omaha, read a paper on "Invagination of Limited Annular Gangrene of Small Bowel versus Resection." Discussed by Drs. A. MacLaren, St. Paul; and L. L. MacArthur, Chicago.

A paper on "Gas Cysts of Intestine." was read by Dr. J. M. T. Finney, Baltimore. Discussed by Drs. William H. Wathen, Louisville; and J. M. T. Finney.

Dr. George Emerson Brewer, New York, presented a paper entitled, "Acute Diverticulitis of Sigmoid; Patient Operated on Before Rupture Had Taken Place." Discussed by Drs. D. N. Eisendrath, Chicago; Truesdale, Fall River, Mass.; and L. L. MacArthur, Chicago.

A paper on "Cancer of Rectum: Deductions from 100 Personal Experiences in Extirpation of Rectum and Sigmoid," was read by Dr. James P. Tuttle, New York. Discussed by Drs. L. L. MacArthur, Chicago; Joseph Bacon, Macomb, Ill.; Evans, Ohio; Hupper, West Virginia; A. B. Cooke, Nashville; and J. P. Tuttle.

The nominating committee presented the following report, which was adopted: Chairman, J. C. Munro, Boston; Vice-Chairman, J. E. Summers, Omaha; Secretary, John F. Binnie, Kansas City; Orator on Surgery, Harvey Cushing, Baltimore.

FRIDAY, JUNE 5.—MORNING.

The Section was called to order at 9 a. m.

A paper entitled, "My Present Position on Appendix Questions," was read by Dr. Robert T. Morris, New York. Discussed by Drs. A. H. Ferguson, Chicago; Christopher Graham, Rochester, Minn.; D. N. Eisendrath, Chicago; Carl Beck, New York; William L. Rodman, Philadelphia; J. H. Stealy, Freeport, Ill.; C. C. Rogers, Chicago; Burwash; H. A. Royster, Raleigh, N. C.; Thompson, Scranton, Pa.; A. J. Ochsner, Chicago; J. B. Murphy, Chicago; and R. T. Morris.

A paper on "Vesical and Renal Calculi and Vesical Tumors" was read by Dr. Carl Beck, New York.

Dr. Joseph Ransohoff, Cincinnati, read a paper on "A New and Rapid Method of Perineal Drainage in Suprapubic Cystotomy." Discussed by Drs. H. H. Young, Baltimore; Bransford Lewis, St. Louis; J. E. Cannaday, W. Va.; J. Ransohoff; and Carl Beck.

A paper entitled, "A Study of Anterior Poliomyelitis, with an Analysis of 647 Cases, from the Children's Hospital, Boston," was read by R. W. Lovett, Boston. Discussed by Drs. H. M. Sherman, San Francisco; E. H. Ochsner, Chicago; and R. W. Lovett.

Dr. V. P. Blair, St. Louis, read a paper on "A Function of the Lesser Trochanter."

A paper entitled, "Preservation of Anatomic Dissections with Permanent Color of Muscles, Organs and Vessels by a New Method," was read by Dr. Edmond Souchon, New Orleans. Discussed by Dr. Peter Potter, Butte, Mont.

On motion of Dr. William L. Rodman, the following resolutions were carried:

Resolved, That the thanks of the members of the Section on Surgery and Anatomy be extended to the distinguished Chairman and most efficient Secretary for the attractive program and the most successful meeting in the history of the Association.

Resolved, That the thanks of the Section be extended to the profession of Chicago for the capacious hall and other arrangements for our accommodation and entertainment.

Section on Ophthalmology.

TUESDAY, JUNE 2.—AFTERNOON.

The meeting was called to order at 2:30 p. m., in the First Presbyterian Church, by the Chairman, Dr. William H. Wilder, Chicago, who introduced as the distinguished guest of the Section, Mr. E. Treacher Collins, of London, England.

The Chairman delivered his address.

A motion by Dr. de Schweinitz that the recommendations contained in the Chairman's address be referred to the Executive Committee of the Section for report, was adopted.

Dr. G. E. de Schweinitz, Philadelphia, read a paper entitled, "A Further Contribution to the Possible Relationship of Autointoxication to Certain Diseases of the Cornea and Uveal Tract (Special Investigation)." Discussed by Drs. Casey A. Wood, Chicago; Edward Jackson, Denver; Lucien Howe, Buffalo; Melville Black, Denver; Arnold Knapp, New York; Tydings, Chicago; Hiram Woods, Baltimore; Leartus Connor, Detroit; Walter Pyle, Philadelphia; and Dr. de Schweinitz.

A paper on "The Eye as a Contributing Factor in Tuberculosis," was read by Dr. F. Park Lewis, Buffalo.

Dr. H. C. Parker, Indianapolis, read a paper on "The Ocular Reaction to Tuberculin."

The papers of Drs. Lewis and Parker were discussed by Drs. Llewellyn Williamson, St. Louis; E. R. Lewis, Dubuque, Iowa; John Green, St. Louis; E. Treacher Collins, London; Davis, New York; Keiper and Edward Jackson, Denver; Robert Randolph, Baltimore; Nelson Black, Milwaukee; Baker, Cincinnati; Hiram Woods, Baltimore; F. Park Lewis, Buffalo; and H. C. Parker, Indianapolis.

A paper entitled, "Ocular Complications of Pregnancy (Special Investigation)," was read by Dr. Hiram Woods, Baltimore. Discussed by Drs. Charles Steadman Bull, New York; William C. Posey, Philadelphia; Casey Wood, Chicago; E. C. Ellett, Memphis; Arnold Knapp, New York; Harry Friedenwald, Baltimore; Feingold, New Orleans; Robert Randolph, Baltimore; and Hiram Woods.

Dr. Melville Black, Denver, read a paper on "The Relation of Ocular and Cardiovascular Disease." Discussed by Drs. L. H. Taylor, Wilkesbarre; G. E. de Schweinitz, Philadelphia; Charles Williams, Boston; Edward Jackson, Denver; Baker, Cincinnati; George Keiper; and Melville Black.

A paper on "Voluntary Unilateral Nystagmus, with Report of a Case," was presented by Dr. Walter L. Pyle, Philadelphia. Discussed by Drs. Wiener, St. Louis; Davis, New York; and Frank, Chicago.

Wednesday, June 3.—Morning.

The Section was called to order at 9 a. m., by the Chairman, Dr. William H. Wilder, Chicago.

Dr. F. C. Heath, Indianapolis, read a paper on "Zonular Opacity of the Cornea." Discussed by Drs. E. V. L. Brown, Chicago; L. H. Taylor, Wilkesbarre; Edward Jackson, Denver; and Dr. F. C. Heath.

A paper on "Diffuse Interstitial Keratitis in Acquired Syphilis," was read by Dr. A. E. Davis, New York City. Discussed by Drs. Thompson, Indianapolis; W. H. Wilder, Chicago; Leartus Connor, Detroit; Baker, Cleveland, and A. E. Davis, New York.

Dr. Vard H. Hulen, San Francisco, read a paper entitled, "Opacification of the Cornea Following Cataract Extraction." Discussed by Drs. Thompson, Indianapolis; W. Greene, Dayton; H. V. Würdemann, Milwaukee; G. M. Savage, Nashville; E. Treacher Collins, London; Clarke, and William Zentmayer, Philadelphia; and Vard H. Hulen.

A paper on "The Surgical Treatment of Orbital Complications in Disease of the Nasal Accessory Sinuses," was read by Dr. Arnold Knapp, New York City. Discussed by Drs. Bernstein, Kalamazoo; William C. Posey, Philadelphia; A. E. Davis, New York City, and Arnold Knapp.

Dr. H. F. Hansell, Philadelphia, read a paper on "An Infrequent Type of Optic Nerve Atrophy." Discussed by Drs. Post and Heisinger, Grand Rapids; Minney, Topeka; and H. F. Hansell.

A paper entitled "Some Clinical Aspects of Lenticular Astigmatism," was read by Dr. Edgar S. Thompson, New York City. Discussed by Drs. G. M. Savage, Nashville; Lucien Howe, Buffalo; Walter Pyle, Philadelphia; Derdiger, Baker, Cleveland; E. C. Ellett, Memphis; A. E. Davis, New York City; and Edgar S. Thompson.

Dr. Clarence Porter Jones, Newport News, Va., read a paper entitled, "A Study of One Hundred Refraction Cases in Indians Fresh from the Plains." Discussed by Drs. White, Richmond; Walter Pyle, Philadelphia; Derdiger, Chicago; Tiffany, Kansas City; and Clarence Porter Jones.

Wednesday, June 3.—Afternoon.

The Section was called to order at 2 p. m. by the Chairman, Dr. William H. Wilder.

A paper on "Developmental Deformities of the Crystalline Lens," was presented by special invitation, by E. Treacher Collins, F.R.C.S., London, England.

On motion of the Secretary, the Section extended to the author a vote of thanks for his scientific address, and the delegate from the Section on Ophthalmology was instructed to present the name of E. Treacher Collins for election as an honorary member of the Association.

Dr. D. W. Greene, Dayton, Ohio, read a paper on "The Association of Lens Opacity with Normal and Pathologic Blood Pressures." Discussed by W. B. Marple, New York; Edward Jackson, Denver; Gibson, Youngstown, Ohio; Leartus Connor, Detroit; George Keiper, Kansas City; Wilkinson, Washington; Thompson, Indianapolis; and D. W. Greene.

A paper on "The Treatment of Some Forms of Lens Displacement Other Than Those of Traumatic Origin," was read by Dr. L. D. Brose, Evansville, Ind. Discussed by Dr. Thompson, Indianapolis.

Dr. S. L. Ziegler, Philadelphia, presented a paper entitled, "History of Iridotomy; Knife-Needle versus Scissors—Description of Author's V-Shaped Method. Discussed by Drs. G. E. de Schweinitz, Philadelphia; Johnson; C. H. Williams, Boston; Edward Jackson, Denver; John Greene, Jr., St. Louis; A. E. Bulson, Jr., Fort Wayne; M. Wiener, St. Louis; and Dr. S. L. Ziegler.

A paper on "Miotics versus Iridectomy in the Treatment of Simple Chronic Glaucoma: An Analytical Study of 65 Cases Treated by Miotics Over a Series of Years (Special Investigation)" was read by Dr. William C. Posey, Philadelphia. Discussed by Mr. E. Treacher Collins, London, England; Drs. W. S. Bull, New York; C. P. Jones, Newport News, Va.; Semple, St. Louis; John Greene, Jr., St. Louis; Ring; and W. C. Posey.

Dr. J. A. Donovan, Butte, Mont., read a paper entitled, "A Better Prognosis in Penetrating Wounds of the Eyeball." Discussed by Drs. S. L. Ledbetter, Birmingham; Thompson, Indianapolis; R. Randolph, Baltimore; Nelson Black, Denver; Parks, Harrisburg; Mann, Texarkana; A. E. Bulson, Jr., Fort Wayne; and Dr. J. A. Donovan.

Thursday, June 4.—Morning.

The Section was called to order at 9 a. m. by Dr. William H. Wilder.

The first part of the meeting was devoted to an exhibition of instruments.

Dr. Walter Pyle, Philadelphia, presented a pocket emergency ophthalmic treatment case.

Dr. Wells, Boston, exhibited a phorometer for quick muscle tests, or roughing out cases in the dispensary, consisting of a weighted disc and a ten-degree prism.

Dr. Stevenson, Akron, Ohio, presented: (1) A modification of a lachrymal sac speculum, which had been described a year ago; (2) a knife, on the principle of the Hagedorn needle for opening hordeolum and abscesses; and (3) a lachrymal syringe.

Dr. Lichtenberg, Kansas City, presented a blunt-pointed keratome.

The unanimous report of the Committee (consisting of Drs. Williams, Stevenson and Black), on Standard Illumination for Visual Test Types, was presented by Dr. Charles H. Williams, Boston. On motion of Dr. Frank Todd, Minneapolis the report was adopted.

The report of the Committee on Optometry Legislation was presented by Dr. Lucien Howe, Buffalo.

Dr. Howe moved the adoption of the resolutions as presented by the Committee.

After some discussion, the Section voted to adopt the following substitute resolution offered by Dr. Hiram Woods, Baltimore:

> *Resolved,* That this Section approves of the general character and conservative tone of this report, thanking the Committee, and especially General Sternberg, for the care given to the study of a non-scientific question.
>
> But, as it is desirable to have any recommendations emanating from this Section definite and comprehensive, and as further conference with our associates in the various states is necessary to this end.
>
> *Resolved,* That this report be referred back to the Committee for further consideration, with power to add other members if desired.

The Executive Committee presented the following report: Chairman, Dr. Alvin A. Hubbell, Buffalo; Vice-Chairman, Dr. Melville Black, Denver; Secretary, Dr. A. E. Bulson, Jr., Fort Wayne, Ind.; Delegate, Dr. T. O. Woodruff, Chicago.

The Committee recommended that the rule in reference to reading of papers be so changed that the author be allowed ten minutes, if needed, in which to present the points of his paper, instead of five minutes, as at present, the remaining rules to remain as now in force.

The Committee also presented as a suggestion for consideration by the Section this query: Should a formal invitation from this Section be extended to the Twelfth International Congress of Ophthalmology to meet in this country in 1914? These points were discussed and laid on the table.

In the matter of the Chairman's address, referred by vote of this Section to the Executive Committee for consideration, they recommend that said suggestions of the retiring Chairman be referred to the incoming officers with the request that they take up as many of these suggestions as they may deem possible in arranging the next program, and that the Chairman appoint such committees to aid in these investigations as he may deem advisable.

On motion of Dr. Walter Pyle, Philadelphia, the report on nominations was adopted, and the Secretary instructed to cast the ballot for the officers nominated.

A paper on "The Treatment of Strictures of the Nasal Duct with Lead Styles," was read by Dr. H. Moulton, Fort Smith, Ark. Discussed by Drs. William E. Gamble, Chicago; Holt, Portland, Me.; Walter Pyle, Philadelphia; William C. Posey, Philadelphia; F. C. Todd, Minneapolis; S. L. Ziegler, Philadelphia; A. E. Bulson, Fort Wayne; and H. Moulton.

Dr. William Zentmayer, Philadelphia, read a paper on "Imperforation of the Lachrymonasal Duct in the Newborn and Its Clinical Manifestations." Discussed by Drs. Edward Jackson, Denver; S. L. Ziegler, Philadelphia; C. J. Kipp, Newark, N. J.; M. D. Stevenson, Akron; Hiram Woods, Baltimore; and William Zentmayer.

A paper embodying a special investigation on the "Principles Underlying the Operative Treatment of Strabismus," was read by Dr. Edward Jackson, Denver. Discussed by Drs. G. C. Savage, Nashville; M. D. Stevenson, Akron, Ohio; Price, Nashville; Derdiger, Chicago; and Edward Jackson.

Dr. A. A. Hubbell, Buffalo, read a paper on "The Relation of So-Called Ophthalmic Migraine to Epilepsy." Discussed by Drs. W. R. Parker, Detroit; Leartus Connor, Detroit; G. C. Savage, Nashville; and A. A. Hubbell.

A paper entitled "Restoration of the Conjunctival Cul-de-Sac for the Insertion of an Artificial Eye" was read by Dr. M. Wiener, St. Louis. Discussed by Dr. F. C. Todd, Minneapolis; Dr. Hotz, Chicago; Mr. E. Treacher Collins, London, England, and Dr. M. Wiener.

THURSDAY, JUNE 4.—AFTERNOON.

A joint meeting was held with the Section on Nervous and Mental Diseases, presided over by the Chairman, William H. Wilder and T. H. Weisenburg, the meeting being called to order by the former at 2 p. m.

Dr. William G. Spiller, Philadelphia, read a paper on "Palliative Operations for Choked Disc."

A paper entitled, "Decompressive Operations, with Especial Reference to Changes in the Eyeground," by Harvey Cushing and James Bordley, Baltimore, was read. Discussed by Drs. H. V. Würdemann, Milwaukee; Chas. H. Frazier, Philadelphia; G. E. de Schweinitz, Philadelphia; Bassoe, Chicago; Mills, Philadelphia; Brewer, London; Harvey Cushing, and William G. Spiller.

Dr. Ward A. Holden, New York, read a paper on "The Optic Nerve Changes in Multiple Sclerosis, with Remarks on the Causation of Non-Toxic Retrobulbar Neuritis in General." Discussed by Drs. Brower and Bassoe, Chicago.

A paper on "Migraine: An Occupation Neurosis," was read by Dr. L. G. Walton, Boston. Discussed by Drs. Henry Gradle, Chicago; Lucien Howe, Buffalo; Hugh T. Patrick, Chicago; A. E. Sterne, Indianapolis; and W. Wolperstein, Cincinnati.

Dr. Harry Friedenwald, Baltimore, read a paper entitled, "Differential Diagnosis of Affections of the Optic Nerve." Discussed by Dr. W. Graves, St. Louis.

On motion of Dr. L. H. Taylor, Wilkesbarre, a unanimous vote of thanks was tendered to the presiding officers of the Ophthalmic Section for the phenomenal meeting, and to the local society for the excellent arrangements made for the comfort of the members.

On motion of Dr. G. C. Savage, Nashville, a special vote of thanks was extended to the trustees of the church, and the pastor and members for their kind attention.

Section on Laryngology and Otology.

TUESDAY, JUNE 2.—AFTERNOON.

The Section was called to order at 2:30 p. m. in Sinai Temple by Dr. W. S. Bryant, Secretary of the Section, in the absence of the Chairman, Dr. H. W. Loeb, St. Louis.

Dr. Alice G. Bryant, Boston, read a paper on "Streptococcic Infections of the Pharyngeal Adenoid in Adults." Discussed by Drs. B. R. Shurly, Detroit; Emil Mayer, New York; J. E. Logan, Kansas City; and Dr. Bryant.

Dr. Loeb arrived during the discussion of Dr. Bryant's paper, and while the Vice-Chairman, Dr. Dunbar Roy, Atlanta, occupied the chair, the Chairman read his address

Dr. Emil Mayer, New York, read a letter received by him from Dr. Burnside Foster, editor of the St. Paul Medical Journal, in regard to the illness and death of Dr. Jacob E. Schadle of that city. On motion the Secretary was instructed to send Dr. Schadle's widow the condolences of the Section.

In the absence of Dr. S. MacCuen Smith and Dr. Robert C. Myles, members of the executive committee, the chair appointed Dr. J. F. Barnhill, Indianapolis, and Dr. J. C. Beck, Chicago, in their places.

A paper on "Laryngeal Manifestations in Locomotor Ataxia and Multiple Sclerosis," by Wolff Freudenthal, New York, was read. Discussed by Drs. Friedberg, Chicago; Emil Mayer, New York; and Dr. Freudenthal.

Dr. Edwin Pynchon, Chicago, read his paper on "Tonsillectomy in Children Under Ether Anesthesia: A Hospital Operation." Discussed by Drs. Beck, Chicago; W. H. Roberts, Pasadena, Cal.; J. A. Stucky, Lexington, Ky.; Wolff Freudenthal, New York; C. F. Welty, San Francisco; J. W. Murphy, Cincinnati; F. C. Todd, Minneapolis; William L. Ballenger, Chicago; F. E. Autan, Belleville, Ill.; Robertson, Chicago; McClure, Lexington, Ky.; Baker, Bay City, Mich.; B. R. Shurly, Detroit; Thomas, Peoria, and Pynchon, Chicago.

WEDNESDAY, JUNE 3—MORNING.

A joint session was held with the Section on Surgery and Anatomy. For minutes see page 2082.

WEDNESDAY, JUNE 3.—AFTERNOON.

The Section was called to order at 2:30 p. m. by the Vice-Chairman, Dr. Dunbar Roy, Atlanta.

On motion, Dr. Joseph C. Beck, Chicago, was permitted to read, in place of his paper announced in the program, "Correcting Nasal Deformities," a paper on "Autoplastic Operations on the Frontal Sinus." Discussed by Drs. A. Jansen, Berlin; J. Holinger, Chicago; W. W. Carter, New York; B. R. Shurly, Detroit; J. A. Stucky, Lexington; Hibbard, Pasadena, Cal.; Otto Freer, Chicago; Bernstein, Kalamazoo; E. F. Ingals, Chicago; and Joseph C. Beck, Chicago.

A paper on "Submucous Resection of the Lateral Nasal Wall in Chronic Empyema of the Antrum, Ethmoid and Sphenoid," by R. Bishop Canfield, Ann Arbor, was read. Discussed by J. W. Murphy, Cincinnati; Chas. H. Baker, Bay City, Mich.; A. Jansen, Berlin; Emil Mayer, New York; Otto Freer, Chicago; Frank Casselberry, Chicago; Sluder, St. Louis; J. E. Logan, Kansas City; F. E. Autan, Belleville, Ill.; S. F. Snow, Syracuse, N. Y.; G. P. Marquis, Chicago; and Dr. Canfield.

On motion of Dr. K. Pischel, San Francisco, following an announcement by the Chairman, the Chairman was instructed to appoint a committee on nomenclature.

A paper entitled, "A Study of the Sphenoidal Sinus Based on the Examination of Eighty-five Specimens," by Dr. James A. Gibson, Buffalo, was read.

Dr. Ross H. Skillern, Philadelphia, read his paper, "The Present Status of the Radical Operation for Empyema of the Sphenoid Sinus, with Demonstration of New Instrument."

These two papers were discussed by Dr. Frank T. Andrews, Chicago, and Dr. Skillern.

A paper on "The Treatment of Hyperesthetic Rhinitis (Hay Fever), Especially with Reference to Injections with Alcohol," was read by Dr. Otto J. Stein, Chicago. Discussed by Drs. J. A. Stucky, Lexington; B. R. Shurly, Detroit; F. C. Todd, Minneapolis; Jack, Buffalo; Edwin Pynchon, Chicago; Bernstein, Kalamazoo; E. E. Gaver, Columbus, O.; S. F. Snow, Syracuse, N. Y.; and Otto Stein, Chicago.

Dr. George F. Cott, Buffalo, read a paper on "Faciohypoglossal Anastomosis." Discussed by Dr. Joseph C. Beck, Chicago; Prof. A. Jansen, Berlin, and Dr. George F. Cott.

THURSDAY, JUNE 4.—MORNING.

Section was called to order at 9:30 a. m. by the Chairman.

Dr. J. F. Barnhill, chairman of the committee on nominations, returned the following report: Chairman, Dr. W. Sohier Bryant, New York; Vice-Chairman, B. R. Shurly, Detroit; Secretary, Geo. E. Shambaugh, Chicago; Delegate, H. W. Loeb, St. Louis. On motion, the persons named were elected as officers of the Section for the ensuing year.

At the request of the U. S. Census office in a communication read by the Secretary, and on motion of Dr. E. Fletcher Ingals of Chicago, the Chairman was directed to appoint a member of the section as a member of an official board of nomenclature to establish an official code.

Pursuant to a motion made Wednesday that a committee on nomenclature be appointed from American laryngologic, rhinologic and otologic societies, the Chairman appointed Drs. Cooledge, Kyle and McKernon, and stated that he would confer with them in regard to the member to be appointed on the national board above referred to.

On motion of Dr. Emil Mayer, New York, the Chairman was asked to appoint a delegate to the otologic congress which meets in August of this year.

The presentation of instruments and specimens was then taken up.

Dr. George F. Cott, Buffalo, demonstrated his specimen showing the operation of faciohypoglossal anastomosis described in his paper the day before.

Dr. Emil Amberg, Detroit, presented a specimen of extended sinus thrombosis.

Dr. M. H. Cryer, Philadelphia, showed variations of the frontal sinuses and their outlets, variations in sphenoidal and maxillary sinuses, and demonstration of the spiral osteotome in craniotomy.

Dr. Otto Freer, Chicago, presented a nasal septum showing a marked crest-shaped deflection following the superior border of the vomer: a section of head showing outer wall of nasal fossa; and pernasal forceps for the removal of adenoid vegetations through the nose.

Dr. H. Friedenwald, Baltimore, demonstrated two series of sections of the adult head.

Dr. J. Holinger, Chicago, showed specimens of labyrinths.

Dr. Kaspar Pischel, San Francisco, exhibited collodion dressings after nasal operations, and a tongue-holder.

Dr. L. F. Page, Indianapolis, demonstrated specimens of carcinoma of the larynx.

Dr. A. E. Prince, Springfield, Ill., exhibited a patient on whom he had performed a simplified operation for frontal sinus obliteration.

Dr. G. E. Shambaugh, Chicago, showed histologic specimens of the structures of the labyrinth.

Dr. C. F. Welty. San Francisco, described a foreign body (safety pin), removed from the larynx and tonsils, removed in capsule. (Dr. Welty's specimens had not arrived.)

Dr. W. W. Carter, New York, gave a demonstration of combined bridge and intranasal splint for the correction of depressed deformities of the nose.

Dr. B. R. Shurly, Detroit, exhibited a tonsil retractor.

Dr. Ostrom, Rock Island, Ill., demonstrated a reverse antrum forceps.

Dr. W. L. Ballenger, Chicago, presented instruments for enlarging the opening in the sphenoidal sinus.

Dr. J. F. Barnhill, Indianapolis, exhibited his adenoid curette and discussed Dr. Cryer's craniotomy instrument.

The specimens and instruments were discussed by Dr. J. Holinger, Chicago; M. H. Cryer, Philadelphia; E. F. Ingals, Chicago; O. T. Freer, Chicago; Carter, New York; K. Pischel, San Francisco; G. E. Shambaugh, Chicago; and F. C. Todd, Minneapolis.

Thursday, June 4.—Afternoon.

The section was called to order by the Vice-Chairman, Dr. Dunbar Roy, Atlanta.

A paper on "Ear Symptoms of Cardiovascular Disease, with Special Reference to Low Pressure Cases," by Louis F. Bishop, New York, was read. Discussed by Drs. J. A. White, Richmond; C. F. Welty, San Francisco; and Dr. Bishop.

Dr. W. Sohier Bryant, New York, presented a paper on "Middle Ear Sclerosis or Atropic Middle Ear Catarrh." Discussed by Drs. Norval H. Pierce, Chicago; C. F. Welty, San Francisco; E. R. Lewis, Dubuque; C. F. Holinger, Chicago; J. E. Logan, Kansas City; G. E. Shambaugh, Chicago; and W. Sohier Bryant, New York.

A paper on "Nasal Analgesia as a Prognostic Symptom in Dry Catarrhal Deafness," by Dr. Dunbar Roy, Atlanta, was read. Discussed by Drs. E. E. Holt, Portland, Maine; C. F. Holinger, Chicago; C. F. Welty, San Francisco; and Dr. Roy.

Dr. William L. Ballenger, Chicago, read a paper on "The Meatomastoid Operation for Chronic Mastoiditis." Discussed by Drs. A. Jansen, Berlin; Andrews, Chicago; J. W. Murphy, Cincinnati; Vail, Cincinnati; C. F. Welty, San Francisco; Norval H. Pierce, Chicago; C. F. Holinger, Chicago; and Dr. Ballenger.

Dr. W. Sohier Bryant, New York, the Chairman-Elect, was introduced and made a few remarks.

A paper on the "Diagnosis of Suppurative Labyrinthitis" was read by Dr. George E. Davis, New York. Discussed by Dr. J. Holinger, Chicago; Prof. A. Jansen, Berlin; and Dr. Davis.

On motion, the Chairman appointed Dr. Frank Allport an alternate delegate to the otologic congress.

On motion of Dr. Dunbar Roy, Atlanta, a vote of thanks was given Prof. A. Jansen of Berlin for his valuable discussions at the meeting. A vote of thanks was also extended to the Congregation of Sinai Temple for the use of the temple, and to the profession of Chicago for the delightful entertainment and courtesies extended. The Chairman was also thanked for his efforts.

Section on Nervous and Mental Diseases.

Tuesday, June 2.—Afternoon.

The meeting was called to order at 2 p. m., in the Calumet Club, by the Chairman, T. H. Weisenburg, Philadelphia.

The Chairman read an address on "Neurologic Teaching in America." Discussed by Drs. Charles E. Beevor, London; M. Allen Starr, New York; F. X. Dercum, Philadelphia; Charles K. Mills, Philadelphia; Archibald Church, Chicago; D. I. Wolfstein, Cincinnati; and George Waterman, Boston.

A paper on "Psychotherapy" was presented by Dr. M. H. Bliss, St. Louis. No discussion.

A paper on "The Attitude of Neurologists Toward Electrotherapy," was read by Dr. Frank P. Fry of St. Louis. Discussed by Drs. C. Eugene Riggs, St. Paul; William Benham Snow, New York; Charles K. Mills, Philadelphia; Wharton Sinkler, Philadelphia; Chas. R. Ball, St. Paul; S. J. Wright, Akron; and Frank P. Fry.

Dr. Philip Zenner, Cincinnati, read a paper on "Two Cases of Multiple Neuritis." Discussed by Dr. Henry W. Freudenthal, New York City, and Dr. Philip Zenner.

A paper on "Insanities Caused by Acute and Chronic Intoxication with Opium and Cocain: A Study of 171 Cases," was read by Dr. Alfred Gordon, Philadelphia. No discussion.

Dr. Earl E. Gaver. Columbus, read a paper on "A Case of Alternating Personality Characterized Chiefly by Ambulatory Automatism and Amnesia with Results of Hypnotic Experiments." Discussed by Drs. Edward B. Angell, Rochester. N. Y.; Alfred Gordon, Philadelphia; W. T. Williamson, Portland. Ore.; George A. Moline, Denver; G. P. Edwards. Nashville; S. J. Wright, Akron; Albert E. Sterne, Indianapolis.

Wednesday, June 3.—Morning.

The meeting was called to order at 9:30 a. m.

A paper entitled "Traumatic Cervical Myelomalacia; Report of a Case with Necropsy," was read by Dr. Carl D. Camp, Ann Arbor. Discussed by Drs. J. J. Thomas, Boston; Frank P. Fry, St. Louis; William W. Graves, St. Louis; and Carl D. Camp.

Dr. William W. Graves. St. Louis, read a paper on "The Respiratory Centers of Chorea Minor." Discussed by Drs. Frank P. Fry, St. Louis; H. L. Mettler, Chicago; and William W. Graves.

A paper entitled, "A Case of Spondylose Rhizomelique," was read by Dr. John H. W. Rhein, Philadelphia. No discussion.

Dr. M. Allen Starr, New York, read a paper on "Epidemic Infantile Paralysis." Discussed by Drs. Wharton Sinkler, Philadelphia; Charles K. Mills, Philadelphia; F. X. Dercum, Philadelphia; H. L. Mettler, Chicago; Frank P. Norbury, Jacksonville, Ill.; William G. Spiller, Philadelphia; Chas. R. Ball, St. Paul; A. R. Allen, Philadelphia; Kratz, Peoria; Henry W. Freudenthal, New York; S. J. Wright, Akron; Charles L. Hitchcock, Detroit; D. I. Wolfstein, Cincinnati; Martin J. Prince, Boston; Ostein, Michigan; and M. Allen Starr.

A paper on "Hemorrhage into the Ventricles; Its Relation to Convulsions and Rigidity in Apoplectiform Hemiplegia" was read by Dr. Alfred Reginald Allen, Philadelphia. Discussed by Dr. William G. Spiller, Philadelphia, and Dr. Alfred Reginald Allen.

Dr. H. A. Tomlinson, St. Peter, read a paper on "Cerebral Inhibition as Illustrated in General Pathologic Conditions in the Nervous System." No discussion.

Drs. Hugh T. Patrick, Chicago; Wharton Sinkler, Philadelphia; and Morton Prince, Boston, were appointed a Committee on Nominations.

Wednesday, June 3.—Afternoon.

The session was reopened at 2 p. m.

An address entitled "Associated Movements" was delivered by Dr. Charles E. Beevor, London, England. Discussed by Drs. Charles K. Mills, Philadelphia; F. X. Dercum, Philadelphia; Hugh T. Patrick, Chicago; Morton Prince, Boston; William G. Spiller, Philadelphia; D. I. Wolfstein, Cincinnati; H. A. Tomlinson, St. Peter; D. M. Allen Starr, New York; Julius Grinker, Chicago; Archibald Church, Chicago; and Dr. Charles E. Beevor.

Dr. Charles K. Mills, Philadelphia, read a paper on "The Cortical Centers for Taste and Smell, Illustrated by the Study of a Case of Brain Tumor with Necropsy." No discussion.

A paper on "Three Cases of Cerebral Tumor," was read by Dr. Wharton Sinkler, Philadelphia. Discussed by Drs. Charles

K. Mills, Philadelphia; J. J. Thomas, Boston; Archibald Church, Chicago; and Julius Grinker, Chicago.

Dr. John J. Thomas, Boston, read a paper on "Injuries of Cranial Nerves from Fractures of the Skull." Discussed by Dr. Albert E. Sterne, Indianapolis, and Dr. John J. Thomas.

Thursday, June 4.—Morning.

The Section was called to order by the Chairman at 9 a. m.

A paper on "The Use of Physical Measures in the Therapeutics of the Nervous System," was read by Dr. William Benham Snow, New York. Discussed by Drs. Julius Grinker, Chicago; J. H. McBride, Pasadena; S. A. Dunham, Buffalo; Robert McGregor, Saginaw; George A. Moline, Denver; S. J. Wright, Akron; and Dr. William Benham Snow.

Dr. Mihran K. Kassabian, Philadelphia, gave a paper on "Roentgenology in Neurology." Discussed by Drs. George A. Moline, Denver; S. A. Dunham, Buffalo; and S. J. Wright, Akron.

A paper on "Disease of the Cerebral Vessels, with Its Problems in Diagnosis," was read by Dr. W. A. Jones, Minneapolis. Discussed by Drs. H. A. Tomlinson, St. Peter; C. Eugene Riggs, St. Paul; Julius Grinker, Chicago; and Arthur S. Hamilton, Minneapolis.

Dr. Morton J. Prince, Boston, read a paper entitled, "Experiments in Psycho-Galvanic Reactions from Co-conscious (Subconscious) Ideas in a Case of Multiple Personality," by himself and Dr. Frederick Peterson, New York. Discussed by Drs. Charles K. Mills, Philadelphia; Mary A. Spink, Indianapolis; A. R. Allen, Philadelphia; H. L. Mettler, Chicago; Carl A. Wickland, Chicago; Mihran K. Kassabian, Philadelphia; C. J. Lewis, Chicago; George A. Moline, Denver; Philip Zenner, Cincinnati; and Morton J. Prince.

A paper entitled, "Elements of Psychiatric Prognosis," was read by Dr. F. X. Dercum, Philadelphia. Discussed by Drs. W. T. Williamson, Portland, Ore.; A. E. Sterne, Indianapolis; and Dr. F. X. Dercum.

Dr. Milton K. Meyers read a paper entitled, "Venous Thrombosis," by himself and Dr. D. J. McCarthy, Philadelphia. No discussion.

The following officers were elected: Chairman, Dr. M. Allen Starr, New York; Secretary, Dr. W. A. Jones, Minneapolis; Delegate, Dr. T. H. Weisenburg, Philadelphia; Alternate, Dr. d'Orsay Hecht, Chicago.

The appointment of representatives of the Section to coöperate with the Association's General Committee on Nomenclature and Classification of Diseases was referred to the newly elected officers.

A resolution of thanks was extended to the Calumet Club for providing a place of meeting and entertainment.

Thursday, June 4.—Afternoon.

A joint meeting was held with the Section on Ophthalmology. For the proceedings, see the minutes of the Section on Ophthalmology, page 2082.

Section on Stomatology.

Tuesday, June 2—Afternoon.

The meeting was called to order at 2 p. m. in the First Regiment Armory by the Chairman, E. A. Bogue, New York.

On motion, the program as prepared was adopted.

The Chairman read his address. Discussed by G. V. I. Brown, Milwaukee; M. H. Fletcher, Cincinnati; Thomas L. Gilmer, Chicago; Eugene S. Talbot, Chicago, and E. A. Bogue.

On motion, the Chairman appointed G. V. I. Brown and A. H. Peck to serve on the Executive Committee in the absence of H. P. Carlton and M. I. Schamberg, in order that the papers read might be properly examined and approved or rejected.

A paper entitled "Pathology as Taught in Dental Schools," by L. G. Noel, Nashville, Tenn., was read. Discussed by Eugene S. Talbot; M. H. Fletcher; M. L. Rhein, New York; N. S. Hoff, Ann Arbor; Vida A. Latham, Chicago; F. B. Moorehead, Chicago; G. V. I. Brown and L. G. Noel.

A paper entitled "Dental Education," by M. L. Rhein, New York, was read. Discussed by N. S. Hoff, E. A. Bogue, F. B. Moorehead, Eugene S. Talbot, M. H. Fletcher, Thomas L. Gilmer, G. V. I. Brown and M. L. Rhein.

The Secretary read a letter from the chief statistician, Bureau of the Census, Department of Commerce and Labor, suggesting that one or more members of the Section on Stomatology be appointed by the Chairman to represent this Section in coöperation with the Association's general Committee on Nomenclature and Classification of Diseases.

On motion, this was approved. The Chairman appointed G. V. I. Brown, Vida A. Latham and F. B. Moorehead.

Wednesday, June 3—Morning.

The meeting was called to order by the Chairman at 9:30.

A paper on "Some Practical Considerations Concerning Inflammation," was read by James E. Power, Providence, R. I.

A paper entitled "Interstitial Gingivitis," by Edward C. Briggs, Boston, was read.

These two papers were discussed by M. L. Rhein, Eugene S. Talbot, N. S. Hoff, A. H. Peck, E. A. Bogue, James E. Power and Edward C. Briggs.

Wednesday, June 3—Afternoon.

The meeting was called to order by the Chairman at 2.

A paper on "The Influence on the Nose of Widening the Palatal Arch," was read by Lee Wallace Dean, Iowa City.

Papers entitled (a) "Etiology of Face, Nose, Jaw and Teeth Deformities," and (b) "Bone Pathology of Tooth Movement," were read by Eugene S. Talbot, Chicago.

Nelson M. Black, Milwaukee, read a paper on "The Relation Between Deviation of the Nasal Septum and Dental and Jaw Deformities from the Rhinologist's Standpoint."

A paper on "(a) Separation of the Superior Maxilla by Direct Pressure for the Relief of Nasal Stenosis, (b) Readjustment of the Superior Maxilla, General Treatment of Harelip and Cleft Palate," was read by G. V. I. Brown, Milwaukee.

Discussion of all these papers was postponed to Thursday morning.

A paper entitled "Diagnostic Value of Microscopic Examinations During Operations on Pathologic Tissue," illustrated by lantern slides, was read by Vida A. Latham, Chicago. No discussion.

Slides were exhibited by M. H. Fletcher illustrating his paper to be read Thursday morning.

Thursday, June 4—Morning.

The meeting was called to order at 9:30 a. m.

The report of the Nominating Committee, Vida A. Latham, Chairman, was presented, and on motion accepted, the following officers being elected: Chairman, Edward C. Briggs, Boston; Vice-Chairman, Thomas L. Gilmer, Chicago; Secretary, Eugene S. Talbot, Chicago; Delegate, G. V. I. Brown, Milwaukee; Alternate, James E. Power, Providence, R. I.

The papers by Drs. Dean, Talbot, Black and Brown, read at the Wednesday afternoon meeting, were discussed by James E. Power, Providence, R. I.; Vida A. Latham, Eugene S. Talbot, G. V. I. Brown, Stewart L. McCurdy, Pittsburg, and E. A. Bogue.

A paper entitled "Diseases of the Alveolar Process," was read by M. H. Fletcher, Cincinnati. Discussed by E. S. Talbot, E. A. Bogue, G. V. I. Brown, Stewart L. McCurdy, Vida A. Latham, William W. Hopkins, M. L. Rhein, Edward C. Briggs and M. H. Fletcher.

Thursday, June 4—Afternoon.

The meeting was called to order at 2 p. m. by the Chairman of the Executive Committee, Vida A. Latham.

A paper entitled "State Reciprocity in Dental Practicing Licensing" was read by A. H. Peck, Chicago. Discussed by Vida A. Latham, E. A. Bogue, Thomas L. Gilmer, F. B. Moorehead, Edmund C. Noyes, Chicago; T. E. Carmundy, Denver, and A. H. Peck.

On suggestion of the Chairman, and on motion, a Committee on Reciprocity was appointed, the committee to report at the next annual session. The Chairman appointed A. H. Peck, F. B. Moorehead and Thomas L. Gilmer as members of the Committee on Reciprocity.

A paper entitled "Tumors Involving the Alveolar Process," by Stewart L. McCurdy, Pittsburg, was read. Discussed by M. H. Cryer, Chicago; G. V. I. Brown, Thomas L. Gilmer, M. H. Fletcher, F. B. Moorehead, Vida A. Latham and Stewart L. McCurdy.

Thomas L. Gilmer, Chicago, read a paper entitled "Ranula and Other Diseases of the Salivary-Glandular System." Discussed by F. B. Moorehead, Vida A. Latham and H. A. Potts, Chicago.

A paper entitled "Nitrous Oxid and Oxygen Anesthesia in Dental and General Surgery," by Fred K. Ream, Chicago, was read. Discussed by C. K. Teter, Cleveland; F. B. Moorehead, and O. J. Cunningham, Kansas City.

Section on Cutaneous Medicine and Surgery.

Tuesday, June 2.—Afternoon.

The Section was called to order at 2 p. m., in Grace Parish House, by the Chairman, Dr. M. B. Hartzell, Philadelphia.

The Chairman read his address, "The Nature and Causes of Eczema." Discussed by Drs. Joseph Zeisler, Chicago;

J. Nevins Hyde, Chicago; Grover W. Wende, Buffalo; William T. Corlett, Cleveland; Charles J. White, Boston; William A. Pusey, Chicago; John A. Fordyce, New York; W. A. Baum, Syracuse; and M. B. Hartzell.

A paper on "Nutritive and Neurotic Disturbances of the Hair," by Drs. L. D. Bulkley and H. H. Janeway, New York, was read by Dr. Janeway.

A paper on "A Deceptive Case of Leprosy," by Drs. Charles J. White and O. Richardson, Boston, was read by Dr. White. Discussed by Dr. John A. Fordyce, New York.

A paper on "X-Ray Uses, Dangers and Abuses," by Dr. W. S. Gottheil, New York, was read, in Dr. Gottheil's absence and on vote of the Section, by Dr. Eberhard W. Dittrich, New York. Discussed by Drs. M. L. Ravitch, Louisville; J. B. Kesler, Iowa City; Joseph Zeisler, Chicago; Mihran K. Kassabian, Philadelphia; Herbert K. Lemon, Goshen, Ind.; I. S. Trostler, Chicago; M. B. Hartzell, Philadelphia; and Eberhard W. Dittrich, New York.

"A Case of Supposed Parapsoriasis (Brocq)," was shown by Dr. William T. Corlett, Cleveland. Discussed by Drs. M. L. Heidingsfeld, Cincinnati; A. Ravogli, Cincinnati; Henry G. Anthony, Chicago; Joseph Zeisler, Chicago; John A. Fordyce, New York, and William T. Corlett.

Dr. G. E. Pfahler, Philadelphia, read a paper on "The Treatment of Epithelioma by the Roentgen Rays." Discussed by Drs. Edward Beecher Finck, Philadelphia; and Albert M. Cole, Indianapolis.

The Chairman announced that at the 1907 session of the Section on Cutaneous Medicine and Surgery at Atlantic City it had been moved that a committee consisting of the incoming officers of the Section and the members of the Executive Committee should obtain an expression of opinion as to what name they considered most advisable for the Section, inasmuch as a great deal of dissatisfaction had been expressed with the present name of the Section, which was changed some years ago from that of the Section on Dermatology to that of the Section on Cutaneous Medicine and Surgery.

The Secretary, in accordance with the above instructions, had mailed 222 reply postal cards to the various members who had registered in the Section during the past four years in accordance with the list of the 1907 transactions. One hundred and twenty-two responses had been received; two cards had been returned from the dead letter office with present address unknown. Of this number, 80 members expressed themselves in favor of changing the name to Section on Dermatology; 19 favored retaining the present name, Section on Cutaneous Medicine and Surgery; 7 favored Section on Diseases of the Skin; 5, Section on Dermatology and Syphilology; 4, Section on Cutaneous Diseases; 1, Section on Dermatology and Malignant Growths; 1, Section on Skin Diseases, Nutrition and Elimination; 1, Section on Cutaneous Medicine and Radiotherapy; 1, Section on Eruptive Diseases; while 3 were indifferent to the situation. Analysis of the result showed that 100 out of 119 members expressed themselves as dissatisfied with the present name of the Section. The name, Section on Dermatology, received four times as many votes as the present name of the Section, which was next highest on the list, and received almost twice as many votes as all the other names combined.

This report, which was submitted and signed by the Committee, was accepted by the Section, to be transmitted to the House of Delegates with the recommendation of the Section that its name be changed to Section on Dermatology.

WEDNESDAY, JUNE 3.—AFTERNOON.

The meeting was called to order at 2:30 p. m.

On motion, the Chairman, Dr. M. B. Hartzell, named the following committee to nominate officers for the ensuing year: Drs. William T. Corlett, Cleveland; H. G. Anthony, Chicago, and John A. Fordyce, New York.

The Secretary, Dr. M. L. Heidingsfeld, read the following communication, which he had received, under date of May 25, 1908, from the Department of Commerce and Labor, Bureau of the Census, at Washington, D. C:

> In pursuance of the cooperation between the Association's Committee on Nomenclature and Classification of Disease and the Bureau of the Census, I have the honor, by the request of the chairman of that committee, Dr. Frank P. Foster of New York, to submit the enclosed resolution, which, I trust, may be acted on by your Section at the approaching session of the Association.
>
> The Committee has undertaken an extensive plan for the improvement of the existing conditions of questions of nomenclature of diseases in this country, as you have doubtless noted by their report in the last issue of THE JOURNAL. The value of such work will be very great to the profession, and it is of fundamental importance to the proper collection and compilation of morbidity and mortality statistics. As I understand, the committee desires the special cooperation of the sections so that the subjects of peculiar interest to each may be represented.
>
> If you will kindly advise me of the names of the members appointed, I shall be glad to send them publications of the Bureau and other information relating to the subject.
>
> CRESSY L. WILBUR, M.D.
> Chief Statistician.

The resolution enclosed was as follows:

> *Resolved*, That one or more members of the Section on Cutaneous Medicine and Surgery be appointed by the Chairman to represent this Section in cooperation with the Association's general Committee on Nomenclature and Classification of Diseases.

It was moved and carried that the Chairman appoint a committee in accordance with the above resolution.

Dr. William T. Corlett, Cleveland, read a paper on "Pemphigus Foliaceus and Its Status Among the Bullous Dermatoses," with lantern slide demonstrations. No discussion.

Dr. John A. Fordyce, New York, read a paper on "Some Unusual Features of Epithelioma of the Skin," with lantern slide demonstration. Discussed by Drs. Joseph Zeisler, Chicago; M. L. Heidingsfeld, Cincinnati, and John A. Fordyce.

Dr. M. L. Heidingsfeld, Cincinnati, read a paper on "Paraffin Prosthesis: A Further Contribution on Its Histopathology," with lantern slide demonstration. No discussion.

Dr. David Lieberthal, Chicago, read a paper on "Multiple Hemorrhagic Sarcoma (Kaposi)," with lantern slide demonstration. No discussion.

Dr. Eberhard W. Dittrich, New York, in Dr. Gottheil's absence, gave a lantern slide demonstration of colored photographs by the lumière trichrome process. Discussed by Dr. M. B. Hartzell, Philadelphia.

The Chairman announced that the election of officers, which according to the printed programs was to be held at 9 a. m., Thursday, June 4, had been postponed until the beginning of the afternoon session of that day.

THURSDAY, JUNE 4.—AFTERNOON.

The meeting was called to order at 2 p. m.

The Nominating Committee reported as follows: President, Dr. William A. Pusey, Chicago; Vice-President, Dr. Grover W. Wende, Buffalo; Secretary, Dr. M. L. Heidingsfeld, Cincinnati; member of the House of Delegates, Dr. R. R. Campbell, Chicago. On motion, the Secretary was requested to cast a ballot for the candidates named.

"The Pigmentations of the Mucous Membrane of the Mouth," was the title of a paper read by Dr. H. G. Anthony, Chicago. Discussed by Dr. William A. Pusey, Chicago; and Dr. Anthony.

Dr. Joseph Zeisler, Chicago, showed two patients, one effected with ulcus rodens, and one with a psoriatic affection of the hands. Discussed by Drs. Herman G. Klotz, New York, and J. B. Kessler, Iowa City, and Joseph Zeisler.

A paper on "Erythema Figurata Perstans," was read by Dr. Grover W. Wende, Buffalo. Discussed by Drs. Frank H. Montgomery, Chicago; and Grover W. Wende.

Dr. M. L. Ravitch, Louisville, read a paper on "Cheilitis Exfoliativa." No discussion.

"Mercurial Treatment for Late Manifestations of Syphilis," was the title of a paper by Dr. Herman G. Klotz, New York. Discussed by Drs. J. F. King, Nashville; Joseph Zeisler, Chicago; M. L. Heidingsfeld, Cincinnati; W. H. Davis, Denver; Eugene Hay, Hot Springs; William A. Pusey, Chicago; Henry C. Baum, Syracuse; M. Lyon, De Witt, Iowa; David Lieberthal, Chicago; M. B. Hartzell, Philadelphia, H. G. Klotz.

A paper on "The Influence of the Discovery of the Pale Spirochete on the Treatment of Syphilis," was read by Dr. James Breakey, Ann Arbor.

A paper entitled, "The Relation of the Character of the Syphilitic Initial Lesion to the Secondary Constitutional Period," was presented by Dr. A. Ravogli, Cincinnati.

These two papers were discussed by Drs. Herman G. Klotz, New York; William A. Pusey, Chicago; and A. Ravogli.

The Chairman appointed Drs. J. Nevins Hyde, Chicago, and John A. Fordyce, New York, as a committee to serve with the Association's General Committee on Nomenclature and Classification of Diseases.

On motion, a vote of thanks was extended to the Trustees of Grace Episcopal Church for having placed the Grace Parish House at the disposal of the Section for a place of meeting, and to the officers who presided over the Section during the present session.

The retiring chairman, Dr. Hartzell, expressed his appreciation of the honor that had been conferred on him in electing him Chairman of the Section a year ago, and of the uniform courtesy which had been accorded to him. He then presented the newly elected chairman, Dr. Pusey.

Dr. Pusey, in taking the chair, thanked the members of the Section for the honor they had conferred on him, and bespoke their hearty cooperation for the coming year, so that the program of the next session of the Section would be equal to the one just completed.

Section on Diseases of Children.

Tuesday, June 2—Afternoon.

The Section was called to order at 2:10 p. m., in Second Presbyterian church, by the Chairman, Dr. Edwin E. Graham, Philadelphia.

Dr. Walls announced that the Section Dinner would be given Tuesday evening at the Calumet Club at 7 o'clock.

The Chairman read his address, a paper on "Infant Mortality."

The Secretary announced that Dr. Isaac A. Abt invited the members of the Section to lunch with him at the Michael Reese Hospital on Thursday at 12:30 o'clock.

Dr. J. H. Mason Knox, Jr., Baltimore, read a paper on "The Character of the Stools in Diarrheal Affections of Infants, with Special Reference to the Condition of the Intestine." Discussed by Drs. J. A. Work, Elkhart, Ind.; T. W. Kilmer, New York; C. G. Kerley, New York; Abraham Jacobi, New York; and Dr. Knox.

Dr. Alfred Friedlander, Cincinnati, read a paper entitled "Studies in Infantile Digestion." Discussed by Drs. J. P. Sedgewick, Minneapolis; A. W. Fairbanks, Boston; T. G. Allen, Chicago; and Dr. Friedlander.

The next paper read was "Rachitic Erosions of the Permanent Teeth Associated with Visual Defects," by Dr. I. A. Abt and Dr. Mortimer Frank, Chicago. Discussed by Drs. R. B. Gilbert, Louisville; J. M. Dodson, Chicago; H. M. McClanahan, Omaha; Mortin Wood, Illinois; Charles Douglas, Detroit; and Dr. Abt.

Dr. Irving M. Snow, Buffalo, read a paper on "Curative Effect of Rest in Children with Persistent Loss of Appetite." Discussed by Drs. A. W. Fairbanks, Boston; S. J. Walker, Chicago; Charles Douglas, Detroit; T. D. Parke, Birmingham, Ala.; C. G. Kerley, New York; Clarendon Rutherford, Chicago; W. G. Taylor, Buffalo; and Dr. Snow.

Wednesday, June 3—Morning.

The Section was called to order at 9:10 a. m., by the Chairman, Dr. Edwin E. Graham.

Dr. D. E. English; Millburn, N. J., read a paper on "The Development of the Infantile Stomach." Discussed by Dr. Isaac A. Abt, Chicago; Dr. John Lovett Morse, Boston; Dr. Abraham Jacobi, New York; Dr. Rutherford, Chicago; Dr. Charles Douglas, Detroit; and Dr. English.

Dr. J. Ross Snyder, Birmingham, Ala., read a paper on "The Problem of Breast Feeding."

Dr. Effa V. Davis, Chicago, read a paper entitled "A Study of the Quantity and Quality of Breast Milk During the First Two Weeks of the Puerperium."

A paper on "Some Fallacious Standards Employed in Artificial Feeding of Infants," was read by Dr. Godfrey Roger Pisek, New York.

A paper entitled "The Gospel of Top Milk," was read by Dr. Abraham Jacobi, New York.

Dr. Thomas S. Southworth, New York, read a paper on "High Fat Percentages in Infant Feeding; Causes and Effects."

The papers of Drs. Snyder, Davis, Pisek, Jacobi and Southworth were discussed by Drs. C. F. Wahrer, Fort Madison, Iowa; John Lovett Morse, Boston, Mass.; W. J. Butler, Chicago; Thomas Morgan Rotch, Boston; J. A. Work, Elkhart, Ind.; Charles Douglas, Detroit; and Drs. Davis, Snyder, Pisek and Southworth.

Dr. D. S. Hanson, Cleveland, read a paper on "Hydrotherapy in Scarlatina with Special Reference to Tub Baths at 90 Degrees for Nervous Symptoms in Early Stages." Discussed by Drs. R. B. Gilbert, Louisville, Ky.; C. A. Earle, Springfield, Ill.; and Dr. Hanson.

A paper on "The Diagnosis of Pneumonia in Infancy," was read by Dr. Roland G. Freeman, New York. Discussed by Drs. G. R. Pisek, New York; J. H. Mason Knox, Jr., Baltimore; and W. W. Butterworth, New Orleans.

Wednesday, June 3—Afternoon.

The Section was called to order at 2:05 p. m., by the Chairman, Dr. Graham.

Dr. John Howland, New York, read a paper on "Circulatory Disturbances in Diphtheria."

Dr. Walter Graham Murphy, Boston, read a paper on "A Summer Camp for Treatment of Sick Babies." Discussed by Drs. J. H. Mason Knox, Jr., Baltimore; John M. Beffel, Milwaukee; T. W. Kilmer, New York; Frank W. Allin, Chicago; C. G. Kerley, New York; J. W. Van Derslice, Chicago; and Dr. Murphy.

A paper on "The Prephysical Signs of Tuberculosis," was read by Dr. W. C. Hollopeter, Philadelphia. Discussed by Drs. A. W. Fairbanks, Boston; R. B. Gilbert, Louisville; C. G. Kerley, New York; Alfred Friedlander, Cincinnati; J. W. VanDerslice, Chicago; W. J. Butler, Chicago; J. F. Hultgen, Chicago; and Dr. Hollopeter.

Dr. Alexander McAlister, Camden, New Jersey, read a paper on "Adaptation of the Fresh Air Treatment of Tuberculosis to Pediatric Practice." Discussed by Drs. D. E. English, Millburn, N. J.; C. F. Wahrer, Fort Madison, Iowa; John M. Beffel, Milwaukee; and T. G. Allen, Chicago.

Dr. Charles G. Kerley, New York, substituted for his paper on "Disorders of the Respiratory Tract," a paper giving "Personal Observations in Scarlet Fever."

Dr. C. F. Wahrer, Fort Madison, Iowa, read a paper on "An Epidemic of Hemorrhagic Nephritis Following Scarlet Fever." The papers of Drs. Kerley and Wahrer were discussed by Drs. H. E. Tuley, Louisville, Ky.; H. M. McClanahan, Omaha; F. S. Churchill, Chicago; J. W. VanDerslice, Chicago; H. B. Whitney, Denver; Charles Douglas, Detroit; John Lovett Morse, Boston; T. G. Allen, Chicago; John Campbell, South St. Paul, Minn.; W. W. Butterworth, New Orleans; B. H. Blair, Lebanon, Ohio; T. B. Cooley, Detroit; and Drs. Kerley and Wahrer.

Thursday, June 4—Morning.

The Section was called to order at 9:10 a. m., by the Chairman, Dr. Graham.

Dr. John Lovett Morse, Boston, Chairman of the Executive Committee, reported the following nominations: Chairman, Dr. Thomas S. Southworth, New York; Vice Chairman, Dr. C. F. Wahrer, Fort Madison, Iowa; Secretary, Dr. W. W. Butterworth, New Orleans; Delegate, Dr. R. B. Gilbert, Louisville; and Alternate, Dr. A. W. Fairbanks, Boston. On motion of Dr. VanDerslice the recommendations of the committee were adopted.

Dr. Fairbanks stated that a year ago a committee consisting of Dr. Van Derslice, Chicago; Dr. Cattermole, Boulder, Colorado; and himself, was appointed to investigate the present status of school children. The committee desired that Dr. Van Derslice make a preliminary statement for them.

Dr. Van Derslice thought that when the committee was appointed the magnitude of the work assigned them had not been understood. When one took into consideration the fact that in the cities of Indiana, Illinois and Ohio, there were 25,000 teachers and remembered that the committee consisted of but three members it would give some idea of the tremendous amount of work to be done by each member of the committee. They had already entered into correspondence with about 40,000 teachers. For their work to be of any value many things must be considered, for instance, the location of the school buildings, general surroundings, air space, seating capacity, ventilation, heating, toilet rooms, water supply, etc. He explained that it was necessary to know the number of cases of illness, of children showing signs of stress; to know whether the strain was due to school life; to know what was the cause of illness, whether the amount of school work, or bad habits contracted by the child, or insufficient sleep; and also to know whether the child was from the tenement districts or from a better environment? Dr. VanDerslice said that it was a fact that many of these poor children from the tenement districts were sent to school with nothing but a small cup of tea for their breakfasts. In New York for two years they had been feeding these children breakfast. It was necessary, he continued, to get the opinion of teachers as to the proper age when the child should be sent to school. The members of the committee had already gathered all sorts of statistics, but there were so many points of view—the teacher's point of view, the parents' point of view and the point of view of the superintendent of schools, and the medical point of view—all of which must be taken into consideration, if any practical suggestions were to come from the investigation. For the present, therefore, they were unable to make a definite report from the material in hand. Next year Dr. Vanderslice wished that every physician interested in the diseases of children would come prepared to give their individual reasons why the children under their care had been removed from school. Was it because of the home life or the school hygiene? Individual work was what this thing must come to. Therefore, the committee begged for another year before presenting a final report on the investigation of the present status of school children.

On motion, the committee was continued for another year.

The Secretary read a letter from the Department of Commerce and Labor to the Association asking for the appointment of a Committee on Nomenclature.

On motion of Dr. F. S. Churchill, Chicago, the Chairman was empowered to appoint a representative of the Section to cooperate with the Association's general Committee on Nomenclature and Classification of Disease.

Dr. T. G. Allen, Chicago, said that the Section ought to go on record in regard to breast feeding. He thought that every resource should be exhausted before weaning the baby. Many of the profession, he said, had not thought seriously about this matter. They were too ready to put a child on artificial food. The young men entering the profession had an idea that it did not make very much difference whether babies were fed on breast milk or on cow's milk. A committee of three should be appointed to study the whole question of making more available breast milk for those babies deprived of the proper milk. When, after the loss of a child, a mother continued to secrete milk, there was no reason why such a mother should not be available to nurse some other child. He referred not only to wet-nurses but to women in ordinary homes. He therefore presented this resolution:

> Whereas, We believe that all too frequently babies are taken from their mother's breast before a reasonable attempt has been made to suit the milk to the child's needs and put on artificial food, therefore
>
> *Resolved*, That we strongly urge that at least as much thought and effort be expended to render the mother's milk suitable for the child as is now expended on the subject of artificial food.

On motion of Dr. Snyder the resolution was adopted.

Moved, by Dr. Allen, that a committee of three be appointed by the Chair to study this whole question and report next year. Dr. Allen said that in Germany a great deal of help was given in this matter by the state. A woman willing to nurse another baby was practically supported. He thought a start should be made in this country. There might be a registration bureau where physicians having cases where breast milk was available could report the fact.

Dr. Van Derslice said that in Chicago an effort had been made to have a breast-milk commission appointed so that they could have a central bureau where breast milk could be supplied. Work had been done for two years on this without a report. Dr. Van Derslice believed this was too broad a subject to be considered other than locally if satisfactory results were to accrue. He wished to provide, in an amendment, that this work be done from a locality rather than be taken up by the section as a section, for it was utterly impossible for the section to deal satisfactorily with such a subject.

Dr. Charles Douglas, Detroit, said they had done some such work in Detroit, and that he realized how utterly impossible it was to work out the thing in such magnitude as was suggested in the resolution.

Dr. Allen thought that the committee could get the experience of other men, compare it with their own experience, and suggest ways and means by which the result might be accomplished.

The Chairman thought that, unless the work of the committee was restricted, it would be impossible to accomplish anything definite.

The motion, as amended by Dr. Van Derslice, was seconded and carried.

Dr. T. W. Kilmer, New York, read a paper on "The Ambulatory Treatment of Pneumonia in Infants and Young Children." Discussed by Dr. S. C. Hamill, Philadelphia; and Dr. Kilmer.

A paper on "Paralytic Dementia in Childhood, with Report of a Case and the Brain Changes," was read by Dr. Arthur W. Fairbanks, Boston. Discussed by Dr. S. J. Walker, Chicago; and Dr. Fairbanks.

The Chairman announced the appointment of the following members of the committee to study the subject of breast milk: Drs. T. G. Allen, Chicago; J. Ross Snyder, Birmingham; and S. C. Hamill, Philadelphia.

Dr. Philip Marvel, Atlantic City, N. J., read a paper on "Hyperpyrexia in Children: Causes and Treatment." Discussed by Dr. T. W. Kilmer, New York; and Dr. Marvel.

A paper was read on "Hemorrhages of the Suprarenal Capsules in the Newly Born, with Report of Two Cases Due to Infection," by Drs. Jennings C. Litzenberg and S. Marx White, Minneapolis. Discussed by Drs. S. C. Hamill, Philadelphia; Abraham Jacobi, New York; S. Marx White; and Dr. Litzenberg.

Dr. John H. W. Rhein, Philadelphia, read a paper on "Cerebellar Symptoms in Hydrocephalus with a Pathologic Report of a Case Associated with Syringomyelia." Discussed by Dr. Arthur W. Fairbanks, Boston.

Thursday, June 4—Afternoon.

The Section was called to order at 2:25 p. m., by the Chairman, Dr. Graham.

On motion, Dr. Thomas W. Rotch, Boston, was given unlimited time for the presentation of his paper, "Chronologic and Anatomic Age." Discussed by Drs. Abraham Jacobi, New York; I. A. Abt, Chicago; Edwin E. Graham, Philadelphia; D. E. English, Millburn, N. J.; R. B. Gilbert, Louisville; T. G. Allen, Chicago; F. C. Gillen, Milwaukee; and Dr. Rotch.

Dr. John Lovett Morse, Boston, read a paper on "The Anemias of Infancy." Discussed by Drs. J. F. Hultgen, Chicago; J. H. Mason Knox, Baltimore; and Dr. Morse.

A paper was read on "The Vaccine and Serum Treatment of Gonorrhea in Female Children," by Drs. William J. Butler and J. P. Long, Chicago.

Drs. F. S. Churchill and A. C. Soper, Jr., Chicago, presented a paper on "The Vaccine Treatment of Gonococcus Vulvovaginitis in Infants and Children." Both papers were discussed by Drs. Arthur W. Fairbanks, Boston; D. E. English, Millburn, N. J.; A. C. Soper, Jr., Chicago; Edwin E. Graham, Philadelphia; C. F. Wahrer, Fort Madison, Iowa; Julius Hess, Chicago; W. J. Butler; and Dr. Churchill in closing.

A vote of thanks was extended to the officers and trustees of the church for the use of the room.

Section on Hygiene and Sanitary Science.

Tuesday, June 2—Afternoon.

The Section was called to order at 2 p. m. in the Second Presbyterian Church by the Chairman, Dr. William C. Gorgas, Ancon, Panama.

The paper of Dr. J. A. Le Prince, Ancon, Canal Zone, entitled, "Mosquito Extermination in the Tropics," was read by the Chairman, who explained that it would take the place of the Chairman's address.

Dr. J. H. White, New Orleans, then read a paper entitled, "Yellow Fever and the Mosquito."

These two papers were then discussed by Drs. Wyman, Egbert, Matthews, Lake, Breitenbach, Munson, Hemingway, Hughes, Beffel, Bracken, Foster, and White.

Dr. Evans of Chicago extended an invitation to the Section to visit the Chicago Drainage Canal on the following day at 2 p. m., on the new launch belonging to the city of Chicago. The invitation was accepted.

A nominating committee consisting of Drs. H. M. Bracken, St. Paul; Seneca Egbert, Philadelphia, and Edward Munson, U. S. Army, was appointed by the Chairman.

On motion, the term of the Secretary was extended to three years, in accordance with the provisions of the constitution.

Thursday, June 4—Morning.

The Section was called to order at 9 a. m. by the Chairman, Dr. W. C. Gorgas.

The nominating committee made the following report: Chairman, Dr. Joseph H. White, U. S. Public Health and Marine-Hospital Service, New Orleans; Vice-Chairman, Dr. J. N. Hurty, Indianapolis; Secretary, Dr. S. T. Armstrong, New York; Executive Committee, Dr. Denslow Lewis, Chicago; Dr. Prince A. Morrow, New York, and Col. W. C. Gorgas, Ancon, Canal Zone, Panama; Delegate, Dr. Charles Harrington, Boston; Alternate, Dr. Clarence B. Wheaton, Chicago; Orator, Dr. John S. Fulton, Baltimore.

Dr. Denslow Lewis, Chicago, placed in nomination Dr. Ferd. C. Valentine, New York, for Chairman. Dr. Liston Montgomery nominated Dr. C. Harrington as Delegate, and Dr. Clarence L. Wheaton, Alternate.

The ballot of the Section was taken for Chairman and Dr. White was elected. On motion of Dr. Lewis, the election was made unanimous.

On motion, the Secretary was instructed to cast the ballot of the Section for the following: Dr. J. N. Hurty, Vice-Chairman; Dr. S. T. Armstrong, Secretary for three years; Dr. John S. Fulton, Orator; Dr. C. Harrington, Delegate; Dr. Clarence L. Wheaton, Alternate.

Dr. J. N. Hurty, Indianapolis, read a paper on "The Necessity of the Uniformity of Vital Statistics."

A paper entitled, "Air Infection of Minor Importance," by Dr. Charles V. Chapin, Providence, R. I., was, on motion, read by the Secretary.

Dr. Myer Solis-Cohen, Philadelphia, read a paper entitled, "The Disinfection After Diphtheria Insufficient Unless It Includes Animate as Well as Inanimate Carriers of Contagion."

These three papers were discussed by Drs. Wilbur, Egan, Sanders, Miner, Webster, Bracken, Crockett, White, Hemingway, Tuttle and Hurty.

It was moved, seconded and adopted by the Section on Hygiene and Sanitary Science that the Delegate of the Section request the House of Delegates to express the confidence of the American Medical Association in the work of the United States Public Health and Marine-Hospital Service in national health supervision.

Dr. Clarence L. Wheaton, Chicago, read a paper entitled, "Climate in the Hygiene of Tuberculosis."

Dr. W. A. Evans, Chicago, read a paper on "Early Diagnosis of Tuberculosis as a Measure of Control, Especially the Relation of Tuberculin Thereto."

Dr. Frank Smithies, Ann Arbor, Mich., submitted a paper entitled, "The Ocular Tuberculin Reaction as a Means of Diagnosis and Control."

These three papers were discussed by Drs. Knopf, Miner and Evans, the discussion then being suspended for recess.

Thursday, June 4—Afternoon.

The Section was called to order shortly after 2:30 by the Chairman.

The discussion which was interrupted by adjournment was continued by Drs. Sachs, Shankland, Kinghorn, Dunn, Browning, Wilson, Johnston, Rosenau and Smithies.

Dr. H. M. Bracken, St. Paul, then read a paper on "The Control of Smallpox." Discussed by Drs. Lake, Webster, Hurty, Spaulding, Williams and Bracken.

Dr. F. C. Valentine, New York, read a paper entitled, "Examination to Establish Whether a Gonorrhea Is Cured." Discussed by Drs. Beffel, Breitenbach, Yarros, Hemingway, Burr and Valentine.

Thursday, June 4—Evening.

The Section was called to order at 8 p. m. by the Chairman, Dr. Gorgas.

Dr. Foster, Delegate to the House of Delegates, made his report, which was accepted.

On motion of Dr. Armstrong, the Secretary, a vote of thanks was extended to the Second Presbyterian Church for the use of its edifice for the meetings.

Dr. W. Forest Dutton, Pittsburg, Pa., read a paper entitled, "The Responsibility of Municipalities in the Ohio Valley for the Epidemics of Typhoid Fever."

Dr. O. C. Breitenbach, Escanaba, Mich., read a paper entitled, "Choleriform Diarrhea of Winter."

Dr. C. Hampson Jones, Baltimore, read a paper entitled, "Four Years of Typhoid Fever in Baltimore."

These three papers were discussed by Drs. Munson, White, Bracken, Breitenbach and Jones.

Section on Pharmacology and Therapeutics.

Tuesday, June 2—Afternoon.

The Section was called to order at 2 p. m. by the Chairman, Dr. M. H. Fussell, Philadelphia, who read an address entitled, "Simplicity in Prescribing."

Secretary Dr. C. S. N. Hallberg, Chicago, read a communication from the American Pharmaceutical Association naming the delegates to the Section on Pharmacology and Therapeutics.

Prof. Joseph P. Remington, Philadelphia, presented the chairman's address of the delegation from the American Pharmaceutical Association.

Secretary C. S. N. Hallberg, Chicago, read his report.

Mr. M. I. Wilbert, Philadelphia, moved that the Chairman be requested to appoint a reference committee, of which the secretary of this Section shall be chairman, this committee to take cognizance of all the resolutions which come up and bring them before the Section in time to refer to the section delegate for presentation to the House of Delegates, the object being to reduce the number of resolutions to a minimum and bring them up properly before the House of Delegates. Carried.

Dr. M. Clayton Thrush, Philadelphia, read a paper entitled, "Osteopathic versus Drug Treatment." Discussed by Drs. A. S. von Mansfelde, Ashland, Neb.; John Kercher, Chicago; C. H. Miller, Chicago; M. C. Thrush, Philadelphia.

Dr. Addison S. Thayer, Portland, Maine, read a paper entitled, "Work-Cure." Discussed by Drs. F. X. Dercum, Philadelphia; A. S. von Mansfelde, Ashland, Neb.; Rufus A. Lyman, Lincoln, Neb.; A. S. Thayer, Portland, Maine.

Wednesday, June 3—Morning.

A joint session was held with the Section on Hygiene and Sanitary Science.

Dr. M. H. Fussell called the meeting to order at 9:30 a. m. and presented Dr. William C. Gorgas, Ancon, Canal Zone, Panama, who presided as Chairman. The time was devoted to a Symposium on Prophylaxis of Communicable Diseases.

Dr. D. L. Edsall, Philadelphia, read a paper discussing the subject, "From the Viewpoint of the Practitioner," and

Dr. M. J. Rosenau, Washington, D. C., "From the Viewpoint of the Hygienist."

These two papers were discussed by Drs. David H. Bergey, Philadelphia; J. N. Hurty, Indianapolis; Joseph H. White, New Orleans; H. M. Bracken, St. Paul; S. M. Hamill, Philadelphia; S. T. Armstrong, New York; Seneca D. Egbert, Philadelphia; Helen C. Putnam, Providence, R. I.; A. S. von Mansfelde, Ashland, Neb.; F. C. Valentine, New York; Denslow Lewis, Chicago; S. A. Knopf, New York; William C. Gorgas, Canal Zone; D. L. Edsall, Philadelphia; M. J. Rosenau, Washington, D. C.

Wednesday, June 3—Afternoon.

Dr. Fussell called the meeting to order at 2:18 p. m.

Dr. Torald Sollmann, Cleveland, Ohio, read a paper on "Isopral." Discussed by Prof. W. A. Puckner, Chicago; and Drs. F. E. Stewart, Philadelphia; T. Sollmann, Cleveland, Ohio; and M. H. Fussell, Philadelphia.

Dr. B. T. Terry, New York, read a paper entitled, "The Specific Clinical Therapy of Trypanosomiases and Spirilloses." Discussed by A. S. von Mansfelde, Ashland, Neb.

Dr. M. B. Hartzell, Philadelphia, read a paper on "Arsenic in the Treatment of Diseases of the Skin." No discussion.

Drs. C. W. Edmunds and George B. Roth, Ann Arbor, presented a paper entitled, "Physiologic Assay of Some Commonly Used Drugs." Discussed by Drs. E. M. Houghton, Detroit; Prof. W. A. Puckner, Chicago; Drs. M. Clayton Thrush, Philadelphia; A. S. von Mansfelde, Ashland, Neb.; G. H. Hoxie, Kansas City; F. E. Stewart, Philadelphia; T. Sollmann, Cleveland, Ohio; C. S. N. Hallberg, Chicago; and C. W. Edmunds, Ann Arbor, Mich.

Drs. Reid Hunt and Atherton Seidell, Washington, D. C., presented a paper entitled, "Commercial Thyroid Preparations." Discussed by Drs. T. Sollmann, Cleveland, Ohio; Frank T. F. Stephenson, Detroit; and Mr. F. C. Koch, Chicago.

Thursday, June 4—Morning.

Dr. M. H. Fussell, Philadelphia, Chairman, called the meeting to order at 9:30 a. m.

The election of officers resulted: Chairman, Dr. Reid Hunt, Washington, D. C.; vice-chairman, Dr. W. W. Tompkins, Charleston, W. Va.; secretary, Dr. C. S. N. Hallberg, Chicago; delegate to the House of Delegates, Dr. M. H. Fussell, Philadelphia; alternate, Dr. R. A. Hatcher, New York.

Dr. O. T. Osborne, New Haven, Conn., read a paper entitled, "The Sufficiency of the Official Drugs and Preparations in the Medicinal Treatment of Disease." Discussed by Drs. J. N. McCormack, Bowling Green, Ky.; T. Sollmann, Cleveland, Ohio; F. E. Stewart, Philadelphia; A. S. von Mansfelde, Ashland, Neb.; R. A. Hatcher, New York; J. N. Jenne, Burlington, Vt.; Emanuel Manco, Kansas City, Mo.; J. M. Patton, Chicago; D. M. Hoyt, Philadelphia; and A. T. McCormack, Bowling Green, Ky.

Dr. M. G. Motter, Washington, D. C., read a paper by Dr. H. C. Wood, Jr., Philadelphia, "The Effect of Quebracho on the Lungs." No discussion.

Dr. R. A. Hatcher, New York, read a paper entitled, "Tincture of Strophanthus and Strophanthin with Special Reference to Dosage." Discussed by Drs. T. Sollmann, Cleveland; C. W. Edmunds, Ann Arbor, Mich.; Mr. M. I. Wilbert, Philadelphia; and Drs. E. M. Houghton, Detroit, and R. A. Hatcher, New York.

Dr. T. Sollmann read a paper for Dr. J. D. Pilcher, Cleveland, entitled, "The Rate of Cooling of Several Poultice Masses." No discussion.

Thursday, June 4—Afternoon.

Dr. M. H. Fussell, Chairman, called the Section to order at 2:05 p. m.

Dr. T. Sollmann, Cleveland, Ohio, read a paper, "The Pharmacopeia as the Standard for Medical Prescribing."

Dr. J. M. Anders, Philadelphia, read a paper, "The Need of a More Intimate Knowledge of the U. S. Pharmacopeia and the National Formulary Among Physicians."

Dr. C. S. N. Hallberg, Chicago, read a paper written by Dr. H. W. Wiley, Washington, D. C., "The Pharmacopeia as a Legal Standard."

Dr. C. F. Wahrer, Fort Madison, Iowa, read a paper, "How Much Is the Medical Profession Responsible for the Prevailing Use of Nostrums?"

Dr. T. Sollmann read a paper on "Revision Methods of Foreign Pharmacopeias," by Prof. H. V. Arny, Cleveland, Ohio.

These five papers were discussed by Drs. J. P. Remington, Philadelphia; M. I. Wilbert, Philadelphia; R. A. Hatcher, New York; Reid Hunt, Washington, D. C.; Prof. W. A. Puckner, Chicago; Dr. C. S. N. Hallberg, Chicago; Bernard Fantus, Chicago; T. Sollmann, Cleveland, Ohio; C. F. Wahrer, Fort Madison, Iowa.

A number of resolutions were adopted by the Section and given into the hands of the delegate, to be presented before the House of Delegates for approval. The following were also adopted by the Section:

APPROVE PHARMACOPEIAL REVISION.

Whereas, The value of pure air, pure water, exercise, bathing and other hygienic agents and methods for the treatment of disease can not be too strongly endorsed by the Section on Pharmacology and Therapeutics, but the use of standard pharmaceutical preparations of known and tried efficiency should not be ignored as they constitute important adjuncts in treatment. And,

Whereas, The neglect and indifference of many practitioners to the recent great development of more exact methods of standardization as well as those of approving the purity of official medicines has seriously impeded the growth of rational therapeutics and has encouraged the use of proprietary remedies and those of unknown composition. Be it therefore

Resolved, That the Section on Pharmacology and Therapeutics earnestly recommends and pledges its support to every well-directed effort which will aim to determine the exact value of therapeutic agents or scientific methods which will be open to all and uncontrolled and uninfluenced by commercial interests which sometimes benefit the individual at the expense of the many who trust the practitioner to restore them to health.

Resolved, That this Section tenders its active support to the Committee on Revision of the U. S. Pharmacopeia and to the American Pharmaceutical Association in their efforts to improve both legal standards by suggestions and recommendations to the end that both the medical and pharmaceutical professions unite in a pledge of active and continued effort in combating danger, disease and death.

Dr. Fussell announced as delegates to the American Pharmaceutical Association, to be held at Hot Springs, Ark., Sept. 7, 1908, the following: Drs. C. C. Stephenson, Little Rock, Ark.; C. F. Wahrer, Fort Madison, Iowa; G. H. Hoxie, Kansas City, Mo.; A. S. von Mansfelde, Ashland, Neb.; I. M. Postelle, Oklahoma City, and Reid Hunt, Washington, D. C.

A resolution of thanks was tendered the retiring officers.

The secretary was instructed to send a resolution of thanks to the board of trustees of the First Presbyterian Church.

Section on Pathology and Physiology.

Tuesday, June 2.—Afternoon.

The Section was called to order at 2 p. m. in the First Regiment Armory by the Chairman, W. B. Cannon, Boston.

Dr. Coplin offered a resolution that the delegate of the Section be instructed to submit to the House of Delegates a request that the title of the Section be changed to the Section on Pathology, Anatomy and Physiology, and that the term "anatomy" be dropped from the title of the Section on Surgery and Anatomy. He stated that this was the wish of the Section on Surgery and Anatomy.

Several members spoke in opposition to the resolution and on motion of Dr. Winfield S. Hall, Chicago, the Section's delegate was instructed to oppose the question in the House of Delegates.

The Chairman read his address, entitled "The Opposition to Experimental Medicine."

Dr. Herman M. Adler, Boston, read a paper entitled "Experiments Toward a Physiologically Isotonic Solution of Salts."

Dr. H. Gideon Wells, Chicago, read a paper on "Chloroform Necrosis of the Liver." Discussed by Drs. O'Connell; R. E. Le Count, Chicago; Edward A. Schäfer, Edinburgh; V. C. Vaughan, Ann Arbor, Mich.; Wilson, Minn.; and H. G. Wells.

A paper on "Safeguards of the Heart," was read by Dr. Henry Sewall, Denver.

Dr. Edward A. Schäfer, Edinburgh, Scotland, read a paper on "The Pituitary Body." Discussed by Drs. Carlson; R. E. Le Count, Chicago; Bush, and E. A. Schäfer.

Wednesday, June 3.—Morning.

The Section was called to order at 9 a. m.

Dr. D. H. Bergey, Philadelphia, read a paper on "Anaphylaxis Induced by Bacterial Proteids." Discussed by Dr. Vaughan, Ann Arbor; and Dr. Bergey.

A paper on "The Cleavage of Bacterial Proteids by Exposure to Direct Sunlight," was read by Dr. Victor C. Vaughan, Ann Arbor. Discussed by Drs. Guthrie, McConnell and Vaughan.

Dr. A. P. Ohlmacher, Detroit, presented a paper on "Therapeutic Immunization in Mixed Infections."

The next paper was "Serum Diagnosis of Syphilis," by Dr. William J. Butler, Chicago. Discussed by Dr. Kersler and Dr. Butler.

A paper on "Histoplasmosis: a Fatal Infectious Disease Resembling Kala-azar Found Among Natives of Tropical America," was read by Dr. Samuel T. Darling, Ancon, Canal Zone. Discussed by Dr. H. B. Ward, Nebraska, and Dr. Darling.

Dr. E. R. Le Count, Chicago, gave a "Demonstration of Diseased Conditions of the Appendix," in connection with a number of pathologic specimens.

Wednesday, June 3.—Afternoon.

A joint meeting was held with the Section on Practice of Medicine, being a symposium on typhoid fever.

The meeting was called to order at 2 p. m. by the Chairman of the Section on Practice of Medicine.

Dr. Cannon announced as the Nominating Committee for the Section on Pathology and Physiology, Drs. Hall, Wesbrook and Bergey.

A paper on "The Channels of Infection and the Suppression of Typhoid Fever," was read by Dr. M. J. Rosenau, Washington, D. C.

Dr. Francis W. Peabody, Boston, read a paper on "The Value of Blood Cultures."

A paper on "Typhoid Bacillus Carriers," was read by Dr. William H. Park, New York.

Dr. David L. Edsall, Philadelphia, presented a paper on "Conditions Simulating Perforation in Typhoid Fever."

A paper on "The Metabolism of Typhoid Fever," was read by Dr. P. A. Shaffer, New York.

Dr. Thomas McCrea, Baltimore, read a paper entitled, "Treatment of Typhoid Fever."

These five papers were discussed by Drs. James M. Anders, Philadelphia; Lipston; Alexander Lambert, New York; M. J. Rosenau, Washington, D. C.; Jones. Nashville: F. W. Pea-Rosenau, Washington, D. C.; Jones, Nashville, F. W. Peabody, Boston; Albertson, Iowa City, Iowa; Marks; Litterer, Nashville; Lichter, Pittsburg; D. L. Edsall, Philadelphia; Litchfield, H. B. Weaver, Asheville, N. C.; Johnson, Boston; W. S. Thayer, Baltimore, H. B. Favill, Chicago; J. A. Witherspoon, Nashville; Munson; Baron; Brian; and Thomas McCrea, Baltimore.

Thursday, June 4.—Morning.

The Section convened at 9 a. m.

The nominating committee made the following report: President, Dr. M. J. Rosenau, Washington, D. C.; Secretary, Dr. H. Gideon Wells, Chicago; Delegate, Dr. H. A. Christian. These were unanimously elected.

A paper entitled, "The Diuretic Action of Adrenalin and the Active Principles of the Pituitary Gland," was read by Dr. E. M. Houghton, Detroit.

Dr. F. C. Busch, Buffalo, read a paper on "Further Results in Suprarenal Transplantation." Discussed by Drs. Coplin, Philadelphia; Wells and Carlson, Chicago, and Busch.

Dr. Martin H. Fischer, Livermore, Cal., presented a paper on "The Nature and Cause of Edema." Discussed by Drs. Carlson and Wells, Chicago; Welch and Hirschfeld, Baltimore; Cannon, Boston; and Fischer.

Dr. A. J. Carlson, Chicago, gave a paper on "Some New Points in the Physiology of Lymph and Lymph Formation." Discussed by Drs Welch, Baltimore; and Wells and Carlson, Chicago.

A paper by Dr. Isabella C. Herb, Chicago, on "Experimental Mumps," was presented. Discussed by Dr. V. T. McCrea, Baltimore, and Dr. Herb.

Dr. C. C. Guthrie, St. Louis, gave a paper, with lantern slides illustrating "Some Observations on: (a) Growth of Hen; (b) Egg Production; (c) Weight of Eggs; (d) Fertility of Eggs, and (e) Size of Chicks After Extirpation and Transplantation of Ovaries in Chickens."

A paper was presented by George T. Kemp, Urbana, Ill., on "Some New Statistics on Blood Plates, and Some New Practical Points on Counting Them."

Dr. J. Henry Schroeder, Cincinnati, read a paper on "The Alleged Urinary Manifestations of Disease of the Pancreas."

The Chairman announced as representatives of the Section to cooperate with the Association General Committee on Nomenclature and Classification of Diseases, Dr. Walter Bierring, Iowa, and Dr. W. M. L. Coplin, Pennsylvania.

Friday, June 5.—Morning.

The Section was called to order at 9 a. m. by the Chairman.

A paper entitled, "A Clinical and Pathologic Study of a Case of Stokes-Adams' Disease," by Harvey G. Beck and William Royal Stokes, Baltimore, was read by Dr. Price.

A paper on "Intracranial Pressure," by S. Burt Wolbach, Boston, was read.

Dr. Winfield S. Hall, Chicago, presented a paper on "The Influence of Diet on the Composition of the Chyle." Discussed by Drs. Harry P. Engle, Newton, Iowa; R. T. Woodyatt, Chicago; A. C. Tenney, Chicago; G. T. Kemp, Champaign, Ill.; H. G. Wells and W. S. Hall, Chicago.

Miscellany

Workmen's Compensation Legislation and Traumatic Neuroses.—E. Schwarz contributes an article on this subject to the *St. Petersburg med. Wochenschrift*, May 15. He comments on the difference in the prognosis of traumatic neuroses in Russia and in Germany, and relates a number of examples from his practice of severe neuroses after injury, which yet soon passed away, not leaving the patients incapacitated. Lumbar puncture showed in some cases that there must have been considerable concussion of the brain and lesions, and yet rapid recovery was the rule. One patient had meningitic symptoms nearly a year after an accident to the head, and the spinal fluid showed lymphocytosis, but he soon recovered his earning capacity. Schwarz insists on complete rest for six weeks; the traumatic neuroses almost invariably vanish by the end of that time. In Germany, on the contrary, the laws for industrial insurance have affected the minds of the working people so that they now expect an indemnity after every accident and demand it as a right. The neurosis in this preoccupied mind finds no chance for recovery, but persists indefinitely. The general public seems to regard with greater respect those who are receiving indemnities and this maintains a vicious circle which affects also the healthy. The German law was drawn up without consulting physicians and without comprehension of the workings of the average man's mind. It has developed an epidemic of practically incurable traumatic neuroses, Schwarz says, while fostering weakness of the will and smothering the conception of duty and responsibility. He remarks in conclusion that he hopes that his German confrères will soon succeed in having the law in regard to industrial insurance modified to retain all its advantages for those who are really injured, while avoiding its present evil consequences. This psychic-nervous epidemic caused by a single law will always remain, however, an interesting and remarkable chapter in the history of medicine.

Endocarditis with Embolism.—L. Guinon has encountered a case of endocarditis in a girl of 10 with insidious onset; the first symptom was left hemiplegia with disturbances in speech resembling the paraphasia of right hemiplegia. Initial convulsions, Kernig's sign, stiffness of the neck, and the lymphocytosis of the spinal fluid had suggested some infectious lesion in the brain before the cardiac lesion was recognized. During the second week pleuropneumonia developed on the paralyzed side. The child had been always in good health until seven weeks before her death, with exception of measles at 4. There was no suppuration in the organs, the seat of the emboli. Death seemed to have been the result of multiple mechanical embolism shutting off important parts of essential organs rather than the result of the intensity of the infectious process. In another similar case the ulcerative endocarditis proved fatal in nine days with nothing to attract attention to the heart except a history of articular rheumatism the year before. The symptoms suggested typhoid fever. Both cases are described in detail in the *Bulletins de la Société de Pédiatrie*, April, 1908, with autopsy and bacteriologic findings.

Conjugal Tuberculosis.—The conclusions of statistics recently collected in Holland show that there was no excess of deaths over the ordinary death rate among widowers whose wives had died of tuberculosis. On the other hand, the death rate of widows whose husbands had died of tuberculosis was twice that of widows of non-tuberculous husbands. These figures were collected in the Middelburg district during 26 years. About 1,200 widows and widowers died, the sexes being nearly equally represented. The subject is discussed in the *Semaine Médicale*, May 13.

Cerebrospinal Meningitis and Tetany in Infants.—L. Babonneix recently reported to the Paris Pediatric Society two cases of meningitis in infants simulating tetany. He declared that the diagnosis of tetany should never be made until lumbar puncture has given negative and the electric tests positive findings. He does not accept as proven that parathyroid insufficiency is always responsible for tetany; but thinks rather that tetany is a syndrome common to different conditions. The discussion on the subject was published in the *Bulletins* of the society, April, 1908.

Queries and Minor Notes

Anonymous Communications will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

TUBERCULIN DIAGNOSTIC TEST.

Pleasant Plains, Ill., June 8, 1908.

To the Editor:—1. Is tuberculin an infallible test for incipient tuberculosis? 2. Are there any conditions under which the tuberculin reaction might fail to appear in a tubercular patient? 3. Would it be possible to find the bacilli in the sputum and fail to get the reaction with tuberculin?

Paul E. Bain.

Answer.—1. The general febrile reaction occurring in an adult patient after the subcutaneous injection of a dose less than 10 mg. of old tuberculin (proportionally smaller in a child) speaks distinctly for the presence of a tuberculous, active, focus. This does not constitute, however, an infallible test, any more than biologic reactions generally, as for instance the Widal reaction and others. It is strongly corroborative evidence and as such it ought to be used with judgment, together with other methods of diagnosis. The cases in which the test will be diagnostically helpful are few, provided the methods of physical diagnosis are carefully used, together with a full consideration of the patient's previous history and after a period of observation. See also Report of Committee on Early Diagnosis of Tuberculosis (Klebs, Musser, Billings, Wilson, Landis), National Association for the Prevention and Study of Tuberculosis, *Boston Medical and Surgical Journal*, 1905, clii, 632.

2. There are cases of tuberculosis in which the tuberculin test usually fails. These are mostly cases with advanced and extensive lesions. Also in the acute generalizing forms of the disease (miliary tuberculosis) no reaction is obtained. On the whole it may be said that the reaction is most intense in the presence of fresh and not extensive foci of tuberculosis, a point evidently of great diagnostic importance.

3. From the above it is clear that tubercle bacilli may be found in the sputum, while no reaction may occur to tuberculin. In the light of modern research it appears that the reaction is not produced by an action of the tuberculin on the tubercle bacillus itself. It is probably brought about by a combination of the antibodies in the tuberculous focus with the tuberculin introduced into the circulation. If by the reparative effort of the organism the tuberculous focus is surrounded by these antibodies, the latter will combine with the tuberculin by virtue of a strong and specific affinity and substances of fermentative qualities are set free, acting as irritants, locally as well as generally. In case this reparative effort is insufficient or the production of toxins abundant, no reaction will occur, because no antibodies are produced. This explains why the tuberculin properly and judiciously applied (in doses of 0.2, 2 and 5 mg.) is capable of giving better prognostic than diagnostic information. The newer methods of applying tuberculin (to the conjunctiva by the method of Wolff-Eisner and Calmette, to the scarified skin by the cutaneous method of von Pirquet and to the intact skin by the percutaneous method of Moro), being much simpler than the subcutaneous method, applicable also in patients with fever, and less disturbing to the patient, promise further advances in this direction, but still need elucidation in several important points. See also articles by Baldwin in The Journal A. M. A., 1907, xlix, 1969, and by Smithies and Walker, ibid., 1908, L, 259.

ACUTE ACID INTOXICATION FROM ANESTHESIA.

CALUMET, MICH., June 8, 1908.

To the Editor:—Please give me the names and source of articles which discuss acute acid intoxication, especially such as follows chloroform anesthesia. A. I. LAWBAUGH.

ANSWER.—The following articles on this subject, original and abstracted, have appeared in THE JOURNAL since 1902:

Brackett, F. G., Stone, J. S., and Low, H. C.: Aciduria (Acetonuria) Associated with Death After Anesthesia (*Boston Med. and Surg. Jour.*, July 7, 1904); abstracted July 23, 1904, p. 282.

Wilbur, R. L.: Acidosis, THE JOURNAL A. M. A., Oct. 22, 1904, p. 1228.

Bevan, A. D., and Favill, H. B.: Acid Intoxication, and Late Poisonous Effects of Anesthetics, THE JOURNAL A. M. A., Sept. 2, 1905, p. 691; Sept. 9, 1905, p. 754.

Guthrie, L. G.: Aciduria (Acetonuria) as the Cause of Deaths Following the Administration of Chloroform and Ether (*Lancet*, Aug. 26, 1905); abstracted Sept. 23, 1905, p. 948.

Wolf, C. G. L.: Acid Intoxication (*New York Med. Jour.*, March 2, 1907); abstracted March 16, 1907, p. 974.

Campbell, R.: Acid Intoxication Following General Anesthesia (*Med. Press and Circ.*, Feb. 6, 1907); abstracted March 23, 1907, p. 1067.

Folin, O.: The Acid Intoxication Theory, THE JOURNAL A. M. A., July 13, 1907, p. 128.

Etiologic Factors in Acidosis: THE JOURNAL A. M. A., Nov. 2, 1907, p. 1544.

McArthur, A. N., and Melbourne: Acidosis (Delayed Chloroform Poisoning) (*Intercolon. Med. Jour.*, Aug. 20, 1907); abstracted Nov. 2, 1907, p. 1561.

MERCURY IN TUBERCULOSIS.

ALBUQUERQUE, N. M., June 4, 1908.

To the Editor:—Please give me information on the treatment of tuberculosis by the hypodermic injection of mercury, especially the succinamid employed by Surgeon B. L. Wright at the Naval Hospial, Fort Lyon, Colo., and also at Pensacola, Fla., and Fort Stanton, N. M. S. G. SEWELL, M.D.

ANSWER.—Mercury has of late been used in several U. S. naval hospitals in cases of pulmonary tuberculosis with alleged success, as reported by B. L. Wright in the *U. S. Naval Medical Bulletin*, April, 1908. The cases given are much too few to allow final conclusions. Not many results are reported which have not also been obtained by other methods. The rapid healing of "advanced tuberculous ulceration of the larynx and pharynx in a remarkably short time" under this treatment merits attention and further corroboration.

Mercurial compounds have been tried at various times both experimentally and clinically, but have never been shown to exert a specific or beneficial influence in tuberculosis. Whether the mercury succinamid differs in this respect must be decided in the future.

FORMULA OF GIEMSA STAIN.

NEW YORK, May 29, 1908.

To the Editor:—Please give me the formula for Giemsa's azure-eosin stain for the *Spirochæta pallida*. R. BELLANTONI.

ANSWER.—Giemsa's stain has the following composition:

Azure II (azure plus methylene blue aa)	3.0
Eosin (B. A.)	0.8
Glycerin (U. S. P.)	250.0
Methyl alcohol (Kahlbaum I)	250.0

It is prepared by grinding up the dyes in the absolute alcohol and then adding the glycerin. The blood films are fixed for a minute in absolute methyl alcohol and then stained for five minutes in a mixture of 14 drops of the dye to 10 c.c. of distilled water, which is freshly prepared; a trace of sodium carbonate may be added to the water to intensify the basic colors. After washing in water the films are blotted and then are ready for the examination.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, week ending June 13, 1908:

Field, P. C., capt., M. C., ordered to accompany 7th Infantry to duty at maneuver camp, Chickamauga Park, Ga.

Raymond, H. I., major, M. C., ordered to return from treatment at Washington, D. C., to Columbus Barracks, Ohio.

Schreiner, E. R., capt., M. C., assigned to temporary charge of San Francisco Medical Supply Depot, during absence of Lieut.-Col., D. M. Appel, M. C.

Appel, D. M., lieut.-col., M. C., left San Francisco, Cal., for witness duty in Washington, D. C.

Darnall, C. R., major, M. C., granted leave of absence for two months.

Marvin, M. F., contract surgeon, returned to Ft. Mansfield, R. I., from two months' leave of absence.

Hasseltine, H. E., contract surgeon, ordered to accompany troops from Ft. Thomas, Ky., to Camp Perry, Ohio, for duty at that camp from July 1 to August 7.

Voorhies, H. G., dental surgeon, left Fort Washakie, Wyo., for duty at Ft. D. A. Russell, Wyo.

Hussey, S. W., dental surgeon, left Ft. Wm. Henry Harrison, Mont., for duty at Ft. Missoula, Mont.

Bernheim, J. R., dental surgeon, relieved from duty at Ft. Slocum, N. Y., June 15; ordered to San Francisco, to sail for Philippine service August 5, and granted leave of absence until that date.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending June 13, 1908:

Peck, A. E., P. A. surgeon, detached from the Naval Station, Cavite, P. I., and ordered home.

Blackwell, E. M., Snyder, J. J., P. A. surgeons, Taylor, J. L., Stalnaker, P. R., asst.-surgeons, detached from course of instruction at the Naval Medical School, Washington, D. C., and ordered to report in that city, June 15, for examination for promotion, and then to wait orders.

McDowell, R. W., asst.-surgeon, ordered to the Naval Hospital, Philadelphia.

Wilson, G. B., surgeon, detached from the course of instruction at the Naval Medical School, Washington, D. C., and ordered to the *Wabash*.

Barber, G. H., surgeon, detached from course of instruction at the Naval Medical School, Washington, D. C., and ordered to the Naval Hospital, Boston.

Bogert, E. S., surgeon, detached from course of instruction at the Naval Medical School, Washington, D. C., and ordered to the Naval War College, Newport, R. I.

Freeman, G. F., P. A. surgeon, detached from course of instruction at the Naval Medical School, Washington, D. C., and ordered to the Navy Yard, Boston.

Brown, E. W., asst.-surgeon, detached from course of instruction at the Naval Medical School, Washington, D. C., and ordered to the Naval Hospital, Norfolk, Va.

Duhigg, J. T., asst.-surgeon, ordered to the Naval Recruiting station, Los Angeles, Cal.

Lane, H. H., asst.-surgeon, ordered to duty in the Department of Government and sanitation, Canal Zone, Panama.

Smith, G. T., surgeon, detached from course of instruction at the Naval Medical School, Washington, D. C., and ordered to the Naval Hospital, New York, July 1.

Brown, E. M., P. A. surgeon, sick leave extended three months from June 13, 1908.

Bunker, C. W. O., asst.-surgeon, detached from the Naval Academy and ordered to the *Arkansas*.

Sellers, F. E., asst.-surgeon, detached from the Naval Academy and ordered to the *Nevada*.

Fauntleroy, A. M., P. A. surgeon, detached from course of instruction at the Naval Medical School, Washington, D. C., and ordered to the Naval Medical School Hospital, Washington, D. C.

Cole, H. W., Jr., asst.-surgeon, detached from course of instruction at the Naval Medical School, Washington, D. C., ordered home, and granted leave for one month.

Melhorn, K. C., asst.-surgeon, detached from the *Wabash*, and ordered to the *Yankee*.

Donelson, M., asst.-surgeon, detached from the *Porter* and ordered to the *Biddle*.

Clark, G. F., acting asst.-surgeon, appointed acting asst.-surgeon from June 6, 1908.

Verner, W. W., P. A. surgeon, resignation accepted from June 10, 1908.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended June 10, 1908.

Stoner, G. W., surgeon, granted leave of absence for four days from May 31, 1908, under Paragraph 189, Service Regulations.

Magruder, G. M., surgeon, granted leave of absence for 1 month from July 2, 1908.

Stimpson, W. G., surgeon, granted leave of absence for 11 days from June 7, 1908.

Brown, B. W., surgeon, granted leave of absence for 1 month and 6 days from June 25, 1908.

Mathewson, H. S., P. A. surgeon, granted extension of leave of absence for 15 days from June 15, 1908.

Robinson, D. E., P. A. surgeon, granted leave of absence for 2 days from May 10, 1908, under Paragraph 191, Service Regulations.

Ramus, C., P. A. surgeon, relieved from duty in Honolulu, T. H., and directed to report to the Chief Medical Officer, Ellis Island, N. Y., for duty.

Bahrenburg, L. P. H., P. A. surgeon, granted leave of absence for two days from May 21, 1908, under Paragraph 191, Service Regulations.

Ward, W. K., P. A. surgeon, granted leave of absence for 1 day from May 10, 1908, under Paragraph 191, Service Regulations.

Herring, R. A., asst.-surgeon, relieved from duty at Ellis Island, N. Y., and directed to proceed to Reedy Island Quarantine Station, reporting to the Medical Officer in command for duty and assignment to quarters.

Stiles, Ch. W., Chief Division of Zoology (Hygienic Laboratory), detailed to represent the Service at North Carolina State Medical Society Meeting, Winston-Salem, N. C., June 17, 1908.

Porter, J. Y., sanitary inspector, directed to inspect Florida quarantine stations from time to time during present season.

Bowers, P. E., acting asst.-surgeon, granted leave of absence for 7 days from June 6, 1908, and excused without pay for 8 days from June 13, 1908.

Fisher, C. E., acting asst.-surgeon, granted leave of absence for 10 days from June 2, 1908.

Foster, J. P. C., acting asst.-surgeon, granted leave of absence for 8 days from June 2, 1908.

Frissell, C. M., acting asst.-surgeon, granted leave of absence for 20 days from June 6, 1908.

Gibson, L. P., acting asst.-surgeon, granted leave of absence for 8 days from June 1, 1908.

Goldsborough, B. W., acting asst.-surgeon, granted leave of absence for 1 day, June 13, 1908.

Hicks, W. R., acting asst.-surgeon, granted leave of absence for 14 days from June 1, 1908.

Keatley, H. W., acting asst.-surgeon, granted leave of absence for two days from May 9, 1908, under Paragraph 210, Service Regulations.

Mason, W. C., acting asst.-surgeon, granted leave of absence for 5 days from June 22, 1908.

Parker, T. F., acting asst.-surgeon, granted leave of absence for 10 days from June 1, 1908.

Stearns, H. H., acting asst.-surgeon, granted leave of absence for 1 day, May 24, 1908, under Paragraph 210, Service Regulations.

APPOINTMENT.

Dr. W. D. Bell, appointed acting asst.-surgeon for duty at St. Johns River Quarantine Station, Florida, June 6, 1908.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Public Health and Marine-Hospital Service, during the week ended June 12, 1908:

SMALLPOX—UNITED STATES.

California: Los Angeles, May 16-23, 1 case; San Francisco, 2 cases.

District of Columbia: Washington, May 16-30, 7 cases.

Illinois: Chicago, May 23-30, 1 case.

Indiana: Indianapolis, May 24-31, 2 cases; Lafayette, May 25-June 1, 1 case; South Bend, May 23-30, 2 cases; Terre Haute, 1 case.

Iowa: Ottumwa, May 23-30, 3 cases.

Kansas: Topeka, May 16-30, 8 cases; Wichita, May 23-30, 3 cases.

Kentucky: Covington, May 23-30, 1 case; Lexington, 1 case.

Louisiana: New Orleans, May 23-30, 11 cases.

Maryland: Baltimore, May 22-30, 1 case.

Massachusetts: Lowell, May 22-29, 1 case.

Michigan: Saginaw, May 16-30, 26 cases.

Missouri: St. Joseph, May 16-23, 11 cases.

Montana: Butte, May 19-26, 2 cases.

Tennessee: Nashville, May 23-30, 1 case.

Ohio: Dayton, May 23-30, 6 cases.

Texas: San Antonio, May 16-30, 9 cases.

Washington: Spokane, May 16-23, 7 cases; Tacoma, May 17-24, 1 case.

Wisconsin: La Crosse, May 24-31, 2 cases.

Virginia: Richmond, May 22-30, 1 case.

SMALLPOX—FOREIGN.

Brazil: Rio de Janeiro, April 26-May 3, 123 cases, 62 deaths.

Canada: Halifax, May 23-30, 4 cases; Winnipeg, May 23-30, 2 cases.

China: Hongkong, April 18-25, 12 cases, 10 deaths.

Egypt: Cairo, May 6-13, 6 cases, 3 deaths; Suez, April 15-May 6, 12 cases.

Ecuador: Guayaquil, April 18-May 2, 8 cases.

France: Paris, May 9-16, 3 cases.

Great Britain: Leith, May 9-16, 1 case; Southampton, May 9-16, 1 case.

India: Bombay, April 28-May 5, 55 deaths; Calcutta, April 18-25, 22 deaths.

Japan: Kobe, April 24-May 2, 1 case; Nagasaki, May 3-10, 1 case; Osaka, April 18-25, 44 cases, 4 deaths; Shimonoseki, May 12, present.

Italy: Catania, May 14-21, 1 death.

Mexico: Aguascalientes, May 17-24, 3 cases; Mexico City, May 11-18, 23 deaths.

Russia: Moscow, May 2-9, 32 cases, 10 deaths; Odessa, May 9-16, 1 death; St. Petersburg, May 2-9, 31 cases, 8 deaths.

Spain: Denia, May 9-16, 2 cases, 1 death; Valencia, 28 cases.

Straits Settlements: Penang, April 18-25, 1 case.

Turkey: Constantinople, May 10-17, 4 deaths; Smyrna, March 24-April 7, 3 deaths.

YELLOW FEVER.

Brazil: Para, May 9-16, 2 cases, 2 deaths.

Ecuador: Guayaquil, April 18-May 2, 9 deaths.

PLAGUE.

China: Hongkong, April 18-25, 29 cases, 26 deaths.

Ecuador: Guayaquil, April 18-May 2, 38 deaths.

Formosa: April 18-May 2, 167 cases, 136 deaths.

India: General, March 28-April 4, 10,665 cases, 9,015 deaths; Bombay, April 24-May 5, 391 deaths; Calcutta, April 18-25, 90 deaths; Rangoon, 23 deaths.

Japan: Osaka, April 18-25, 3 cases, 4 deaths.

Mauritius: Feb. 1-29, 3 cases, 3 deaths.

Peru: General, April 25-May 2, 30 cases, 22 deaths.

Straits Settlements: Singapore, April 18-26, 1 death.

Trinidad: May 31, 3 deaths.

Venezuela: Caracas, May 25, 1 death; La Guaira, May 22, 2 cases, May 31, present.

CHOLERA.

India: Bombay, April 27-May 5, 1 death; Calcutta, April 18-25, 314 deaths; Rangoon, 11 deaths.

Japan: Yokosuka, May 12, 1 death.

Marriages

KENT KERCH, M.D., to Miss Minnibell Crane, both of Chicago, June 3.

EUGENE SWAYNE, M.D., to Miss Ida M. Paramore, both of Philadelphia, June 3.

GEORGE HENRY GAGE, M.D., to Miss Ethel Morley, both of Rochester, N. Y., June 3.

JAMES CROWE, M.D., Bethayres, Pa., to Miss Nellie Ashby of Fox Chase, Pa., June 3.

WILLIAM ROBIE PATTEN EMERSON, M.D., to Miss Edna Skilton, both of Boston, May 27.

EDWIN THOMAS BROWN, M.D., to Miss Jozia Maie West, both of Barton, Ark., June 3.

AUGUST J. BEYER, M.D., Oldenburg, Texas, to Miss Nellie Harvey of New Orleans, June 10.

EDWARD FRANCIS CROFUTT, M.D., New York City, to Miss Janet D. Lape of Chicago, June 4.

LOUIS L. THOMPSON, M.D., Reading, Pa., to Miss Elsie May Nagle of Port Carbon, Pa., June 1.

EUGENE LAFORREST SWAN, M.D., Brooklyn, N. Y., to Miss Mollie Dodge Ripley of Boston, June 3.

ERNEST HAROLD SPARROW, M.D., to Miss Bertha Evelyn Sawyer, both of Cambridge, Mass., June 10.

CORNELIUS J. MCGILLICUDDY, M.D., Colon, Panama, to Miss Helen I. Doherty of Dorchester, Mass., June 3.

CLAUDE J. B. FLOWERS, M.D., to Miss Augusta Karoline Frederica Rose, both of Harrisburg, Pa., June 2.

Deaths

Enoch Vine Stoddard, M.D. Albany (N. Y.) Medical College, 1863; a member of the medical societies of the State of New York and County of Monroe, and American Academy of Medicine; surgeon of the Sixty-fifth New York Volunteer Infantry in 1863 and 1864; commissioner of health of Rochester, N. Y., from 1873 to 1875; president of the Rochester Humane Society for the Prevention of Cruelty to Children and Animals for many years; from 1893 to 1908 commissioner of New York State Board of Charities; vice-president of the board from 1894 to 1903 and president from 1903 to 1908; consulting physician to Rochester City Hospital; from 1873 to 1890 professor of materia medica and therapeutics and thereafter emeritus professor in the University of Buffalo, Medical Department; died at his home in Rochester, June 6, after an illness of several months, aged 67.

Kent Oscanyan Foltz, M.D. Eclectic Medical Institute, Cincinnati, 1866; of Cincinnati, Ohio; professor of diseases of the eye, ear, nose and throat in his alma mater; president of the Ohio State Eclectic Medical Society and associate editor of the *Eclectic Medical Journal;* consulting physician to the Seton Hospital, Cincinnati; died in that institution, June 6, from acute nephritis, aged 50.

Robert J. Watts, Jr., M.D. College of Physicians and Surgeons in the City of New York, 1893; a member of the medical societies of the State and County of New York, and the Medical Association of the Greater City of New York; assistant physician to St. Mary's Hospital for Children; died at his home in New York City, June 8, from chronic nephritis, aged 41.

Henry Grant Lamb, M.D. Chicago Homeopathic Medical College, 1890; of Sandy Lake, Pa.; coroner of Mercer County for 12 years; a member of the Medical Society of the State of Pennsylvania and Mercer County Medical Society; died in the Medico-Chirurgical Hospital, Philadelphia, June 6, from rheumatic endocarditis, after an illness of several months, aged 44.

John C. F. Bush, M.D. College of Physicians and Surgeons, Baltimore, 1884; of Wahoo, Neb.; a member of the American Medical Association and Medical Society of the Missouri Valley; district surgeon of the Union Pacific Railway and local surgeon for the Chicago & Northwestern System; died June 4, in Warren, Pa., where he had gone en route to Europe, aged 51.

Joel Wallace Whitmire, M.D. Rush Medical College, Chicago, 1877; a member of the Illinois State and Livingston County medical societies; local surgeon to the Wabash System and Toledo, Peoria & Western Railway; and a member of the county board of United States pension examining surgeons; died at his home in Forrest, Ill., June 1, aged 56.

Thomas E. Spaulding, M.D. University of Texas, Medical Department, Galveston, 1900; a member of the State Medical Association of Texas and Hunt County Medical Association; for several years a member of the board of United States pension examining surgeons; died at his home in Greenville, January 24, aged 36.

John Powers, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1884; a member of the Michigan State and Benzie County medical societies; a member of the board of United States pension examiners; died suddenly at his home in Benzonia, April 4, from cerebral hemorrhage, aged 73.

James H. Reynolds, M.D. Louisville (Ky.) Medical College, 1903; of Leicester, N. C.; a member of the Medical Society of the State of North Carolina and Buncombe County Medical Society; died at the Mission Hospital, Asheville, N. C., June 3, four days after an operation for intestinal obstruction, aged 29.

John Graham Hunt, M.D. Vanderbilt University Medical Department, Nashville, Tenn., 1882; formerly clerk of the Superior Court of Granville County, N. C., and a director of the State Hospital for the Insane, Raleigh; died at his home in Oxford, N. C., June 2, after an illness of several months.

Michael W. Kelly, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1879; of Joliet, Ill.; a member of the American Medical Association; died in St. Joseph's Hospital, Joliet, June 2, from cerebral hemorrhage, following a runaway acident a month before, aged 60.

Williamson F. Boyakin, M.D. Transylvania University, Medical Department, Lexington, Ky., 1832; in 1857 an editor in Belleville, Ill.; a veteran of the Civil War, in which he served as captain of the Thirtieth Illinois Volunteer Infantry; died at his home in Marysville, Kan., June 5, aged 101.

Waller Hunn Nardin, M.D. New York University Medical College, New York City, 1860; a member of the American Medical Association; for two years and a half assistant surgeon in the Confederate service during the Civil War; died at his home in Anderson, S. C., May 30, aged 70.

Lewis B. Parsell, M.D. Long Island College Hospital, Brooklyn, N. Y., 1881; of Closter, N. J.; a member of the medical societies of New Jersey and Bergen County; a member of the medical board of Englewood (N. J.) Hospital; died in the Nyack (N. Y.) Hospital, April 22, aged 56.

Nathaniel Borden Aldrich, M.D. Medical School of Harvard University, Boston, 1889; gynecologist to the Fall River City Hospital and for many years in charge of a private hospital in that city; died at his home, June 6, from appendicitis, two days after appendicectomy, aged 42.

Arthur A. Barrows, M.D. College of Physicians and Surgeons in the City of New York, 1870; for several years principal of a public school and a practitioner of Hackensack, N. J.; died suddenly in a train in the New York subway, June 6, from cerebral hemorrhage, aged 68.

Walter J. Lewis, M.D. Medical Department of the Tulane University of Louisiana, New Orleans, 1860; of Como, Texas; a member of the State Medical Association of Texas and Hopkins County Medical Association; died in Sulphur Springs, Texas, February 19, aged 68.

John Alexander Wade, M.D. Bellevue Hospital Medical College, New York City, 1893; a member of the Connecticut State and Fairfield County medical societies; died recently at his home in Danbury, Conn., from sarcoma of the brain, after an illness of two years, aged 48.

Homer M. Shaw, M.D. Medical College of Indiana, Indianapolis, 1902; a member of the Indiana State Medical Association and Delaware County Medical Society; of Gaston, Ind.; was drowned in Tippecanoe Lake, Kosciusko County, Ind., while swimming, June 7, aged 29.

Joseph Pospisiel, M.D. Georgetown University School of Medicine, Washington, D. C., 1894; an employé of the United States pension bureau; shot and killed himself June 7, while insane supposedly from drug addiction, aged 41.

Charles E. Gustave Nautze, M.D. Beaumont Hospital Medical College, St. Louis, 1901; said at one time to have been in the Medical Corps of the Army; was found dead at his office in St. Louis, from cerebral hemorrhage, June 7, aged 38.

George W. McCaleb, M.D. Medical Department of the Tulane University of Louisiana, New Orleans, 1888; a member of the American Medical Association; died at his home in Gonzales, Texas, March 17, after a protracted illness, aged 50.

Henry J. Richardson, M.D. McGill University, Montreal, 1894; a member of the Northwest Territories Medical Society, and local surgeon of the Canadian Pacific Railway at Canmore, Alberta; died at his home, Dec. 10, 1907, aged 37.

Charles Herbert Davie, M.D. University of Buffalo (N. Y.) Medical Department, 1875; for more than 30 years a practitioner of Scituate, Mass.; died suddenly in the South station, Boston, June 4, from heart disease, aged 65.

Horace P. Lacy, M.D. University of Virginia, Medical Department, Charlottesville, 1855; for many years physician to Hampden-Sidney College, Va.; died at his home in that place, May 30, after an invalidism of three years.

John Lyon Gardiner, M.D. College of Physicians and Surgeons in the City of New York, 1844; for many years a practitioner of Bridgehampton, Long Island, N. Y.; died recently at his home, and was buried June 2, aged 85.

Martin William Auspitz, M.D. University and Bellevue Hospital Medical College, New York City, 1903; of New York City, was shot and instantly killed, June 7, by a nurse who claimed that he had wronged her, aged 30.

John R. Brabston, M.D. Memphis Hospital College, Medical Department Baptist Southwestern University, Memphis, 1882; of Vicksburg, Miss.; died at an infirmary in that city, May 28, after a prolonged illness, aged 53.

Benjamin F. Cole (Years of Practice, Ohio, 1896): of Dayton; for 48 years a practitioner; it is said, committed suicide, June 6, by hanging himself in an outhouse at the Shively school, near Dayton, aged about 70.

Thomas J. McCulloch, M.D. Jefferson Medical College, Philadelphia, 1857; a Confederate veteran; died at the Confederate Home, Austin, Texas, from sclerosis of the liver, May 20, after an illness of one year, aged 73.

Michael N. Regent, M.D. Bennett College of Eclectic Medicine and Surgery, Chicago, 1888; Rush Medical College, Chicago, 1896; died at his home in Chicago, June 5, from ptomain poisoning, after a short illness.

Young Edwin Holloway, M.D. Miami Medical College, Cincinnati, 1872; of South Highlands, Birmingham, Ala.; died suddenly, June 6, while riding in his automobile, from cerebral hemorrhage, aged about 60.

Frank C. Gundlach, M.D. Cleveland University of Medicine and Surgery, 1885; died at his home in Pittsburg, Pa., June 10, from the effects of opium and chloral, said to have been taken with suicidal intent, aged 55.

Julia Beard Wood (Years of Practice, Mass.); for many years a practitioner of Worcester, Mass.; died at her home in that city, June 2, from paralysis, after an illness of a year and a half, aged 67.

Charles Bissell Cody, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1869; of Sheboygan Falls, Wis.; died in St. Nicholas Hospital, Sheboygan, June 3, aged 76.

Myra R. Hewitt, M.D. Hering Medical College, Chicago, 1903; of Oshkosh, Wis.; died at the home of her sister in Chicago, May 29, from cancer, after an illness of three months, aged 47.

Fernando B. Tyree, M.D. Memphis (Tenn.) Medical College, 1890; of Byars, Okla.; was shot at Stratford, June 1, in an altercation with Leonard Hyden, and died June 2.

William S. Jones, M.D. University of Tennessee, Medical Department, Nashville, 1866; died at his home in Oakland, Ky., June 4, from nephritis, after an illness of one year, aged 71.

Augustus A. Clough, M.D. Denver College of Medicine, University of Denver, Colo., 1886; formerly health commissioner of Denver; is reported to have died in Honduras.

Hiram Edwin Coles, M.D. Medical College of Virginia, Richmond, 1861; a Confederate veteran; died suddenly at his home in Lilian, Va., June 1, aged about 68.

Darius I. Trimble, M.D. Curtis Physio-Medical Institute, Marion, Ind., 1890; died suddenly from heart disease, May 31, at his home in Herbst, Ind., aged 59.

Harry Blackford, M.D. Pulte Medical College, Cincinnati, 1904; died at his home in Middletown, Ohio, June 8, after an illness of several weeks, aged 41.

Isaac Westerfield (Years of Practice, Ky., 1897); for 60 years a practitioner; died at his home in Magan, Ky., recently and was buried May 28, aged 87.

Joseph H. Kitzmiller, M.D. Hahnemann Medical College and Hospital of Chicago, 1878; died at his home in Taylorville, Ill., June 8, aged 59.

Jeremiah M. Peters, M.D. Meharry Medical College, Nashville, Tenn., 1889; died at his home in Owensboro, Ky., May 31.

Charles M. Stephenson, M.D. McGill University, Montreal, 1878; died at his home in Coaticook, Quebec, Dec. 15, 1907.

James T. Moore (License, Maine, 1895); died suddenly at his home in Standish, Maine, April 29.

Medical Education and State Boards of Registration

COMING EXAMINATIONS.

Virginia State Medical Examining Board, Richmond, June 23-26. Secretary, Dr. R. S. Martin, Stuart.

Pennsylvania State Medical Examining Boards, June 23-26. The Regular Board meets at Philadelphia and Pittsburg; the Homeopathic at Philadelphia, and the Eclectic at Harrisburg. All applications must be filed with Dr. N. C. Schaeffer, Secrtary of Medical Council, Harrisburg.

New York State Board of Medical Examiners, Albany, June 23-26. Chief of Examinations Division, Charles F. Wheelock, Albany.

Illinois State Board of Health, The Coliseum, Chicago, June 24-26. Secretary, Dr. J. A. Egan, Springfield.

Rhode Island State Board of Health, Room 313, State House. Providence, July 2-3. Secretary, Dr. Gardner T. Swarts, 315 State House, Providence.

Utah State Board of Medical Examiners, Salt Lake City, July 6-7. Secretary, Dr. R. W. Fisher, Salt Lake City.

Arizona Board of Medical Examiners, Phoenix, July 6-7. Secretary, Dr. Ancil Martin, Phoenix.

Kentucky State Board of Health, Louisville, July 7. Secretary, Dr. J. N. McCormack, Bowling Green.

Washington State Medical Examining Board, Seattle, July 7. Secretary, Dr. C. W. Sharples, 528 Burke Bldg., Seattle.

Colorado State Board of Medical Examiners, State Capitol Bldg., Denver, July 7. Secretary, Dr. S. D. VanMeter, 1723 Tremont St., Denver.

Maine Board of Registration of Medicine, State House, Augusta, July 7-8. Secretary, Dr. Wm. J. Maybury, Saco.

North Dakota State Board of Medical Examiners, Grand Forks, July 7-9. Secretary, Dr. H. M. Wheeler, Grand Forks.

Oregon State Board of Medical Examiners, Portland, July 7-9. Secretary, Dr. Byron E. Miller, "The Dekum," Portland.

South Dakota State Board of Medical Examiners, Deadwood, July 8. Secretary, Dr. H. E. McNutt, Aberdeen.

New Mexico Board of Health and Medical Examiners, The Capitol, Santa Fe, July 13-14. Secretary, Dr. J. A. Massie, Santa Fe.

Arkansas Regular Board of Medical Examiners, State Capitol Bldg., Little Rock, July 14. Secretary, Dr. F. T. Murphy, Brinkley.

Arkansas Homeopathic Board of Medical Examiners, Little Rock, July 14. Secretary, P. C. Williams, Texarkana.

Arkansas Eclectic Board of Medical Examiners, Little Rock, July 14. Secretary, Dr. A. J. Widener, Little Rock.

Connecticut Homeopathic Medical Examining Board, New Haven, July 14. Secretary, Dr. Edwin C. M. Hall, 82 Grand Ave., New Haven.

Connecticut Eclectic Medical Examining Board, Hotel Garde, New Haven, July 14. Secretary, Dr. T. S. Hodge, 16 Main St., Torrington.

Connecticut Regular State Medical Examining Board, City Hall, New Haven, July 14-15. Secretary, Dr. Charles A. Tuttle, 196 York St., New Haven.

District of Columbia Board of Medical Supervisors, Washington, July 14. Secretary, Dr. George C. Ober, 210 B. St., S.-E., Washington.

West Virginia State Board of Health, Charleston, July 14-16. Secretary, Dr. H. A. Barbee, Pt. Pleasant.

Massachusetts Board of Registration in Medicine, State House, Boston, July 14-16. Secretary, Dr. Edwin B. Harvey, Room 159, State House, Boston.

Vermont State Board of Medical Registration, Burlington, July 14-16. Secretary, Dr. W. Scott Nay, Underhill.

Wisconsin Board of Medical Examiners, Park Hotel, Madison, July 14-16. Secretary, Dr. J. V. Stevens, Jefferson.

New Hampshire State Board of Medical Examiners, State Library, Concord, July 15-16. Regent, Mr. H. C. Morrison, Concord.

George Washington University Abandons Night Teaching.

Dr. W. F. R. Phillips, dean of the Department of Medicine of George Washington University, announces that hereafter no students will be matriculated who can not attend the ordinary day courses, and that the evening courses will be abandoned at the close of the session ending 1911.

Iowa Reciprocity Reports.

Dr. Louis A. Thomas, secretary of the Iowa State Board of Medical Examiners, sends us reports of reciprocal licenses issued at the January and April meetings of that board. The following colleges were represented:

JANUARY MEETING.

College.	Year grad.	Reciprocity with.
College of P. & S., Chicago.........(1906) ;	(1907)	Illinois
Northwestern Univ. Med. School, (1904) Wis. ;	(1905)	Illinois
Baltimore Med. Coll........................	(1905)	Maine
University of Maryland......................	(1893)	Virginia
St. Louis University........................	(1905)	Missouri
University of Nebraska......................	(1907)	Nebraska
Dartmouth Med. Coll.........................	(1901)	Maine
Jefferson Med. Coll.........................	(1881)	Michigan
APRIL MEETING.		
Northwestern Univ. Med. School......(1906) ;	(1907)	Illinois
College of P. and S., Chicago................	(1906)	Illinois
Rush Med. Coll...............................	(1906)	Illinois
Hahnemann Med. Coll., Chicago.............	(1906)	Illinois
University of Louisville.....................	(1894)	Kansas
University of Michigan	(1880)	Missouri
Cleveland Homeopathic Med. Coll...........	(1897)	Minnesota

COUNCIL ON MEDICAL EDUCATION OF THE AMERICAN MEDICAL ASSOCIATION.

Fourth Annual Conference held at Chicago, April 13, 1908.

(Concluded from page 1937.)

Character of the Medical License Examination.

J. A. Witherspoon, M.D., Professor of Medicine, in the Medical Department of Vanderbilt University, Nashville, Tenn. —Approaching a subject of this sort one naturally feels that there are a great many influences that should be looked to when it comes to saying how state boards shall examine candidates for licenses to practice medicine. What I am going to say is by no means meant as a reflection, and yet while the whole world, including the state boards, is trying to fix on a standard of entrance qualifications for students to enter the study of medicine, and to get a general requirement that will be adopted by all, with which efforts I am frank to say that I am in hearty symptathy, I believe another movement should be started, and that is to get a uniform method of selecting examining boards of this country. It is an unfortunate condition of affairs, that the licensing boards of the United States are selected in so many different ways. I do not know what the prevalent rule is over the country, but I do know that down in my section of the country many of them are selected because of their political prestige, and because they have the power to help the man that helps them.

APPOINTMENT OF EXAMINERS.

I was struck by Dr. Harison's statement that Michigan gave the state medical society the right to select men from whom appointments would be made. I think that is a good method and if we can get it generally adopted it would enable us easily to solve the question of state board examinations. I know that some state boards, gentlemen, do need the help of experienced examiners. Many boys have simply taken compends and prepared for an examination and passed and such a condition ought not to exist. The only way this can be overcome is to secure first-class men on the examining boards who will adopt the best methods of finding out what knowledge the man has.

A PRACTICAL ORAL EXAMINATION.

If you can meet in cities where there are hospitals and laboratories at your command, it seems to me a good plan to have both oral and written examinations, because through oral examinations you sometimes find out from a man a great deal that you would not find out through a written examination. You could see what his preparation is and by the examination be able to tell whether that man is capable of using the material he has. Now, if that can be done, I believe that you will solve the problem of the cheap school which prepared its students, as one gentleman said, in six weeks of quizzing, to pass any state board examination. So long as a man by mere quiz compend methods can be prepared to pass the state board examination, so long are our boards defective. If you bring that man into a hospital ward in contact with a patient and have him make a diagnosis of the case, then you will see what that man knows, and that is the only fair way under present methods of teaching by which it can be done.

FACILITIES FOR PRACTICAL EXAMINATIONS.

You say examiners can not be teachers, and that they have not the facilities to do these things. There is no school of acknowledged worth in this country which would not willingly furnish facilities to any board which desired them. The men of our boards to-day, many of them, are men who have not had the advantages of modern teaching by laboratory methods, and if this is true, would it not be a good thing for the state boards of the country to engage a man to go over the papers on pathology and bacteriology who is thoroughly competent to pass on them? Let a man who is an expert in work of that sort, where the board is deficient, be engaged. Of course, if the board has a man who is competent to do that, he is the man to do it. If some such methods were followed, I believe that the schools with no laboratory facilities and which are teaching the medicine of twenty-five years ago, would practically disappear without our having to blacklist them, because their graduates could not pass such an examination.

QUESTIONS SUBMITTED BY EXPERTS.

Again, what is the objection to having a list of questions, say one hundred or so, selected by experts and submitted to the examining board? For instance, why not let a man in the state who is a specialist in chemistry formulate some questions which would be practical? Why not utilize the men who have given their lives to teaching and laboratory methods? It is a shame, gentlemen, that a man can claim that he is able after six weeks' quizzing, to fit a man to pass a state board examination, but it is the case in some states.

A SINGLE ORGANIZATION OF STATE BOARDS SUGGESTED.

I always feel when I come to these meetings that I meet the cream of the medical boards of this country, and they doubtless come here to obtain suggestions for the good of their states. Now, it seems to me, it would be of enormous benefit if a great national body could be organized that would bring in all these state boards. I know of a state board in this country where for two consecutive years, the boys have had the questions from one to three days before the examination is held. When I went to the secretary of the board and said: "Is it a fact that the boys did have these questions?" he said: "It is impossible; I had them printed by my own printer and I know that he is honest. It is impossible." I got hold of the questions, however, which were obtained by one of our students the day before the examination, and who was honest enough to come up and give them to me. I tried to head off the examination, but it was too late. You gentlemen who are leaders in this state board work ought to organize a body that will bring together all states and set forth the ideal, that it takes knowledge and ability, as well as honesty for the very high and honorable position of a medical examiner.

Practical Ideas Concerning Reciprocity, I.

A. Ravogli, M.D., President of the State Board of Medical Examiners of Ohio, Cincinnati.—It often happens that a young man, by hard work, has passed his examinations successfully in his state, but for some good reason has been compelled to move to another state. If no reciprocity provisions exist between the two states, he is required by the other state to repeat the oracal and pass the examinations a second time. It is right that an applicant should be compelled to pass one examination to get his license, but it is unjust to subject him to a second or a third. This disagreeable condition ought to be eliminated from the medical profession, which is the only profession subjected to such an injustice. This difficulty was in some manner remedied by the American Confederation of Examining Boards when they began to establish the courtesies of reciprocity between the different states.

BASES FOR RECIPROCITY.

The chief point is on what bases we can reciprocate. There is the examination which all applicants must have taken for a medical license. Therefore a qualification was adopted providing that a second examination would not be required if the applicant had already been licensed by an examination, provided his other qualifications were satisfactory. This covered the ground for the newly accepted physician. But over 90 per cent. of all physicians or practitioners have never taken an examination. Men up to the age of 60 and 65 have asked our board for licenses through reciprocity with other states. There was a doctor who had a practice in Indiana, where he had lived twenty-five years. He lost his wife, and he had a married daughter in Ohio. Now this poor man wanted to come to Ohio at the age of 60 or 65 to make his home with his daughter, and at the same time make his living practicing medicine. According to the law he was subject to the examination which you see was very hard on that man. We have had cases of physicians afflicted with tuberculosis who have been told to go to Colorado, where they would be benefited by the climate. These men had nothing to do to make a living but to practice medicine, and they, in their poor condition of health, would be compelled to study up the different branches in order to pass an examination. For such reasons a second qualification was established which provided for registration without examination of candidates holding licenses issued on the basis of a diploma from a reputable medical college, where such licenses were issued prior to the time when the state required the examination of all applicants.

RECIPROCITY IN OHIO.

This qualification, therefore, has taken care of the old practitioner. In Ohio we began talking about reciprocity in 1903, and a resolution was adopted which empowered the board to accept by reciprocity those who had been subjected to an examination and the law was amended accordingly. This law opened the door to the courtesies of reciprocity to young physicians, yet precluded the way to reciprocity to the old practitioners, who were compelled to be subjected to the test of an examination, which for them was considered a hardship. Through the influence of the delegates of the Ohio Medical Society it was shown that the most of the reciprocating boards were willing to grant license to Ohio physicians on the ground of the second qualification, but it was first necessary for the board of Ohio to enter in reciprocity with them accepting this qualification. On April 3, 1906, a resolution to that effect was unanimously adopted and Ohio lined up with the states reciprocating on both qualifications.

The Department of Education for the State of New York, after having concluded a reciprocity agreement with New Jersey offered to make similar arrangements with Michigan and Ohio. The first obstacle to an agreement was that the board of the State of New York because of some irregularity on the part of some of their physicians, who at the time of the enactment of the law, migrated as students to other states and returned after completing courses lower in grade than that prescribed by the law, was opposed to accept the second qualification. They were opposed for the reason that some now irregular practitioner might become registered by the way of reciprocity without any test of examination. Ohio, however, could not change its law, and therefore has reciprocity with New York only on the ground of an examination passed in either one of the states.

ESSENTIALS FOR RECIPROCITY.

There are three points to be considered in connection with reciprocity: First, a uniform standard of preliminary education; second, a uniform standard of medical education; and, third, a uniform standard of medical examination. When we have taken care of these three conditions I figure that we can arrange for reciprocity with every state. We have been invited to enter into reciprocity with several states that still have a medical course of three years, and no preliminary educational requirement, and for those reasons we were compelled to refuse because we could not allow physicians of a lower grade of education to enter the state. Such refusal has compelled those states to pass laws providing for preliminary education, and increasing the length of the medical course in order to get reciprocity with other states. When a state establishes reciprocity with states with lower standards it opens the door to many students who look elsewhere for less work or for easier examinations, and who will then re-enter the state by the door of reciprocity.

INFLUENCE OF RECIPROCITY.

I think that reciprocity has been a great benefit to all states, because it compels the state which is in the lower grade of education to raise its standard. There is no doubt that Minnesota has begun the good work by demanding one year of preparatory work as a condition of entrance to a medical school. This will influence other states to do likewise. In Ohio we have already passed a resolution asking from the legislature the power of increasing the standard for entrance to a medical examination, and in a year or two we will probably have, as a necessary requirement to enter a medical college, one year of preparatory studies in biology, chemistry, physics and other important work. We also consider that reciprocity should be adopted by every state as a means of increasing the standard of the medical profession. I believe that all the states are trying their best to raise the standard of the medical profession, to the honor of American medicine.

Practical Ideas Concerning Reciprocity, II.

S. D. Van Meter, M.D., Secretary of the State Board of Medical Examiners of Colorado, Denver.—It matters not how varied may be the existing opinions relative to the many-sided subject of medical licensure, it must be admitted that the only just basis on which a license may be granted is, that degree of educational and moral qualification which will best protect the public health and reflect due credit on the medical profession. However, the problem of determining the real qualifications of applicants is complex, and only those who have had the experience of administering the medical laws realize the difficulties to be encountered.

METHODS OF DETERMINING QUALIFICATIONS.

The methods at our disposal of determining the qualifications of applicants for licensure are: Oral, written and clinical examinations, duly verified documentary evidence, and a combination of all. It is needless to say that inasmuch as no one method is a sure test the combination of all is probably the safest. Nevertheless, such a plan or method offers a most serious objection, viz., that of requiring much time and labor on the part of both the examiner and the applicant, which has a tendency to cause the former to shirk his duty, and the latter to feel he is being put to unnecessary trouble; and, inasmuch as the problem eventually resolves itself into one of human judgment, which unfortunately is an uncertain entity, the best that can be expected is an attempt on the part of those administering our laws to do justice to all concerned.

The problem is further complicated by the fact that a test of qualification applicable to the recent graduate is wholly inefficient to the older practitioner, and it is a regrettable fact that, under the guise of raising the standard of medical licensure, some states have insisted on a technical and written examination of all applicants, for no other purpose than that of limiting the number of physicians within their borders. This has frequently acted as an insurmountable barrier to the older, qualified applicant, which, in turn, has given birth and life to the so-called "reciprocity movement" in medical licensure. Necessarily, the recent graduate, whose qualifications in my opinion are more difficult to determine, must be subjected to a rigid technical examination, inasmuch as we have no other means of determining his qualifications; but, in the case of the older practitioner there is no reason why the documentary evidence he can present of his preliminary and collegiate education, licenses in other states, hospital service, and, above all, his record for reputable practice, should not, after thorough investigation and verification, be sufficient to determine with far more accuracy the question of his fitness to practice medicine than any technical examination.

NO ONE DOCUMENT SUFFICIENT.

The great mistake of placing the whole stress on any one document has been practically demonstrated in the farcical results obtained in former years, when a diploma from a "reputable medical school" was all that was necessary to secure a state license. As has been said, the injustice of universal technical examinations gave birth and life to the so-called "reciprocity movement," honorable in intent, but defective in two important points, the first of which is that of placing too much stress on one document, namely, that of a license from some other state. The second, the refusal to recognize a license as evidence of qualification when the applicant comes from a state whose board has not entered into a reciprocal agreement with the board from whom he is seeking a license.

This provision was not prompted by any intention of injustice, but to coerce other states to recognize documentary evidence of qualification, when presented by older practitioners. This does not remove the inequity or justify the injustice of this provision of making the individual responsible for the action of the state board over which he has no control. The mere fact that a board has not entered into an agreement to recognize the credentials of applicants from another state does not lessen the value of its license as evidence of qualification.

RECIPROCITY WITHOUT RETALIATION.

It is a satisfaction, however, that a number of the state boards who grant licenses on documentary evidence have abolished the retaliation provision, and accept licenses from other states as evidence of qualification, irrespective of the fact as to whether or not there is a reciprocal agreement existing between those states. Furthermore, I am informed that the American Confederation of Reciprocating, Examining and Licensing Medical Boards does not now insist on this inequitable provision. Unfortunately there are several states whose medical statutes make it mandatory on their examining boards to refuse to recognize the credentials of applicants from states which have not entered into reciprocal agreements with them.

A DEFINITE SCHEDULE NECESSARY.

To further the interests of rational medical licensure and to prevent the abuse that may arise from the careless recognition of documentary evidence of qualification, it can not be too strongly urged that a definite schedule acceptable as evidence of qualification should be agreed on and adopted as a working guide by the licensing boards of the several states, when determining the question of the qualification of the older class of applicants. That it is impossible for all of the state boards to agree on what such schedule should be is evident by the experience of the American Confederation of Reciprocating, Examining and Licensing Medical Boards.

OBJECTIONS TO EXISTING SCHEDULES.

It can not be claimed that the schedules adopted by that body are very far from correct, but the unfortunate misuse of the word "reciprocity," the great mistake of injecting the retaliatory principle of refusing to accept evidence from states not members of the Confederation, and the placing of too much dependence and stress on a single document, have prevented the great success that should have been achieved. With no intention of ignoring the good work done by the American Confederation of Reciprocating, Examining and Licensing Boards it is my opinion that much more would be accomplished if the word "reciprocity" were dropped altogether. Further, the object of securing rational medical licensure of licentiates of one state who, from choice or necessity, desire to locate in another, can be attained more quickly if the several national bodies laboring for this goal would unite and centralize their efforts. This can best be done through the medium of this Council.

A SOLUTION OF THE PROBLEM SUGGESTED.

While it can not be claimed that any organization has the legal authority to decide what the licensing boards shall, or shall not do, it is a well recognized fact that the examining boards throughout the country, as a whole, entertain the highest esteem for the wisdom and judgment of the Council on Education of the American Medical Association, and would gladly welcome any suggestion or advice calculated to simplify the difficult task of deciding the qualification of applicants for license to practice medicine, especially if supported by the Confederation of Reciprocating Boards and the other national organizations endeavoring to better medical licensure. Therefore, I would strongly advocate that this Council take up the question of what schedule of credentials should be accepted by the license boards as evidence of qualification, in lieu of examination. I am confident that your conclusions and advice would be accepted most cheerfully by the licensing bodies of the several states, and that the schedule you suggest would be universally adopted.

ESSENTIALS OF THE SCHEDULE.

It is essential that such a schedule should embrace the applicant's preliminary and collegiate education, state license or licenses, hospital and other experience calculated to qualify him as a practitioner of medicine, and last, but not least, a fact equally important, his record for reputable practice from time of graduation to date of application for license. In addition to such a schedule, divide perhaps into two classes, one for graduates prior to 1900, A.D., the other for those between 1900 and the present date, it would be well to consider the advisability of what would be deemed proper for the future. Personally, I have always considered that the most important part of the course in a medical education is the preliminary, and have been an advocate of the composite course for the A.B. and M.D. degrees in six years, with a compulsory seventh year of hospital service. I hope to see before long that the degree of doctor of medicine will not be granted on less.

To a schedule based on these essentials might, and should, be added one of our federal medical services; and, while it can not be claimed that a national certificate of qualification can be made legal, there is little doubt, should this Council offer to issue such a certificate, that the majority, if not all, of the examining boards would willingly accept them as evidence of qualification.

DISCUSSION.

Dr. **Herbert L. Burrell**, of Boston, referred to the fact that one of the objects for which the American Medical Association was organized was the improvement of medical education. He said it was significant that the central thought of the conference seemed to be the duty to the public rather than to the profession. Medicine has advanced beyond being merely the care of the individual and has reached the point where it means the public welfare of the community.

Referring to the different viewpoints of speakers in regard to preliminary education, he showed how necessary it was to have thorough discussions of all educational matters, and furnishing the opportunity for such discussions, he said, was the most important work of these conferences. They were also doing much to educate the profession itself as to the needs of medical education.

The true object of medical education is to train men for power to accomplish something. In providing a standard of educational requirements, there is no need to consider the few men of genius; they will take care of themselves. It is the middle men who must be safe practitioners.

Dr. **George W. Webster**, Chicago, said that the Illinois state constitution provided that the governor should both nominate and appoint, and that it would, therefore, require a constitutional amendment to give the state medical societies power to nominate members of examining boards. He thought that "practical" examinations were scarcely practical at the present time, owing to the large numbers taking the examinations and the enormous amount of time such examinations require. He said that method was more important than mere facts and he believed the best method was to supervise a man's education for sixteen years, determining the character of his preliminary and medical education and of the medical college wherein he obtained his instruction; then it would scarcely matter what kind of an examination he passed at the end of that time.

Dr. **Horace D. Arnold**, of Massachusetts, said he regretted to see his state reported as it was in the charts, but it was extremely difficult to obtain legislation. Much could be done even under the present law, however, since he thought they would be able to require a practical examination of all applicants for license. Before trying to obtain a new law he thought it was necessary first to create public opinion favoring it.

Dr. **F. J. Lutz**, of Missouri, hoped the time would soon come when the medical schools would be of such grade that their diplomas might be endorsed without examination. He did not agree with another speaker, that the greatest progress has come from within the colleges, although that might be true in individual cases, since many colleges still hold to the bare minimum standards required by law. It was his belief, in regard to reciprocity, that 90 per cent. of those applying for registration under that provision should not be admitted to practice medicine in any state. He was in favor, however, of a uniform standard of both literary and professional qualifications, as well as for reciprocal relations between states.

Dr. **John M. Dodson**, of Chicago, said that practical examinations for license are held in almost all civilized nations and under conditions not very different from those existing here. Even in Illinois a practical examination is held for embalmers who are to treat the dead. How much more important it is to have practical tests for those who are to treat the living. An absurd provision in medical practice acts, he thought, is that excluding from the examining boards the very persons who are best qualified by training and experience to do their work. Regarding reciprocity he believed the solution would be a national voluntary examining board composed of men of the highest degree of competency. In answer to President Eliot's criticism of the combined course for the baccalaureate and medical degrees in six years, Dr. Dodson said it is the direct result of the elective system which President Eliot himself introduced over thirty years ago. If in a student's work for the literary degree he had completed such courses as anatomy, physiology, bacteriology and other sciences fundamental to medicine, it would be ridiculous for the medical school to say: "You must repeat the work," and equally absurd to say: "You may take something else in its place, but you must use up the two years of time which they cover." The medical college should say frankly that, since the courses had been completed and under better conditions and teachers than obtained in nine out of ten medical schools, that student might enter the junior year.

Dr. **A. H. Brundage**, of Wisconsin, said the way to weed out men without a practical knowledge of medicine is to give a practical examination. In regard to penalties for the illegal practice of medicine, he believed in making them severe, and that all such cases should be brought in a court of record.

Dr. **J. McPherson Scott**, of Maryland, said that to prevent impersonation at examinations every candidate in his state is required to paste a photograph of himself on his application. This photograph must be sealed with the seal of the college and certified to by the dean of the faculty. If not a recent graduate, a friend must go with the candidate to a notary public and an affidavit must be made as to the applicant's identity. The photograph is detached and a number is placed on it. The same number is placed on the desk to be used by the applicant at the examination. The examiner frequently goes around and sees that the person there is the one represented by the photograph. Since the introduction of that system Dr. Scott said his board has had no trouble with impersonators.

In order to keep the questions safely, an examiner watched the stenographer while the questions were being written and while they were being run through the mimeograph machine, after which everything was gathered up and safely kept. In addition to all this care, detectives are in the room during examinations who are well paid to see that things go right.

In regard to legislation, he said it is hard to get in Maryland unless the doctors could be kept out of the fight altogether. He referred to the recent legislation requiring christian scientists to pass the same examination as other physicians, and said that law was obtained by a layman and his attorney who previously warned the board in order that no doctors should step in and spoil the game. The doctors kept out and as a result the law was amended so that "by no hook or crook can a christian scientist get in his work."

As to reciprocity, he said, if a physician is found to be all right, he is licensed regardless of the state from which he came.

Dr. **C. H. Travell**, of New York, said that the new law in that state provides for a single board of nine members to be appointed by the regents without regard to any school or society. Since the subjects of materia medica and therapeutics are the points of difference, it was decided to leave the teaching of these branches to the different schools and to apply tests only in the subjects which all schools hold in common. The regents can regulate the teaching of the branches omitted from the examinations, through their power of supervision over the colleges.

Dr. **W. T. Sarles**, of Wisconsin, said the chief need in the regulation of the various "isms" in medicine is a concise definition of what constitutes the practice of medicine.

The conference was then adjourned.

(See note on next page regarding a complete report of this conference.)

The Complete Report of the Conference.

[Space would not permit the full presentation in these columns of all papers and discussions. The full report of the conference will be printed in pamphlet form, however, and a copy will be sent to any address on receipt of 4 cents in stamps to cover postage.—Ed.]

Society Proceedings

COMING MEETINGS.

Michigan State Medical Society, Manistee, June 24-25.
State Medical Society of Wisconsin, Milwaukee, June 24-26.
Oregon State Medical Association, Portland, July 1-3.
American Ophthalmological Society, New London, Conn., July 15-16

THE AMERICAN GYNECOLOGICAL SOCIETY.

Thirty-third Annual Meeting, held in Philadelphia, May 26-28, 1908.

The President, Dr. J. Montgomery Baldy, Philadelphia, in the Chair.

An address of welcome was delivered by Dr. Edward L. Duer, of Philadelphia, and responded to by Dr. William M. Polk, New York.

Officers Elected.

The names of the officers elected appeared in The Journal, June 6, 1908, 1913.

The President's Address.

President Baldy in his address discussed the general policies, advances and failures of the past, and the duties of the future. The objects of the society are of a mixed character, scientific and social. The social side brings men together, gives opportunity for personal contact and the estimate of personal worth, and no better way exists of discovering an individual's professional capacity than to become acquainted with his methods of thought, accuracy of observation, and process of reasoning as applied to those every day affairs with which everyone, scientist or layman, is equally well acquainted and of which he is equally competent to judge. In looking over the field of endeavor for the past year he finds nothing new advanced nor any startling improvements on the old. After a decade of obstetric and gynecologic activity, unprecedented in any branch of medicine, he said that we seem like wise men to be resting, retrospecting, and putting our house in perfect order before proceeding further. Notwithstanding this the signs for the future are bright, and when it is noted on the one hand the activity of the obstetric world in that great undertaking, the prevention of blindness at the beginning of life, and the activity of the gynecologic world in the fight against that greatest of all scourges of middle life—cancer—we may look with complacency on the criticism which has predicted the end of gynecology as a specialty. Dr. Baldy then discussed the general administration of anesthetics as performed to-day, and expressed the hope that a salaried anesthetizer would be placed in each and every hospital in the land with a salary of sufficient size to attract to the service men or women of proper intelligence. Many brainy women fully capable of being trained to give anesthetics have entered the nursing profession and it is from this source one must look for a solution of the difficulties. Women are being tried and are proving satisfactory as anesthetists, and it will be a bright day in the technic of the operating room when their services are more generally adopted.

Symposium on Immediate versus Deferred Operations for Intra-Abdominal Hemorrhage Due to Tubal Pregnancy.

Dr. Florian Krug, New York, said that whenever opinions diametrically oppose each other on mooted points in surgery, the truth as well as the best interests of the patients are not to be found at either extreme but usually in the middle. The severity of shock is not always proportionate to the amount of blood lost. Comparatively few patients die from actual hemorrhage. In most cases, termed "tragic" or "cataclysmic," the hemorrhage has been seriously aggravated by trauma, viz., curettage, too vigorous bimanual palpation, etc. Some patients will die before surgical aid can reach them, others will die in spite of it, some have died because of it—surgical interference having taken place too hurriedly without proper preparations.

Dr. F. F. Simpson, Pittsburg, said that: (1) The first hemorrhage is rarely severe. That is the time for diagnosis, and for operation as early as elective conditions can be brought about. (2) The teaching that death is imminent when rupture occurs, makes the inexperienced treat the affection lightly until the occurrence of a second or a third hemorrhage, which may indeed be alarming. (3) If the patient is almost exsanguinated, very little additional depression will wipe out her margin of reserve strength. (4) With simple, prompt and proper treatment such as any practitioner should be able to give, hemorrhage from rupture should rarely cause death. (5) The decision for immediate operation should rest on a low mortality for such operations, in the individual operator's hands, rather than on an essentially high mortality the disease has been supposed to have.

Dr. Hiram N. Vineberg, New York, said that the amount of intraperitoneal hemorrhage varies within wide bounds. In the majority of cases it is not so great as to be a direct menace to life. Operative treatment may be as early as feasible, or deferred a few days to suit the convenience of the operator and the exigencies of the surroundings. In a very small percentage of cases the hemorrhage is so great as to be a direct menace to life from anemia and from pressure on the diaphragm and consequent crowding of the heart and lungs. These have been termed by the writer "cataclysmic" cases from the sudden onset and from the rapid inundation of the abdominal cavity with blood. Immediate operation in this class of cases is imperative and if aided by an intravenous saline infusion, expeditiously and skilfully administered, will save an otherwise doomed life.

Dr. E. E. Montgomery, Philadelphia, said that many of the earlier reported cures by the employment of electricity were cases in which the condition was only diagnosed after rupture and the cure consisted in the absorption of the clot, which more than likely would have disappeared just as rapidly had the measures been omitted. As the arterial tension is reduced by the loss of blood and the stream has diminished force, there is naturally a tendency to the formation of a clot, which may arrest further bleeding. In a considerable number of cases this fortunate termination does not occur and the patient bleeds to death. These are the cases in which prompt action becomes a valuable factor, and it is just as important to secure the bleeding vessel within the body as it would be were it more superficial. In these serious cases, we can feel justified in resorting to stimulants only when we are sure the open vessel is securely closed and of this we can only be certain when the vessel has been exposed.

Dr. C. C. Frederick, Buffalo, said that as the majority of tubal hemorrhages are diagnosed days or weeks after primary rupture, the above decision is needed only in a small percentage of instances. Only a very small percentage of ruptures produce at once a dangerous hemorrhage. The vast majority stop bleeding soon after rupture, recurring coincidentally with manifestations of shock at more or less frequent intervals. Examination of the hemoglobin index at frequent intervals, together with an erythrocyte count, also at frequent intervals, are the best means known to determine if hemorrhage is progressive. If hemorrhagic shock continues and blood examination shows progressive anemia, operate at once, using physiologic salt solution, adrenalin, etc., to stimulate circulation. If hemorrhage is not progressive, wait, using the same means to recuperate the patient, and then operate.

Dr. Egert H. Grandin, New York, believes that the abdominal route is the only rational, logical and safe one except in the formation of hematocele, or for the purpose of diagnosis, when the vaginal route should obtain. He looks on ectopic pregnancy as the most malignant disease to which woman is subjected, possibly excepting carcinoma, and the malignancy increases in proportion as the surgeon sits on the fence and waits. When the woman is in deep shock, the active hemorrhage has ceased, therefore, wait until she has rallied, and then operate, always by the abdomen. When bleeding is going on he does not believe one should stimulate the patient until the abdomen has been opened and the source of the hemorrhage checked. If the condition of the patient permits, he would open the abdomen and exsect the damaged broad ligament.

Dr. W. P. Manton, Detroit, said that in determining the course to pursue in the treatment of intraperitoneal hemorrhage due to tubal pregnancy, a rare judgment fortified by experience is demanded. Accumulated experience demonstrates that where there is free blood in the peritoneal cavity and hemorrhage going on, the sooner operation is undertaken the better are the chances for rescuing the patient.

Dr. H. J. Boldt, New York, said that whether an operation for intraperitoneal hemorrhage from ectopic pregnancy should be deferred, or be undertaken immediately, must depend on the judgment of the individual physician, based on his personal experience, and also on a careful study of the experience of others. An analysis of the cases in which there was profound collapse from intraperitoneal hemorrhage, but in which nothing from the history pointed to previous intra-peritoneal bleeding, shows that by far the greater majority rally from the bleeding sufficiently to come well out of the shock. To operate on a patient in profound collapse from a primary hemorrhage is a mistake, because with proper treatment the patient may rally in the course of a few hours. The author's own experience has been that in these cases bleeding is renewed within a few days, or even sooner. An operation should not be deferred in patients with active symptoms of partial tubal rupture or tubal abortion. The sooner they are operated on the better. If the general condition of the patient shows a slight improvement one should not operate then, but wait until the patient has more fully recuperated, if this seems likely. His preference is not to transport such patients to a hospital, but to operate on them in their homes, because of the increased danger caused by the transportation. How long shall operation be postponed if a patient rallies? Not at all, if she has really rallied; when she has a fair pulse, is perfectly intelligent in her answers, and has a normal skin. To wait longer is for her to assume risks.

Dr. A. Lapthorn Smith, Montreal, said that there is only one treatment for tubal pregnancy, and that is early removal. If rupture has taken place the case becomes an emergency one. Even if the patient is unconscious from shock (hemorrhage), he would not wait until she rallied, for this will mean a fresh hemorrhage, but he advises cutting down and tying the bleeding vessel, replacing the blood that is lost with normal salt solution.

Dr. B. F. Baer, Philadelphia, said that it is always imperative to act at once, secure and close an open, bleeding vessel, and this holds true in hemorrhage from a ruptured tubal pregnancy. But there may be a doubt in a certain case of very profound collapse whether the vessel is still open and whether it might not be wise to spend a few hours in restorative measures.

Dr. August Martin, Berlin, said that there is no necessity for operating hastily in these cases if hemorrhage has ceased, but if bleeding is still going on, we should follow the surgical rule to operate with a view to stopping the hemorrhage. As to whether the operation shall be done at the residence of the patient or not depends on circumstances, but preferably the surgery should be done at a hospital. If the case is urgent, operation should be done immediately and by the abdominal route, but in less severe cases the vaginal route can be selected.

Dr. Seth C. Gordon, Portland, Me., quoted the dictum of Lawson Tait that "no man living ever made a diagnosis of extra-uterine pregnancy before rupture." In 1887 a pupil of the speaker telegraphed him to the effect that he had a case of extra-uterine pregnancy and desired Dr. Gordon to be ready to come to see the patient at a moment's notice. Two hours later rupture took place, but it was twelve hours after rupture had taken place before the speaker saw the patient. After opening the abdomen he removed four quarts of bloody fluid and a fetus, which was about ten or twelve weeks old. The woman made a good recovery. He mentioned three other cases in which he had operated after rupture had taken place, with recovery of all the women. He recalled only two cases in which he was able to make a diagnosis before the occurrence of rupture, and these were operated on promptly, and both women recovered.

Dr. E. W. Cushing, Boston, said his attention was called to this subject some twenty years ago by a case in a near relative. Those who are old enough would recall many cases of so-called hematocele which got well, and he doubted whether women have tubal pregnancy any oftener to-day than they did in 1888. Notwithstanding this, he believes in operating in these cases, and yet he has seen several patients whose symptoms of tubal pregnancy with or without rupture were so slight and so obscure that it was not easy to obtain consent to operate. He mentioned two cases in which he had operated within two months, the operations having been followed by the recovery of both patients.

Dr. Hunter Robb, Cleveland, said that more conservatism in the treatment of ectopic pregnancy is called for in the majority of cases. When the diagnosis of ectopic pregnancy is certain, operative measures are indicated; but in most cases the danger is not sufficiently imminent to warrant immediate interference unless the condition of the patient is otherwise satisfactory. Many women not only survive the effects of a tubal abortion or rupture, but also recover even without an operation. Not more than 5 per cent. of the victims of ectopic pregnancy die at the time of rupture, whereas after the immediate operation in cases of ectopic gestation in 1,176 cases in twenty-five clinics the mortality was 8 per cent. When a patient is seen in a state of collapse as the result of a ruptured ectopic sac, she should not be operated on until the condition of shock has been tided over. These patients when they die, usually succumb not from loss of blood, but mainly from shock. Physiologists teach that a woman weighing 130 pounds must probably lose four pounds of blood before succumbing to the effects of the hemorrhage *per se*. So large an amount of blood is rarely found in the abdominal cavity; the bloody fluid is a mixture of blood and a serous exudate. So long as there is a reasonable evidence that immediate operation may be the wrong procedure, it is the duty of the physician to hold his hand and leave something to nature.

Dr. J. Wesley Bovee, Washington, D. C., said there can be no doubt but that if some cases of tubal pregnancy are allowed to go without operation the patients will die from a subsequent hemorrhage. No case is safe without operation. He prefers the abdominal to the vaginal route. If the case is very urgent the surgical work should be correspondingly rapidly done.

Dr. Andrew F. Currier, New York, agrees with those who have spoken that these cases are surgical, and just as a surgeon will endeavor to stop a hemorrhage that occurs from a bleeding vessel in any portion of the body, so is it equally important and proper to stop it in cases of tubal pregnancy. He thinks it takes a very acute sense to know when bleeding in these cases has actually ceased, and if one is satisfied that there has been bleeding, he does not see any good reason for delay in operating except in those cases in which the symptoms are mild and in which it is possible to bring the patient under more favorable circumstances for operation, but if hemorrhage has occurred the woman should be treated in a surgical manner.

Dr. Hugo Ehrenfest, St. Louis, said he operated on a woman a few weeks ago in whom infection had occurred from a well-formed hematocele from an attempt to perform a criminal abortion on herself. She was three months advanced in pregnancy. A diagnosis of infected hematocele was made from the presence of a mass and septic fever. Operation confirmed the diagnosis.

Dr. F. Pfannenstiel, of Germany, said that there are a few rare cases in which hemorrhage is so great that the patient must be operated on promptly in order to save her life. He thinks we should operate as early as possible, without precipitation.

Dr. Brooks H. Wells, New York, said that while in cases of ectopic pregnancy 95 per cent. may get well without operation, and that 5 per cent. will surely die if not operated on, the best results can be obtained by operation done just as soon as the diagnosis can be made. Those women who make the quickest and smoothest convalescence, and who have the fewest symptoms of trouble afterwards, are the ones who are operated on promptly. Furthermore, the mortality rate in those operated on quickly is much smaller than in those that have been in "cold storage" for days or sometimes weeks.

Dr. Joseph Taber Johnson, Washington, D. C., said that it is a backward step to wait to see whether these patients are going to bleed again or not. The proper thing to do in these cases of emergency surgery, provided a skilful operator is at hand and the surroundings are good, is to operate, and the sooner the ruptured tube is removed the better. Even should hematocele form, there is no assurance that it may not become infected.

Dr. William Gardner, Montreal, believes that the majority of cases should be operated on, but the question arises should the gynecologist wait in the face of the symptoms presented or operate immediately. He thinks Professor Pfannenstiel sounded the keynote when he said we may operate but without precipitation. He would wait in certain cases, but watch them carefully, before deciding to operate.

(*To be continued.*)

ESSEX NORTH DISTRICT (MASS.) MEDICAL SOCIETY.

Annual Meeting held at Lawrence, May 6, 1908.

Election of Officers.

The following officers were elected: President, Dr. George E. Durant, Haverhill; vice-president, Dr. W. W. Pillsbury, Newburyport; secretary-treasurer, Dr. J. Forrest Burnham, Lawrence; corresponding secretary, Dr. Roy V. Baketel, Methuen; auditor, Dr. William H. Merrill, Lawrence; censors, Drs. Lysander J. Young, Haverhill; Frank B. Pierce, Haverhill; Robert M. Birmingham, Lawrence; John A. Magee, Lawrence; John A. Fitzhugh, Amesbury; councilors, Drs. L. J. Young, Haverhill; Israel J. Clarke, Haverhill; Charles G. Carleton, Lawrence; J. Forrest Burnham, Lawrence; John A. Douglass, Amesbury; Charles P. Morrill, North Andover; commissioner of trials, Dr. John F. Young, Newburyport; nominating councilor, Dr. I. J. Clarke, Haverhill; alternating nominating councilor, Dr. Charles G. Carleton, Lawrence.

The resignation of Dr. Maurice D. Clarke, Haverhill, who for twenty-one years has filled the office of secretary and treasurer, was accepted with regret, and a unanimous vote of thanks was passed in honor of his long and faithful service.

Expert Testimony.

The committee on expert testimony recommended that such cases in court proceedings be arranged on the basis of professional consultation. The report was accepted and the following resolutions were adopted:

Resolved:

1. That the Essex North District Branch of the Massachusetts Medical Society recommends to its members that when called to make an examination, with other physicians, of a case where testimony in court is likely to follow they make this examination on the basis of a professional consultation.
2. That the fact of this vote be communicated to the other district societies in Massachusetts.
3. That a copy be published in the *Boston Medical and Surgical Journal* and THE JOURNAL of the American Medical Association.

Communications from American Medical Association.

A letter was read from the American Medical Association in regard to placing on list of delegates to national conventions suitable physicians, and to assist in all ways in promoting ends looking to the establishment of a national department of health; also to secure the candidacy of as many physicians as possible for election to both branches of both the state legislature and Congress.

Use of Pharmaceuticals in Prescriptions.

The following resolutions on the use of pharmaceuticals for prescriptions were unanimously adopted:

WHEREAS, The American Medical Association has established a Council on Pharmacy and Chemistry, composed of scientists of world-wide reputation and standing, whose function is to examine pharmaceutical products, in order to be able to inform the profession as to the real therapeutic value and chemical composition of said products; and,

WHEREAS, After careful examination of many hundreds of said products it has officially announced its approval of a large number of them, and, in order to make clear to the profession the methods and purposes of the work, has published exposures of a large number of the fraudulent preparations that have been foisted on the profession, and through them on the public, by interested owners and manufacturers, frequently laymen, ignorant of the use of drugs, except their meretricious use—as examples of the much larger number which it has found of little or no value, or positively harmful and,

WHEREAS, We believe that every physician in the jurisdiction of the Essex North District Medical Society is vitally interested in the work of this Council, and desires in every possible way to promote its usefulness and interest; and

WHEREAS, The greatest aid to the nostrum manufacturers in their nefarious and avaricious work has been the medical press, whether controlled by medical organizations, individual members of the profession, or interested lay firms; and

WHEREAS, We believe the time has arrived when the profession of medicine and all agencies controlled by it should be divorced permanently, finally and forever from those interests which, like ghouls, prey on the sick and afflicted, through the commercial sale of nostrums and dishonest, so-called proprietary medicines; now, thereforefore, be it

Resolved, By this Society in annual session assembled, and the medical profession in sympathy with it, that we heartily endorse the formation of the Council on Pharmacy and Chemistry; that we extend it our confidence and congratulations on the splendid work already accomplished, and that we pledge it our unanimous support in its purpose of freeing our profession and its publications from nostrum control; and, be it further

Resolved, That we recommend to the physicians of the district, that so far as practicable they confine their prescription writing and use of drugs to those preparations contained in the United States Pharmacopeia and National Formulary which have been established as the law of the land by the National Food and Drugs Act and in the list of New and Non-Official Remedies approved by the Council on Pharmacy and Chemistry of the American Medical Association; and also that we recommend the refusing to subscribe to or encourage any medical journal that is advertising proprietary preparations that have not been approved by the Council; and further recommend support to such publications as are willing to assist the profession in freeing their columns of nostrum advertising, even if they find it necessary to increase their subscription rates; and further be it

Resolved, That we expressly condemn the publication of so-called medical journals by interested manufacturers of nostrums and recommend the profession of the district to decline to receive them; and finally be it

Resolved, That a copy of these resolutions be sent to each physician in the jurisdiction of the district, to the secretaries of the Massachusetts state and district societies, and to the American Medical Association for publication.

The secretary, Dr. J. Forrest Burnham, read a paper on "United States Pharmacopeia Preparations, National Formulary Preparations and Preparations Approved by the Council on Pharmacy and Chemistry of the American Medical Association versus Nostrums."

W. H. Glover, Ph.G., Lawrence, presented a paper on "A Demonstration of United States Pharmacopeial and National Formulary Preparations."

AMERICAN SURGICAL ASSOCIATION.

Meeting held at Richmond, Va., May 4-6, 1908.

(*Continued from page 1826.*)

Discussion on Surgery of the Kidney.

Dr. Emmet Rixford, San Francisco, reported an operation for stone in the bladder in which autopsy revealed four ureters, in three of which were stones. In another patient operated on, for subacute peritonitis a small kidney was found in the vicinity of the appendix. The right kidney was hypertrophied. Regarding the cure of double tuberculosis following removal of one kidney he suggests an explanation in the production of hyperemia by the blood being forced into the kidney somewhat after the Bier method in the cure of tuberculosis of the extremities. If this is true, it would seem not impossible to secure healing of small foci in tuberculous kidneys by other means than nephrectomy. Tuberculin may have a future in that direction.

Dr. A. G. Gerster, New York, offered an explanation of the occurrence of hemorrhage in nephrectomy nine or ten days subsequent to operation by the assumption of injury to a large arterial branch causing thrombosis and that on the tenth day the thrombosis becoming detached, the hemorrhage took place. In two cases he has been obliged to remove the kidney after simple exploratory incision in the pelvis because of uncontrollable hemorrhage. In one case it was shown that one of the larger branches of the artery had been divided half way. He has since entirely abandoned the use of the knife in opening into the pelvis through the kidney and uses the following method: After incision of the cortical substance the knife is laid aside. With a curved director he pushes forward into the pelvis of the kidney. Along this he passes a dressings-forceps into the pelvis. This instrument is opened and then withdrawn. The finger is inserted along the track which has thus been made by tearing and stretching.

Dr. Frederick Kammerer, New York, reported three cases of unilateral infection of the kidney. In the first case recovery followed the removal of one kidney. In the second case, showing but two infarcts in one kidney and the other being normal, the incised kidney was tamponed and replaced. Barring a severe hemorrhage the patient did well at first, but the ascent of temperature indicated the necessity of extirpation of the kidney. The third case was one of perinephritic abscess in which removal of the kidney was finally necessary. The urine after nephrectomy was normal, as was the temperature seeming to prove the point made in Dr. Brewer's paper that the infection can be unilateral.

Dr. John H. Gibbon, Philadelphia, spoke of *x*-ray pictures as a most valuable means of diagnosticating ureteral calculi. Also important is the presence of microscopic blood. He pointed out the danger of using metal ureteral bougies. He referred to his previously published account of two cases of ureteral stone in which he did a combined extraperitoneal and intraperitoneal operation. The two great advantages of the method are the time saved and the less possible traumatism. While the ureters should be drained after removal of stone there is little difference whether or not they are sutured.

Dr. Charles L. Gibson reported a case with features similar to those described by Dr. Brewer with pain in the left kidney. Minute miliary deposits were seen at each pole. Half of the kidney at each pole was removed and the patient perfectly recovered.

Dr. George Woolsey, New York, does not feel that a negative plate, even if considered perfect and taken by an expert is at all a sure sign of no ureteral stone. He has operated on two patients in whom he found the lesion spoken of by Dr. Brewer and has effected a cure by nephrectomy. He feels that to Dr. Brewer is due a debt of gratitude for his presentation of a new field of pathology and treatment in kidney lesions.

Dr. A. D. Bevan, referring to kidney stone, emphasized the importance of diagnosis in this order: Gross clinical picture, including history; careful ordinary examination of the urine, chemical and microscopic; *x*-ray examination. He finds in the teaching of students great difficulty in overcoming the "laboratory habit," and in pressing on them the importance of the gross clinical picture. While he does not consider the *x*-ray infallible in the diagnosis of kidney stone, he believes that it can be relied on in nine-tenths of the cases. Diagnosis is arrived at by exclusion and then should be confirmed by the *x*-ray. He relies greatly on the amount of urea. He believes that a great many of the patients can be operated on under nitrous oxid gas which he considers much safer than ether or chloroform.

Dr. M. L. Harris, Chicago, said that in the use of the segregator in removing urine from two kidneys, if the urine dropped from the two sides synchronously, whether or not the amount is the same, it is always an indication that there has been an improper adjustment of the instrument or that an anomaly is present.

Stone in the Bladder, with Intermittent Pneumaturia for Three Years, and Subsequent Formation of a Fecal Fistula.

Dr. A. T. Bristow, Brooklyn, stated that pneumaturia is relatively common though little mentioned in text-books. In the case reported there had been several severe attacks of pneumaturia. Since January, 1907, the attack had been constant, usually occurring in the morning. Feces and bile have also been detected in the urine, also animal and vegetable fibers. There is now a definite fecal fistula about an inch and a half above the right ureteral opening. While there is some pus and mucus in the bladder, there is no active cystitis, and except for the occasional attacks before mentioned, the patient is perfectly well so far as his general health is concerned and refuses operation.

DISCUSSION.

Dr. Frederick Kammerer reported a case of pelvic abscess which had healed promptly after opening, but cystitis developed. The cystoscope revealed a large deep abscess to the right of the bladder in the mucous membrane. Some months later this abscess was operated on and the appendix removed, and the patient subsequently recovered.

Dr. Arthur D. Bevan, Chicago, reported a case in which he had removed a kidney within the capsule and in which was found a stone which had penetrated the duodenum. The man died of hemorrhage of the lungs about the sixth day and extensive septic infarcts of both lower lobes were found. Examination of the abdomen showed a perfectly clean peritoneal cavity, but posteriorly an opening into the duodenum which had been produced by the inflammation about the stone. In another case in which the *x*-ray showed an abnormally enlarged kidney, operation revealed the kidney and calices distended with gas.

Dr. George E. Brewer, New York, suggested the possibility of some of these cases being diverticulitis.

Dr. Emmet Rixford, San Francisco, reported the case of a man suffering from recurrent attacks of pelvic inflammation. In preparing for operation, castor oil was given; this was followed by a furious peritonitis resulting in death. Autopsy showed a diverticulum. An abscess at the base of the bladder had opened both into the bladder and into the peritoneum.

Dr. George Woolsey, New York City, reported the case of a patient who came to him for stricture of the urethra. Rectal examination showed a mass behind and to the left of the rectum. The patient suffered intermittent attacks of pain with rise of temperature and pneumaturia with pus and a little fecal matter in the urine. An anterior incision was made but the mass could not be reached. It was proposed to operate posteriorly, but the man did not return. The anterior incision admitted a catheter and so relieved the pain.

Primary Carcinoma of the Female Urethra.

Dr. Lewis S. McMurtry, Louisville, has searched the literature of this subject in the Surgeon-General's Office in Washington, and has added eleven cases to the list as recorded by Dr. J. S. Percy, Galesburg, Ill. The entire number to date is twenty-seven cases. Dr. McMurtry reported two cases in which he has operated in the last three years. In both the disease originated in the urethra. Both patients were treated by complete excision of the urethra down to the sphincter muscle of the bladder. In one case there was recurrence during the first year, rapidly extending to the base of the bladder, the perivesical tissues and inguinal glands. Further operation was not permitted. In the second case, the pathologic process was in its incipiency; the urethra was excised as indicated; prompt healing followed with perfect control of the bladder and there has been no recurrence one year after operation. Dr. McMurtry claims that early diagnosis of the condition is difficult because of the resemblance of the initial lesion to urethral caruncle. He also directed attention to the difficulty of differential diagnosis from syphilitic lesions in the same location. The prognosis and treatment are the same as for carcinoma in other parts of the body. The great desideratum for successful treatment is routine examination of all patients applying to the physician with painful micturition, early diagnosis of malignant types of disease, with complete excision in that early stage of invasion when permanent cure is possible.

Melanotic Sarcoma of Common Bile Duct and Ampulla of Vater.

Dr. Francis J. Shepherd, Montreal, reported the case of a man aged 42 years, who in June, 1907, complained of severe itching all over the body. Jaundice with loss of flesh and strength followed. A rounded, painless swelling was noted in the region of the gall bladder. In July, he entered the Montreal General Hospital for exploration and operation. No obstruction of the bile duct could be made out and no gall stones were found nor was there appearance of malignancy. The gall bladder was drained, but the patient died of exhaustion and asthenia six weeks after operation. Autopsy revealed a soft, brownish-black fungoid mass 2.5 cm. in length completely occluding the common duct and part of Vater's diverticulum. The mass was so soft that it could not be made out by external manipulation of the duct and a probe easily passed through the duct into the duodenum. The growth was apparently primary for a most careful examination failed to reveal any melanotic growth elsewhere nor were there any pigmented moles on the body. It is suggested that at some time some pigment cells became dislodged from a normal situation and subsequently were arrested in the bile duct. Secondary melanosarcomata are common in the liver, but no case has been reported of such a growth in the common bile duct.

Rhinoplasty for Sunken Nose.

Dr. John F. Binnie, Kansas City, Mo., reported a case in which the nasal bones and soft parts of the nose were intact; the cartilaginous septum was absent, and the end of the nose and the alæ were retracted into the pyriform opening. Subcutaneously, he mobilized the soft parts, inserted then into the edge of the pyriform opening and pulled the mobilized nose into position. With a tenotome he subcutaneously tunneled the soft parts of the mobilized nose and drew strips of cartilage through these tunnels in such a manner as to act as trusses for the support of the nose. The strips of cartilage were secured from the costal margins.

DISCUSSION.

Dr. John B. Roberts referred to a case similar in a young girl under his care in whom he had taken two large tongue-shaped flaps from her rather fat cheeks.

Dr. Leonard Freeman, Denver, spoke of two classes of saddle nose, one in which the skin is loose and one in which there is considerable cicatricial tissue and tendency to contraction. Those of the former variety are satisfactorily treated by the use of paraffin, the latter by the employment of metal plates.

Dr. Emmet Rixford, San Francisco, spoke of the availability of the tissue of the rib in these operations for sunken nose.

Psychical End Results in Major Surgical Operations.

Dr. James G. Mumford, Boston, remarked on the entrance of psychic impressions into surgical therapeutics as well as into other forms of treatment. To ascertain the final outcome of certain major surgical operations 500 eight-year-old records at the Massachusetts General Hospital were studied. Only 129 patients could be traced to the end. There were 91 women and 38 men in the series. If the statistical conclusions reached in this paper are correct, it is not unreasonable to assert that surgeons in some fashion should exercise for a longer period than is customary some supervision of their patient after operation. The experience of the social service workers at the Massachusetts General Hospital seems to indicate that great numbers of patients, after surgical operations may be brought back to health and usefulness who, under the ordinary conditions of surgical convalescence would remain semi-invalids or would regain health haltingly and after the lapse of many months or years.

Evidence in Support of the Theory That Hodgkin's Disease Is Type of Sarcoma.

Dr. William B. Coley, New York, based his paper on a study of over 80 cases of sarcoma primary in the lymphatic glands. He also stated that Hodgkin's disease closely resembles neoplasms, especially sarcoma, in the way in which it is affected by the *x*-ray and the mixed toxins of erysipelas and *Bacillus prodigiosus*. He reported a case of Hodgkin's disease, the clinical picture of which was characteristic, and in which the clinical diagnosis was confirmed by the microscope. The disease disappeared under six weeks' treatment with the mixed toxins and the patient is perfectly well seven months later. There are no enlarged glands, and spleen and liver are normal. He gave the following conclusions: The clinical features of Hodgkin's disease are often so nearly identical with those of round-cell sarcoma, that it is impossible to differentiate the two conditions. The histologic features so closely resemble sarcoma that if a given specimen be examined by different pathologists, opinions would be about equally divided between Hodgkin's disease and sarcoma. The onset of the disease, its course and duration, formation of general metastases, and final ending in death, most closely simulate sarcoma. While in most cases the metastases occur in preexisting lymph gland tissue, this is by no means always true, since in some cases the tumor breaks through the capsule, infiltrates the surrounding tissues, fascia, muscle, periosteum and the bone itself. The fact that Hodgkin's disease and leukemia have certain features pointing to an infectious origin, should not exclude them from being classed as malignant tumors, but, on the contrary, this fact furnishes additional evidence in favor of the infectious origin of sarcoma. In view of the utter hopelessness of Hodgkin's disease, as well as leukemia, from surgical and medical treatment, and in view of the remarkable results obtained, though in a very limited number of cases, with the *x*-rays and the mixed toxins of erysipelas and *B. prodigiosus*, the best chance of success apparently lies in a wider application of these methods of treatment, either singly or in combination.

Sterile Oil to Prevent Peritoneal Adhesions.

Dr. John B. Blake, Boston, stated that Martin of Berlin is said to have used oil on his sponges in certain cases to minimize adhesions; beyond this no reference to the method has been found. In Dr. Blake's study, considerable quantities of oil introduced into the peritoneal cavities of cats did not produce harm. Oil was also used in seven patients. In four convalescence was characterized by less pain than usual; one patient with diffuse peritonitis died without reason to infer that death was due to the oil; two patients had unfavorable symptoms, but one was evidently local sepsis; the other was probably tuberculous peritonitis. He concludes that absolutely sterile oil in moderate quantities may be used without danger in the peritoneal cavity. It remains in the cavity for from five to fifteen days, possibly longer. Its presence tends to prevent early and direct adhesion of denuded or inflamed peritoneal surfaces. Its use under the precautions is moderately effective in sometimes preventing, and usually diminishing the formation of postoperative peritoneal adhesions.

DISCUSSION.

Dr. A. Vander Veer, Albany, N. Y., has used oil in the manner reported by Dr. Blake, but in larger quantities, from 4 to 6 ounces, and the patients did well. He believes that the amount of peritoneal adhesions following abdominal operations is overestimated.

(To be continued.)

AMERICAN NEUROLOGICAL ASSOCIATION.

Thirty-fourth Annual Meeting, held at Philadelphia May 20-22, 1908.

Dr. Charles W. Burr, the President, in the Chair.

The officers elected were given in The Journal June 6, page 1913.

Mental State in Chorea and Affections Similar Thereto.

Dr. Charles W. Burr said he had chosen this subject for his presidential address because it is of interest in itself and because the study of mental symptoms in physical disease will throw some light on the nature of the insanities. For example the study of the mental state in typhoid fever throws some light on the clinical occurrence of delirium. It is unfortunate that the word chorea can not be dropped from use. It includes such diverse conditions that it carries with it no clear meaning. Sydenham's chorea is a separate and distinct disease which probably has a specific exciting cause. The majority of patients affected with this disease are entirely sane throughout its course, although even in mild cases there is peevishness, fretfulness, loss of power of attention and selfishness. In a second grade there are night terrors and hallucinations; in a third, distinct delirium with fever; in a fourth, stupor and acute dementia. Patients of the first and second groups almost always fully recover; those of the third group frequently die, and of the fourth, either die or remain demented.

Report of Case of Hemiplegia.

Dr. Frank R. Fry, Cincinnati, reported a case of progressive left hemiplegia with the Jacksonian phenomenon, but absence of sensory or tumor symptoms. On autopsy there was found a glioma of large size in the right centrum reaching into the immediate subcortical position. (No discussion.)

Case of Cortical Blindness Exhibiting Apraxic Symptoms. Discussion of Apraxia.

Dr. J. H. W. Rhein, Philadelphia, reported the case of a man, aged 55, who was ill for three years and developed progressive loss of eyesight together with inability to recognize the position of his body or limbs; loss of the sense of location; loss of tactile and temperature sense in the left hand. Stereognostic perception was impaired on both sides. There was no palsy but the left hand and arm were contractured and could be moved only reflexly. There was gradual mental failure toward the last and finally death from exhaustion. Autopsy revealed an area of softening in the cortex in the occipito-parietal region on the right side of the brain. Sections showed degeneration in the white matter of both occipital lobes and part of the parietal lobes.

DISCUSSION.

Dr. Joseph Collins, New York, said that this patient had once been under his care and that the case presented all the clinical manifestations of a type of arteriosclerosis which has not been definitely described and which results in cerebral softening. He thinks that the areas of softening described would account for all the objective and subjective signs. He asked whether the autopsy showed arterial lesions and whether serial sections had been made of the brain ganglia and how much degeneration existed.

Dr. A. Gordon, Philadelphia, said that in hemiplegia of cortical or subcortical origin there is frequently change of function in the opposite side and asked whether a systematic study of the corpus callosum had been made.

Dr. Rhein said that there was general arteriosclerosis. The microscopic lesions of the brain were rather those of perivascular distention and infiltration. This was also present in the white matter which showed degeneration. The corpus callosum was carefully studied.

Treatment of Facial Spasm by Injections of Alcohol.

Dr. H. T. Patrick, Chicago, reported three cases of facial spasm which he had treated by injection of alcohol into the seventh nerve trunk. Two patients showed good results, in the third there was failure to reach the nerve. Fifteen drops of a 40 to 50 per cent. solution of alcohol is injected hypodermically with a needle of medium length into the trunk of the nerve just in front of the mastoid over the stylo-mastoid foramen. The nerve is not easy to locate. As soon as the alcohol strikes it there develops complete facial paralysis which disappears in several months and which is not nearly so annoying to the patient as the spasm. In neither of his cases did the spasm return after recovery from the paraylsis which resulted from the treatment.

DISCUSSION.

Dr. J. J. Putnam, Boston, asked whether Dr. Patrick considered that the injection of the alcohol induces a special pathological condition of the nerve and how he explained the result.

Dr. A. Gordon, Philadelphia, asked Dr. Patrick if he had had any experience in treating in this way spasms following Bell's palsy.

Dr. H. M. Thomas, Baltimore, asked how long the spasms had existed in Dr. Patrick's first case. Dr. Thomas has seen a number of operations for facial spasm and thinks that the palsy which results is as bad as the spasm. The only case he has seen cured was one of anastomosis with the spinal accessory nerve done by Dr. Cushing. In this case emotional power of motion returned before voluntary power, a phenomenon he could not explain.

Dr. G. L. Walton, Boston, emphasized the presence of other obsessive tendencies in the victims of tic. Sufferers from spasm may be also neurotic, but not necessarily obsessive. He also spoke of the importance of carefully correcting refractive error before resorting to direct attack on the seventh nerve. He mentioned an obstinate case of many years standing completely cured by final adjustment of glasses and muscular exercises for insufficiency.

Dr. Charles E. Beevor, London, Eng., asked if there is any twitching when the needle enters the nerve. He thinks, as the nerve is a motor one, that there ought to be twitching as soon as the needle enters it.

Dr. J. Ramsay Hunt, New York, asked Dr. Patrick if he has found any etiologic factor in these cases. He thinks that it might be reflex, for in going over the literature he found that many patients showed some auditory disturbance aneurism pressing on the facial nerve or some such cause. He thinks that part of the seventh nerve might be sensory and thus convey the afferent impulses.

Dr. W. G. Spiller, Philadelphia, considers the cases reported by Dr. Patrick cases of peripheral facial palsy. When regeneration occurs connections of nerve cells take place which are different from those which previously existed and in this way cells become connected with the upper or lower branches of the facial nerve which were not in contact before. This accounts for the fact as noticed that the facial spasm is always synchronous with closing of the eyelids. He has tested this many times and always found it so.

Dr. J. J. Putnam, Boston, agreed with Dr. Spiller.

Dr. Patrick said that he does not know how alcohol acts. In answer to Dr. Thomas he stated that his first case of facial spasm was of ten years standing. He does not put forward the alcohol treatment as a radical cure, nor does he claim originality for it. If spasm returns after the palsy vanishes he could see no objection to repeating the treatment. The muscles did not twitch when the needle was inserted nor was he sure if he had touched the nerve or not. He knows nothing of the etiology in his cases.

A Special Diagnostic Phenomenon in the Attitude of the Head in Cerebellar Diseases.

Dr. Alfred Gordon, Philadelphia, said that a certain position of the head in cerebellar diseases is not infrequent. Very often the head is inclined toward the side of the lesion. It is of importance when cranial nerve symptoms are absent. He has observed in six cases, four of which came to autopsy, the following phenomenon: During the course of the disease and sometimes at the beginning, the head changes its position. Then when it is forcibly turned to its former position, vertigo and pain in the head ensue. The autopsies proved that the phenomenon is of diagnostic value, as when it occurs it enables one to determine the seat of the tumor.

DISCUSSION.

Dr. Joseph Collins, New York, asked in what way the position of the head described by Dr. Gordon differed from that described by Hughlings Jackson 28 years ago.

Dr. W. C. Krauss, Buffalo, N. Y., said that he had seen cases in which this position of the head was present to a remarkable degree.

Dr. M. Allen Starr, New York, said that 12 or 14 years ago he made a collection of 40 cases of cerebellar tumor in order to determine whether or not the direction of the staggering gave any clue to the side of the tumor. In one-third of the cases the patient staggered toward the side of the tumor and in two-thirds away from the tumor. Since then he has collected others until now he has a series of 100 cases and has come to the conclusion that the direction of staggering gives no clue to the location of the tumor.

Dr. Frank R. Fry, Cincinnati, said that a few years ago he reported a case of frontal lobe tumor which gave all the signs of a cerebellar tumor. He thinks that the symptoms are due to pressure of the cerebellum against the rim of the foramen magnum.

Dr. Philip Coombs Knapp, Boston, said that in a good many tumors in different parts of the brain a change in the position of the head will cause increase in dizziness and headache. The head is apt to be turned to the same side as the tumor so as to bring the tumor into the lower portion of the cranial cavity and thus lessen the pressure on other parts of the brain. In cerebellar tumor in which ordinarily these symptoms are more marked they would be exaggerated by change in position of the head.

Dr. J. Ramsay Hunt, New York, said that he has observed two cases of cerebellar softening in which the head was fixed and he thinks that this was done to compensate for loss of cerebellar function. He has never been able to determine any fixed position of the head which could be used as a localizing factor.

Dr. C. E. Beevor, London, Eng., thinks the position of the head so very uncertain that it is not of much value for diagnostic purposes. In a large number of cases there is no characteristic position of the head.

Dr. J. H. W. Rhein, Philadelphia, said that the position of the head is not pathognomonic.

Dr. T. H. Weisenburg, Philadelphia, said that he has recently collected a number of cases of cerebellar tumor and in most of the cases the cerebellar attitude was of no value. In two cases there was diplopia and the patients held their heads in this position to avoid this symptom. When paper was held over their eyes the position of the head was changed.

Dr. Gordon said that he wished to emphasize the fact that in cerebellar tumor the head is first inclined to one side but later inclines to the other side, and that the side to which the head latterly inclines is the side of the tumor.

Two Cases of Aphasia Relieved by Operation, and Their Bearing on Modern Theories of Aphasia.

Dr. B. Sachs, New York, reported the case of a man of 38 who had fallen, striking his head on the right side. Operation was performed over the site of the fracture, but the patient continued unable to talk. Dr. Sachs saw the patient five months later and advised operation on the left side. This was done and a cyst removed from the third frontal convolution. By re-education the power of talking has been fully restored. The second case was a woman of 42 who was found suffering from typical sensory aphasia with other evidences of organic brain lesion. Operation was performed in the left temporal region and abscess found in the temporal lobe. Within a week the aphasia had entirely disappeared. The writer thought that in practice the traditional lines in reference to aphasia should be followed.

DISCUSSION.

Dr. H. M. Hoppe, Cincinnati, reported the case of a man who after injury gradually developed partial sensory aphasia. On operation a small spicule of bone was found under the temporal muscle and around it a cyst pressing upon the temporal lobe. The patient improved after the operation, but never completely regained the power of naming objects.

Dr. Joseph Collins, New York, said that he considered Dr. Sachs's first case not one of aphasia but one of anarthria.

Dr. Joseph Fraenkel, New York, said that Dr. Sachs's first case had been studied by him and that it was plainly one of motor aphasia. There was no evidence of paralysis. He thinks that the case teaches that we must still adhere to traditional lines in reference to aphasia.

Dr. Adolph Meyer, New York, believes that points of vulnerability of the speech mechanism and the exact site of speech mechanism are two entirely different things and should not be confounded.

Dr. Sachs said that he does not think his cases could be used in illustration of the difference in view between Marie and Dejerine in reference to aphasia and that he does not have that intention in presenting them. He insisted that his first case was one of aphasia and not anarthria, as Dr. Collins claimed.

The Cerebral Distribution.

Dr. Charles E. Beevor, London, Eng., related his experience in injecting the various blood vessels of the brain with soluble colors under uniform pressure and illustrated his results by means of lantern slides. The pressure was maintained by means of pressure bottles, the canulæ entering the various arteries being fed by way of the color-bottles from a several-way tube which formed the outlet of the pressure bottle. At various times 2, 3, 4 or 5 of the arteries of supply to the brain were injected simultaneously. The injections were made in the fresh brains which were afterward hardened in formalin. Dr. Beevor has been doing this work for the past six years and has successfully injected and studied about eighty brains.

DISCUSSION.

Dr. M. Allen Starr, New York, said that many of Dr. Beevor's points and especially the distribution of the vessels to the internal capsule and the basal ganglia are quite new to him and that the work is a very valuable original contribution to the subject.

Dr. H. T. Patrick, Chicago, thinks one could be impressed to the proper degree with the originality of the idea and the patience and skill required only when he had an opportunity to look over Dr. Beevor's entire collection of brains and see how uniformly successful the results have been.

Dr. J. J. Putnam, Boston, asked Dr. Beevor if he had attached any functional significance to this distribution of the vessels.

Dr. Adolph Meyer, New York, asked whether or not any studies had been made in reference to anastomosis of the various arteries and the possibilities of supply in case of occlusion.

Dr. Joseph Collins, New York, asked if there was anything in Dr. Beevor's investigation which would indicate the distribution of the end arteries.

Dr. Beevor said he does not think the distribution has any functional significance but is purely anatomic. He said that the basal arteries are certainly end arteries; others are anastomotic. However, there is very little communication between the various branches of the same artery.

(*To be continued.*)

Medicolegal

Things Deemed to Be a Breach by Physician of Restriction Against Use of Residence Property for Business.

The St. Louis Court of Appeals had, in the case of Semple vs. Schwarz and another, a suit against a physician and his wife for alleged breach of covenant in the title to their residence lot, deeded to the wife, the covenant being against said lot or any part thereof being used or occupied for trade or business of any kind whatever. The physician testified that for the purpose of securing the privacy and peace of his family he and his wife planned, in building on said lot, a reception room for such patients as would call at the residence; that he saw patients in this room from 2 to 4 o'clock p. m. of each week day, and gave his patients to understand that he could be seen there during these hours, and an average of about five persons per day called and were received in this room; that he performed no operations at his residence, but simply diagnosed a case, and if an operation was necessary made an appointment with the patient to perform it at one of the hospitals.

The defendants insisted that the evidence failed to show that the physician was carrying on any business at his residence; that what he did there was in the exercise of his calling as a physician and was professional work, not a business calling or vocation; within the meaning of the restrictions.

In a narrow or restricted sense of the term he was, perhaps, not engaged in business. But the definition of the term given by the lexicographers and sanctioned by the courts is broad enough to comprehend any employment, vocation, or calling in which one may engage for a livelihood or profit, and hence broad enough to take in the practice of physic, law, or divinity.

Whether or not the physician violated the covenants must be ascertained by a proper construction of the following clause in the covenants, to-wit: "Nor shall said lot or any part thereof ever be used or occupied for trade or business of any kind whatever." The covenantor evidently, from the very language used, intended to exclude from the lot all and every kind of business and every occupation or calling which could, within the broadest definition of the term, be classed as business. Any other construction of this clause of the covenant, it seems to the court, would do violence to its language and tend to defeat its evident purpose. This view was strengthened by a consideration of the object and purpose of this and the other restrictions and covenants which were to make the place a strictly exclusive residence one, and the court is bound to conclude that the physician's evidence showed he breached the covenant prohibiting the occupation of the lot for business purposes.

But the court does not think the evidence warranted the court to enjoin him from receiving patients at his residence at all, or that the court should say he should not set aside a special room in his residence where patients might be received if they must call. It would be ridiculous and inhuman to hold that no patients should be admitted to the physician's residence under any circumstances whatever, or to hold that he could not set apart a room for the purpose of seeing such persons as must of necessity call at his residence for the purpose of consulting him professionally, or such as might be taken there for emergency treatment.

The fact that the physician and his wife had set apart a room in their residence for the express purpose of receiving patients and that he had let his patients know they might call on him there professionally between 2 and 4 o'clock p. m. of each week day, and the fact that he had advertised this particular room at his office by tacking his professional card on the door, constituted the business he was conducting at his residence in violation of the covenant.

By the judgment of the circuit court the physician was enjoined from habitually receiving, treating, or consulting with his patients at his residence, and from displaying on the premises any sign or device indicating that he was so using his premises, and from inviting, directly or indirectly, his patients to visit him at the premises for treatment or consultation as a physician, either by the use of cards, telephone books, or any other form of announcement, or by word of mouth. But this court thinks that the physician should not be prohibited from advertising his place of residence in the telephone books. To do so would prohibit him and his patients the use of this most convenient means of communication with each other.

The decree of this court is that the physician and his wife, and each of them, for and during the life of the restrictions, be enjoined and prohibited from maintaining any office on the premises for the purpose of receiving or treating any patient who may call on the physician to be treated by him, or to consult him professionally; and they are enjoined from advertising in any manner, or by any means whatever, the fact that he will receive patients or persons at the premises for the purpose of professional treatment, or consultation; and he is enjoined and prohibited from carrying on his business as a physician at or on the premises.

Condemnation of School Building by State Board of Health.

The Appellate Court of Indiana says, in the case of Advisory Board of Coal Creek Township, Montgomery County, vs. Levandowski, that, assuming, without deciding, that the State Board of Health has authority to condemn a school building and prevent its use for school purposes in its then present condition on purely sanitary grounds, such an assumption does not carry with it the inference that such condemnation requires the destruction of the building. At most all the State Board of Health can require is that the building be made sanitary. Whether this shall be done by repairing the old or rebuilding the new one is for the proper local authorities to determine.

Dying Declarations.

The Supreme Court of Illinois says, in the case of People vs. Buettner, that dying declarations are such as are made by the party, relating to the facts of the injury of which he afterwards dies, under the fixed belief and moral conviction that his death is impending and certain to follow almost immediately, without opportunity for repentance, and in the absence of all hope of avoidance—when he has despaired of life and looks to death as inevitable and at hand.

The declarant in this case, when asked by her nurse how she felt, replied on two occasions: "I feel good." "Very well." From these expressions it may be assumed that there was nothing in her feelings that presaged her approaching dissolution. Still, if she had abandoned hope of life and looked on death as certain to follow immediately, the declarations would be admissible, even though she was brought to this state of mind by the statements made to her by her nurse and physician.

The important question was: Did the deceased have a fixed belief that she was certain to die soon? If this was the state of her mind, it was no objection to her declarations that her belief was induced by the statements of her nurse and physician. The fact that the deceased manifested a desire for the consolations of religion and caused a priest to be sent for showed that the statements made to her by the nurse and physician had brought her to a fixed belief that death was near at hand.

The expression of the desire of the deceased for the consolations of religion, and especially when the particular religion or church of the deceased provides for the administering of certain rites to its members when, and only when, they are actually in articulo mortis, has always been regarded by the courts as one of the strongest proofs that the deceased is in that condition of mind which is requisite to the admission in evidence of his statements as dying declarations.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below

Medical Record, New York.

June 6.

1 *New Duty of the Medical Profession: Education of the Public in Scientific Medicine. H. L. Burrell, Boston.
2 *The Cancer Problem. G. W. Crile, Cleveland.
3 Unusual Case Requiring Cesarean Section. W. T. Dannreuther, New York.
4 Three Patients Operated on for Large Abdominal Tumors. W. P. Harbin, Rome, Ga.
5 *The Art of Tying Surgical Knots. C. H. Duncan, New York.
6 Urticaria Following the Second Administration of Diphtheria Antitoxin. A. W. Blain, Jr., Detroit, Mich.
7 *The Convalescent Period and Its Successful Management. W. P. Worster, New York.

1. Published in THE JOURNAL, June 6, 1908, page 1873.

2. Published in THE JOURNAL, June 6, 1908, page 1883.

5. **Knot Tying.**—Duncan describes with illustrations a new German method of tying knots used in surgery.

7. **Convalescence.**—Worster says that in the early convalescent period from any disease in which the case has almost terminated fatally, when death seems imminent from heart failure, and when free stimulation from drugs has been made and the patient gains resistance very slowly, the muscles being lax and flabby and unable to perform their duty in aiding the heart to send out the normal diastolic wave, nothing in the materia medica will act so promptly as judicious and properly applied hydrotherapy. He says that cold through the peripheral nerve terminals is refreshing because the stimulus is conveyed to the central nervous system by means of the shock and thence reflected by the nerve centers governing them to the functions of respiration, circulation, etc. Affusions are most applicable because of the flexibility of temperature, duration and pressure. He describes the method of application to the trunk of cold compresses at night, and a method of ablution when patients are too weak to be handled. The reactive capacity of the patient must be studied to establish his ability to withstand the proper gradation of cold. This may be obtained by passing the back of the nail of the forefinger of the right hand across the abdomen or chest and increasing the pressure on the second stroke made parallel to the first. Ac-

cording to the deep reddening of the skin and the celerity of the blood in following the nail, after a little practice the reactive capacity of the patient may be readily judged. The shock of the cold is always conveyed to the central nervous system and thence reflected to the three chief blood pressures: (a) the pressure behind the column—the heart; (b) the pressure on the sides of the column—the muscular coats of the arteries and the elastic fibers of the arterioles, and (c) the pressure in front of the column—the normal elasticity of the capillaries. In this manner is blood pressure maintained.

Boston Medical and Surgical Journal.

June 4.

8 *New Duty of the Medical Profession: Education of the Public in Scientific Medicine. H. L. Burrell, Boston.
9 *Use of Silk Ligaments in Addition to Muscle and Tendon Transference in Infantile Paralysis. R. Soutter, Boston.
10 Atypical Cases of Tonsillar and Peritonsillar Inflammations with One Unusual Complication. W. H. Merrill, Lawrence, Mass.
11 *Early Diagnosis of Typhoid by Blood Cultures from the Ear. O. R. Mabee and A. E. Taft, Boston.
12 Antityphoid Inoculation. G. P. Sanborn, Boston.
13 A Sterilizing Hopper. F. A. Washburn, Boston.
14 Psoas Abscess Mistaken for a Case of Acute Abdomen. W. P. Coues, Boston.

8. See No. 1.

9. **Silk Ligaments in Infantile Paralysis.**—Soutter describes the use of silk ligaments as a supplement to tendon and muscle transplantation to overcome deformity in paralytic cases. He emphasizes the following points in infantile paralysis: Deformity can be prevented by careful treatment, so that nothing but the most simple operations should be undertaken until massage, electricity and, best of all, careful muscle training have been used for three or four years. In the early stages deformity can be prevented by light apparatus. The possibility of the return of function in the paralyzed muscle is much more hopeful than is generally supposed, even in very extensive paralysis. Everything to foster the return of function should be done before transplanting muscles or using silk ligaments, even though these procedures would be of great benefit. He reports the method of procedure. Silk ligaments will stiffen the joint sufficiently to prevent lateral motion, but allow dorsal flexion, so necessary to walking. This method is for this reason preferable to arthrodesis, even when the paralysis is extensive. By preventing distortion silk ligaments are extremely useful to supplement necessary transplantation. The newly transferred muscle takes up its work more readily and is relieved from other strain.

11. **Blood Culture Diagnosis in Typhoid.**—Mabee and Taft describe the method of making blood cultures from the ear in typhoid fever and arrive at the following conclusions: Blood cultures in early cases of typhoid fever (that is, within the first week) give an accurate diagnosis in from 90 to 100 per cent. of the cases. The information obtained in this way is, therefore, extremely valuable, because the Widal reaction is rarely obtained before the ninth or tenth day of the disease. The simplicity of the method of obtaining blood from the ear for blood cultures warrants its general use by practitioners. In early cases one c.cm. of blood is sufficient for each culture. In cases of two and three weeks' duration a larger quantity of blood gives a higher percentage of positive cultures. In febrile conditions of a few days' duration with symptoms simulating typhoid fever a negative blood culture probably excludes typhoid fever. In septicemia due to the *Staphylococcus pyogenes aureus*, it is possible to recover this organism from the blood by the ear method with the use of ox bile as a culture medium.

New York Medical Journal.

June 6.

15 *Expert Testimony. R. B. Cowing, New York.
16 *Restoration of the Normal Balance of the Foot. E. G. Abbott and H. A. Pingree, Portland, Me.
17 Specific Action of Mercury in Syphilis. H. G. Piffard, New York.
18 *Intussusception of the Sigmoid. J. M. Lynch, New York.
19 Osteomyelitis. F. H. Albee, New York.
20 *A Simple Air House. J. T. Tubby, Jr., New York.
21 *To What Extent is Migraine Amenable to Treatment of the Eyes? E. M. Alger, New York.
22 *Epilepsy. B. R. Tucker, Richmond, Va.
23 Multiple Conception. M. J. Karpeles, Philadelphia.

15. **Expert Testimony.**—Judge Cowing describes the principal defects in medical expert testimony as regards insanity: 1. Its partisan character. He particularly objects to the custom of allowing medical experts to aid counsel by prompting the questions to other medical witnesses, and then appearing in the witness box to sustain the side of the case for which they have thus been enacting in the capacity of counsel—and all this in the presence and hearing of the jury. Naturally, such a course creates an impression of partisanship. 2. The insufficient standard of qualification. The witness should have to testify that he has made a special study of psychology and is familiar with the law's definition of insanity. 3. Never more than two experts for each side should be allowed. This would compel the parties to produce the best experts available. 4. The hypothetical question should be entirely done away with, and right should be given to experts to give their opinions based on facts or alleged facts not within their own personal knowledge. Cowing next enumerates the various remedies that have been proposed. He refers to the old rule, which formerly disqualified as witnesses all who had a pecuniary interest in the case. This rule has been relaxed; but the author thinks that the reason for this old rule—the exclusion of biased testimony—applies with great force to medical experts, and that the solution of the problem of expert testimony must lie in some method of rendering medical expert witnesses independent of the litigants.

16. **Normal Balance of the Foot.**—In their concluding article, Abbott and Pingree consider the operative measures for restoring the normal balance of the foot, based on the plan of dividing those structures which resist the restoration of the arch to a normal position, and of shortening those that normally maintain it in place. They describe their operation, and state that the results so far obtained give them reason to believe that the work justifies farther consideration.

18. **Intussusception of Sigmoid.**—Lynch describes the etiology, pathology and symptomatology of this condition, which he holds to occur more frequently than we are aware of. Among the symptoms he particularly enumerates: A feeling of unfinished stool, following a movement of the bowels, aching pain in the sacrum, a passage of mucus or membrane, a dragging sensation in the left iliac region, with a feeling of heat across the lower portion of the abdomen and back, periodical attacks of hemorrhage from the bowels, colicky pains before the bowels move, pain on sitting or standing for any length of time, headache, vertigo, nausea, vomiting, frequent and painful urination, pain down the back of the legs. The symptoms vary with the degree of intussusception, the length of time it has existed, and the involvement of other organs. He discusses the more important of these in detail. Treatment is palliative or operative. He describes the operative treatment, which consists essentially in suspending the intestine by passing three or four Pagenstecher sutures through the inverted transversalis fascia. He describes three cases.

20. **An Air House.**—Tubby describes an inexpensive air house, apparently on the Japanese style, for open-air sleeping. He gives an elevation and ground plan. In the neighborhood of New York such a house could be built for about $150. It consists of a room 8x13 feet, with ample porch and wide overhanging roof, the whole house wall above 3 feet 6 inches being closed with shutters of roofing paper.

21. **Migraine and the Eyes.**—Alger says that there are three ocular conditions conceivably concerned with attacks of migraine: 1. Overuse of ciliary muscle in accommodation; 2, conditions rendering binocular vision impossible without undue strain of extrinsic muscles; 3, the cerebral fatigue consequent on constant interpretation of distorted or unequal retinal images. The one great defect in the evidence of the relation between these conditions is the widespread failure of ocular therapeutics to afford relief, even when applied by men whose reputations are of the highest. This may be due to two causes: First, that the ocular treatment is seldom as patient and painstaking as it should be; and, second, because there may be cases in which eyestrain is not the chief cause and

perhaps not a cause at all. He believes both to be true. He holds that a thorough examination of the eyes should be made in every case, not only once, but several times, by different men if the first is not successful. He reports ten cases.

22. **Epilepsy.**—Tucker discusses the types of epilepsy on a classification plan modified from that of Turner; also the diagnosis, pathology, prognosis and treatment. He believes that we should look on epilepsy as an organic nervous disease with a pathology of its own; that we should admit the majority of all cases to be helpable, and a goodly percentage curable; and that, if we will turn from the apathy of the past and adopt the more modern methods of diagnosis and treatment, we may aid in the inauguration of a new and optimistic era for this much dreaded malady.

Lancet-Clinic, Cincinnati.

May 30.

24 Glaucoma. D. T. Vail, Cincinnati.
25 *Non-Penetrating Abdominal Wounds. J. L. Wiggins, East St. Louis, Ill.
26 Retroflexion and Retroversion of the Uterus; Causes, Consequences and Treatment. H. M. Graham, Indianapolis, Ind.
27 First-Year Experiences. L. A. Clary, Winfield, Kan.
28 What We Learn from Analysis of the Feces. J. A. Sweeny, Louisville, Ky.

25. **Non-Penetrating Abdominal Wounds.**—Wiggins considers that it would be well if we could be divorced from the idea that an exact diagnosis is a requisite; for such a diagnosis is not possible, as a rule. Any patient who has received an injury, severe or seemingly simple, without or with marked shock and with immediate or subsequently ensuing pain, muscular rigidity, weak pulse and an anxious expression peculiar to serious injury of the abdominal organs, is in a condition requiring surgical intervention. He quotes statistics to show the advisability of operative procedure in such cases, and urges that such intervention should not be reserved for only those cases in which the possibility of recovery under expectant treatment is out of the question.

New York State Journal of Medicine.

April.

29 *Pancreatitis Resulting from Gallstone Disease. W. J. Mayo, Rochester, Minn.
30 *Surgical Treatment of Gastric and Duodenal Ulcer. A. J. Ochsner, Chicago.
31 *The Gastric Neuroses. D. Roberts, Brooklyn, N. Y.
32 *Diagnosis and Treatment of Gastric Ulcer. D. Rochester, Buffalo, N. Y.
33 *Gumma of the Liver as a Surgical Disease. J. C. Munro, Boston.
34 *Non-Parasitic Cysts of the Liver. W. G. Macdonald, Albany.
35 *Edema Neonatorum and Sclerema Neonatorum. O. P. Humpstone, Brooklyn, N. Y.
36 Grip Epidemic in Pittsburg. J. A. Lichty, Pittsburg.
37 Grip in Baltimore. C. H. Jones, Baltimore.
38 *Throat and Sinus Complications of Grip. C. G. Coakley, New York.
39 Aural Complications of Grip. E. B. Dench, New York.
40 Lives of Officers of the Medical Society of the State of New York. J. J. Walsh, New York.

29, 30 and 33. Abstracted in The Journal, Feb. 22, 1908, page 638.

31, 32 and 34. Abstracted in The Journal, Feb. 22, 1908, page 639.

35. **Edema Neonatorum.**—Humpstone describes at length a case of edema neonatorum and briefly one of sclerema neonatorum. He is of opinion that edema neonatorum is a vasomotor disturbance of central origin, and that sclerema is a trophic adipose disturbance, with profuse formation of stearin and lack of olein. Both are really symptomatic, rather than diseases in themselves. Furthermore, these patients do recover, and demand every effort, even though the later results are as lamentable as in the case reported.

38. **Sinus Complications of Grip.**—Coakley emphasizes the necessity of differentiating between true neuralgias and so-called neuralgia accompanying diseases of accessory sinuses in grip. In the latter, the pain is often mitigated or absent at night, returning in the morning and disappearing during the evening. The point of greatest pain does not necessarily indicate which sinus is involved. Pressure over the anterior surface of the antrum just below the inner canthus is often seen in antral disease; on the under surface of the frontal bone above the inner canthus, internal to the supraorbital notch, in disease of the frontal sinus. Deep-seated pain at the back of the orbit, intensified on moderate use of the eye, sometimes with indistinctness of vision, suggests affection of the posterior ethmoidal cells and sphenoidal sinuses. Coakley urges on practitioners the necessity of a nasal examination in all cases of neuralgia with considerable purulent discharge.

Philippine Journal of Science, Manila.

January.

41 *Comparative Study of Tsutsugamushi Disease and Spotted or Tick Fever of Montana. P. M. Ashburn and C. F. Craig, U. S. Army.
42 *Tropical Infantile Dysentery with Hitherto Undescribed Bacillus as Causative Factor. F. B. Bowman, Manila.
43 Plague Procedure in Hongkong. J. M. Atkinson, Hongkong, China.
44 Quantitative Relationships Between Agglutinin, Agglutinoid and Agglutinable Substance. Y. K. Ohno, Manila.
45 Peculiar Cases of Traumatism of Internal Organs Some Due to Tropical Conditions and Practices. M. Herzog, Manila.
46 Habitual Use of Opium as a Factor in the Production of Diseases. T. H. Kee, Manila.

41. This article was published in the *Boston Medical and Surgical Journal*, May 14, 1908, and abstracted in The Journal, May 30, page 1864.

42. **Tropical Infantile Dysentery.**—Bowman reports a series of cases from which was isolated a bacillus that resembled culturally and morphologically in some ways *Bacillus dysenteriæ*, in others *B. coli* and *B. typhosus*. The specific agglutinins developed in animals through inoculation of this bacillus did not react with *B. dysenteriæ*, *B. coli*, and *B. typhosus*, but organisms isolated from three other cases of dysentery were agglutinated in high dilutions, each by the specific serum of the other. Serum from one patient agglutinated the bacillus isolated from the same patient, yet did not agglutinate other organisms from the same source. The author concludes that intestinal organisms, especially the Shiga bacillus, exhibit such varied cultural and agglutinative characters when growing under different conditions and in different localities, that it is very difficult to classify them. From his own observations and a search through the literature, he is led to believe that the bacillus isolated from his cases has hitherto not been described as one of the exciting factors in dysentery, but the specific character of the serum from one of these cases and of that from the rabbits immunized against the Shiga bacillus seems to show conclusively that this bacillus was the cause of the epidemic of infantile dysentery described in the paper.

Journal of Medical Research, Boston.

May.

47 *Diuresis Following Ether Narcosis. P. B. Hawk, Champaign.
48 New Technic in Study of Symbiotic Relations of Bacteria. M. R. Smirnow, New Haven, Conn.
49 Symbiotic Relations of Bacillus Diphtheriæ. Id.
50 Fatal Septicemia in Young Chickens, or White Diarrhea. L. F. Rettger and S. C. Harvey, New Haven, Conn.
51 *Bacteriology of the Female Genital Tract, with Special Reference to the Detection of Gonococcus. F. B. Gurd, Montreal.
52 *Protective Inoculation Against Plague. R. P. Strong, Manila, P. I.
53 *Study of Natural and Acquired Immunity of Guinea-Pigs to Gonococcus. J. C. Torrey, Ithaca, N. Y.
54 Sudan Oil in Transplantation of Tumors. G. McConnell, St. Louis, Mo.

47. **Ether Narcosis.**—Hawk finds that ether narcosis in dogs has a distinct diuretic effect; also that the dog loses weight on the day when it is placed under ether narcosis.

51. **Bacteriology of Female Genital Tract.**—As the result of investigations carried out in the Montreal General Hospital, Gurd comes to the conclusion that the different results obtained by various observers in the study of the bacteria of the female genital tract are owing to different methods of examination; furthermore, that the gonococcus is even more important as a factor in pelvic disease than is ordinarily believed, and that at least 50 per cent. of the women attending hospital gynecologic clinics suffer from gonococcus infection. The lesions may become very chronic, gonococci being found years after the active disease. Pregnancy and labor often arouse apparently non-virulent and dormant gonococci to renewed activity. Gurd regards the examination of smears from fresh discharges as of little value, because so many organisms

are present that resemble the gonococcus, while the number of gonococci present is often very small; consequently he relies on cultivation for the demonstration of gonococci. Blood agar is the most suitable medium; swabs the best means for collecting the material for examination, the most favorable source being the vaginal discharge. Of course, the particular organ that appears to be the site of the infective process should be carefully examined.

52. **Plague.**—Strong reviews the work on protective inoculation against plague and reaches the conclusion that, while inoculation of killed cultures or their extracts would be far preferable for immunization in man, because safer, nevertheless, satisfactory immunity can be obtained only by inoculation with properly attenuated living bacilli. While Strong's work so far has shown that the attenuated cultures he has used in human beings have been without danger, yet this work must be regarded as still in the experimental stage. More extensive experiments with different peoples and under different conditions are required before the method can be recommended for general use. Strong holds that the question now is whether we shall continue the struggle against plague by the usual hygienic methods carried out in many endemic centers, methods that he regards as inadequate for the suppression of plague in such centers, or whether further experimentation shall be undertaken with protective inoculation with living attenuated cultures, the method that he thinks offers a greater hope of success.

53. **Immunity to Gonococcus.**—Torrey finds that the gonotoxin is obtained solely from dead and disintegrated gonococci. Immunity to gonotoxin can not be established in guinea-pigs, and, after several injections of gonotoxin, some guinea-pigs appear to become hypersensitive. The recovery of guinea-pigs after intraperitoneal injection of living gonococci is explained by Torrey as the result of the destruction of gonococci by lytic substances within ten hours after injection. When guinea-pigs die from such injections, they do so as the result of toxemia, and not as the result of general infection. Vaccination with the living gonococci gave better protection than inoculation of dead cocci, and in animals so immunized there was obtained evidence of the presence of specific bacteriolytic substances, as well as of more rapid and more extensive phagocytosis by cells on the surface of the omentum. Immunization of guinea-pigs against meningococci and against *Micrococcus catarrhalis* gave no protection against gonococcus.

Memphis Medical Monthly.

May.

55 *Pathologic Significance of Headaches. G. G. Buford, Memphis.
56 Hysteria and Neurasthenia Resulting from Traumatism. B. F. Turner, Memphis.
57 Six Cases Treated with Specific Antigonococcic Serum. B. N. Dunavant, Memphis.
58 Fatal Nasal Hemorrhage in a Hemophiliac; Death from Septic Pneumonia. R. McKinney, Memphis.
59 Nature and Treatment of Hysteria. S. T. Rucker, Memphis.
60 Operative Obstetrics and Midwifery. W. D. Ray, Memphis.

55. **Headaches.**—Buford classifies headaches into those due to (1) mechanical or pressure irritation; (2) chemical irritation. Either form may be peripheral or central. He describes both methods of production, and concludes that the painful sensation of headache is due to irritation of either a sensory nerve fiber or a sensory cell, and whether the irritation is mechanical or chemical, the sensation is the same and is referred to the distribution of nerve terminals. A continuous headache is due to pressure; an intermittent headache to toxic irritation. Pressure headaches have their cause located intracranially or extracranially, and intermittent headaches have their origin usually in the thoracic or abdominal viscera.

Journal of the Medical Society of New Jersey, Orange.

April.

61 *Morbid Psychology. F. Peterson, New York.
62 Two Cases of Fracture of Head of Radius. C. F. Baker, Newark.
63 Medical Administration of the General Municipal Hospital of Manhattan and the Bronx.
64 *Treatment of Stammering and Stuttering. E. W. Scripture, New York.

61. **Morbid Psychology.**—Peterson gives the following classification of mental disorders for the general practitioner:

TOXIC AND EXHAUSTIVE PSYCHOSES.
Puerperal.
Lactational.
Renal Disease.
Typhoid.
Pneumonia.
Alcohol.
Morphin.
Cocain.
Chloral, etc.

PSYCHOSES WITH NERVOUS DISEASES.
Polyneuritis.
Chorea.
Epilepsy.
Hysteria.

PSYCHOSES WITH ORGANIC BRAIN DISEASE.
Apoplexy.
Arteriosclerosis.
Tumor.
Syphilis.
Trauma.
Meningitis.
Insolation, etc.

MANIA—DEPRESSIVE INSANITY.
Melancholia.
Mania.

DEMENTIA PRAECOX. { Hebephrenic.
Katatonic.
Paranoid.

GENERAL PARESIS.
PARANOIA AND PARANOID CONDITIONS.
SENILE PSYCHOSES.
CONSTITUTIONAL PSYCHOPATHIC STATES.
IDIOCY, IMBECILITY AND FEEBLEMINDEDNESS.

He points out that this classification contains some new terms, particularly manic depressive insanity and dementia præcox, and describes how the mania and melancholia, formerly regarded as separate syndromes, have now been brought together under one term as different phases of one underlying pathologic process. The cardinal symptoms of the two disorders are as follows:

MANIA.
Exaltation.
Motor Excitement.
Accelerated Flow of Thought.
(Flight of Ideas.)

MELANCHOLIA.
Depression.
Retarded Flow of Thought.
Motor Inhibition.
(Stupor.)

He gives a diagrammatic representation of the various forms in which recurrent mania and recurrent melancholia may be blended into circular insanities.

64. This article was published in the *Medical Record*, Mar. 21, 1908, and was commented on editorially in The Journal, Mar. 28, 1908, page 1041.

Archives of Diagnosis, New York.

April.

65 The Bronchoscope as an Aid in General Diagnosis. C. Jackson, Pittsburg.
66 *Misleading Factors in Aortic Regurgitation. C. L. Greene, St. Paul.
67 Heart Lesions of Infancy and Childhood. I. A. Abt, Chicago.
68 *Measurement of Human Blood Pressure. L. F. Bishop, New York.
69 *Points on the Differential Diagnosis Between Gastric Insufficiency Due to Stenosis and that Caused by Fatigued Muscle. F. B. Turck, Chicago.
70 Diagnosis of Chronic Cholecystitis. H. W. Bettmann, Cincinnati.
71 Differential Diagnosis Between Chronic Interstitial and Chronic Parenchymatous Nephritis by Examination of the Urine. L. Heitzmann, New York.
72 Differential Diagnosis of Various Forms of Deafness. W. S. Bryant, New York.
73 *Diagnosis of Commoner Drug Eruptions. W. S. Gottheil, New York.
74 *Indicanuria: Its Diagnostic Value. W. H. Porter, New York.
75 Value of Spinal Puncture in Diagnosis. M. H. Fussell, Philadelphia.

66. **Aortic Regurgitation.**—Greene reports five cases which, he thinks, justify him in saying: (a) That temporary aortic leakage is not so uncommon as is usually held by our clinicians. (b) That more attention should be paid to the atypical forms which a murmur may assume. (c) That the capillary pulse is the most constant sign, and that its frequency in other lesions is probably greatly over-estimated by reason of the fact that an existing aortic regurgitation may be readily overlooked. (d) That a capillary pulse in neurasthenic patients is frequently attributed to the neurasthenia rather than to its true cause. (e) That a modification or absence of the second carotid tone is a most valuable and constant sign in cases unassociated with marked arteriosclerosis. (f) That no examination having reference to the integrity of the heart is complete unless the carotid tones and capillary pulse are carefully investigated.

68. **Blood Pressure.**—Bishop reports a simplified apparatus for the measurement of human blood pressure. It consists of

an armlet 15 centimeters wide and 49 centimeters long, of greater width than the Riva-Rocci armlet, and the rubber bag occupying only a part of the circumference of the armlet, so as to compress the artery against the bone instead of constricting the entire arm; connected with the cuff is a red rubber tube, 203 centimeters long. To this is connected a white tube, 60 centimeters long, and to this again a blue tube and a blue bag measuring to the center of the bag, 136 centimeters. Connected to the bag is a cord passing through a pulley so constructed that it can be hung at a height by a cane or a similar implement. A special scale attached to the bag at the level of its contents is used to measure the height of the bag above the patient's heart. The instrument is used by disconnecting the tube and exhausting the two bags, the end of the tubes being placed in a basin of water on the ground; about 12 ounces (360 c.c.), are allowed to siphon into the bag. The tubes are rejoined under water to avoid the entrance of air; the red cuff is lifted to allow all the water to flow into the blue bag, and the armlet is then attached to the arm, with the bag on the inside. The pulley with a cord is now attached high up to some convenient object and the bag is hoisted slowly till the water pressure flows back to the cuff sufficiently to obliterate the wrist pulse. If, at this point, the white tube is opposite the level of the patient's heart, the pressure is within normal limits. The blue tube opposite indicates subnormal pressure; the red tube, supernormal. A special scale indicates the reading in figures of millimeters of mercury. The author claims for this a much greater length of scale than the ordinary air mercury instruments; also that a closer reading is often possible. Comparison with standard instruments has shown that its readings are correct.

69. **Gastric Insufficiency.**—Turck describes the difficulty of differential diagnosis between motor insufficiency due to constriction, and that due to fatigue of the gastric muscles. In stenosis the muscle wall hypertrophies; in myasthenia it becomes less resistant. The difference can be tested by artificial inflation through a double tube. The gyromele can also be used, or diagnosis can be effected by exclusion, by the giving of a test meal. The examination of the feces for muscle fiber and connective tissue is a simple but important means of differentiating between motor insufficiency of motor and gastric origin.

73. **Drug Eruptions.**—Gottheil notes the general characteristics of eruptions that would lead to the suspicion of drug intoxication as the cause of a local or general efflorescence, namely, (1) polymorphism; (2) rapidity of development; (3) etiology, i. e., the fact of medication with a drug known to cause certain characteristic appearances; (4) idiosyncrasy; (5) location, extent, course and duration; (6) morphology. He describes the appearances caused by twenty different drugs.

74. **Indicanuria.**—Porter says that it is unscientific to speak of indican as a normal constituent of the urine, for it indicates positively that there is a putrefactive fermentation of the proteid constituent, either in the intrinsic structures of the body, or in their passage through the alimentary canal. The indican test enables us to diagnose a number of important conditions connected with digestion, the action of the liver, and metabolism, especially if used with the author's indican color scale. A white or not colored reaction shows the alimentary tract and system at large free from putrefactive fermentation; a deep clear blue indicates a moderately simple form of putrefactive fermentation; a dirty, muddy blue shows a putrefactive change with innumerable by-products or toxic products. A decidedly bluish-black color shows an intense type of putrefactive fermentation with the production of a large number of highly toxic substances capable of giving rise to very severe toxemia. A reddish shading of the blue or a reddish-green color shows obstruction to free flow of bile through the common duct. A greenish tinge indicates an obstruction to the internal or intrahepatic end of the bile ducts. These patients bear surgical interference badly. A peculiar red residue occurs when the patient is taking potassium iodid. An intelligent interpretation of the various indican reactions indicates the progress of the case and forms an accurate guide as regards diagnosis and prognosis

Annals of Ophthalmology, St. Louis.

January.

76 The Zonula Ciliaris and Its Relation to Neighboring Structures. M. Salzmann, Vienna.
77 *The Color Sense. W. S. Wadsworth, Philadelphia.
78 Recurrent Hemorrhages Into the Vitreous Humor Occurring in Adolescence. F. Krauss, Philadelphia.
79 Case of Quinin Amaurosis. C. Williams, Philadelphia.

77. **The Color Sense.**—Wadsworth criticizes the neglect of the biology and physiology of the color sense, and makes a strong argument for its practical importance to the physician. He discusses the reciprocal relations between the color sense and the emotions, and the consequent effect of the latter on the organism. In neurotic children and neuropathic adults the effects are often as marked as in fevers, and he has known persons so affected by color that the resulting irritation of the nervous system was vastly more than is often taken as sufficient ground for surgical intervention, such as circumcision. For a normal man in average health, under definite conditions, time of day, digestion, fatigue, a color will have a fairly fixed value to him; if not, he is not normal in his color sense. Wadsworth suggests the relation of the color sense to drug habits. A large percentage of color defectives is found among the descendants of austere ancestors who were greatly irritated by colors; or of those emotional—usually religious—to excess.

Washington Medical Annals.

March.

80 *Latent and Atypical Malaria, especially in Children. B. M. Randolph, Washington.
81 Case of Phlegmonous Gastritis. W. H. Hough, Washington.
82 Case of Solitary Kidney; Uretero-pyelonephritis; Syphilitic Contraction and Atrophy of Liver. D. S. Lamb, Washington.
83 Causes of Typhoid in the District of Columbia. G. L. Magruder, Washington.
84 Water Supply of Washington in Causation of Typhoid. S. Cosby, U. S. Army.
85 Washington Filters and Quality of Effluent Therefrom in Causation of Typhoid. F. F. Longley, Washington.
86 Causes of Typhoid. M. J. Rosenau, Washington.
87 Dangers of Domestic Filters, Water Coolers and Ice Cream in Causation of Typhoid. H. W. Wiley, Washington.
88 Water Supply of Dairy Farms in the Causation of Typhoid. B. M. Bolton, Washington.
89 Early Diagnosis of Typhoid. L. L. Lumsden, U. S. Public Health and Marine-Hospital Service.
90 Urotropin as a Prophylactic Wherewith to Combat Spread of Typhoid by Chronic Bacillus Carriers. J. H. Kastle, U. S. Public Health and Marine-Hospital Service.

80. **Atypical Malaria.**—Randolph makes the following points: The malarial plasmodium may exist for a long time latent in the human body without giving evidence of its presence. Children are peculiarly susceptible to malarial infection, and serve as hosts for the organism far more frequently than is realized. Children are often harborers of the malarial plasmodium without giving any clinical evidence of illness, and even more prone than adults to atypical forms of this disease. He presents six cases in support of his propositions. He further points out that the increasing intercourse between the United States and foreign malaria-infected regions, especially by government officials, may lead to an increase of cases offering the characteristics of tropical malaria. Further, he states that apparently healthy infants and children may be sources of infection, preserving many strains of malarial plasmodia that would otherwise become extinct; and, finally, he insists on the importance of taking into consideration the possible presence of the plasmodium of malaria in obstinate affections of children in which the diagnosis is not obvious, and giving them the benefit of a careful blood examination.

Military Surgeon, Carlisle, Pa.

April.

91 *Purification of Drinking Water for Troops in the Field. C. R. Darnall, U. S. Army.
92 Efficient Method of Disposing of Garbage and Kitchen Refuse by Incineration Under the Camp Spider. H. A. Arnold, National Guard, Pennsylvania.
93 *Tea as a Beverage for the Military Service. G. F. Mitchell, U. S. Army.
94 Case of Lumbar Hernia. J. R. Hurley, U. S. Public Health and Marine-Hospital Service.
95 U. S. Naval Station, Olongapo, Philippine Islands; Its Location, Climate and Diseases. C. P. Kindleberger, U. S. Navy.

91. **Purification of Drinking Water.**—Darnall discusses the important question of the purification of drinking water for

troops in the field. He describes the requirements as follows: The apparatus and materials employed must be light, of small bulk, and easily transportable. The apparatus must be simple of construction and not liable to get out of order. It must be capable of providing a large quantity of water in a short time. It must supply a potable water, not necessarily a sterile water. The water must not be unpleasant to the senses of sight, taste or smell. He considers the various methods of purification by chemicals, by heat, with and without special apparatus, by filtration, by coagulants with subsequent filtration, and describes at considerable length the Darnal filter with its *modus operandi*.

93. **Tea.**—Mitchell describes the botany, history, and chemistry of tea, the effects of tea drinking, and discusses tea versus coffee for the military, suggesting that the use of tea be subjected to a thorough and exhaustive trial as an incomparable stimulant and drink for the Army and Navy of the United States.

Long Island Medical Journal.

April.

96 *Difficulties in Diagnosis and Surgical Treatment of Goiter. M. B. Tinker, Ithaca.
97 *Masked Appendicitis. A. T. Bristow, Brooklyn, N. Y.
98 Intestinal Fistula Following Appendicitis. J. C. Kennedy, Brooklyn, N. Y.
99 Clinical Importance of Accessory Sinuses of the Nose. H. Arrowsmith, Brooklyn, N. Y.

96. **Surgical Treatment of Goiter.**—Tinker discusses the difficulties arising from lack of increase in the size of the neck, the interference of the growth with circulation and the sympathetic nervous system, toxemia from over secretion of the thyroid, especially when mental symptoms are a prominent feature, and in exophthalmic goiter from the absence of one or more characteristic symptoms. In regard to surgical treatment, he thinks that the essential dangers and difficulties of partial thyroidectomy have been much overestimated. Friability of the gland, the delicacy of the veins, hemorrhage, the special dangers and difficulties of general anesthesia, etc., are considered, as also are the difficulties arising from improper application of medical treatment. He has never had such great satisfaction from operation with any other condition as with goiter. He concludes as follows: A correct diagnosis should be made first, if possible. Any harmless medical measures should always be tried first. Try as many specifics as you please, and for any reasonable time, but when the patient fails to get permanent relief, as is usually the case, you have not done your full duty unless you have at least suggested the possibilities of surgery, before its difficulties become too great.

97. **Masked Appendicitis.**—Bristow describes six types of masked appendicitis: (1) Cases in which all subjective symptoms are mild, temperature and pulse low. In these cases the blood count will help. (2) Cases with general symptoms no more marked than in (1) with the blood count deceptive. (3) Cases of evident abdominal inflammation, in which the pain is referred to a region distant from the real source of trouble. (4) Cases of apparent recovery, yet in which there is a latent abscess which on resumption of the usual occupation may rupture with fatal results. (5) Such an abscess may become encysted and remain quiescent for a relatively long time. (6) Chronic subacute appendicitis, in which tenderness may always be found on palpation, but in which fever is rarely present. He concludes as follows: One attack of the disease confers no immunity against future attacks. On the contrary a primary attack predisposes to secondary attacks. Secondary attacks are apt to be progressively serious. Therefore, as no single attack constitutes a terminal fact in medicine, opinions as to the frequency of recovery, if used as a basis for reasoning concerning either prognosis or treatment, are illogical and dangerous. Cases of masked appendicitis are very frequent, the most common being the first type mentioned. These are the cases which furnish most of our mortality and cases of abscess. If these patients are treated on the theory that a much greater proportion than 70 per cent. of all cases of disease recover without operation, the accidents and mortality of the disease will be greatly increased. No one can tell anything about the real condition of the appendix in any given case of the disease without inspection, and inspection means removal. This is the only safe procedure unless from other circumstances any operation is contraindicated.

Archives of Otology, New York.

April.

100 Two Cases of Sinus Thrombosis Complicated by Cerebral Abscess in the Temporosphenoidal Lobes. W. R. Dabney, Marietta, Ohio.
101 *The Piano-String Theory of the Basilar Membrane. W. S. Bryant, New York.
102 Sarcoma of the Middle Ear. A. Zebrowski.
103 Large Cholesteatoma of the Middle Ear and the Posterior Cranial Fossa, Cured by Radical Operation. C. Zimmerman, Milwaukee.

101. **Piano String Theory of the Basilar Membrane.**—Bryant concludes that the basilar membrane is not essential to the organ of Corti, and, when present, is not furnished with the requisite length and mass of fibers to vibrate in sympathy with every note, even if the rest of the structures would allow it. Further, the basilar membrane is devoid of the requirements of a resonating body. Helmholtz's piano-string theory of musical perception, he states, is without foundation in every particular.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London.

May 23.

1 *X-Rays in the Diagnosis of Appendicitis and Other Abdominal Conditions. Sir W. H. Bennett.
2 Connective Tissue in Carcinoma and in Certain Inflammatory States that Precede its Onset. V. Bonney.
3 *Prophylaxis in the Care of Children in Hospitals. H. Koplik.
4 Malarial Cirrhosis of the Liver. E. F. G. Tucker.
5 *Acute Suffocative Catarrh of Lænnec and Other Conditions From Which It Should Be Distinguished. S. West.
6 Cases of Cranial Surgery. H. Curtis.
7 Method of Suturing the Lateral Recti to Insure Greater Mobility of the Stump After Enucleation of the Eyeball. E. Clarke.

1. **X-Rays in Appendicitis.**—Bennett has no hesitation in saying that in cases of abdominal pain or discomfort, unless the diagnosis is obvious, no examination is complete which does not include the use of the *x*-rays. The practitioner is, he says, failing in his duty to his patient, especially if an exploratory operation is contemplated, who does not in such cases employ the *x*-rays when they are available, unless the delay involved in obtaining the necessary investigator be detrimental to the patient's safety.

3. **Hospital Prophylaxis in Children.**—Koplik describes the hospital ward for the care of children as it existed twenty-five years ago. He states that a hospital for the care of diseases of children should be one which can take care of children from birth up to the fourteenth year of life, or at least the tenth year. It should be so constructed that the wards can be cut off and separated from each other, so that, in case of an epidemic in one ward, this ward, from the nature of the construction of the building, can remain isolated, allowing the other wards to continue their service. There should be a well-conducted reception ward, where children are detained for twenty-four hours after admission, for careful examination of the throat, eyes, skin eruptions, and in female children conditions of the genitals. In this way no child is admitted to the ward proper without at least twenty-four hours' observation. The service should be conducted by a man who has had an excellent all-round general medical training, who has been in general practice for some years, who has made, in addition, a special study of diseases of children, and who has determined to drop gradually the service of adults and devote his whole time and study to the management of children. He describes the reception ward, the ward proper, the prophylaxis of the mouth, the use of thermometers, with notes as to procedure on the outbreak of contagious disease in the ward.

5. **Acute Suffocative Catarrh.**—West arrives at the following conclusion: Lænnec's suffocative catarrh is a peculiar and

characteristic affection, rare, especially in the adult, and not generally recognized as a clinical entity. It has to be distinguished from capillary bronchitis and disseminated, postbronchitic (secondary) bronchopneumonia; more closely resembling it are primary bronchopneumonia—i. e., disseminated pneumonococcal pneumonia, and possibly an acute pneumococcal or other bacterial bronchitis. In association with it may be placed: 1, cases of acute pulmonary edema which develop in the course of chronic heart obstruction or of acute heart failure; 2, cases of collateral fluxion or of pulmonary failure, and, 3, cases of pneumonia which begin with widespread pulmonary congection. A careful bacteriologic examination of the sputum should be made in all cases of suffocative catarrh, as being likely to throw light on the true nature of the affection.

British Medical Journal, London.

May 23.

8 Relationship of Action to Dose, Especially with Reference to Repeated Adminstration of Indaconitin. J. T. Cash.
9 *Internal Use of Oil of Turpentine. E. Smith.
10 *Puerperal Eclampsia, with Special Reference to Treatment with Nitroglycerin. J. M. McCarthy.
11 *Causes of Inversion of the Uterus. L. Atthill.
12 Absorption of Ointments. R. L. Sutton.
13 *Surgical Treatment of Syphilis. D'A. Power.
14 Case of Ochronosis. L. C. E. Harston and A. B. Soltau.
15 Satinwood Dermatitis. F. Gardiner.

9. **Oil of Turpentine.**—Smith considers that oil of turpentine as a remedy is falling into undeserved neglect. This is doubtless due to fear of irritation of the kidneys: but in small doses, such as 5 or 10 minims, it has little tendency to produce this result, and in large aperient doses, 2 drams to half an ounce and upward, the action of the drug is on the bowels and too little gets absorbed to pass through the kidneys. Its value may be tested in hemorrhagic purpura, in which it may be given to a child of 5 or 6 years as an aperient, in a dose of 2 drams, with an equal quantity of castor oil. If the first dose is insufficient it may be increased without fear of doing harm. For children of 10 or 12 years Smith has given as much as half an ounce of each of the oils. In hemophilia a brisk terebinthine aperient will sometimes bring about a cessation of the bleeding after local styptics have been used in vain. If necessary, the dose may be repeated in six or eight hours. Local bleedings, such as hemoptysis and the melena of typhoid, may be judiciously treated by the same remedy in smaller doses, say 10 to 15 minims three times a day. Other conditions in which it is useful are iritis, syphilitic or rheumatic, in the adult, in dram doses three times a day, amaurosis, and night blindness. If strangury is produced, the drug must be suspended and linseed tea be freely given. In small doses it is an antiseptic and sedative in cases of flatulent colic. In the abdominal cramps of children, 3 or 4 minims of rectified turpentine, with or without double the quantity of castor oil, mixed with a spoonful of almond mixture, may be given three times a day. This combination is useful in tuberculous peritonitis. In hiccough, 10 drops with 30 drops of spirit of nitrous ether in aromatic water are very serviceable. A dose of 10 or 15 drops two or three times a day after food Smith has found to relieve the catarrh of the bile ducts. He also believes it helps in producing a solvent action on the gallstones. The curative value of turpentine by the mouth may often be supplemented and enforced by its use as an enema.

10. **Puerperal Eclampsia.**—McCarthy was led to try nitroglycerin in puerperal eclampsia by the similarity of conditions existing in patients suffering from puerperal eclampsia and in those suffering from uremic convulsions. His cases lead him to conclude that when given hypodermically it is likely to reduce maternal mortality. He does not suggest this dogmatically, but merely holds that the remedy is worthy of further trial.

11. **Inversion of the Uterus.**—Atthill concludes from his observations that not alone is the center of the fundus the portion of the uterine wall most susceptible of irritation, but that very probably it is the center from which the expulsive action of the uterus takes its origin. The inference is that if a placenta be unduly adherent when it happens to be located at the fundus, or if a sessile tumor grow from the fundus, the uterus is stimulated to get rid of what has become a foreign body, and, failing to detach this, becomes inverted in consequence of its own efforts

13. **Surgical Syphilis.**—Power arrives at the following conclusions: Experimental evidence has shown that syphilis is due to infection with *Spirochæta pallida*, an organism which lingers for a short time at the seat of inoculation and then rapidly spreads through the body. This organism transmitted from parent to child is the cause of inherited syphilis. Many forms of arthritis formerly classed as syphilitic are due to other infective agents acting on tissues modified by the action of syphilitic virus. Syphilitic changes in the bones, joints, tongue and other parts may occur as a result of inherited syphilis much later in life than is usually recognized. They are then the result of accidental causes, and they are often the only evidence of the inherited taint. The modern treatment of syphilis consists (a) in the more careful administration of mercury, which is now given to cure the disease itself, and not merely to relieve the symptoms, as has hitherto been the case; (b) in a recognition of the limitations of the absorptive power of the iodids; (c) in a freer use of surgical methods to remove the products of syphilitic inflammation before the iodids are administered.

Medical Press and Circular, London.

May 20.

16 After Results of the Surgical Treatment of Uterine Displacements. A. E. Giles.
17 Symptomatic Alopecia. D. Walsh.
18 *"Empty Bronchus" Treatment by Posture in Bronchiectasis of Children. W. Ewart.
19 Diagnosis of Hematuria. A. Fullerton.
20 Pneumonia in Children. G. H. M. Dunlop.

18. **"Empty Bronchus" Treatment.**—Ewart points out that the two fundamental principles of the treatment of bronchiectasis are: 1, To empty the bronchus and to keep it empty; 2, to fill the lung with air, and keep it actively expanding. He refers to the methods of intratracheal injection, creosote and other inhalations, and internal medication, and proceeds to advocate mechanical methods. The method is divided into (a) intermittent, and (b) continuous, postural treatment. The bronchial treatment is mainly postural, the intermittent "ultra-prone" posture, or "inversion," being the most rapid and effectual for the evacuation of accumulations in the cavities of phthisis or of bronchiectasis. The patient leans over the side of the bed or of a table, placing the hands on the ground, so that the long axis of the thorax approaches the vertical. A few coughs will rapidly clear away the greater part of the collection. Children bear inversion remarkably well, and in small children and infants something near actual inversion may safely be resorted to. The continuous treatment has three practical instalments. The nocturnal postural treatment; the diurnal postural treatment; the respiratory treatment by means of the elastic belt and of the "exerciser." He describes a costo-abdominal elastic belt which should be worn day and night. For carrying out the nocturnal treatment he describes the extemporizing of a "bronchiectasis cot" from an ordinary one. For the diurnal treatment an "all fours exerciser" is described and its use illustrated. Various other devices, all tending toward stopping the bronchial irritation and hypersecretion by bronchial drainage and pulmonary ventilation, and to reclaiming for active pulmonary expansion the thoracic space usurped by the dilatations and the fibrous tissue are described. These ends are eminently attainable in childhood.

Journal of Tropical Medicine and Hygiene, London.

May 1.

21 *Testing Disinfectants. S. Rideal.

May 15.

22 Case of Supposed Veld Sore in the Federated Malay States. W. B. Orme and J. M. H. Macleod.
23 Administration of Atoxyl Endovenously In Filariasis. R. A. O'Brien.

21. This article was commented on editorially in The Journal, May 30, 1908, page 1801.

Clinical Journal, London.

May 20.

24 Cases of Cranial Surgery. H. Curtis.

Annales de l'Institut Pasteur, Paris.

April, XXII, No. 4, pp. 289-368.

25 *Modes of Neutralization of Bacterial Toxins. A. Marie and M. Tiffeneau.
26 Normal Flora of Infants' Stools. G. Jacobson.
27 Action of Hemolytic Substances on Protozoa, Spirochetes and Vibriones. C. Levaditi and A. Rosenbaum.
28 Experimental Study on Fate of Tetanus Toxin in the Digestive Tract. H. Vincent.
29 *Vaccination Against Plague by the Digestive Tract: Gastric and Rectal Routes. G. Fornario.

25. **Neutralization of Bacterial Toxins.**—Marie's research seems to show that brain tissue has a neutralizing power in regard to tetanus toxin and also that this is exclusively the work of albuminoid elements.

29. **Vaccination Against the Plague by Way of the Stomach or Rectum.**—Fornario has succeeded in immunizing guinea-pigs and rabbits against plague by feeding them with small doses of virulent bacilli or heated cultures. Two-thirds of the animals survived otherwise fatal infection. The immunity can be conferred even more easily by rectal injections. The intervals between the injections or feedings should be from ten to fourteen days. The antibodies rapidly appear in the blood. The plague bacilli ingested are almost completely destroyed in the digestive tract.

Bulletin de l'Académie de Médecine, Paris.

May 12, LXXII, pp. 517-536.

30 *Chronic Appendicitis. L. G. Richelot.
31 *Inflammatory Tuberculosis of the Fibrous Type. (Scléro-tuberculose et diathèse fibreuse.) A. Poncet and R. Leriche.

30. **Chronic Appendicitis.**—Richelot regards the appendix as responsible for a number of cases of gastrointestinal derangement generally ascribed to other causes. He relates some instances of mucomembranous colitis persisting for years, but vanishing completely after appendicectomy. One patient found that chronic obstipation, anemia, nervous depression and vaginismus all disappeared after the removal of the appendix, which evidently had been responsible for the spasm of both vagina and intestine. Another patient was a young man with mucomembranous enteritis for six years which had reduced him to great debility. A febrile attack of indigestion led to the discovery of pain at McBurney's point, and after appendicectomy all disturbances disappeared. The appendix had evidently been for years the starting point for the intestinal reflex. In another case mucomembranous enteritis and painful dyspepsia had persisted for years without relief, with great nervous depression and pain in the gall-bladder region. Complete restoration to health followed appendicectomy.

31. **Inflammatory Tuberculosis of the Fibrous Type.**—Poncet and Leriche ascribe arthritic sclerosis to the results of mild inflammatory tuberculous processes, and report a number of examples to sustain their view that tuberculosis may induce an actual fibrous diathesis. In the skeleton the sclerotic process assumes the type of infectious exostosis. In the muscles it may be the cause of ossifying myositis. In the breast it may induce nodular mastitis. In one case recently, the third attack of tuberculous rheumatism was accompanied by osteitis of the sternum and mammitis with multiple sclerous nodules. The digestive tract does not escape the tendency to sclerosis. The fibrous stenosis, the sclerosis, is a primary, a progressing lesion in these cases, not cicatricial induration.

Presse Médicale, Paris.

May 13, XVI, No. 39, pp. 305-312.

32 Functions of Liver and Spleen in Relation to Hemolytic Jaundice. (Fonctions du foie et de la rate dans leurs rapports avec les ictères hémolytiques.) L. Hallion.
33 Local Accidents Consecutive to Injections of Quinin. R. de Gaulejac.

May 16, No. 40, pp. 313-320.

34 Cancer of the Uterine Cervix. J. L. Faure.
35 *Treatment of Paroxysmal Local Heart Weakness. (Asthénie cardiaque.) A. Deschamps.

35. **Local "Cardiac Asthenia."**—Deschamps explains this local, innate form of cardiac insufficiency as the result of weakness in the cardiac innervation, that is, of the vago-sympathetic system and its centers. Structural incompetency is aggravated by overexertion and toxi-infections of the cardiobulbar system. The patients complain incessantly of the heart, but no organic trouble can be detected except that the heart is rather small. Palpitation and dyspnea come on at the least effort, and the insufficiency tends to become permanent, with occasional attacks of nervous asystole. Besides the ordinary measures, great benefit can be derived, he says, from subcutaneous injections of some serum in the right side of the back. The nerve terminals of the motor branch of the vagus are distributed through the skin of the back and the injected fluid has a direct stimulating action on the nerve terminals and through them on the centers of the vagus. The deficient nerve is the motor nerve of the heart, and this is most accessible in the right side of the back. He uses a 50 per cent. solution of sodium glycerophosphate—one drop to the cubic centimeter—or salt solution, never injecting more than 2 c.c. of fluid.

Revue de Chirurgie, Paris.

May 10, No. 5, pp. 589-732.

36 *Treatment of Chronic Pancreatitis Complicated by Obliteration of the Common Bile Duct. Vautrin.
37 *Gonorrheal Obliteration of the Epididymis and Its Surgical Treatment. P. Delbet and M. Chevassu.
38 Internal Architecture of the Bones. Its Share in Fractures and Deformities. E. Gallois and J. Bosquette. Commenced in No. 4.

36. **Treatment of Chronic Pancreatitis.**—Vautrin reports four cases of chronic pancreatitis, accompanied by gallstones, and one of what he calls "exuberant" pancreatitis, describing the various methods of operative treatment. The patients were women between 40 and 72 and all were restored to health. He comments on the insidious development of pancreatitis in some cases. In others it may be accompanied by much hypertrophy, suggesting cancer, but this soon subsides when the pancreas is well drained.

37. **Gonorrheal Obliteration of the Epididymis.**—Delbet and Chevassu have collected 131 cases, with azoospermia in 114, but they call attention to the fact that these statistics include both acute and chronic cases. It is certain that permeability became re-established later in a large number of patients. Probably more than half the individuals affected with epididymitis of gonorrheal origin are left permanently sterile unless permeability of the passages is artificially restored. The authors' research confirms the assumption that the testicle continues its normal secretion behind the obliteration, and that comparatively normal conditions can be restored by implanting the vas deferens in the testicle. They have done this operation in six cases, and in another united the vas with the epididymis after resection of part of the latter. They give the history of such operations and advocate them as harmless and justified by the good results obtained. Manifest atrophy is the only contraindication, they state, even with very old, chronic lesions.

Semaine Médicale, Paris.

May 13, XXVIII, No. 20, pp. 228-240.

39 Modern Military Surgery. (Ce que l'on peut penser de la guerre moderne et de la chirurgie de guerre d'après la campagne russo-japonaise.) F. Lejars.

Beiträge zur Klinik der Tuberkulose, Würzburg.

IX, No. 3, pp. 261-434. Last indexed April 11, p. 1230.

40 *Experiences with Artificially Induced Pneumothorax and Hydrothorax in Lung Affections, etc. (Therapeutischer Pneumothorax und Hydrothorax bei einseitiger Lungentuberkulose, Bronchiektasen und Aspirations-Erkrankungen.) A. Schmidt.
41 *Diagnosis of Enlargement of Glands in the Chest. (Diagnose von Schwellungen der endothorakalen Lymphdrüsen.) A. Brecke.
42 Case of Tuberculosis of Site of Placenta. (Tuberkulose der Plazentarstelle.) R. Beneke and W. Kürbitz.
43 *Air Embolism in General Circulation After Operation on Lung. (Fall von Luftembolie im grossen Kreislauf nach Lungenoperation.) R. Beneke.
44 *Results of Various Simultaneous Tuberculin Tests. (Ergebnisse gleichzeitig angestellter kutaner, konjunktivaler und subkutaner Tuberkulinreaktionen bei vorgeschrittenen, initialen und suspekten Formen der Lungentuberkulose.) O. Roepke.

40. **Experiences with Artificially Induced Pneumothorax in Respiratory Affections.**—Since 1905 Schmidt has been giving compression of the lung a trial in treatment of unilateral pulmonary tuberculosis, bronchiectasia and aspiration affections; he has applied it in 24 cases. His experience confirms the efficacy of the measure in certain selected cases; also that the

artificial pneumothorax must be created very slowly and gradually, and that the procedure must be repeated again and again until the lung is completely immobilized, and the compression must be kept up for at least a year. It is still a question whether this technic can be applied unless the lesion is strictly unilateral—the extent of the process and of the pleuritic adhesions may turn the scale. Even advanced anemia and debility would not deter him from the infusion of air, as it does not make much demands on the vitality. There are no grounds for assuming an unfavorable influence on hemoptysis, rather the contrary. The results of the compression are promising, even though there are only five cases on record of pronounced success in the twenty-two patients with tuberculous lung processes treated by this means. Forlanini has obtained better results than the German clinicians during the fourteen years in which he has been applying this compression treatment, but he has encountered only twenty-five cases in all during this period in which he believed that the conditions indicated this technic, and this, Schmidt thinks, is the secret of success. He obtained fully as good results with infusion of sterile air as with pure nitrogen; *x*-ray control is indispensable. In aspiration pneumonia and fetid bronchitis the compression technic gave good results in his experience—the outcome depending, however, on the possibility of recuperation of the tissues. Old chronic cases, with much shriveling and displacement, should, of course, be excluded. Infusion of oil may be preferable for bronchiectasia.

41. **Diagnosis of Enlargement of Glands in the Thorax.**—Brecke noted in sixteen cases a series of symptoms which suggested possible enlargement of the endothoracic lymph glands. They included dulness over the manubrium, changes in the pulse rate, disturbances in the field of the inferior laryngeal nerve, tenderness of the spinous processes of the upper thoracic vertebræ, occasional oppression over the sternum, palpitations, and, after tuberculin, pain in the stomach. These symptoms are especially significant if tuberculosis is suspected. Most of his patients were women, and the *x*-rays confirmed the diagnosis of enlarged bronchial or mediastinal glands. Cough and asthmatic attacks later completed the clinical picture. He gives an illustrated description of the cases.

43. **Air Embolism After Operation on the Lung.**—Beneke was operating on a man of 47 for abscess of the lung, under Billroth mixture. There was little hemorrhage until suddenly venous blood began to pour out as the superior lobe was being mobilized. The hemorrhage was readily arrested and camphor injected, but the patient died in collapse in three minutes. Autopsy explained the trouble as embolism of air sucked into the veins as they were opened by the operation. The air must have passed through the veins of the lung into the left side of the heart, and thence into the general circulation. The disturbance in the cerebral arteries was evidently the direct cause of the sudden death. No other explanation could be found except the general filling of the arteries with air. The adhesions kept the opened vein or veins gaping, and this complication must be borne in mind as a possible contingency in operating on the lungs. He was able to reproduce the condition in dogs.

44. **Results of Simultaneous Application of Various Tuberculin Diagnostic Reactions.**—Roepke gives the tabulated findings of associated cutaneous, conjunctival and subcutaneous tuberculin tests in suspicious, initial and advanced pulmonary tuberculosis and in health. This material is tabulated under various headings—a total of 336 individuals were thus tested, his final conclusions being that the Koch subcutaneous tuberculin test is still the most reliable of all measures for the detection of pulmonary tuberculosis in its earliest stages. If other technics are preferred, the cutaneous and conjunctival tests must be used together for the results to be conclusive. He regards it as now established that the absence of tuberculosis is proved by a negative response to a single cutaneous tuberculin test with undiluted tuberculin plus the conjunctival test repeated four times in the same eye, increasing the strength of the tuberculin from 1 to 4 per cent. A positive response to all this speaks for tuberculosis, but without defining its location or character. In case the cutaneous and conjunctival tests give contradictory findings, the subcutaneous test finally decides the matter. The other technics have the advantage that they do not induce a general reaction and consequently can be applied in febrile conditions, meningitis, etc. The cutaneous reaction shoots beyond the mark; it reveals tuberculous infection past or present. None of the three technics, he says, has much value for the prognosis.

Beiträge zur klinischen Chirurgie, Tübingen.

May, LVIII, No. 1, pp. 1-288.

45 *Experimental Study of Healing in of Foreign Bodies. (Fremdkörper im Organismus. Einheilung.) H. v. Baeyer.
46 Snapping Hip Joint. (Schnellende Hüfte. Hanche à ressort.) M. v. Brunn.
47 Further Experiences with Suture of Appendicitic Abscesses. Id.
48 Removal of False Teeth from the Esophagus with the Aid of the Esophagoscope. (Entfernung von Gebissen aus der Speiseröhre.) Blauel.
49 *Primary Tumors of Trachea. E. Krleg.
50 Disinfection of Skin with Alcohol Alone. (Hautdesinfektion nur mit Alkohol.) Meissner.
51 Fractures of Both Condyles of Femur. Id.

45. **Healing of Foreign Bodies in the Organism.**—About 120 pages are devoted to description of research in this line, foreign bodies of various kinds being implanted in various tissues in animals and the results studied. They demonstrate that every foreign substance, no matter what material, always exerts a chemical as well as a physical action where it is implanted. The results varied also with different species and different individuals of the same species.

49. **Primary Tumors in the Trachea.**—Krieg has collected 201 cases of primary tumors in the trachea, including 21 sarcomata and 40 carcinomata, and 6 of unknown nature, all of the others being benign growths. In the larynx only about one-eighth of the growths on record were malignant. The list of tracheal tumors includes also 2 observed at von Bruns' clinic at Tübingen. Both patients were cured by operative removal of the fibroma or papilloma in question.

Berliner klinische Wochenschrift.

May 18, XLV, No. 20, pp. 949-992.

52 *Fibrosarcoma of Ilium with Metastases in Skeleton. K. Nunokawa.
53 Substances in Blood Serum that Promote Phagocytosis. K. Meyer.
54 New Methods of Research on Immunity. (Immunitätsforschung.) W. Weichardt.
55 Diabetes. Unschuid.
56 "Lightning" Treatment of Cancer. (Fulgurationsbehandlung der Krebse nach Keating-Hart.) E. Rosenkranz.
57 *Sterilization of Stomach Tubes. (Desinfektion von Magenschläuchen in der täglichen Praxis.) E. Fuld.
58 Correlation Between Affections of Nose and Throat and Those of the Eyes. (Zusammenhang der Erkrankungen der Nase und des Nasenrachenraumes mit denen des Auges.) A. Onodi. Commenced in No. 19.
59 Criminal Abortion. H. Marx.

52. **Fibrosarcoma of Ilium.**—Nunokawa reports a case in which the entire skeleton was disseminated with circumscribed neoplasms, the primary tumor, apparently, being a more diffuse involvement of the left ilium, originating in the periosteum.

57. **Sterilization of Stomach Tubes.**—Fuld writes from Orth's Pathologic Institute at Berlin to describe a simple technic for disinfection of the stomach tube which has proved satisfactory. The tube is kept for twenty minutes in 50 per cent. glycerin at a temperature of 70 C. (158 F.). This kills all pathogenic germs without injuring the tubes.

Deutsche Zeitschrift für Chirurgie, Leipsic.

May, XCIII, No. 2, pp. 101-236.

60 *Experimental Research on Collateral Circulation in Kidneys. (Kollateralkreislauf der Niere.) E. Liek.
61 *Diagnosis of Hydatid Cysts in the Bones. (Knochenechinokokken.) C. Ritter.
62 *Action of Pure Oxygen on Wounds and Infections. (Einwirkung reinen Sauerstoffes auf Wunden und Infektionen.) L. Burkhardt.
63 Common Ileocolic Mesentery. E. Schmidt.
64 Pathologic Anatomy and Operative Reduction of Luxation of the Semilunar Bone. A. Ohly.
65 Apparatus for Fracture of the Leg. (Apparat für die Frakturen des Schenkels.) E. Martini.

60. **Experimental Study of the Collateral Circulation of the Kidneys.**—Liek's extensive work on cats and rabbits has shown that the assumption of the development of adequate collateral circulation after decapsulation of the kidney and application

of omentum is not always justified by the facts. His research demonstrated that the parenchyma of the kidney does not owe retention of its integrity to newly formed vessels in the capsule, but to the collaterals persisting in the hilus. If the hilus circulation is completely shut off, the decapsulated kidney can not be sufficiently nourished by the collaterals in the capsule. These experiments were made on the healthy kidneys of animals, and it is dubious whether the conclusions can be applied to man. In many clinical cases, he says, the decapsulation amounts to an energetic massage of the organ with active hyperemia—which explains the prompt benefit observed; it occurs too quickly for it to be the result of newly established collateral circulation. Those who report favorable results from decapsulation in anuria seem to forget that any other operation on the kidney would probably have the same effect in starting the secretion of urine. Decapsulation in man is by no means a harmless procedure. Whether wrapping the kidney in the omentum afterward will render the outcome better, seems to him doubtful, judging from his experimental findings.

61. **Hydatid Cysts of Bones.**—In Ritter's first case the patient, a man of 33, had pains in the thigh and knee for fourteen years, ascribed to neuralgia; then the bone became swollen and tender, with slight local edema. There was no fracture, but Roentgen-ray examination suggested the presence of cysts, and almost the entire shaft was found involved in the echinococcus process. After evacuation of the focus, the thin shell of bone fractured; the leg was considerably shorter when the patient was dismissed. Healing required seven months. The second case was one of hydatid cysts in the clavicle, sternum and first rib. Fracture had occurred eight years before the process was diagnosed. The cysts reached to the skin on each side and were full of dead and decaying vesicles and crystals of cholesterin, but no pus. The tumor in the bones had been completely concealed by these sacs on both sides. The condition caused no special disturbances, and the patient entered the hospital merely on account of an eye affection, bilateral color scotoma and hemeralopia. Pain and weakness in the right arm had been the only local symptoms. Roentgen-ray examination confirmed the assumption of a hydatid process, showing the numerous echinococcus cysts, the thin corticalis, the absence of bone marrow and of reaction on the part of the periosteum. The cavity was evacuated, tamponed, and a suction glass was applied daily. The suction treatment not only cleared out the secretions, but stimulated the periosteum and bone to prompt reparative reaction, the extensive wound being soon covered with granulations. There was also immediate improvement of the eye affection.

62. **Action of Pure Oxygen on Wounds.**—Burkhardt has been studying the effect of oxygen for surgical uses. Ozone seems to be more effectual than ordinary oxygen, especially for cavities which can be easily filled with the gas. Both ozone and oxygen induce arterial hyperemia and inhibit the growth of aërobic bacteria but do not kill them. In the animal body the oxygen only slightly checks the growth of bacteria, although the virulence of the toxins seems to be somewhat reduced. The peritoneum responds to contact with pure oxygen with mild inflammatory irritation and hyperleucocytosis; absorption in the abdominal cavity is retarded.

Deutsche medizinische Wochenschrift, Berlin.

May 14, XXXIV, No. 20, pp. 857-904.

66 *Inefficient Labor and Its Treatment. (Wehenschwäche.) W. A. Freund.
67 Comparison of Preventive Action of Atoxyl and Mercury in Experimental Syphilis. (Präventive Wirkung des Atoxyl im Vergleich mit Quecksilber bei der experimentellen Kaninchensyphilis.) P. Uhlenhuth and O. Weidanz.
68 *Radiography of Apical Tuberculosis. (Lungenspitzentuberkulose im Röntgenbild.) Albers-Schönberg.
69 *Radiography in Early Diagnosis of Pulmonary Tuberculosis. Schlayer.
70 Unreliability of Complement-Binding Test for Tuberculous Effusions. K. Meyer.
71 Millon's Test Not Reliable for Differentiation of Tuberculous Pus. (Ist das Müllersche Verfahren der Unterscheidung des tuberkulösen Eiters von Cocceneiter mittels des Millonschen Reagens brauchbar?) H. Dold.
72 Origin of Urobilin. (Urobilinenstehung.) Fischler.
73 Viscosity of Blood Under Iodids. (Verhalten der Blutviskosität bei Joddarreichung.) Determann.
74 *The Pain with Perforation of Appendix Into Abdominal Cavity. (Schmerz bei der Perforation der Appendix in die freie Bauchhöhle.) Kafemann.

66. **Inefficient Labor.**—Freund lays great stress on prophylaxis. Overfilling of stomach and intestine, especially toward the end of pregnancy, should be guarded against; also catching cold, bearing in mind that with inadequate clothing, especially in winter, the lower abdomen is particularly liable to get chilled, and rheumatism of the uterus may result. Great harm is done, he says, by repeated examination, above all when delivery is under way. He remarks that it is easy to imagine the results for the functioning of the bowels and bladder if a manual or instrumental examination were made at the beginning of the act of defecation or micturition. A healthy life and proper diet during pregnancy with the above prophylactic measures will render inefficient labor very rare. In discussing measures for treatment he mentions venesection. No one would believe without personal experience, he declares, the prompt and energetic action of considerable blood-letting. He thinks it deserves wider application in obstetrics. The chief indication for ergot is weakness of the uterine contractions in the third stage of labor. The results to date of suprarenal extract injected directly into the wall of the uterus have been encouraging and he recommends further trials of this measure. He also thinks that the changes in the suprarenals in pregnancy deserve more study.

68 and 69. **Radiography of Apical Tuberculosis.**—Albers-Schönberg has been able to diagnose incipient apical tuberculosis with the *x*-rays before any clinical signs appeared. Schlayer also found that the *x*-rays showed apical lesions in 85 per cent. of the suspected patients. In only two-thirds of the cases was the process an active one. In 6 per cent. the *x*-rays failed to reveal the certain existence of apical tuberculosis. He examined 600 persons suspected of tuberculosis, and regards the findings as a valuable control of percussion, although not decisive in all circumstances. They testify to the enormous prevalence of small tuberculous foci in the lungs. About 350 patients were under observation a long time, and in a third of them the course of the cases showed that the alterations seen in the apices must have been old healed processes.

74. **Behind the Scenes in Appendicitis.**—Kafemann advocates the following suggestions from his own experience with severe perforating appendicitis: 1, Immediate operation in even the mildest cases in order to avert the danger of an abscess; 2, subcutaneous infusion of water to relieve the intolerable thirst; 3, very small incision; 4, early change to the country for convalescence; 5, avoidance of bandages and trusses, and, 6, strengthening the muscles and abdominal wall by plenty of exercise. The pains in his case were all diffuse or in the left abdomen during the first few days. The cold instruments chilled him, and he says they should be warmed.

Medizinische Klinik, Berlin.

May 17, IV, No. 20, pp. 733-772.

75 *Epidemic Meningitis. M. Matthes. Id. H. Hochhaus.
76 Rachitis and Osteomalacia in Japan. T. Nakahara.
77 *Spastic Obstipation. F. Kisch, Jr.
78 The "Four Cells" Electric Bath. (Praktische Bedeutung der Vierzellenbäder.) E. Tobias.
79 Technic for Local Treatment of Gonorrhea. Beutler.
80 Anatomic Research in Blindness from Administration of Atoxyl. M. Nonne.

75. **Epidemic Meningitis.**—Reviewing an epidemic of meningitis at Cologne, Matthes says that 13 of the 35 patients with meningococcus meningitis and the 4 patients with pneumococcus meningitis died. No benefit was derived from serum treatment. The disease was as severe in adults as in children. The best results were obtained with hot baths. Spinal puncture did not produce appreciable improvement. In regard to differentiation, he says that in some of the severest cases there were no typical symptoms at first, merely the picture of serious infection with stupor or delirium, high fever as with pneumonia, with nothing to call attention to the meninges. It is probable that cases like this have escaped recognition in the past. One man of 33 suffered from violent headache for five weeks before the typical meningitic symptoms developed. In another case a girl of 15 had a febrile tonsillitis, then an afebrile period followed by what was apparently a severe attack of hysteria, only a difference in the pupils suggested an organic affection. An abscess in the brain seemed probable, but in the course of a week fever returned and signs of meningitis became appar-

ent, confirmed by lumbar puncture. Hysterical conditions may be confounded with meningitis; in one hysterical patient the spinal fluid was under high pressure although the trouble was purely functional. There was almost complete amaurosis for a time, a symptom not rare in true meningitis. Tonsillitis had preceded the meningitis in a number of cases, and the glands in the neck were also frequently found enlarged.

77. **Treatment of Spastic Obstipation.**—Kisch outlines treatment as requiring measures to influence the general health and the altered nervous system with special regard for the spastic condition in the intestine. Nervous individuals inclined to constipation should lead a tranquil regular life. If debilitated, a course of forced feeding is indispensable. The diet in all cases of spastic obstipation should be nourishing, easily digested, with avoidance of everything liable to irritate the intestines.

Münchener medizinische Wochenschrift.

May 12, LV, No. 19, pp. 1001-1056.

81 *Focal Symptoms with Diffuse Brain Affections. (Herdsymptome bei diffusen Hirnerkrankungen.) A. Saenger.
82 Gum Arabic Added to Anesthetic for Spinal Anesthesia. (Gummi als Zusatz zum Anästhetikum bei Lumbalanästhesie.) E. Erhardt.
83 Typhoid Bacilli in Cerebrospinal Fluid. A. Nieter.
84 *"Soapy Stools" in Infancy. (Bedeutung der Seifenstühle im Säuglingsalter.) A. F. Hecht.
85 *Operative Treatment of Hernia in Children. (Hernien im Kindesalter.) E. Grossmann.
86 Significance of Achilles Tendon Reflex. (Achillessehnenreflex.) F. Conzen.
87 Study of Chlamydozoa. (Zur Kenntnis der pathogenen Mikroorganismen. "Chlamydozoa.") S. Prowazek.
88 Color Photography. (Lumièresche Dreifarbenphotographie.) R. Slevers.
89 Treatment of Fractures of Forearm. (Vorderarmbrüche.) N. Kaefer.
90 *Treatment of Decubitus with Local Massage. R. Teller.

81. **Focal Symptoms with Diffuse Brain Affections.**—Saenger urges the importance of further research on focal manifestations. He gives a number of examples in which various focal symptoms in the course of diffuse brain affections predominated to such an extent as to disguise the fundamental disorder. Among them are cases of tuberculous meningitis with monoplegia, aphasia and paralysis of a cerebral nerve; suppurative meningitis, diffuse sarcomatous meningitis, and chronic diffuse leptomeningitis. Encephalitis may induce focal symptoms even when diffuse. The greatest liability to error is in chronic hydrocephalus, as he shows by a typical example in which the clinical picture simulated a neurofibroma of the auditory nerve. He has recently had occasion to observe hemiparesis and aphasia in a man of 72, explained by diffuse arteriosclerosis of the cerebral vessels. He encountered a case of focal symptoms, apraxia, etc., with merely atrophy of the brain in senile dementia. Focal symptoms may be observed in multiple sclerosis and progressive paralysis. He urges search for better diagnostic measures, and thinks that lumbar puncture, Roentgen-ray examination and puncture of the brain may render good service.

84. **Saponification of Infants' Stools.**—Hecht concludes from his study of this subject that "soapy stools" indicate always some chronic disturbance in the absorption of fat. At the same time the splitting of the fat proceeds unhindered, and there can not be much acidity or increased peristalsis or catarrhal irritation. In case of acute exacerbations, "soapy stools" give way to other forms of fat stools, but after the acute phase has subsided the soapy stools return.

85. **Hernia in Children.**—Grossmann's little patients on whom he operated for hernia all made a smooth recovery, the wound healing by primary intention in each case. One-third of the patients were less than a year old, and more than one-third required bilateral intervention. He regards operative treatment as so harmless and the results so satisfactory that he advises it in all cases.

90. **Local Massage in Treatment of Decubitus.**—Teller has been successful in preventing and curing decubitus by local massage to induce hyperemia in the edges of the sore. His technic takes time and patience and, he warns, should never be left to an attendant. He cleanses the wound with gauze sponges wet with peroxid of hydrogen or with a solution of aluminum acetate, covers the space around the decubitus with Lassar's paste, and then massages the edges of the wound with the forefinger with light pressure. He massages for from two to ten minutes, striving to induce intensive stimulation of the nerves and vessels. The region around is then covered with the paste, and the floor of the sore is covered with small wet compresses or dusted lightly with powder. The whole region is then covered with a smooth layer of gauze and then a thin layer of cotton, with oiled silk above, held in place with strips of plaster. The dressing is renewed each day. The tendency to healing is promoted by warm full baths, the patient lying on a sheet stretched over the top of the tub. This technic has proved successful even with extremely debilitated patients with extensive decubitus; it healed over rapidly and completely.

Therapeutische Monatshefte, Berlin.

May, XXII, No. 5, pp. 219-274.

91 *Antipyresis. R. Staehelin.
92 *Gout and Its Relation to Nuclein Metabolism. (Gicht und ihre Beziehung zum Nukleinstoffwechsel des Menschen.) S. Möller.
93 *Spinal Anesthesia. (Lumbalanästhesie.) N. Ellerbrock.
94 Huckleberry Extract in Treatment of Intestinal Affections. (Methodik der Verwendung von Heidelbeerextrakt bel Darmaffektionen.) A. Laufer.
95 Treatment of Migraine. A. Herzfeld.
96 To Remove Concretions of Wax from Ear. (Entfernung von Ceruminalpfröpfen aus dem Gehörgange.) R. Imhofer.
97 *Agar-agar in Habitual Constipation. (Agar-agar bei habitueller Stuhlverstopfung.) Mangelsdorf.

91. **Antipyresis.**—Staehelin writes from His' clinic at Berlin to describe experiments which confirm the assumption that fever may be useful for the infected organism. In acute affections the fever may be left unmolested. The question is not the height of the temperature, but the other symptoms. Physical and medicinal measures are both useful if antipyresis is required. Hydriatic treatment is always indicated when there is danger from the cerebral disturbances, when the somnolent patient is not breathing correctly, when there is danger of bronchitis and atelectasis, and when nourishment is interfered with by the brain disturbances. These dangers are most imminent in typhoid. To be sure, he says, we no longer give baths at 60 F.; we do not give the baths so often, and we no longer accept the thermometer as the sole criterion of the effect of the bath. The bath may have accomplished its purpose without having reduced the temperature materially. What we want is to have the patient become conscious, breathe deep and expectorate. Consequently the best bath is that which withdraws only a little heat, being at most only about 15 or 18 degrees colder than the body of the patient, with no cold douches of the trunk. The influence on the circulation, nervous system and respiration is at least as good as with more heroic procedures, while the influence on the general condition and appetite is much better. A moderate reduction of the temperature, especially when persisting for several hours, has a beneficial action beyond all question. We attain this, however, more readily with mild procedures than with rough measures. Matthes recommends carbonated baths as the water can be cooler without harm to the patient. Baths are often given in sepsis, exanthematous diseases, etc., with marked success. Antipyresis with cool packs, and similar measures, if it occurs at all, is entirely subordinate to their stimulating action. He regards the increased destruction of albumin in fever as the chief expression of the disturbance in metabolism, and states that the reduction in the amount of nitrogen eliminated is the index of better conditions in the metabolism. Copious intake of nourishment, especially of carbohydrates, should be promoted. Abundant nourishment is not harmful in fever, he reiterates, both clinical experience and experimental research confirm the fact that abundant nourishment renders the course of infectious diseases much more favorable. The main point is to supply large amounts of calories; not albumin in particular. "We must take advantage," he says, "of every aid that kitchen and cellar can offer." The choice of articles of food and the limitations of the intake are decided only by the condition of the digestive organs and the patient's ability to ingest food. He concludes with the statement that the facts learned from experimental research not only explain what fever really is, but they show how to treat febrile patients, and practical experience is confirming

the importance of the principles thus learned. They justify measures for antipyresis, while at the same time protecting against overrating them.

92. **Gout and Nuclein Metabolism.**—Möller reviews the results of recent experimental research and their application to man. He accepts two forms of gout: "metabolism gout" and "kidney gout." The essential element is the constant presence of uric acid in the venous blood, even on a diet free from purin. In health no uric acid is found in the blood because what is formed is at once destroyed by the uricolytic ferment. This suggests that gout is the result of disturbance in the uricolysis. Both theory and practice confirm, he says, the efficacy of regularly continued doses of hydrochloric acid and avoidance of a purely vegetable diet for fear of an excess of alkali from the vegetables. During the acute attack the old tried remedies, colchicum, local heat, etc., are indicated, but small amounts of hydrochloric acid should be taken all the time. The diet should be purin-free, so as to avoid bringing on an acute attack.

93. **Spinal Anesthesia.**—Ellerbrock reports 63 operations under spinal anesthesia; he applies it only when general anesthesia is contraindicated, especially for patients with myoma or for unusually long operations, and in diabetes, lung and kidney affections. He has met with one mishap—a woman of 54 developed meningitis, fatal the ninth day, after removal of the myomatous uterus, but autopsy revealed arteriosclerosis of the cerebral vessels.

97. **Agar-agar in Habitual Constipation.**—Mangelsdorf has found agar-agar useful. He says that the condition of the stomach generally parallels that of the intestines; atony of one is usually accompanied by atony of the other. Determination of the outlines of the stomach is thus an index of the condition of the intestinal musculature. When the greater curvature of the stomach is above the umbilicus, green vegetables and fruit are tolerated without disturbances, and likewise agar-agar. Any special dietetic measure is useless and premature until the muscular force of the digestive organs approximates normal.

Zeitschrift für klinische Medizin, Berlin.

LXV, Nos. 3-4, pp. 161-352. Last indexed, May 9, p. 1574.

98 *Investigation of Motility of Stomach with Fat-zwieback Test Breakfast. (Untersuchungen über die Motilität des menschlichen Magens mittels des Fettzwiebackfrühstücks.) H. Strauss and J. Leva.
99 *Some Puzzling Neurologic Cases. (Neurologische Beiträge.) M. Bornstein.
100 Bronchial Breathing with Pleurisy with Effusion. (Bronchialatmen bei der Pleuritis exsudativa.) E. Granström.
101 *Chemical and Experimental Studies of General Anesthesia. (Narkose.) K. Reicher.
102 Histogenetic Relations Between Severe Blood Affections and Malignant Tumors. (Histogenetische Beziehungen zwischen schweren Blutkrankheiten und bösartigen Geschwülsten.) C. S. Engel.
103 *Four Cases of Paroxysmal Tachycardia. R. Balint and K. Engel.
104 Laws Regulating Elimination of Sugar in Diabetes Mellitus. (Gesetze der Zuckerausscheidung. IV.) W. Falta. Id. (Zum zeitlichen Ablauf der Zersetzungen. V.) Id. and A. Gigon.
105 Dicrotic Pulse with Aortic Insufficiency. Goldscheider.
106 Diabetic Lipemia. (II. Lipolyse und Nierenverfettung.) G. Klemperer and H. Umber.

98. **Research on Motor Functioning of Stomach with Aid of Strauss' Fat-Zwieback Test Breakfast.**—This communication from Strauss' polyclinic for internal diseases relates extensive experience which emphasizes the importance of general disturbances in the health as influencing the motor functioning of the stomach. It also shows that the motor function is surprisingly independent of various stomach affections, but is influenced by constitutional or other causes inducing general weakness. Study of the stomach functioning should include investigation of the motor conditions as well as of the secretory, each throwing light on the other.

99. **Seven Puzzling Neurologic Cases.**—Bornstein's first patient was a woman of 32 with symptoms suggesting tabes except for secondary atrophy after choked disc in the left eye and choked disc in the right eye. The sensory cutaneous disturbances improved in time, and Babinski's sign appeared. Migraine and vertigo were prominent symptoms, with vomiting, but both headache and vomiting subsided for two years and then returned. The case was finally diagnosed as idiopathic hydrocephalus. The second patient was a boy of 10 with headache and vomiting for a time, transient blindness and hemiparesis, after a fall on the head. The case was differentiated as Nonne's "pseudotumor"—the symptoms indicating tumor, although nothing is found at autopsy. Great improvement was observed in this case after two months. Another case showed that the different parts of the spinal cord when irritated are able to inhibit the functions of parts of the spinal cord below, and that this inhibition is the more complete the larger the number of irritated segments. In another case a man of 18 developed chorea combined with hysterical symptoms, shaking palsy and left paresis after a fright. The affection has persisted unmodified for eighteen months since he was awakened one night by a cry of fire. In another case the symptoms indicated an affection of the conical portion of the spinal cord below the lumbar enlargement. They developed suddenly after jumping from a low window. The other case was evidently an acute nonsuppurative encephalitis which developed suddenly in a healthy girl after a dance, entailing after a few weeks the typical picture of facio-brachial monoplegia with motor aphasia, with final favorable outcome.

101. **Chemical and Experimental Study of General Anesthesia.**—Reicher concludes from his research that important lipoids and fats are expelled by the cells under the influence of the anesthetic; these substances may participate in the production of the anesthesia. Their action, superposed on the abnormal conditions in diabetes, etc., may hasten the course of the disease, as he shows in detail by concrete examples.

103. **Paroxysmal Tachycardia.**—Balint and Engel report four cases of spasmodic tachycardia which they ascribe to increased numbers of extrasystoles, polyrhythmia, or the influencing of the automatic action of the heart by stimuli from without—what they call positive bathmotrophic influences. They were unable to abort the attacks, but one patient was sometimes able to arrest them by seizing the back of his neck in both hands and throwing his head back; another by abruptly sitting up. Another aborted the attack by large doses of bromids in the prodromal stage. Tonics proved useful and other measures for neuroses. The attacks occurred less frequently as the general health improved, but none of the patients was permanently cured.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

Patogenia de la Eclampsia Puerperal, Estudio Experimental. By Dr. Ubaldo Fernandez, Jefe de trabajos practicos de la Maternidad de la Escuela de parteras. Paper. Pp. 189, with illustrations. Buenos Aires: (La Semana Medica), Imp. de Obras de E. Spinelli, Callao 737, 1908.

Juvenile Crime and Reformation including Stigmata of Degeneration. By Arthur Macdonald, Honorary President of the "Third International Congress of Criminal Anthropology" of Europe. Paper. Pp. 339. Washington: Government Printing Office, 1908.

The Practice of Medicine. By Frederick Taylor, M.D., F.R.C.P., Examiner in Medicine at the University of Birmingham. Eighth Edition. Cloth. Pp. 1111, with illustrations. Price, $6.40. Philadelphia: P. Blakiston's Son & Co., 1908.

Hygienic Laboratory.—Bulletin No. 40. Treasury Department, Public Health and Marine-Hospital Service of the United States, M. J. Rosenau, Director, May 25, 1908. Paper. Pp. 43. Washington: Government Printing Office, 1908.

Adenomyoma of the Uterus. By Thomas Stephen Cullen, Associate Professor of Gynecology in the Johns Hopkins University. Cloth. Pp. 270, with illustrations. Price, $5.00. Philadelphia: W. B. Saunders Co., 1908.

State Board Questions and Answers. By R. Max Goepp, M.D., Professor of Clinical Medicine at the Philadelphia Polyclinic. Cloth. Pp. 684. Price, $4.00. Philadelphia: W. B. Saunders Co., 1908.

Hernia. By R. W. Murray, F.R.C.S., Surgeon, David Lewis Northern Hospital, Liverpool. Cloth. Pp. 99, with illustrations, Price, $1.80. Philadelphia: P. Blakiston's Son & Co., 1908.

On the Witness Stand. By Hugo Münsterberg, Professor of Psychology, Harvard University. Cloth. Pp. 269. Price, $1.50. New York: The McClure Co., 1908.

Thirty-eighth Registration Report of the State of Michigan for the Year 1904. Pp. 190. Cloth. Lansing: State Printers, 1908.

Pennsylvania Report of the Commissioner of Health, 1905-06. Pp. 520. Cloth. Harrisburg: State Printer, 1908.

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Original Articles

HYPEREMIA.*

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When some noxious influence acts on a more or less limited area of the body, local resistance is manifested by the production of granulation tissue and of hyperemia. Under favorable circumstances the granulation tissue repairs defects resulting from the noxa or more or less completely encapsulates the irritating agent. Under less favorable circumstances the irritation being continuous, e. g., in tuberculous infection, granulomata are formed, these granulomata being evidence of defense. If the resisting power is sufficient the embryonic tissue overcomes the irritant and encloses it in fully developed scar tissue. Stimulation of the production of granulation tissue in and around a tuberculous focus seems to be the therapeutic action of injections of emulsions containing iodoform, bismuth, finely divided carbon, etc., and of sclerogenic injections.

The second method by which Nature resists a noxa is by hyperemia. When an irritant, e. g., the staphylococcus, gains access to the tissues the flow of blood to the part becomes increased, there is exudation of fluids and leucocytes from the vessels into the tissues. The blood serum contains antibodies or antitoxins which neutralize the chemical products of bacterial activity, bactericidal agents which attack the bacteria themselves; opsonins which prepare the bacteria for absorption and destruction by phagocytes or perhaps act as a sort of appetizer or cocktail to the phagocytes, and lastly there are the leucocytes which act as phagocytes directly killing bacteria or as scavengers removing the débris of the fight. Thus while the granulation tissue acts a sort of passive rôle besieging the invading irritant, the hyperemia directly and actively combats it.

It was noticed long ago that valvular disease of the heart causing pulmonary congestion seems to prevent the development of pulmonary tuberculosis. Bier, struck by this observation, thought that by producing local hyperemia he could modify or cure tuberculous lesions in various parts of the body. He produced the necessary congestion by applying a rubber bandage proximal to the lesion—in a limb. Only sufficient constriction was used to produce a warm swelling. The constriction must never be severe enough to cause coldness, pain or even paresthesia. The results obtained in tuberculous lesions led Bier to extend the treatment to various other infective lesions in which the results have been most gratifying. Klapp, who is associated with Bier, thought that the same results might be more conveniently obtained by the use of cupping glasses of suitable shapes and sizes. It is with this last method that I have had most experience, and I have come to have much faith in it.

METHOD OF USE.

If pus is present it is evacuated through a comparatively small cut or puncture. The suction of the cupping glass will notably aid in the removal of the pus. A suitable cup which completely covers the lesion is applied. Suction is produced by means of a rubber bulb or a syringe. The suction must be strong enough to produce a red swelling of the part. If the swelling becomes blue the suction is too powerful. The same is true if pain or paresthesia is occasioned. The suction is kept up for five minutes, the cup is removed for three minutes, and reapplied for five minutes, etc. This alternation of five minutes of suction and three minutes of rest is persisted in for about forty-five minutes daily. The patients quickly learn the correct degree of suction to apply and soon can carry out the treatment better than can the surgeon. The suction exerted brings an increased quantity of blood into the part and increases the exudation from the vessels; thus an unusual amount of the active protective material is brought into the place where it will do most good. The suction must be sufficiently strong to produce this condition but not strong enough to cause stasis of the blood in the part. There must be an increased inflow and only a slightly decreased outflow of blood in order that the maximum amount of the active fighting forces may be present during the whole period of suction. The periods of rest permit the escape of blood from the part, and thus when the suction is once more applied an entirely fresh supply of fighting material is obtained. Wright believes the escaping blood contains a vaccine which stimulates the production of antibodies throughout the economy.

In our student days we were taught that pain in an inflammatory lesion is due to mechanical tension or distention, i. e., it is due chiefly to the swelling. The injection of water into the skin produces a temporary pain —later anesthesia. The increased swelling occasioned by the proper production of hyperemia is followed by a notable and early decrease in pain. Pain in an inflammatory lesion seems to be due to irritation by toxins and especially to the high specific gravity of the inflammatory exudates. Hyperemia properly produced destroys or dilutes the toxins and dilutes the exudates. Every one knows the relief experienced when a tense inflammatory swelling is incised, i. e., when tension is relieved.

The tense swelling is due to an exudate of high specific gravity — the tension prevents the inflow of blood to the part and the escape of diluting serums from the vessels and when the tension is removed fresh blood flows into the part and relief is obtained.

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* Read in the Section on Surgery and Anatomy of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

C. Ritter[1] has proved that the freezing point of pus is always lower, sometimes very much lower, than that of blood or serum, which are alike. The pus of a cold abscess has a freezing point, that is, a concentration, almost identical with blood and serum. Inflammatory serum has a freezing point similar to that of pus. It is safe to say that the fluids of inflamed tissues are of higher concentration than those of normal. If these experiments and observations are true, then any treatment which tends to dilute the fluids of high specific gravity and bring them to a concentration equal to that of the blood and blood serum must relieve pain. Relief of pain is one of the marked features of the treatment by hyperemia.

In dispensary practice I have learned to trust to treatment by means of cupping glasses in those forms of cervical adenitis so common among the poor. If pus is present it is evacuated through a tenotome puncture and suction applied: if pus is not present cups are applied at once. Usually cure results in seven, eight or ten days and scar is notable from its absence. A most striking result was obtained in the following case:

Patient.—A farmer aged 37, suffered from a large bunch of glands of wood-like hardness situated behind the sternomastoid near the clavicle. This adenitis was secondary to boils on the back of the neck which had healed. There was intense pain preventing sleep.

Treatment.—Suction hyperemia was instituted and after two treatments the patient could sleep well and was comfortable. After four treatments all the periadenitis had disappeared, the glands decreased in size, were mobile and discreet. Complete recovery was prompt. Even after the first treatment the patient maintained that he felt distinct relief.

Another illustrative case was the following:

Patient.—W. J., aged 45, on Feb. 8, 1907, punctured his palm with a nail. In about two days there was much pain, etc., and poultices were applied.

Treatment.—On February 12, the hand was much swollen both in the back and in the palm; great pain and tenderness were also present. Fingers were stiff. A small incision made in the palm (¾ in.) showed pus deeply seated; it was squeezed out. Suction hyperemia was applied by the patient about three times daily for 30 minutes at a time.

Result.—February 19: There was no pus, no pain. Fingers were mobile, though stiffer than normal. Swelling was almost gone. The pain was the first symptom to disappear.

I have seen a goodly number of buboes disappear promptly and with the minimum of trouble after the contents were evacuated through a puncture and hyperemia was produced by suitable cups. In the treatment of furuncles the cupping glass often acts like a charm and the abortion of boils is common.

I have thought it worth while to give a short description of the simplest possible treatment of some common and troublesome ailments because the simplicity and apparent futility of the treatment is calculated to keep many from employing it, but simple as the method is it has proved its worth not merely in the rather trivial ailments I have spoken of in this paper but in many serious lesions.

DISCUSSION.

Dr. M. G. Seelig, St. Louis, said that for three years he has made use of Bier's hyperemia both in dispensary and in private practice with good results. The patients, as a rule, have been spared not only the pain that goes with the infection, but the pain that goes with the dressing of all very painful wounds. In all these three years he has never used anything in the shape of a drain. In common with Dr. Binnie's experience he has limited himself almost exclusively to the cupping treatment of Bier, and based on that experience he has gradually grown more and more to believe that the pure mechanical evacuation action of the cup is of almost as much importance as the physiologic action. His results with the tourniquet have not been so good. In using the Bier cup you increase the pressure for a few minutes; with the tourniquet there is more or less danger of causing anemia rather than hyperemia.

The phase of Bier's hyperemia that always appeals most to him, and which for some reason is not emphasized in the literature, is the portion embraced in Bier's preface in his original work, in which he emphasized the philosophic principles back of hyperemia. He considers that inflammation is a series of phenomena set up by Nature in an attempt to cure itself, and that it lies within the province of the doctor not to regard inflammation a witch or devil invading the human organism. This is important from a historical point of view, and if we go back a few years we find that Bier is merely upholding a doctrine which the celebrated John Hunter fought for.

Dr. Victor J. Baccus, Chicago, said that he did not believe in the treatment of Bier before he went to Berlin, although he had read everything that was written on the subject, and had tried it on half a dozen patients. After he got over there, he found that he did not know how to use the method and that that was why he had not been more successful. The ward cases soon convinced him of the value of the method. He saw cases of cellulitis of the hand, not limited to the fingers, but infections involving the hand and extending up to the elbow, so that any surgeon would have applied a hot dressing and opened the hand next day. The patient was put to bed and constriction was applied. The period of physiologic rest, according to Bier, had passed away, and in five or six days the constriction hyperemia caused the inflammation to decrease, and then the patient was encouraged to move the fingers. The object is to heal the part without mutilation, keeping the tendons functionating. If the inflammation is localized and there is danger of softening and necrosis, incisions are made in the skin, with or without local anesthesia, followed by cupping. Such hands heal in from two to three weeks and the patient is well. The bad results arising from the use of this method are due to faulty technic. With reference to the apparatus necessary, it is simply a rubber band, one or two cups and a hot air bottle, which any one can make for himself, the whole outfit costing not more than four or five dollars. Trust to the rubber band, use it according to instructions, and you will get results.

Dr. D. N. Eisendrath, Chicago, said he had tried this method of treatment by means of the constricting band and the cup at the Michael Reese and Cook County hospitals in hundreds of cases, and had come to certain conclusions. He has found that in the acute arthritis, the acute pyemic arthritis or gonorrheal arthritis, there is no better treatment than Bier's hyperemia by means of the constricting band placed proximally to the joint for two hours a day. It gives almost immediate relief from the pain. In tuberculous arthritis his results have been almost equally as good. It is remarkable how much can be saved in the way of operative treatment by a systematic and persevering application of this treatment. In regard to certain varieties of infections he would like to have Dr. Binnie's opinion. In cases of acute streptococcus infections, those which travel rapidly up the arm or leg, he has found that the Bier treatment has but little effect, so that he has practically given it up and resorted to older methods of free incisions and hot applications and dressings. He has also found the method very useful in promoting union of fractured bones and also in preventing infection; for instance, in crushing injuries of the hand, when he has tried to save fingers, he often is in the habit of putting on constriction to prevent infection, and in many cases it has been of the greatest possible advantage. He thinks that the profession does not sufficiently appreciate the value of this treatment. If the treatment were applied only to certain cases and not to others, it would be more widely adopted because of the better results that would be obtained.

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[1] Arch. f. klin. Chir., 1902, lxviii, 437.

DR. JOHN B. MURPHY, Chicago, said that there is nothing that he knows of that has come into surgery in the last ten years as a practical application that appears to him to have as much value, and, he is sorry to say, is practiced so little and is so frequently misused. He believes that its most important place is in the acute infections. Take, for instance, the crushing injuries of the hand, the infected wounds of the hand that produce such disastrous results, often leaving the hand a crippled member for the remaining portion of the patient's life. He believes that a very great majority of these cases can be aborted as simple infections of the finger or even the thumb with a properly applied constricting band or cup. Which should be used is a matter of convenience, but the aim should be to accomplish a definite purpose; to have a definite object in view. We have been talking about dispersing inflammation. Our forefathers poulticed hoping to scatter the infection. Every one now knows that that very infiltration is Nature's effort at holding in, circumscribing, retaining and overpowering the zone of infection. Anything that aids and strengthens that by increasing the edema, increasing the swelling, increasing the circumscribing power of the tissue in that part aids in the process of preventing the spreading of the infection. If you will bear in mind that the purpose of the Bier treatment is—never mind the theory—to hold and circumscribe that infection, and if you produce edema by means of constriction or cup, you will find that your patient is relieved of pain. It is better than a poultice, the cofferdamming is more complete than with a poultice, and you curtail the time that is consumed in repair. Dr. Murphy said that if he were in emergency practice to-day he would dispense with every dressing on a wound. After it has healed put on a cage of wire to prevent contact and use the Bier treatment to promote local resistance against infection that is present or may be imminent.

LOCAL APPLICATIONS IN SURGERY.*

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A skeptic is one who refuses to accept any man's *ipse dixit*. He refuses to believe dogmas simply because others believe them and to do things because others have done them. He demands proof. Long live the skeptic! The object of this brief paper is to encourage skepticism in local therapeutics, to discourage the use of local applications without positive proof of their efficacy, and to call attention to the ease and certainty with which the desired information may be obtained.

Empiricism is a term used in a very loose sense and is capable of many definitions. The most commonly accepted definition is "practice based on inadequate knowledge which has been derived from a narrow range of observation without any warrant for its exactitude." An ancient sect of Greek physicians who maintained that experience is the foundation of the science of medicine called themselves empirics in contradistinction to those who relied on theory. Our effort at the present time is to base our practice on exact scientific knowledge, but it is not given to us to know all things, and until medicine has become an exact science empiricism must prevail. The greatest need of our profession is to get away from irrational empiricism and, when we must base our practice on experience for want of a scientific foundation, to insist that our experience shall bear the test of comparison.

Surgeons are prone to claim that their specialty is an exact science, but there is no place where there is more of irrational empiricism and less of science than in our use of local applications. We have inherited the habit of making applications to wounds and inflamed parts from our forefathers whose practice was almost wholly empiric in its worst sense. It is true that we have made advances in the use of local applications because the filthy poultices so popular with our forefathers have given place to others less objectionable if equally inefficient. Local applications always have been and doubtless always will be popular with the laity, and there is a decided tendency in the profession to make these applications and to attribute to them the improvement due to Nature's efforts. It is high time that we abandon this *post hoc* reasoning in surgery and recognize the fact that the natural tendency is for a wound to heal and for inflammation to disappear through the unaided efforts of Nature.

The mere fact that a swelling disappears after a local application has been made is no proof that the application had aught to do with the disappearance. Many different preparations have had each its season of popularity only to give way to others. A very decided color and a particularly offensive odor have usually been the best recommendations for popular favor. Icthyol, for example, one of the recent favorites, is a filthy, vile-smelling stuff made from fish dead and rotton for several thousand years. Shades of Esculapius! The fact that one favorite is so soon displaced by another is proof of its inefficiency. Our allegiance to opium and its preparations has never wavered since its discovery, because its power as an anodyne can be demonstrated at any time, but its popularity as a local application is on the wane because we have learned that it relieves pain only after it is absorbed and that absorption takes place much more quickly when it is taken into the stomach or injected underneath the skin. In other words, its effect is general and not local, no matter how administered. This being true, why, for example, should we make a local application of opium in the form of a suppository after an operation for hemorrhoids when we can secure a more comfortable and certain result from a hypodermic of morphia? It seems strange that we should have used local applications so extensively without proof of their value when the proof is so near at hand. It is a comparatively easy matter to make local applications in a series of cases and to compare them with another series of like cases in which no applications have been made. When put to this test the vast majority of local applications are found to be absolutely valueless. The present trend of therapeutics in general is not toward nihilism, as some would have us believe, but it is toward the elimination of drugs and applications the usefulness of which can not be demonstrated either by scientific investigation or rational empiricism. When our profession has followed this tendency to final analysis, and when it has learned to insist on as exact and complete a diagnosis as is possible in every case, no matter how insignificant it may seem, there will be much less quackery. We are very largely responsible for the many medical fakes because we have not done our work as well as we should. We have been too ready to prescribe without proper diagnosis and to employ useless remedies just as the quacks do.

It is because we have failed to give Nature due credit for her healing powers that such an absurd cult as Eddyism has taken such hold on the people. When a faith healer sits around and does nothing but think, while Nature is making a cure, and then attributes the cure to his masterly inactivity, he is only following our example when we paint a swollen joint with iodin and claim that the resolution due to Nature's efforts is due to the fact that we have changed the color of the skin. It is true that only a few years ago we painted all manner of swellings with iodin and watched the swelling disappear with great satisfaction, feeling that we had undoubtedly assisted Nature with our decorations, but it is equally true that we seldom make this application now and that the swelling disappears just as promptly and with less discomfort to the patient.

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* Read in the Section on Surgery and Anatomy of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

Liniments and blisters are still very popular with veterinary surgeons, but they have fortunately fallen into disrepute with us. Liniments have their uses, but their curative effect has not been demonstrated. They often relieve pain, and when "well rubbed in" the massage does good, and the patient gets the benefit of suggestion. Their greatest advantage is, however, that they give the patient a feeling that something is being done for him and keep him and his sympathizing friends busy, thus preventing them from doing something else which might interfere with the cure Nature is bringing about, rather a humiliating admission when we recall the former popularity of liniments with the profession.

It is rarely, indeed, that the one-time popular blister does more than add to the discomfort of the patient.

It is only a few years since every surgeon felt it his duty to cover his wounds with some dusting powder, but we have learned that wounds heal just as quickly without the powder, and it is getting to be well understood that every unnecessary application to a wound is meddling with Nature's process and that meddlesome surgery is bad surgery. The fact that iodoform was the most popular dusting powder was doubtless due to its vile odor.

Medicated dressings, so popular at the beginning of the Listerian era, have practically gone out of date because experience has proved that they are not only useless but sometimes harmful. Iodoform gauze is about the only one left and it is on its last legs. The results obtained by the best surgeons demonstrate that the only application necessary for a fresh wound is dry sterile gauze to absorb any possible discharge and a covering of sterile absorbent cotton to prevent contamination. The value of these simple dressings is doubtless overestimated because brilliant results have been obtained in superficial burns without dressings by simply protecting the parts from the bed covering by means of a cradle, and it is well known that wounds about the face heal promptly without dressings. On a tightly-closed wound the real function of the simple dressings previously mentioned is to add to the comfort of the patient by protecting the parts from the clothing and to prevent contamination from meddlesome fingers. On an open wound they undoubtedly have a value in preventing atmospheric infection.

It is no longer necessary to denounce the use of strong chemical solutions on a fresh wound, because they have been so generally abandoned, but they are still being used in infected wounds to an unwarranted extent. Frequent irrigations of a suppurating wound will not stop suppuration and they will delay the granulating process. I have repeatedly treated two infected wounds on the same person, one with irrigations of bichlorid solution 1 to 2,000, and the other without, and have found that the wound which was not irrigated invariably did the better. Irrigation with normal salt solution is better than with sterile water because it is more grateful to the patient, just as an application of salt solution to the Schneiderian membrane is more grateful than one of pure water. Irrigation with the salt solution should only be resorted to when it is the best mechanical means of removing retained discharges. Anything beyond this is meddling. An open wound and gentle pressure are much better than any irrigation.

The application of 95 per cent. carbolic acid, as first recommended by Powell, is the most important advance made in the matter of local applications for many years. A very virulent infection can often be cut short by the application of this drug, which destroys all bacteria, and when followed within two minutes by alcohol there is no danger of absorption and the amount of tissue destroyed is very small, and instead of causing pain it acts as a local anodyne. Before this discovery the hot iron was our only means of securing like results and this caused great pain and destroyed too much tissue.

Heat and cold, either moist or dry, are the most popular local applications at present and their popularity leads to their abuse. Our only positive knowledge concerning them is that they do relieve pain. Their curative value is still a moot point. When one physician is a strenuous advocate of cold applications for a certain malady and another is equally strenuous in his advocacy of the application of heat for the same malady, the chances are that both are indulging in some *post hoc* reasoning and that the patient would be cured of his malady by Nature just as quickly had they relieved his pain in some other way. In an inflammation of the skin or superficial parts the application of heat and cold must have some effect from their action on the blood vessels and nerves, but whether for good or ill is not so certain, and without definite knowledge their application beyond the point of relieving pain is unwarranted because they may do harm instead of good. The application of heat or cold for a deep-seated disease like appendicitis, so far as any curative effect is concerned, seems to me the height of folly. Their advocates believe that their efficacy depends on the lowering or raising of the temperature of the diseased part, and it is a physical impossibility to change the temperature of the appendix by any external application because of its remoteness and of the circulation of many currents of blood of a fixed temperature between the skin and the diseased organ. We must not forget that at least 80 per cent. of these cases will recover if we let them alone. The worst feature of this subject is that in a great many cases the patient has lost his life because his doctor had such faith in local applications that he continued to use them until it was too late for a life-saving operation. This remark is equally true of a host of other applications. We have all seen cases of cancer treated by local applications until all hope of cure by operation was gone. It is only too true that in many cases cancer is not cured by operation, but patients who are cured are operated on early, and nothing is so likely to cause delay as misplaced faith in local applications.

It is very trying to a surgeon to be called to see a patient and find the affected part has been plastered all over with "antiseptic mud" (save the mark) or some other equally objectionable and useless substance.

In the popular treatment of a crushed hand irrational empiricism runs rampant. One person will apply moist heat, thereby encouraging the ravages of bacteria, the one thing to be feared most, while another will apply cold until what little vitality was left in the crushed part is destroyed and gangrene results. In this case the modern surgeon, after thoroughly cleansing the part, applies sterile gauze and absorbent cotton for protection and comfort and allows Nature to choose her own temperature.

The abuses of heat and cold are too numerous to mention, but one or two examples may not be amiss. One of the most common abuses of heat is in the treatment of phlegmon of the hand. Every surgeon has cases brought to him after the patient has had poultices applied until the tendons are destroyed when early judicious incisions would have saved the hand and much suffering. The local application of heat in these cases is the most grateful possible and it should be used for the comfort it gives the patient but without any expectation that it will bring about a cure. When used in this way it should not interfere with rational surgical treatment and it accomplishes good without harm.

Recently a man came to me, stating that his sister had been suffering for six days from an acute attack of appendicitis and that her side was turning purple. I supposed that it was an abscess case with the "green groin" of old writers, but found on her arrival at the hospital that a thin rubber bag filled with cracked ice had been so faithfully applied for six days that the abdominal wall was frozen down to the superficial fascia. About this same time I read of an instance in which a French physician met with this same misfortune and his patient secured a verdict against him for malpractice.

DISCUSSION.

Dr. H. A. Royster, Raleigh, N. C., said that in our eagerness nowadays to operate, we have been neglecting some very important surgical principles. A surgeon's reputation is often made, or marred, by the so-called minor things. The paper under discussion deals chiefly with the abuses of local applications and not their uses. Dr. Moore has reached the other extreme, but he has set a good pace. His remarks on the abuse of local applications apply with equal force to medical and surgical conditions. Surgery is more exact than medicine, but only in the operative field. We may not be any more sure of cause and effect than the internist. His befuddled statement that the swelling disappears after a local application has been made, is no proof that the application has aught to do with the disappearance of the swelling. The same might also apply to bandaging, rest, lapse of time, etc. Montaigne said, in regard to the ailment and its cure, whether it came about from the lapse of a sufficient number of days, the remedies employed, the nature of the disease or his grandmother's prayers, one could hardly say. The same is true of local applications, because there is always that tremendous factor, the forces of nature.

Dr. Royster would not like to give up using ichthyol, which Dr. Moore so vehemently condemns, even though he felt that the massage and pressure accompanying it win half the battle. He also confessed to the use of the lead and opium wash in epididymitis. He still went so far as to blister a chronically inflamed kneejoint, knowing that the patient would be rendered more uncomfortable thereby, and, perhaps, doing it for that reason in order to relieve the monotony. He felt sure, also, that there is a place in surgical therapeutics for ointments containing the proper medication; particularly for oily dressings so commonly employed nowadays—balsam of Peru and castor oil, and also the alcoholic dressings. When a local application does no harm, and there is a rational basis for its use, no one should condemn its employment. When it does harm, it should be rejected. When symptoms are obscured thereby, or proper treatment is postponed, one is guilty of malpractice if he continues the use of a local application.

One weak point in Dr. Moore's armor is the fact that he apparently disapproves of the mental effect procured by the use of liniments. Theses things are very useful when they are harmless. Dr. Royster desired to emphasize the harm done by counter irritation to the abdomen in cases that later come to operation. The skin may be frozen by ice, reddened by mustard, and blistered by cantharides. Much damage is done by such local applications, in addition to the delay caused by their use.

Dr. Howell, Columbus, Ohio, said that if you place a constricting band around the leg above an inflamed kneejoint and produce a hyperemia below the band, it is exactly the physiologic action produced by heat and cold. It is simply hyperemia.

In case of phlegmon, Dr. Howell would go further than Dr. Moore, and use, in addition to his treatment of gauze and a soft bandage, a splint. Infection travels by way of the lymphatics toward the body by means of muscular action, and if there was ever good done by a citizen of this city, it was when Ochsner so graphically described the course of infection through the lymphatics by muscular action. This is a befuddled point in surgery to-day. In phlegmons of the hand or of any other part of the body, not only should you apply a gauze dressing, but rest of the part should be provided for.

From an experience that covers the average surgeon's life, Dr. Howell said that alcoholic solutions, medicated or not, kept moist on an inflamed part at rest, will produce better results than when the part is at rest and dry. The same is true of counter irritation used by the old family doctor. It is simply a matter of Bier's hyperemia put into another form.

Dr. A. J. Ochsner, Chicago, believes that, while you are doing useless things, you must be certain that they are harmless. Most applications keep the applier from doing worse things. He believed that the good of rest is enhanced by many of these applications, and that in so far as these applications enhance the value of rest, they are of advantage to the patient. Close observers have found a very large amount of comfort when they have had personal experience with many of these application, so that there is something of good in them for the patient. Dr. Ochsner had peritonitis many years ago, and remembers well the great comfort received from a large flax-seed poultice. When this poultice was removed, the discomfort returned; when the poultice was reapplied, the discomfort disappeared. It does not matter whether there is a scientific explanation; whether it is Bier's hyperemia or whether it is not. So long as the discomfort disappears when a thing is done, continue to do it. There is benefit in the use of many of these things. He believes that it is largely the benefit of rest or hyperemia.

Dr. T. J. Conley, Chicago, would be very loath to give up iodoform, salicylic acid and boric acid without some good reason. They do not destroy the streptococcus, but they do destroy the staphylococcus, and in that way they do a great deal of good.

Dr. John B. Murphy, Chicago, said that we should learn to let these wounds alone, to keep our hands off. Let them stay clean, and they will get well. The irritating solutions that have been used, the handling that has been done, the rubbing and scrubbing that is outrageously done, the milking of an abscess, are abuses that the profession should not countenance. The temporary relief which is received from the applications of heat or cold on non-abridged surfaces is very much to be commended. What that application will be is a matter for us to select. But the wet dressing, the pus poultice in the management of open wounds, is a very great detriment to the healing process. No more striking example can be cited than a pure infection of the pelvis of gonorrheal origin, where a pus tube is ruptured in its removal, and you have the pus poured out in the lower portion of the pelvis. If you put in a drainage tube, and it is kept in for a week or ten or fifteen days, it will be two or three weeks before the case will heal up and before the discharge will cease. Why? If you take one of these cases, the enormous percentage of which are aseptic, notwithstanding the pus, close that abdomen, the patient is out of bed, and well in a week or ten days. That is purely evidence of mechanic irritation and retarding of healing process. All irritation of open surfaces should be abandoned. Wounds will heal more rapidly without it.

Dr. Robert F. Weir, New York, said that to keep wounds at rest and clean is the best treatment we can follow. But when you come to painful swellings, such as a boil, put on a little heat and it feels better. There is no question about that; but let us know what we are doing. The moisture used allows stretching of the dry skin. Therefore, he believes in a little moisture. There is a point about heat that is worth dwelling on. It does not do any good to the inflammation or to the septic process, but it stops tingling and aching of the nerves. Therefore, Dr. Weir is willing to adhere to a little moisture, hot moisture, on a painful swelling. Otherwise let it alone.

Dr. Arthur Dean Bevan, Chicago, said that in an infected wound of the hand, he believes that the best dressing is the continuous moist antiseptic dressing, very mildly so, either boric acid or acetate of aluminum in a very weak solution; and he believes that it is scientific. The bacteria are rendered less noxious; their growth is inhibited in the dressing, and the drainage is better. The wound secretion flows into the moist dressing, and it is picked up better by it than by the dry dressing, which is hard and uncomfortable. The wet dressing certainly is more comfortable to the patient, and on that account, he is very much in favor of the moist antiseptic dressing in painful swellings.

Dr. Bevan is coming to the use of ointments a good deal. He likes zinc oxid best where the dry, inflexible gauze dressing is uncomfortable to the patient. The old-fashioned flaxseed poultice may be of much value. Why can not such a poultice, when made antiseptic by boiling, be a good dressing and carry no danger to the patient, especially if it gives comfort?

Dr. Jabez N. Jackson, Kansas City, Mo., said that the action of heat had been discussed simply from the standpoint of hyperemia, the stimulating action of heat on the capillaries. As a matter of fact, he is firmly convinced that the effect of moist heat does not in any sense depend on its effect on the vascular system. Heat has a distinctive effect on the lymphatic system. What happens from the application of heat, either dry or moist, to the skin surface? Your hand is scalded with hot water, and a blister forms. The lymph has been drawn from its usual channels and carried into the skin, showing that the heat has a distinct effect on the lymph circulation. The effect of heat does not depend altogether on the degree of temperature, but on the length of exposure to a uniform temperature. If moist heat is kept up continuously for a time, it has the same effect as has a high temperature for a short time. The effect of heat is to produce outward drainage of the lymphatics; to stop the proximal flow of lymph. The effect of heat is on the lymphatics and not on the blood vessels.

Any agency which can stop the lymph circulation will localize infection. It does not matter what agent or material is used so long as you get the effect of the heat, get a lymph stasis, which will arrest the spread of the infection. In the case of the spreading infections, we add to the moist heat simple incisions and control the infection very rapidly. The application of moist heat in an ordinary contused wound is illogical because it causes lymph stasis and localizes the infection, whereas, if lymph flow is promoted, infection is prevented.

Dr. Charles Parker, Chicago, commended the wet dressing. Pus in a poultice is better than pus in a wound. The wet dressing should consist simply of ordinary sterile gauze wet with sterile water or salt solution. He did not believe in the necessity of antiseptics. On top of that is placed some impervious tissue. The wet dressing has several functions. One is the absorbing function. It does absorb and clean the wound. An ounce of good absorbent gauze will absorb four ounces of water. When it is moistened, it will weigh about two ounces. It absorbs possibly better than the dry gauze. Dry gauze with plenty of pus will absorb rapidly, but a small quantity of pus will dry in the gauze and from that time on there is no more absorption.

The wet dressing acts as a mechanical diluter of the pus. Change it often. Our final reliance must be on the cells of the tissue. Save as many of these cells as you can. A dry or open dressing allows desiccation of living cells. Now, there are bacteria in the tissues, on the surface and in the dressings. Those in the dressing we do not care about. We can throw them away. Those on the surface are diluted, and a certain number of them go into the dressing. Those in the tissue, none of your antiseptics can reach because the antiseptics will kill the cells if used strong enough to kill germs. Phagocytosis will solve the problem for you. Alcohol and antiseptics of all kinds decrease phagocytosis. Save your antiseptics. Induce the lymph to flow into the wounds. Have some means of drainage. Above all, preserve, all the cells you can. Keep them warm. Put on a wet dressing, hot or cold; it will soon be at the temperature of the body.

Dr. J. E. Moore said he is simply pleading for the discarding of useless applications and the use of those whose value has been proved. He uses them every day because they make his patients feel better; but they do not cure anything. We must have the extremist. Every time a man speaks of something new he is called an extremist, but in time we reach the happy medium, and then the extremist shall not have been in vain. He does not disapprove of bandages. He has seen swellings disappear many times under the use of bandages. His paper was a plea for surgery without meddling. Meddling is always bad. He has not irrigated a healthy wound for ten years, and he is proud of it.

Moist and dry dressings have their place, but we have no time to work this out to-day. Dr. Weir wants heat and moisture on his boil. So does Dr. Moore, but it will not cure the boil. Dr. Connelly believes in putting on things to keep the patient busy, and Dr. Moore declared that there is our danger point, because we have not the right to keep our patient busy. Such things bring the profession into disrepute and give the Eddyite a chance to get in his work.

THE CALMETTE OCULAR REACTION TO TUBERCULIN.*

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Wolff-Eisner[1] and Calmette,[2] working independently, were the first to suggest the conjunctival tuberculin reaction as a diagnostic test for tuberculosis. Since their earliest reports in the spring of 1907 the medical journals in this country and abroad have contained the reports of many observers working along the lines suggested by Calmette. Wolff-Eisner at first used a 10 per cent. aqueous solution of tuberculin which produced a marked conjunctivitis in tuberculous patients, while the non-tuberculous did not show any conjunctival reaction. Calmette used but a 1 per cent. aqueous solution prepared by the precipitation of crude tuberculin with 95 per cent. alcohol, the precipitate being collected and dried. He claimed that in this manner the glycerin and beef extract salts were removed, which in themselves might cause a conjunctival irritation.

Most observers have used the solution prepared in the manner described by Calmette, although several observers, notably MacLennan[3] and Webster and Kilpatrick.[22] have obtained equally good results with a 1 per cent. aqueous solution of "old" tuberculin. MacLennan tested 25 cases with a 1 per cent. aqueous solution of "old" tuberculin of Koch. Of 14 clinically tuberculous patients, 12 reacted positively; 10 of the positive cases had previously reacted to the Calmette solution.

Calmette[4] described the reaction as follows: "From the third hour onward the eye in which a 1 per cent.

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* Read in the Section on Ophthalmology of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

1. Berl. klin. Wochschr., 1907, xliv, p. 700.
2. Compt. rendus de l'Acad. des Sc., June 17, 1907.
3. Brit. Med. Jour., Dec. 7, 1907.
4. Presse Méd., June 19, 1907.

aqueous solution of tuberculin had been applied became reddened, and in the course of several hours showed all the appearances of a more or less pronounced attack of mucopurulent inflammation of the conjunctiva. The maximum was seen within six or seven hours after the instillation of the tuberculin. All traces of inflammation had disappeared in two or three days. The plan is free from danger and causes the patient scarcely any discomfort."

Various observers recommend solutions of different strengths. Schenck and Seiffert,[5] who make their dilutions with a 3 per cent. solution of boric acid, recommend three different strengths. If the 1 per cent. solution of tuberculin produces no reaction, a 2 per cent. solution is tried, and if this fails a 4 per cent. solution is used.

Comby[6] uses a 0.5 per cent. solution in children, which, he says, is sufficiently strong to produce the reaction and is not harmful. In 132 unselected hospital cases he obtained 62 positive reactions. Ten of the tested cases later came to autopsy, 4 of these had reacted and 6 had manifested no reaction. The postmortem findings confirmed the value of the tuberculin reaction.

Baldwin[7] recommends 0.33 and 0.5 per cent. as the strength of the solution to be used at first. If these fail a stronger solution is used in the other eye. In a personal letter Dr. Baldwin informed me that he avoids the stronger initial dose and also avoids using the same eye twice, because of a possible severe inflammation. These sequelæ will be considered below.

From the study of nearly 2,200 tested cases taken from the medical literature of the past year it is safe to assert that in the ocular tuberculin reaction we have a test which is equal, if not superior, to any other one test; its application is extremely simple; it almost never produces any constitutional disturbances, and, if the initial dose at least is under 1 per cent. strength, little or no danger can possibly come from its use. A positive reaction almost invariably means tuberculosis, even though the case clinically has not been so diagnosed. The clinician can not always exclude a latent or old tuberculous focus. More postmortem reports on tested cases, both positive and negative, will be awaited with interest.

Cohn[8] obtained 8 positive reactions in 12 cases of typhoid tested with tuberculin. He explains these findings by the fact that typhoid cases have a special hypersensibility to bacterial albumin in general as well as to typhoid bacillus extracts. He concludes, however, from a study of 310 cases other than typhoid, that a positive reaction to the ocular tuberculin test is presumptive evidence of tuberculosis. He obtained 38 positive reactions out of 41 cases in the first and second stages of tuberculosis, and only 22 positive reactions out of 45 cases in the third stage of tuberculosis. His observations in this respect agree with many others.

Many observers have obtained positive reactions in all clinically tuberculous cases, while others, like Cohn, have often failed to obtain the reaction in advanced cases. This is explained by the fact that the opsonic index of these patients is low and they offer no resistance to the tuberculin. In this connection it is interesting to note the observations of Smithies and Walker,[9] one of whom obtained a reaction in his own eye after he had been subjected to a subcutaneous injection of 1 mg. of tuberculin. The ocular test in this instance was negative previous to the injection of tuberculin. These observers also agree with the majority, that cases of acute miliary tuberculosis and advanced and moribund cases in which there is no doubt of the condition often react negatively.

COMPARATIVE DIAGNOSTIC VALUE OF THE SUBCUTANEOUS INJECTION, VACCINATION AND OCULAR REACTIONS TO TUBERCULIN.

Baldwin[7] has stated that, while it is too early to compare the value of the ocular and subcutaneous tests, a close similarity in the results have been obtained. Cohn[8] compared the ocular reaction with Koch's method of subcutaneous injections in a series of doubtful cases which resulted in favor of the ocular test. Mainini[10] applied the cutaneous test of von Pirquet[11] in 208 cases and the Calmette reaction in 100 cases. He was impressed with the constancy of the reaction in patients with certain tuberculosis, except those in the advanced stage. He found the cutaneous reaction six times more frequently among patients merely suspected of having tuberculosis than the ocular reaction. von Pirquet,[11] in 360 tests with the cutaneous reaction in children, found a marked difference between the hyperemia produced in tuberculous and non-tuberculous children under 2 years of age. In older tuberculous individuals the reaction was slight.

Comby[12] found the age of the child materially influenced the ocular reaction. Under 1 year of age no reaction was obtained, either in tuberculous or non-tuberculous infants; in the second year the reaction was very uncertain; beyond 2 years of age the results were similar to those obtained in adults. It is interesting to note that von Pirquet found the cutaneous reaction uncertain in children over 2 years of age, and Comby found the ocular reaction uncertain in children under 2 years.

Warfield[13] reports 169 cases tested by vaccination, and his conclusions agree with those of Mainini in that the cutaneous test is harmless and is of value in the pretuberculous stage.

Lenhartz[14] tried both the cutaneous and ocular reactions in 111 cases, 37 of which were undoubtedly tuberculous. Of the 37 tuberculous patients, 15 had been previously treated with subcutaneous injection of tuberculin. Of these the cutaneous test was negative in 6, well marked in 4, distinct in 2, and doubtful in 3. The ocular test was positive in 11, doubtful in 2, and not tried in 2. The better results in these cases with the ocular test may have been due to the previous injection of tuberculin, as Smithies and Walker[9] obtained an ocular reaction in a non-tuberculous patient after tuberculin had been injected subcutaneously. In 11 of Lenhartz's cases, clinically non-tuberculous, the ocular and cutaneous reactions gave about the same results. Of 63 suspicious cases, 23 were positive to both, 40 negative to the cutaneous, and 36 negative to the ocular test (this test being omitted in 4).

IS THE OCULAR TUBERCULIN TEST HARMLESS?

Calmette[15] has recently claimed that in more than 10,000 cases already tested its harmlessness has been proven. Delorme, in his discussion of Calmette's paper, cited 39 cases of excessive conjunctival reaction.

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[5] Muench. med. Wochschr., 1907, liv, p. 2269.
[6] Presse Méd., Aug. 10, 1907.
[7] The Journal A. M. A., Dec. 14, 1907.
[8] Berl. klin. Wochschr., Nov. 25, 1907.
[9] The Journal A. M. A., Jan. 25, 1908.
[10] Muench. med. Wochschr., Dec. 24, 1907.
[11] Berl. klin. Wochschr., May 20, 1907.
[12] Rev. Méd. de la Suisse Romande, 1907, xxvii, p. 888.
[13] The Journal A. M. A., Feb. 29, 1908.
[14] Muench. med. Wochschr., Nov. 26, 1907.
[15] Bull. de l'Acad. de méd., Jan. 14, 1908.

De Lapersonne,[16] in his investigation of alleged injury to the eye from the instillation of tuberculin, found six cases of ulcero-vascular keratitis, which were, with one exception, in patients having a pre-existing lesion of the cornea. All recovered with good vision. He found in two other cases intraocular sequelæ which took the form of iridocyclitis. De Lapersonne advises against the use of the ocular test until both eyes have been thoroughly examined. He also advises against using this test in differentiation of lesions of the eyeball, whether deep or superficial, although it might be used in the diagnosis of diseases of the lids, orbit and lachrymal organs. The complications noted by De Lapersonne did not become manifest until from ten to twenty days after the instillation.

Netter[17] has recently protested against too much enthusiasm for the ocular reaction, because of its liability to be followed by serious consequences. He said that he knew of several instances in which Parisian ophthalmologists had been treating severe eye trouble following the instillation of tuberculin.

Eisen[18] reports two serious conjunctival reactions in 45 tests. Both patients had suffered from conjunctivitis in youth. The reaction in these patients was so severe that they were turned over to an ophthalmologist for treatment.

Feer's[19] experience with both the ocular and cutaneous tests leads him to warn against the use of the ocular test in scrofulous children, for the reason that it is liable to incite a severe and lasting conjunctivitis.

Weins and Gunther[20] report several instances of serious trouble in their experience. In one case, a child of 3 had a severe chronic conjunctivitis following the instillation of the tuberculin which was still evident after many months. In another case the instillation was followed by swelling and suppuration of the conjunctiva, and this, in turn, was followed by the formation of phlyctenular ulcerations which were present for over three months. In another case the reaction soon subsided, but it was followed by conjunctival hemorrhage and inflammation, the latter lasting over a week. In 38 cases tested with 0.5 per cent. solution the reaction was negative in all but one. In this case a pre-existing mild conjunctivitis became much aggravated, with membrane formation, hemorrhages, keratitis, and severe subjective disturbances. The end-result, however, in this case was complete recovery.

H. Truc[21] declares the ocular test to be entirely harmless even when applied to individuals with ocular lesions. The reaction occurred with equal intensity in the diseased as in the sound eye, and, so far as he could judge, had no bad effect on the diseased eye.

Baldwin[7] gives acute or chronic conjunctivitis, blepharitis, keratitis, trachoma, or any disease of the cornea and internal structures of the eye as contraindication to the use of the ocular tuberculin test. In a personal letter Dr. Baldwin cites the case of a colleague on whom the reaction was tried: "The instillation was followed by edema of both eyelids and great swelling of the bulbar and palpebral conjunctivæ. In over 200 individuals there have been at least five severe reactions, ranging from deep injection and tumefaction of the entire conjunctiva and edema of the lids to ecchymoses, which have occurred in two instances."

Dr. Frank Smithies, of Ann Arbor, in a personal letter, stated that a more intense reaction was obtained in patients having a pre-existing conjunctivitis. One patient under his observation, a syphilitic with an old arthritis, reacted so strongly to a second instillation that the inflammation was cleared up with difficulty. This patient at the time was taking iodids.

Webster and Kilpatrick[22] mentioned one case of phlyctenular conjunctivitis following recovery for the ocular reaction. They reported 121 cases tested with the 1 to 100 "old" tuberculin solution.

THE OCULAR REACTION IN OPHTHALMOLOGY.

Stephenson[23] was one of the first ophthalmologists to apply this test for the differential diagnosis of ocular lesions. He says in his report: "The preponderating part unquestionably played by syphilis in the production of many ocular affections has, perhaps, tended to render some of us a little blind to the influence of other causes, prominent among which, as I believe, stands tuberculosis. How often do we meet disseminated chorioiditis indistinguishable by ophthalmologists from the form due to syphilis in patients in whom there is no evidence whatsoever of a specific taint, acquired or inherited? I feel confident that no small number of such non-syphilitic cases are in reality due to tuberculosis."

Stephenson's cases are:

1. *Phlyctenular Keratitis and Conjunctivitis.*—Six cases of long standing in children. Only two of these cases manifested other tuberculous lesions. All gave positive reaction; one recent case of phlyctenular keratitis gave a negative reaction.
2. *Chorioiditis.*—Three cases in young women without syphilitic taint, and presenting no other tubercular lesions. All three tests positive.
3. *Interstitial Keratitis.*—Eight cases tested; five showed typical signs of inherited syphilis. These five cases gave no reaction; the other three cases gave positive reactions.
4. *Episcleritis.*—Three cases tested; one positive case, which showed enlarged glands, the other two cases negative.
5. *Tubercle of Iris.*—One case in a girl of 12, who had had severe inflammation of left eye for six months. Anterior chamber filled with dense exudate. No general clinical signs of tuberculosis or syphilis. Case gave positive reaction.
6. *Tubercle of Cornea.*—One case in girl of 12. Cornea showed patchy deposits, rest of cornea hazy. Posterior synechiæ. Ophthalmoscope revealed areas of yellowish-white exudate in cornea. Reaction positive.
7. *Chronic Iridocyclitis.*—Two cases, both positive; one case was in a child of 9, the other in a woman of 34.

Painblau[24] reported two cases of tuberculosis of the conjunctiva which reacted positively. Brunetière[24] reported three negative reactions in cases thought possibly to be tuberculous, keratoiritis, interstitial keratitis, and exudative chorioiditis. Later Brunetière affirmed the diagnostic value of the ocular tuberculin reaction as a means of differentiating ocular lesions.

Aubaret and Lafon[25] report the use of the ocular reaction in 18 ophthalmic cases with positive reactions. These cases included intraocular tuberculosis, phlyctenular keratitis, episcleritis, interstitial keratitis, lachrymal affections and optic neuritis.

H. Truc[21] tested 23 patients with various ocular lesions, 4 having certain or suspected tuberculosis gave a positive reaction, 4 other reactions were positive in patients showing no clinical signs of tuberculosis. The other 15 cases gave no reaction.

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[16] Presse méd., Dec. 7, 1907.
[17] Soc. d'Ophth., Paris, 1907.
[18] Pelt. z. Klin. d. Tuberk., vii, No. 4.
[19] Muench. med. Wochschr., Jan. 7, 1908.
[20] Ibid., Dec. 24, 1907.
[21] Soc. d'Ophth., 1907
[22] Brit. Med. Jour. Dec. 7, 1907.
[23] Brit. Med. Jour., Oct. 19, 1907.
[24] Ophth. Provinciale, August, 1907.
[25] Gazette Hebd. des sciences méd. de Bordeaux, Aug. 4, 1907.

Dr. George Derby, of Boston, was kind enough to send me the results of his experience with the Calmette reaction up to Jan. 21, 1908. He had tested 24 cases, 8 of which were controls. Two of the controls gave a positive reaction, one having a tuberculous family history, and the other could not be followed up. Of the 16 remaining cases, 15 had ocular lesions which might have been tuberculous. Among the cases manifesting ocular lesions there were 5 cases of phlyctenular keratitis, one of which gave a positive reaction, later confirmed by subcutaneous injection, and one gave a doubtful reaction. The remaining 3 cases were negative. Two cases of recurrent sclerokeratitis were positive. Three cases of interstitial keratitis giving specific history were negative. Three cases of scleritis gave one positive reaction, later confirmed by subcutaneous injection. One case having corneal ulcer and another with chorioretinitis were negative.

Derby advises against the instillation of the tuberculin in a diseased eye. He mentioned one case in which the tuberculin had been instilled into an apparently normal eye to find on more careful examination an old corneal scar. The reaction in this case was followed by a mild episcleritis which lasted several weeks.

My own experience with the test has been so limited that a summary of my cases seems hardly worth while. Dr. John R. Thrasher obtained the cases of certain or suspected tuberculosis for his clinic in the Indiana University School of Medicine; he also made the sputum examinations and aided me in following up the cases. I made 31 tests, 7 of which were second tests in cases in which the first reaction was negative. The Calmette solution, 1 per cent., was made from tablets furnished me by the experimental department of Parke, Davis & Co. In the 24 cases tested, 3 were positive and 1 doubtful. One positive reaction was obtained in a colored woman having a subacute bronchitis and enlarged cervical glands; sputum negative. The doubtful reaction was obtained in a case of lung tuberculosis; sputum positive. Three cases of advanced tuberculosis showing numerous bacilli in the sputum gave a positive reaction in one case; the other 2 cases gave negative reactions. Of the 24 patients, 5 had ocular lesions, but were in other respects apparently normal. One case of optic atrophy was negative; one case of hyalitis with deposits on Descemet's membrane was negative; a case of phlyctenular keratitis in one eye gave a positive reaction when the solution was instilled into the sound eye; one case of interstitial keratitis, undoubtedly specific, was negative, and one case of central chorioretinitis was negative.

FREQUENCY OF TUBERCULOSIS OF THE EYE.

Helbron[26] claims that 0.5 per cent. of 15,000 ophthalmic affections in the Berlin eye clinic were due to tuberculosis. Stock's[27] report of 59 cases of chronic iridocyclitis, of which 61 per cent. reacted to the subcutaneous injection of Koch's "old" tuberculin, shows the great number of this class of cases caused by tuberculosis. Verhoeff[28] and Bull[29] have within the past year called our attention to the tuberculous nature of many cases of scleritis and episcleritis. These tuberculous cases have reacted to the subcutaneous injection of both the "old" tuberculin of Koch and the tuberculin T.R. Prof. Carl Hess,[29] in the discussion of Bull's paper, said that he used tuberculin for diagnosis in about 100 cases and over 50 per cent. of these cases had given a general reaction. Török[30] reports 16 cases of tuberculosis of the eye treated with tuberculin injections. These cases included tuberculosis of the conjunctiva, sclera, iris and chorioid.

Chance,[31] in a paper on iritis in general disease, makes the assertion that tuberculous iritis is much more common than it was formerly supposed to be.

Brücker[32] cites 38 eye cases in which tuberculin was injected for diagnostic purposes. Of 12 acute cases of iritis only 2 reacted, while in 14 cases of chronic iritis or iridocyclitis 11 reacted.

CONCLUSIONS.

1. The Calmette ocular tuberculin test is of as great diagnostic importance as any other single test.
2. A positive reaction is indicative of a tuberculous focus somewhere in the body.
3. The test is uncertain in patients under 2 years of age, in whom the cutaneous test of von Pirquet is most certain.
4. The test fails in advanced cases of tuberculosis but there is little need of it here for diagnostic purposes.
5. The initial instillation should be preferably under 1 per cent. strength, in order that severe inflammatory conditions may not follow its use.
6. If necessary to make the second and stronger test the instillation should be made in the eye not previously used.
7. The consensus of opinion seems to be against using the test in an eye not wholly normal.
8. After-complications have occurred from the use of the test, but these have entirely cleared up in a varying length of time. These conditions are not so frequent when the initial test is made with a solution under 1 per cent. in strength.
9. Recent investigations have shown a greater number of ophthalmic affections due to tuberculosis than formerly supposed, and in the Calmette reaction we have a simple means of differential diagnosis which should be thoroughly tried.
10. The ocular reaction is especially valuable for ascertaining the tuberculous nature of cases of phlyctenular keratitis and conjunctivitis, episcleritis and scleritis, chronic iritis and iridocyclitis, interstitial keratitis, and chorioiditis.
11. A 1 per cent. solution of Koch's "old" tuberculin is nearly as good as the Calmette solution for diagnostic purposes.
12. The test in the hands of various observers has given such uniformly excellent results that its value is practically assured.

DISCUSSION

ON PAPERS OF DRS. LEWIS* AND PARKER.

Dr. Llewellyn Williamson, St. Louis, said that all had seen cases of gastric neuroses dependent on some error of the visual apparatus. Occasionally, he said, some reference to these neuroses was found in the writings of ophthalmologists; but no one, heretofore, had called attention to the very important factor these gastric neuroses of ocular origin might play in the etiology and treatment of tuberculosis.

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[26] Muench. med. Wochschr., Jan. 7, 1908.

[27] Tuberculose als aetiologie der chronischen Entzündungen des Auges und seiner adnexæ besonders der chronischen Uveitis, Leipzig, 1907.

[28] Boston Med. and Surg. Jour., March 14, 1907.

[29] The Journal A. M. A., Aug. 3, 1907.

[30] Arch. Ophth., September, 1907.

[31] Therap. Gaz., August, 1907.

[32] Arch. Ophth., September, 1907, xxxvi, 647.

* The paper of Dr. Lewis was published June 13.

Dr. Williamson said that earnest efforts must be put forth before general practitioners as a class will recognize that ocular neuroses were not confined to headaches alone. He believed that the diagnosis of many obscure conditions could be distinctly aided by ophthalmologists and that a closer communion and interdependence between the ophthalmologist and the internist was becoming every day more desirable.

Derangements of the visual system and tuberculosis of the lungs might seem to have no connection, and yet, a little thought will show that they might be closely related. Dr. Williamson said that the opportunities for tuberculous infection were enormous and the number of autopsies in which that infection was found where no such trouble had been suspected during life, was much beyond anything suspected by those who had not especially investigated the subject. A colleague of large experience in tuberculosis had recently told Dr. Williamson that he was quite confident that at least 75 per cent of all persons had tuberculosis at some time during their lives. It was evident, Dr. Williamson said, that a great many patients recovered and that the factor which played so important a part in the recovery of these cases, was the vital resistance of the body. Not only did lessened resistance play a large part in the patient's recovery in already existing infection, but also in rendering more easy an initial infection. Anything, then, which diminished the tone of the system, was an important factor in tuberculosis. Dr. Williamson stated that eyestrain might, and frequently did, play an important part in the waste of nerve force, and consequent lowering of bodily tone; so that the connection between the eye and systemic tuberculosis did not seem far distant after all.

On the authority of a vast array of modern writers, Dr. Williamson stated that the three grand essentials in the treatment of tuberculosis were fresh air, proper and abundant feeding, and rest, combined with judicious exercise; and that of these, the most important was, undoubtedly, feeding. This had been recognized since the time of Paracelsus, in the sixteenth century.

Could disturbances of the visual apparatus, the speaker asked, have any influence on the digestion? He replied by quoting from Bulson, Ambrose Ranney, and Starr, whose testimony indicated that a frequent result of eyestrain in its various fields was the disturbance of the digestive apparatus. In a large number of cases, the disappearance of the digestive disturbance was reported as following more or less promptly on the correction of the visual defect, and in many instances, a recurrence of the symptoms had been observed following the disuse of the glasses. It was abundantly demonstrated that very many cases of digestive derangements had their origin solely in error of vision. In further support of these conclusions, Dr. Williamson cited Professor Muesser, and Cohen's "Physiological Therapeutics." Since then, a healthy condition of the digestive organs was of prime importance in the successful treatment of tuberculosis, and since errors of the visual system might by reflex action, seriously impair the proper performance of the functions by the digestive system. Dr. Williamson believed that the importance of a thorough examination of the eyes in all cases of tuberculosis required no argument. He was thoroughly in accord with Dr. Lewis and thought the subject should be insistently put before the general body of medical men.

Dr. E. R. Lewis, Dubuque, Iowa, said that a widely heralded, plausible novelty had appeared in the diagnostic field, but the profession must not let seductive simplicity or dazzling possibilities lure them away from strict observance of the commandment: "Prove all things; hold fast that which is good." Dr. Lewis believed that nothing could be more unfortunate than that the impression should spread abroad among careless unscientific members of the medical profession that these tests furnished a "ready made" diagnosis; that by sending for a bottle of tablets, following directions and observing reactions they would be enabled to give an opinion stamped with the approval of the world's best investigators. He said that the tests of von Pirquet and Calmette offered no short cut to a high plane of scientific attainments; but that on the contrary, their application must be based on a thorough familiarity with the theory of immunity—and the experimental work of Ehrlich Römer, Martin and Cherry, Courmont, Doyon and the other workers in this until recently virgin field.

Dr. Lewis believed that it was premature to attempt to discuss the comparative diagnostic values of the subcutaneous injection of Koch's old tuberculin, von Pirquet's vaccination test and Calmette's conjunctival test. For purposes of such a comparison, uniformity in the essentials was a *sine qua non.* He said that of these three tests but one had been applied with anything like this uniformity by the multitude of observers whose reports must go to make up our verdict; that was the test with Koch's old tuberculin.

Dr. Lewis said that he had analyzed reports of 22 observers since appearance of the reports collated by Smithies and Walker. These included 2,080 cases in which the ocular test was applied, the reagent being Calmette's alcoholic precipitate in 750, old tuberculin in 923, new tuberculin in 10, and reagent not specified in 397.

Dr. Lewis summarized the evidence against the specificity of the reaction in these reports in the following table:

POSITIVE REACTIONS.	DISEASE PRESENT.
10 out of 17	Typhoid. Patients clearly non-tubercular.
2 out of 5	Scarlatina. Patients clearly non-tubercular.
3 out of 6	Acute bronchitis. Patients clearly non-tuberc.
3 out of 3	Acute-enteritis. Patients clearly non-tuberc.
9 out of 235	No disease. Patients apparently healthy.
Several.	Bone disease of non-tuberculous nature.
Several.	Acute gonorrheal arthritis.
	Three cases of unquestionable tuberculosis of mild type.

Dr. Lewis said that Mainini based on 308 cases, the opinion that the ocular reaction was very probably not specific; that Kleineberger, from observation of 61 cases believed that a reaction to a second instillation in the same eye expressed merely hypersensitiveness; that Stadelmann, observing a large number of cutaneous reactions, believed that this test had no diagnostic importance; that Webster and Kilpatrick concluded that the ocular reaction gave some promise of utility, but that its reliability could be determined only after much more extended research; and that Downes warned against attaching undue importance to results of the ocular test, either positive or negative.

Dr. Lewis thought that careful analysis of the evidence presented must arouse doubt as to which of the positive reactions supplied evidence of a non-specific response of the tissues to an irritant and which must be considered evidence of receptor combining with toxin.

In construing the negative reactions, Dr. Lewis said that without considering the possibility of faulty technic, two widely varying meanings must be considered: Absence of tuberculosis; or presence of tuberculosis in a body so low in resisting power as to be unable to manifest a reaction indicating specific opposition to the instilled tuberculin.

Dr. Lewis considered the question of possibility of harmful effects from applying the conjunctival test to be of very great importance. He quoted Stadelmann, Serafini, Plehn, and others as having observed a tendency on the part of conjunctivæ subjected to the Calmette test to flare up into more or less violent inflammation long after subsidence of reactionary symptoms.

In his experience, comprising observations made on 71 cases, Dr. Lewis had seen no untoward results following instillations of 0.5 per cent. and 1 per cent. solutions of the alcoholic precipitate. Most of these cases presented positive clinical evidence of the existence of tuberculosis; yet, in less than 50 per cent. was the reaction to the conjunctival test positive. Yet he said some observers reported as high as 97 per cent. positive in cases of clinically positive tuberculosis. He realized a most crying need for the adoption of uniform technic in the application of the von Pirquet and Calmette tests, and felt that as yet the tests of von Pirquet and Calmette had made no enduring place for themselves in the diagnostic system, but he hoped that finally they would fill definite places among methods of precise diagnosis.

Dr. John Green, St. Louis, said that a limited experience with the Calmette test in fourteen cases of suspected tuberculosis had impressed him with two possibilities: Excessive reaction, and the occurrence of reaction when other tuberculosis tests are negative. Illustrating the first possibility, he cited a case of recurrent uveitis, in which the fellow eye was blind. A 0.5 per cent. tuberculin instilled into the blind eye had evoked an excessive reaction and despite vigorous treatment, nearly a month had elapsed before the conjunctiva was restored to normal. As illustrative of the second point, Dr. Green referred to a young man with doubtful specific history, who presented a central chorioiditis of several months' duration; 0.5 per cent. tuberculin instilled into the normal eye had evoked, in twelve hours, a typical reaction which subsided promptly. Several days later the cutaneous method gave no reaction. Under increasing doses of the iodids, absorption took place with disappearance of the lesion, which seemed to point to the non-tuberculous nature of the process.

Mr. E. Treacher Collins, London, England, said that it had always seemed strange to him that the profession had been so loath to recognize tuberculosis of ocular origin. Every new test which was brought out for tuberculosis compelled the recognition of the fact that eye disease was more frequently tuberculous than was formerly thought.

He said that he and his colleagues had had a good deal of experience with the Calmette test in London and had found it not altogether devoid of unpleasant symptoms. He had had one case, (a mucopurulent conjunctivitis), in which the reaction lasted quite three weeks after an application of 1 per cent. solution, and two of his colleagues had had cases of chorioiditis follow such applications.

Mr. Collins said that there was one form of intraocular inflammation which could be recognized as tuberculous from its clinical character apart from these tests. This was an episcleral chorioiditis. He explained that the lymph spaces between the ciliary body and the sclera were favorable sites for the starting point of tuberculosis; that the nodule presented itself as an episcleritis; and that the tubercle then continued to spread forward in these lymph spaces and involved the ligamentum pectinatum, then presenting the symptoms of a marginal chorioiditis. Sometimes, he said, the tubercle was arrested at that point, and the condition cleared up. It was the condition often diagnosed as of rheumatic origin and he believed that the majority of these cases were really tuberculous in origin. If the course of the disease progressed unchecked it extended to the ciliary muscle and the ciliary body and a chorioiditis punctata in connection with it, and sometimes a lowering of intraocular tension, was the result. He said that sometimes a nodule formed at the periphery of the chamber, which made the diagnosis of tubercle very certain. The ciliary body might be destroyed, the function of the eye lost, and the condition end in a shrunken globe. Mr. Collins thought that it was a condition that could be recognized from its clinical characteristics alone.

Dr. A. E. Davis, New York, said that he did not believe that the relief of abnormal visual conditions was a necessary prerequisite to recovery from pulmonary disease. He said that, of course, all recognized the fact that anything that lowered the vitality in these cases had a detrimental effect on recovery, but he thought that it would be somewhat misleading to say that glasses gave such relief before further investigation on the subject with the accumulation of data of hundreds or thousands of cases, and by a number of observers. Dr. Davis asked Dr. Lewis to state what percentage of cures in these cases he attributed to the wearing of glasses.

Dr. G. F. Keiper, Lafayette, Ind., said that he also had written a paper on the Calmette reaction and now found that it needed revision. He said that the test was but a year old and that, because of that fact, it was yet too early to draw any thing in the way of positive conclusions concerning its value. Dr. Keiper stated that all observers had agreed that an eye involved in any process of disease should not have the tuberculin introduced because of the danger of excessive reaction likely to follow. It was his opinion that it would be best to make the subcutaneous, or von Pirquet test, and exclude the instillation of tuberculin in the eye itself. He thought also that it would be wise here to follow parliamentary procedure and refer the matter to proper committees in order that they might bring before the Section the results of such investigations, that they might have something definite to go on It would often save them from some distressing results in trying these new things, and it might guard against possible lawsuits.

Dr. Edward Jackson, Denver, said that Mr. Collins' remarks as to involvement of the region immediately beneath the anterior portion of the sclera had been of special interest to him in connection with a case that he now had under treatment. The patient had lost one eye about ten years ago from chronic uveitis and was now suffering from the third attack of uveitis in the second eye. Using the Calmette test in the blind eye, Dr. Jackson obtained a typical reaction that lasted sixteen days, but without anything more than what might be regarded as a rather severe reaction to the test. The patient had been placed on hypodermic use of the tuberculin—an injection once a week; there had been a slight general reaction after several of these injections, and at least three times there had appeared in the limbus three or four striking spots of hyperemia. Dr. Jackson said that he had examined them under magnification and found that they were little spots of increased vascularity right under the edge of the sclera.

Dr. Robert Randolph, Baltimore, said that they had been in the habit of using this reaction as a routine practice in the Phipps Laboratory of the Johns Hopkins Hospital, and had been much impressed with the nicety of the test. But he said that, like the other tests, for example, von Pirquet's, it was apt to mislead by revealing a condition which was clinically of no importance; in other words, a positive reaction not infrequently meant a long-healed focus or foci in an individual who was practically sound. He considered a negative reaction of more value, as indicating that the individual was probably sound. Dr. Jackson said that this test was occasionally reported as reacting positively in normal individuals, but some recent investigations, conducted in Escherich's clinic, showed that this was not so. A number of individuals in whom the Calmette test was negative, who clinically were free of tuberculosis, and who died of other diseases, were shown to be entirely free of tuberculous foci when they came to autopsy.

Dr. Nelson M. Black, Milwaukee, said that in none of the cases reported of severe conjunctivitis following the use of the ophthalmic reaction had the condition of the conjunctiva previous to the application of the test been stated. He asked if it was not possible that a bacteriologic examination of the contents of the conjunctival sac before applying the test would be wise. He thought that some of the apparently non-pathogenic bacteria frequently found in the secretion of the eye might become pathogenic or that the condition brought about in the sac by the action of the tuberculin might produce a culture medium, permitting the bacteria found in the eye to become active and produce a purulent inflammation.

Dr. A. R. Baker, Cleveland, said that he had not felt called on to use this ocular tuberculin test. He did not think that he knew enough about it; but he had found that the young physicians in the dispensary were using it and he had seen some bad reactions.

Dr. Hiram Woods, Baltimore, said that in the Children's Hospital, in Baltimore, he had followed a series of 37 cases in which the test had been used. In one child, a 0.5 per cent. solution used in one eye failed; the child had had, at the time, a small stye on the lid of the other eye. Four weeks later 1 per cent., used in that eye, was followed by a mucopurulent conjunctivitis; a small bleb appeared at the limbus which developed into one of the most obstinate corneal ulcers that Dr. Woods had ever seen. That was the only bad result. Dr. Woods said that those who had had most experience with the test warned that it should not be used in an inflamed eye. In view of what Mr. Collins had said of the extreme anterior point at which the tuberculous process might begin. Dr. Woods thought it necessary to be very careful lest an infection exist at a place where it might be overlooked.

Dr. F. Park Lewis, Buffalo, said that he had no desire to generalize on matters about which particulars were essential. He thought that perhaps the summary of his paper would lead to the belief that he considered all cases of tuberculosis as having an ocular basis; of course, he believed nothing of the kind. Dr. Lewis said that a large number of cases of refractive error might have no manifestations, but if it were possible that a certain number of cases did, the eye should be investigated in the suspected tuberculosis patients. He added that his purpose was not necessarily to have action taken by this Section, but to emphasize that such an ocular basis for tuberculosis existed and that whenever it did, it was necessary to investigate the matter and consider closely the relation of the eye to the general condition, that this relation might not be overlooked.

Dr. H. C. Parker, Indianapolis, said that he had not made over ten tests within the past two months, and in only one of these had he obtained a positive reaction. This reaction had been obtained in a nurse used as a control in whom there was not the slightest evidence of a tuberculous condition either present or past, and whose family history was excellent. In this case the reaction was violent with marked subjective symptoms, accompanied with purulent discharge, the lid showing edema and chemosis. A smear taken from the conjunctival sac showed numerous lance-shaped diplococci resembling closely and called pneumococci. Several of Dr. Parker's later negative tests were made in undoubted cases of clinical tuberculosis.

Dr. Parker said that several recent writers had become enthusiastic over the results obtained by the Calmette reaction, while others had put forth a warning note either against its reliability or its too promiscuous use by physicians possessing no intimate knowledge of ocular lesions, past or present.

Arnold Knapp's case (reported in the *Archives of Ophthalmology*, March, 1908) of interstitial keratitis following the instillation of Calmette solution in an eye previously healthy showed that the test was not without danger.

Weber, in the *British Medical Journal*, Feb. 15, 1908, reported the cases of five healthy doctors who tried the test on themselves, each obtaining a positive reaction, three of which were violent.

Dr. Parker said that it was without doubt true that much more information was necessary on this subject; also that the test should be made only in eyes showing no ocular lesion or scar on the surface of the eyeball; and that, even in such instances, the test was not free from some danger.

COLLES' FRACTURE: WITH A NEW THEORY OF ITS MECHANISM.*

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NEW YORK.

For the past two or three years an effort has been made to evolve a simple, practical method of treating this fracture, that may be relied on to give good results in the hands of the general practitioner. The subject has been so interwoven with all sorts of queer theories as to causation, symptoms and treatment, that the truth is hard to pick out. The great fault seems to be that those who have successfully treated the injury themselves have failed to emphasize the essential points of the treatment. The problem was to lay down an exact form of procedure that will enable one who seldom sees the fracture to recognize it without the aid of an *x*-ray apparatus when it appears, and to treat it successfully.

The conclusions set forth in this paper are based on experiments on the cadaver, and also on the study of about fifty cases, the greater number of which were seen at the Roosevelt Hospital Out-Patient Department, though some were observed in other clinics and private practice. Since perfecting the method we at the Roosevelt Hospital Dispensary have never had a bad result. Some of the results can be classified only as fair, but many are almost perfect, and in some cases the injured wrist can hardly be distinguished from the sound one. We regard this fracture, not as one of the most difficult and unsatisfactory to treat, but as one of the simplest and most gratifying.

Now, in the first place, let it be understood what is meant by a Colles' fracture. It is a fracture of the radius in its lowest inch, usually in the lowest three-quarters of an inch. It is this and nothing more. Often, comminution is present; usually the lower fragment is displaced, and almost invariably there is enough interlocking of the fragments (impaction) to hold them together in their new position (Figs. 4, 5 and 6). In this impaction the posterior part of the bone usually suffers more than the anterior, and the external part more than the internal. Hence the tilting back of the lower fragment (silver fork deformity), and the abduction of the hand. Frequently the styloid process of the ulna is fractured, and the triangular fibrocartilage is dislocated at the same time (Figs. 6 and 8). All this is interesting and more or less instructive, but the essential point for us to remember is that a Colles' fracture is an impacted fracture of the lower three-quarters of an inch of the radius.

The cause of the fracture is almost invariably a fall on the heel of the extended hand. This is the one point about the injury that is well understood. The position of the hand has nothing essential to do with the fracture, except that extension is the only position the hand can be in to transmit the blow to the radius when one falls on one's hand.

MECHANISM.

Many theories have been advanced as to the mechanism and as to the production of the usual deformity, but none of them has been generally accepted. I have learned more from a few simple experiments on the cadaver than from the observation of many clinical cases. A cat thrown out of the window lands on all fours and fractures no bones. A man falling on both hands rarely fractures a wrist. Hence the rarity of double Colles' fracture. It is extremely difficult to fracture the radius of a cadaver by blows on the superextended wrist. I succeeded in breaking the lower end into several pieces, but did not cause impaction. What are the reasons for this phenomenon?

1. *Why does a fall on the hand so frequently break the radius at this spot?* Because this is the weakest point between the wrist and the shoulder. The structure of the radius here is cancellous and is not arranged to withstand a force applied longitudinally. The thicker layer of dense bone just above resists the strain and is driven down into the lower fragment. At a short distance above the wrist begins the interosseous membrane, which, running downward from the radius to the ulna, transfers the strain to the latter bone, and thus relieves the upper end of the radius (Fig. 1).

2. *Why does the outer part of the bone suffer more than the inner?* Because the inner portion is held fast to the ulna, while the outer portion is free (Figs. 1 and 4), and hence swings up and meets more of the force of the blow. Not until the styloid process of the ulna is broken and the triangular fibrocartilage is dislocated is the internal portion of the bone exposed to impaction (Fig. 6). Again, the fall is usually on the radial side of the hand.

3. *Why does the posterior or dorsal aspect of the bone usually suffer more than the anterior* (Fig. 7). This has been a stumbling-block heretofore of all investigators. In point of fact the explanation is perfectly simple. A section at the usual seat of fracture shows the bone here

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* Read at the annual meeting of the Monroe County (N. Y.) Medical Society, May 19, 1908.

to be shaped roughly as a right-angled triangle, with the hypotenuse forward (Fig. 2). When a force is exerted on a line parallel to the hypotenuse, midway between it and the apex (Fig. 3), the apex will yield much more readily than the broad base. Such a force the transverse line of the carpus exerts. Again, the bone in the anterior part is much denser than that on the posterior, as the specimen (Fig. 2) will show; the soft cancellous bone in the specimen has been scraped out with the handle of the scalpel.

SYMPTOMS AND PHYSICAL SIGNS.

Pain and disability in a recent case are usually marked, and are important in the diagnosis. As a rule, the patient presents himself with an expression of pain on his face, supporting the injured wrist with the sound hand. The alcoholic aroma on his breath is not to be considered in a causal light to the injury, but as the result of an effort of the patient to drown his discomfort. He states that he has fallen on his hand, and thinks he has sprained his wrist. On examination it is noticed: 1, That the wrist is swollen; 2, that all motions in it are limited and painful; 3, that the examining finger feels a break in contour of the lower end of the radius; 4, that pressure on the radius in its lower three-fourths of an inch causes pain. This last is important. It is not necessary to use any force. The tips of the fingers should be used, and the face of the patient will usually betray the seat of the fracture, even if he says not a word.

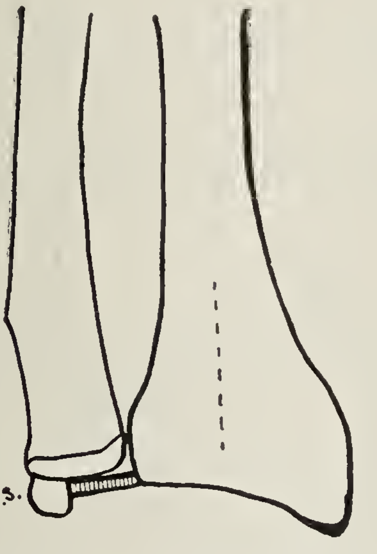
Fig. 1.—Showing normal anteroposterior appearance of lower radio-ulnar articulation. Note how radius is joined to styloid process of ulna by the strong fibrocartilage.

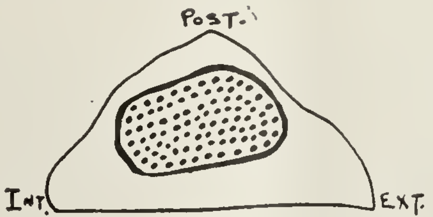

Fig. 2.—Section of bone at usual seat of fracture. Observe the thickness of the anterior wall.

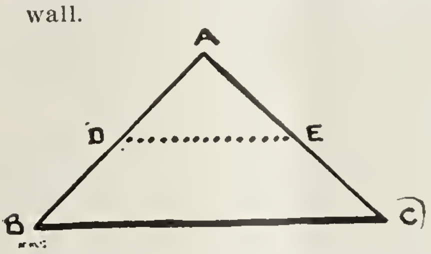

Fig. 3.—If a crushing force is applied at D E, at right angles to the plane A B C, the apex D A E will yield much more readily than will the base and sides D B C E.

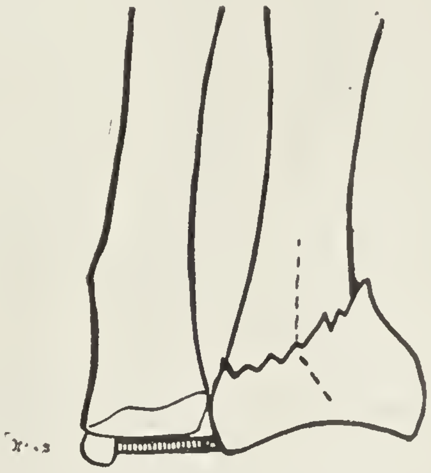
Fig. 4.—Impaction. Tilting outward of lower fragment. The radio-ulnar articulation is intact, and the styloid process remains in place.

The four principal points in the diagnosis, in the order of their importance, are: 1, sensitiveness to pressure of the lower end of the radius; 2, history of a fall on the hand; 3, disability; 4, deformity.

This is a typical picture of a fresh Colles' fracture, and these are the most important symptoms and physical signs. Others have been described, some important, some not.

There is nothing absolutely characteristic of the deformity of a Colles' fracture, except the swelling at the wrist, a thickening of the lower end of the radius (Fig. 10). This is always present. With a simple, slight impaction there will be nothing more than this. With much impaction, especially of the outer portion of the radius, the hand will be abducted, and the wrist will be widened. When the posterior part of the bone is much impacted, as it usually is, the lower fragment swings backward as on a hinge, and we have the silver-fork deformity (Fig. 9). The fingers are in semiflexion. Motion of them causes pain.

Crepitus and false point of motion occur so seldom that search for them is practically useless.

Changes may occur in the level of the styloid processes. When the radius is much impacted its styloid process rises to the level of that of the ulna or beyond it, but the swelling of the wrist and the frequent breaking of the latter process make this symptom unreliable.

Sensitiveness of the lower end of the ulna is present if the styloid process has been broken.

Ecchymosis is present in a fair proportion of cases.

Deepening of the wrinkles on the anterior surface of the wrist is often present, but is not diagnostic.

DIFFERENTIAL DIAGNOSIS.

Sprain of the wrist is much less common than is generally thought, and a patient who has suffered it rarely consults a surgeon. The disability is slight; the pain is less; motion is, as a rule, painful in one direction; little swelling is present; the characteristic history is absent; and there is no thickening or sensitiveness of the lower end of the radius. The sensitiveness is lower down.

Fracture of the carpus, most frequently of the scaphoid bone, is often mistaken for Colles' fracture. The main diagnostic point here is the extreme sensitiveness over the broken bone, usually in the region of the anatomic snuff-box. The disability is also not so great unless dislocation of the semilunar accompanies the fracture. Here extension of the middle finger will usually be especially painful. In case of doubt, examination under ether will solve the problem. If we make use of the x-ray it is well to have a picture of both wrists, otherwise slight variation in the carpal bones will escape our notice. Without the x-ray an old fracture of the scaphoid sometimes can not be differentiated from a Colles' fracture.

In case any doubt as to the diagnosis exists in the mind of the surgeon it is well to be on the safe side and assume that a fracture is present. Sometimes under ether we shall discover that the fracture is not a Colles' fracture but one of the rarer types of fracture of the lower end of the radius. Most careful examination is always warranted in these cases.

PROGNOSIS.

It is well known that some Colles' fractures without any treatment make excellent recoveries, but it is even better known that most of them do not. A good result is one that is not only good from a cosmetic standpoint, but also good functionally. With the method of treatment to be described the cosmetic results to be expected are: 1, in the young, practical perfection; 2, in older persons, thickening of the lower end of the radius, sometimes with slight radial displacement of the lower fragment, that is, dislocation of the ulna, improperly so-called. As to function, here again perfection is to be expected in the young. In older persons a good result is one with 10 to 20 degrees restriction of pronation and supination, about the same amount of restriction in extension and flexion, and practically no limitation of abduction and adduction. Perfect motion is always to be expected in the fingers, and any restriction here is to be charged to unreduced anteroposterior displacement of the fragments.

TREATMENT.

Colles' fractures when left to themselves usually leave their possessors with very bad wrists. When treated ineffectively the same thing occurs. Therefore, it is necessary, if one would treat them successfully, to fix the attention on something besides a particular form of bandage or splint. To look up a text-book, and from the mass of various appliances to attempt to choose a suitable one, is to invite confusion and disaster.

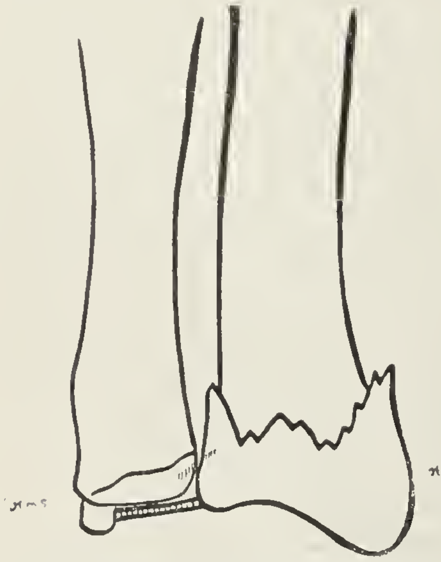
Fig. 5.—Impaction, slightly greater, of external part of bone. The radio-ulnar articulation holds fast.

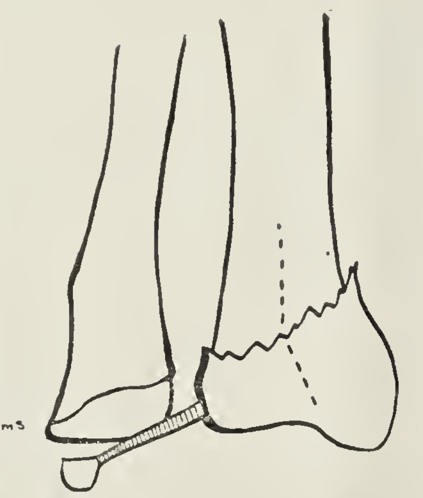
Fig. 6.—Great impaction. Tilting outward of lower fragment. Separation of bones, with tearing off of styloid process of ulna.

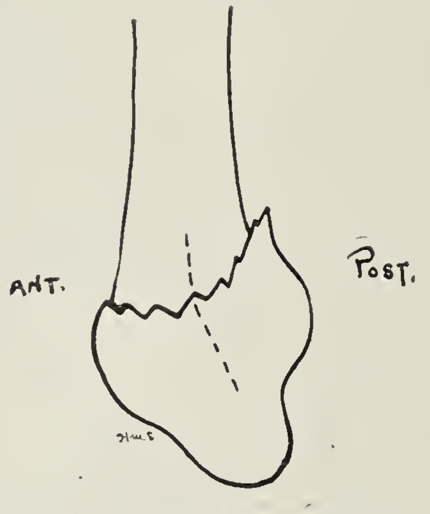

Fig. 7.—Shows tipping backward of lower fragment, and greater damage of posterior part of bone. This is the cause of the "silver-fork" deformity.

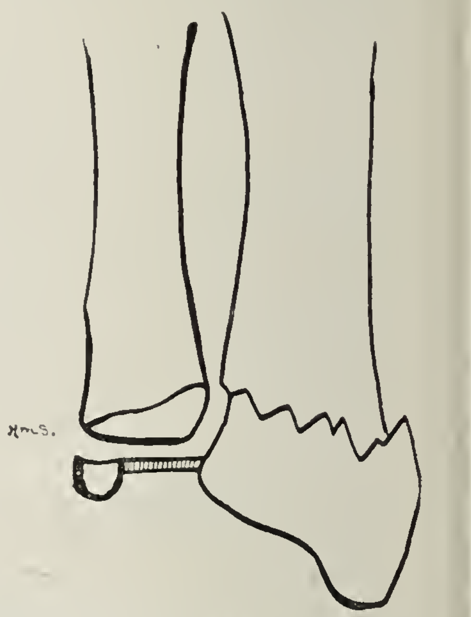
Fig. 8.—Radial displacement of lower fragment, tearing off styloid process of ulna.

The main indication is completely to break up the impaction; the second indication is to hold the fragments in place until they have united.

After the impaction has been broken up one may experiment with splints *ad libitum*. He may try early motion of the wrist, late motion, pistol splints, molded splints, tin splints, anterior, posterior, or lateral splints, and he will probably get good results. The notion that an existing impaction should be let alone is unfortunately widespread. It is wrong in theory and pernicious in practice, and can not be too strongly condemned.

This breaking up of impaction is all-important and the keynote of the treatment here indicated. With any impaction there must be deformity, and with deformity so near the wrist joint there must be loss of function. Some of these fractures have so little impaction that they might be treated expectantly, but it is almost impossible, even with the x-ray, to tell which they are. So as a matter of routine the first rule is, "Break up the impaction."

How shall this be done? Reduction without an anesthetic is always painful, often unsatisfactory, and sometimes impossible. Usually a patient, who perhaps would have acquiesced if the surgeon had insisted at first on an anesthetic, will refuse one after an unsuccessful attempt without it. The best and safest course is to insist in the first place, realizing that only one chance will be granted, and only to operate without anesthesia when the patient demands it and assumes before a witness the responsibility of a possible failure.

Even for this anesthesia we have developed a method of our own at Roosevelt Hospital. We use ether, reassure the patient, tell him to keep perfectly quiet and to ask for air if he wants it, and then we practically talk him to sleep. We divert his attention by a running fire of questions and remarks, so that he does not have a chance to be frightened and is under primary anesthesia in about five minutes. When he ceases to notice our remarks we proceed with the reduction. As a rule he is far enough out of the ether to sit up by the time we have finished the application of his dressing.

The way to break up an impacted Colles' fracture is not by traction on the hand, as was taught at college. This is unsatisfactory and often futile. Take a firm hold with one hand on the upper fragment, and with the other hand on the lower fragment and wrist. Then move the fragments backward and forward on each other until crepitus is distinctly elicited. If necessary, use the knee as a fulcrum, but at all events be sure that the fragments move on each other. Then take away the anesthetic and apply the dressing. There is rarely any tendency to redisplacement. If any such tendency exists, it may be restrained by an assistant while the bandage is being applied.

For a splint I regard the plaster-of-Paris gauntlet (Fig. 11) as superior to any other form of dressing. It can be quickly applied, it is strong, and it fits more accurately than any ready-made form of splint. I use it invariably, but do not regard it as essential.

First apply, without padding, two or three layers of gauze bandage, from the ends of the fingers to the elbow. Then, with the patient's hand in pronation and in slight flexion, put on a plaster-of-Paris bandage, ranging in thickness from about one-eighth inch at the elbow to one-fourth inch at the wrist and palm. While this is setting, grasp the fragments and assure yourself that they are in perfect alignment. Correct also any tendency to abduction, if that be present, by extreme ulnar adduction. Then trim the plaster by cutting off all below the metacarpophalangeal joints and by cutting out a wide hole for the thumb. Next cut off the superfluous part of the protruding gauze bandage, and finally slit the plaster on its radial side from top to bottom, and with bandage scissors divide every turn of the gauze bandage to guard against damage from swelling. The patient is instructed, if by any chance his fingers swell or become blue and cold, to seek immediate aid—not once has this ever been necessary in our patients—and to return on the morrow. We simply assure ourselves when he returns that all is well, and then tell him to report at the end of a week. We do not remove the dressing for two reasons: first, because we have found it unnecessary; and, second, because we have found from experience that the fracture often looks on the second day as if it were improperly set, and tempts us to interfere, when in reality everything is as it should be.

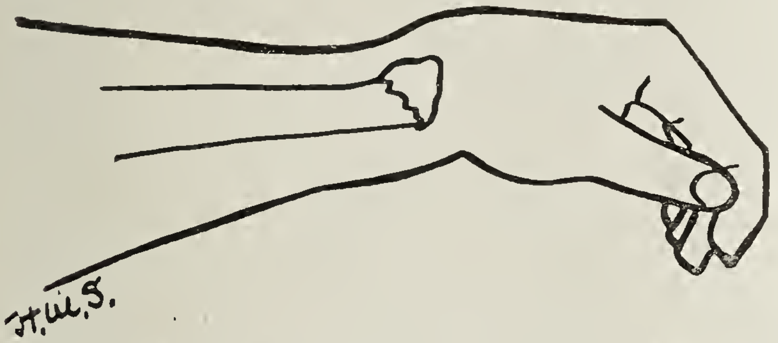

Fig. 9.—Showing how tipping backward of the lower fragment causes the "silver-fork" deformity.

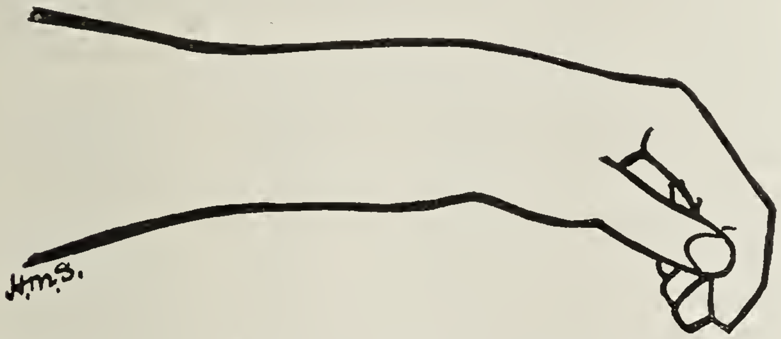

Fig. 10.—Diffuse swelling sometimes seen. Pressure backward of the wrist causes it to assume the "silver-fork" appearance.

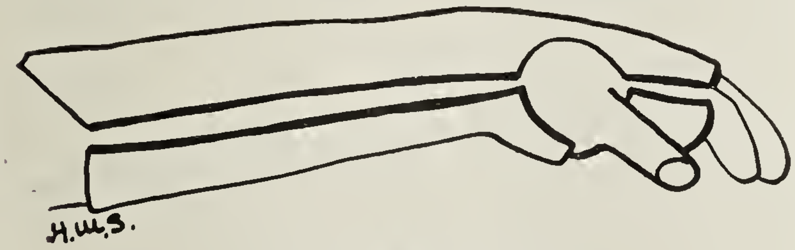

Fig. 11.—Ely gauntlet.

The length of time that the splint remains on varies greatly. Our limits are nine days to about a month. This may be left to the judgment of the surgeon; possibly it makes small difference. The younger the patient, as a rule, the shorter the time. The splint is removed by simply springing it off and is laid away against the patient's next visit. If he has had any pain, it is then applied for a few days longer.

Early passive motion of the wrist is doubtless a good thing, but we have not found it necessary. Indeed, situated as we are in the dispensary, a method of treatment which required frequent visits would be irksome to us and to the patients as well.

In the face of all the best authority in these matters, I make the statement that immobilization never causes ankylosis. If the fracture is accurately set in place and properly held there, ankylosis need not be feared. Prolonged rest will cause, of course, some stiffness when the joint is first moved, but this will disappear. Attention should be fixed on accurate adjustment, and then the results of any amount of rest need not be feared. The operator will view without alarm the stiffness and disability that will often be present when the splint is removed, for he will learn that they will disappear with time and exercise.

To sum up broadly, Colles' fracture is an impacted fracture of the lower inch of the radius caused by a fall on the extended hand, whose main symptom is sensitiveness of the lower end of the bone. It is best treated by breaking up the impaction under ether and then immobilizing the hand.

167 West Seventy-first Street.

Clinical Notes

A SERIOUS RESULT OF THE OCULAR TUBERCULIN TEST.

G. REESE SATTERLEE, M.D.
NEW YORK.
With Ophthalmic Examination by Daniel H. Wiesner, M.D., of New York.

The ocular tuberculin test has been used by me in a series of hospital cases with no bad results until the following experience. The preparation used was a 1 per cent. ocular tuberculin, prepared by the Department of Health of New York City. Drops from the same preparation and from the same bottle were instilled into the eyes of ten patients previous to this one and in two patients following, with apparently no bad results.

The patient was a school girl, 18 years of age. As a child she had whooping-cough and measles. After measles, which she had at the age of 9, she had frequent attacks of redness of the eyelids and hordeola lasting three days. Six years ago a growth, the exact nature of which was not ascertained, was removed from the pharynx. For the past four years she had had a cervical adenitis. The enlarged nodes began on the left side and grew slowly but steadily, involving also the right cervical region. Four months ago she had a severe conjunctivitis for which she was excluded from the school.

Jan. 31, 1908, examination showed hard enlargements of the pre-auricular glands on both sides. The submaxillary glands were as large as pigeons' eggs and the superficial cervical nodes also were much enlarged. The growths were tender and showed some periadenitis. There was a slight enlargement of the axillary and inguinal glands. The patient's general condition was good. The eyes were apparently normal (no ophthalmic examination was made) and there were no evidences of conjunctival irritation. The clinical diagnosis of the surgeons was Hodgkin's disease, with the probability of a superimposed tuberculosis.

For diagnostic purposes, two drops of a 1 per cent. tuberculin solution were instilled into the left eye. Four hours later the conjunctiva of the same eye was congested, the caruncle swollen and reddened, but accompanied by no pain. Eighteen hours after the test there were all the signs of a very severe conjunctivitis with swelling and edema of the eyelids. Thirty-six hours after the application, opacity of the cornea began to take place and a 1 per cent. solution of atropin was applied three times a day. There was no abatement of the conjunctivitis for three days, when it began to show signs of improvement. The patient was then discharged from the hospital on February 9.

On February 26 patient visited the eye clinic and the following report has been furnished me by Dr. Daniel H. Wiesner, to whom I am indebted for aid in following and reporting the case:

OPHTHALMIC EXAMINATION BY DR. WIESNER.

The lids of the left eye are swollen, puffed and red. The conjunctiva of both upper and lower lid is much thickened and reddened. The condition spreads to the fornix above and below, involving the ocular conjunctiva, and continuing to the cornea, causing a vascular keratitis. Under five weeks' treatment this subsided somewhat and she passed from my observation to enter the hospital for removal of the cervical glands.

A small piece of a tumor in the left cervical region was removed and showed a condition of coagulation necrosis and giant-celled formation, evidently tuberculous. No diagnosis of Hodgkin's disease could be made. No further operation was advised and the patient left the hospital. Dr. Wiesner has kept track of the patient to some extent and made the following observations on April 23:

Both lids of the left eye are greatly thickened, with a reddening of the integument, most marked on the upper lid. The border of the lids at the ciliary edge is much thickened, the lashes lost in patches and show spots of localized elevated thickening, covered by a scaly deposit. There is a constant twitching of the lids, photophobia and a considerable discharge of tears, mucus and mucopus. The palpebral conjunctiva is much thickened, swollen and of a deep red color and velvety appearance with no follicular enlargements. The thickening extends to the fornix and is so marked and extensive as to narrow the palpebral fissure and cause an inability to raise the upper lid.

The ocular conjunctiva is much injected at every part, both larger and smaller blood vessels participating, superficial as well as deep. About the cornea, at its lower, inner and outer part, there is an intensified zone of this injection. At the lower and outer margin of the cornea, on the conjunctiva, is an oval ulceration, elevated on the edges, with a broken-down top having very much the appearance of a broken-down phlyctenula after rupture. External to this is a second spot, similar to the first in every way, though not so large or marked. The whole cornea is the seat of a cloudiness and opacity, the upper part being least affected. Ramifying all over the cornea are blood vessels, large and small, which are continuous with those from the conjunctiva on all sides. The anterior chamber is deep and the aqueous humor is not clear. The iris is off-color and does not respond to atropin, showing a form of iritis. The vision is limited to simple light perception. The whole condition is that of a kerato-iritis with ulcerations of the cornea, a state probably tubercular. The right eye shows a swelling of the lids with a slight injection of the palpebral and ocular conjunctiva and a clear cornea.

REPORTED SERIOUS RESULTS.

In reviewing the literature on the very extensive practice of the ocular tuberculin reaction, very few reports of serious results are noted. Most of the cases on record are in Germany or France.

M. Kalt[1] reported the case of an instillation of a 1 per cent. tuberculin in the eyes of a man, 46 years old, suffering from iridochorioiditis of the right eye and sclerokeratitis of the left eye. Infiltration of the sclera and cornea rapidly took place, so that vision was soon reduced to light perception. In the opposite eye there had been no reaction. Stephenson[2] observed a follicular conjunctivitis, following the instillation of tuberculin, which lasted four months. Terren[3] noticed a conjunctivitis of two months' duration which finally took on the aspect of a tubercular conjunctivitis.

Wiens and Gunther[4] reported a severe reaction after an instillation of tuberculin. After six hours there was a severe irritation of the conjunctiva, with a heavy swelling and reddening of the conjunctiva palpebrarum. After twenty hours there was a severe edema of the lids and a pseudo-membrane of fibrin formation. Multiple hemorrhages then occurred in the cornea. In five days a keratitis with formation of new blood vessels occurred. The serious condition vanished at the end of the second week.

Trousseau[5] reports three serious results after the use of a 0.5 per cent. tuberculin. In one patient, with a tuberculous conjunctivitis, after a violent reaction, the tubercles spread from a limited area over the whole conjunctiva. His second case was that of a woman, 45 years of age, with a double iridochorioiditis. After the Calmette test a violent iridochorioiditis took place and the vision in the eye fell to simple light perception. The third case was that of a girl of 12 who had been, supposedly, cured of a double parenchymatous keratitis due to syphilis, but later had a "white swelling" of a joint. For diagnostic purposes, two drops of a 1 per cent. tuberculin were instilled. The reaction lasted forty-eight hours only, but six days later the keratitis reappeared. At the time of his report, the cornea was vascularized with no signs of amelioration.

Dr. Edwin Török has just described to me a case occurring in the Budapest clinic (not as yet reported) of a 10-year-old girl who had been cured one year previous of an interstitial keratitis. Six days after a drop of tuberculin had been instilled a new intense keratitis arose. It has been shown that subcutaneous injections of tuberculin will give the local ocular conjunctival as well as a general reaction in the case of tubercular eye disease.[6] Brons[7] reported a positive reaction in a case of old iridocyclitis, keratitis and scleritis. At the end of six days this turned into a corneal sclerosis which ceased at the end of a month.

In view of the severe eye conditions that have occurred following ocular tuberculin instillations and that probably have only just begun to be reported, it seems wise to caution against a practice that may cause the most serious and often unnecessary results.

60 East Seventy-eighth St.

THE FOLIN METHODS FOR ESTIMATING THE QUANTITY OF AMMONIA IN THE URINE.

WALTER H. BUHLIG, B.S., M.D.
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CHICAGO.

The growing importance of the subject of acid intoxication demands a wider knowledge of the methods of determining the ammonia in the urine. Chief among the procedures for obtaining the quantity of ammonia are those that have come from Folin's laboratory, but there are certain facts concerning them that need elucidation. Many reports in recent literature of the ammonia content of urines are made and the sole information of the means of arriving at the results is the parenthetical addition "Folin's method." On consulting some of the most modern text-books on clinical pathology, one who is not familiar with the recent literature of ammonia determinations will be much puzzled by the variation in the description of "Folin's method." For instance, in Simon's "Clinical Diagnosis," sixth edition, a certain procedure is outlined under the heading of "Folin's method;" in Hawk's "Practical Physiological Chemistry," 1907, a still different one is described, and in Emerson's "Clinical Diagnosis" another process is abstracted. It is true that, to my knowledge, there are two, and perhaps three, methods that should bear Folin's name. The object of this paper is to remove any confusion arising from the unqualified appellation in different text-books, and to show the need, in order to secure uniformity in results, for a more definite specification of the method used by any investigator.

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[1] A la Société d'Ophthalmologie de Paris, Oct. 8, 1907.

[2] The Ophthalmoscope, Dec. 1, 1907.

[3] Quoted by Trousseau in Jour. de méd. et de chir. prat., Jan. 10, 1908.

[4] Wiens u. Günther, Munich. medic. Wchnschr., 1907, No. 52.

[5] Jour. de Médicine et de Chir. Prat., Jan. 10, 1908.

[6] Török: Ophthalmologic Section N. Y. Acad. Med., May 19, 1908.

[7] Klin. Monatsbl. f. Augenheilkunde, 1908, No. 1.

The procedure described by Simon is the one announced by Folin in 1901,[1] and, because of its low results and because of an error that was not constant, was promptly discarded by him in 1902.[2] This next contribution contains the only method which should bear the title of "Folin's method," for Folin himself used it with confidence as late as 1905,[3] and in comparing it with the third method to be mentioned, Shaffer[4] specifically designates this second method as "Folin's method." The one described by Hawk is this true Folin method and the one outlined by Emerson is the same as that described by Shaffer. Though this procedure emanated from Folin's laboratory, it is better to call it the vacuum-distillation method of Shaffer. In fact, in a controversy with two German authors who published a similar method, Folin[5] gives Shaffer the credit.

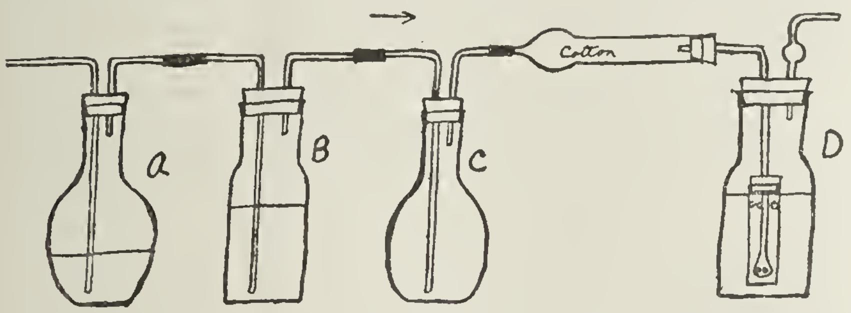

Fig. 1.—Apparatus used in the Folin method of determining the ammonia content of urine, with the addition of an air-filled flask, C.

Going over briefly the Folin and the vacuum-distillation methods, Figure 1 describes graphically the apparatus and reagents used by me in a number of quantitative determinations of ammonia in the urine. The arrangement, except for the addition of the air-filled flask C, is practically that which Folin described.[2] It was found that previous to the addition of the air-filled bottle a strong stream of air, especially with albuminous urines, would cause some of the petroleum mixture to saturate the cotton and, unless watched carefully, to come over into the standard acid; and that, with the addition of the air-filled flask, a stronger stream of air could be more confidently applied. The cotton in the calcium chlorid tube was also employed to stop any spray from arriving in the acid. Special attention is called to Folin's absorption device in the standard acid bottle. We have inserted a bulb at the end to catch any acid which might go over with the bubbling. Flask A contains dilute sulphuric acid to avoid any ammonia going into the apparatus from the air. This is no small point in a general chemical work room. In Flask B the sodium chlorid is used to prevent decomposition, the petroleum hinders the frothing and the sodium carbonate, which is added just when all is ready, is the necessary weak alkali. In Flask D, the mixture of standard acid and water must cover the upper openings of the absorption device.

Folin demands that 600 to 700 liters of air be delivered per hour. Inasmuch as it is somewhat impracticable to measure the volume passed by any given pump, it is necessary to test any suction device to conclude whether all of the ammonia is obtained. At first, in preliminary experiments, a regular size Chapman pump was employed and a solution of ammonium chlorid was used to test its efficiency. Even with the pump going six hours, practically all the readings were too low. A large steam suction pump was finally employed and, excepting errors which ranged from 0.5 to 2 per cent., all the ammonia was delivered from the standard solution in two and a half to three hours. A large size Chapman pump and a strong stream of water may remove all the ammonia from a given mixture, but some control of any apparatus must first be had. Alizarin red in 1 per cent. solution was used as indicator. The change from yellow to red, the end reaction, is very sharp.

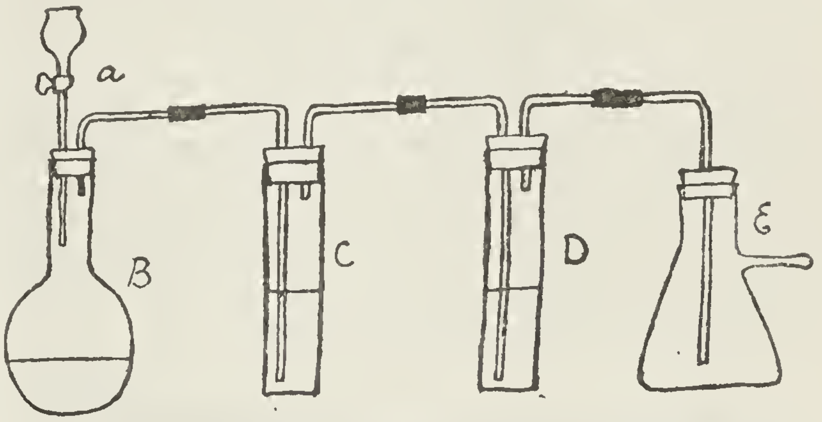

Fig. 2.—Apparatus used in Shaffer's vacuum distillation method.

Figure 2 illustrates the apparatus necessary for the employment of Shaffer's vacuum-distillation method. This is copied from the sketch in Emerson's "Clinical Diagnosis," page 119, and is added for the sake of clearness. The advantage of this procedure is the saving of time, half an hour sufficing for the whole operation. The principle is this: The ammonia is distilled over in a very short time with gentle heat and lowered pressure. The sodium carbonate is added last. The stopcock, A, is then closed, the flask B is put into a water bath at 50° C, and the pump started. The ammonia distills over rapidly into the acid in bottles C and D, when suction is made through the filtering flask E. Fifteen minutes' heating usually suffices. The stop-cock, A, which, as pictured, does not reach to the mixture, is then opened and normal pressure is restored. Alizarin red, as with the Folin method, is used as an indicator, special emphasis in either case being placed upon the end reaction, which is the first change from yellow to red.

I have not used this vacuum-distillation method in my ammonia estimations. Several, perhaps more, determinations may be made simultaneously in the Folin way, several sets of apparatus being connected with one pump of required strength. The saving of time, which is a factor in the Shaffer procedure, is not then so prominent an advantage over the Folin method. The vacuum-distillation method needs watching, which is not necessary when one is acquainted with the Folin process.

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[1] Ztschr. f. Physiol. Chem., xxxii, 515.
[2] Ztschr. f. Physiol. Chem., xxxvii, 161.
[3] Am. Jour. Physiol., xiii, 45.
[4] Am. Jour. Physiol., viii, 330.
[5] Ztschr. f. Physiol. Chem., xxxix, 477.

With either method the ammonia is computed as follows: Suppose that 30 c.c. n/5 H_2SO_4 is used. At the end of the process, the acid is titrated with n/5 NaOH. Suppose that it takes 24 c.c. of the alkali. Then 6 c.c. of n/5 acid was neutralized by the ammonia. This corresponds to 12 c.c. of n/10 acid, and, assuming that 50 c.c. of urine was employed in the actual determination, equals, in 100 c.c. of urine, 24 c.c. of n/10 acid, which neutralizes 24 c.c. of n/10 NH_3, in terms of which ammonia is nearly always recorded. One c.c. of n/10 NH_3 contains 1.7 mg. Therefore the amount of NH_3 in 100 c.c. of urine is 24 times 1.7 mg. or 40.8 mg.

5533 Union Avenue.

A NEW INSTRUMENT FOR GRASPING THE TONSIL PRELIMINARY TO COMPLETE ENUCLEATION.

GEORGE L. RICHARDS, M.D.

FALL RIVER, MASS.

Nearly all operators are now agreed that in the surgical treatment of diseased or hypertrophied tonsils, what is desired is to enucleate the gland and not merely to clip off a portion of it. To accomplish this satisfactorily it becomes necessary to have some instrument with which to grasp the tonsil during the preliminary dissection and detachment from its bed.

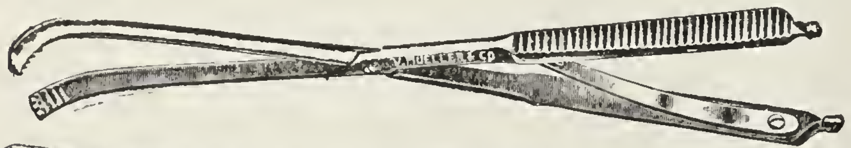

Fig. 1.—New tonsil forceps, open.
Fig. 2.—New tonsil forceps, closed.

Various forms of instruments for grasping the tonsil have been devised, but I have found them all unsatisfactory for one or the other of two reasons. First, the jaws tear the tonsil or do not hold it well, or, second, the form of the handle is such that after the dissection is complete the instrument has to be detached to allow the enucleating instrument, be it snare or tonsillotome, to be placed over the tonsil. It is then necessary to manipulate the forceps and to grasp the tonsil through the ring of the instrument, a procedure somewhat difficult in the case of small and submerged tonsils.

I have attempted in the instrument here illustrated to overcome both of these difficulties. The jaw has considerable bearing surface and will hold without tearing if the tonsil is properly grasped. The handle will allow the ring of any tonsil instrument in the market to be passed over it while *in situ*. The lock is one that holds, yet it can be instantly released; and the tonsil, once grasped, can be held by this instrument during all the processes of dissection. After the tonsil is properly dissected out in accordance with the special technic of the operator it is grasped with the forceps, the detaching instrument is then placed over it, traction made by the forceps and the tonsil then detached by the tonsil instrument. Should there be any hemorrhage the forceps acts as a good hemostat, since it will hold and not tear the vessel. The ligature can be thrown over it just as over any artery forceps. The curve is one well adapted to tonsil work.

To one accustomed to use a tonsil forceps of the scissors handle type, this instrument will at first feel awkward to the hand. In using, the forceps should be held with the tips of the thumb and fingers and not grasped with the whole hand, and the tonsil engaged in its vertical diameter.

I have had two sizes made, although the larger one will probably answer all purposes. Should a small fragment be left, the smaller size is admirably adapted to grasping it without there being much danger of injuring the pillar.

84 North Main Street.

TREATMENT OF GONORRHEA IN THE FEMALE.

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PROSSER, WASH.

As the treatment of gonorrhea in the female is frequently unsatisfactory on account of its liability to recurrence, I regard a recent experience as at least an innovation and one which may point the way to a satisfactory solution of the question of treatment.

History.—The patient had just completed an abortion at the second month. She had complained for a period commencing two weeks after her marriage of a continuous smarting on urination and severe tenderness about the introitus vaginæ, and also of the presence of a purulent vaginal discharge.

Examination.—The introitus was red and very tender, so much so that it was with difficulty that a virgin-size speculum could be introduced. About the cervix, which was red and not eroded, was about a dram of pus containing a pure culture of gonococci. The tubes and ovaries were apparently not affected; the meatus urinarius was red but no pus could be expressed.

Treatment.—This was begun March 4, 1906, consisting of the application of a 1 per cent. solution of silver nitrate to the vagina and cervix every other day. By April 9 it was possible to use a large speculum without causing discomfort. At this time a thread of mucopurulent material wiped from the external os contained large numbers of gonococci. About April 30, gonococci ceased to appear in the vaginal secretions. This date just preceded the regular menstrual period, and at the first treatment afterward gonococci were abundant and continued to be present, though in lessening numbers, until May 30.

In spite of treatment being continued through the next menstruation they again appeared on June 16, 17 and 18. On June 19 the smear showed an absence of gonococci. The vagina at this time was now inoculated with normal vaginal secretion—that is the secretion from a normal, healthy vaginal wall. On June 21, 22 and 23 Doederlein's bacillus (the non-pathogenic bacillus inhabiting the normal vagina) was present in increasing numbers to the entire exclusion of the gonococci. By June 25 the vaginal bacilli were present in great numbers and the patient was discharged, stating that she felt "perfectly natural," a condition which had been absent since the time of infection.

This treatment by inoculation was based on the assumption that the field had been swept of its chief defense, viz., the Doederlein bacillus, and had been possessed by the gonococcus. Finding it impossible to eradicate entirely the gonococci, I determined to try to subject this pathogenic organism to the greatest possible discomfiture and then artificially to restore the normal vaginal bacillus, hoping thereby to complete the extermination of the gonococci. In this I was not disappointed.

It would seem that the same reasoning might be employed in the case of other infections of the genital tract when its protector has been totally destroyed. I think it is not known what effect the healthy vaginal flora has on the parts of the tract farther up. This might with profit be determined.

A CASE OF ARTHRITIC PURPURA.

B. P. ROSENBERRY, M.D.
ARCADIA, WIS.

Patient.—Boy, aged 6, of German parentage.

History.—Father of a very nervous temperament; mother subject to chronic stomach trouble and constipation. No history of any hemorrhagic diathesis. Patient had mild attacks of spinal meningitis when five months old but made rapid and good recovery. Never seriously ill since, though he had frequently had mild attacks of indigestion accompanied by fever, lasting a day or two. Extremely nervous temperament and very active physically. Never had rheumatism of any form. For the past two or three weeks patient had complained at various times of pains in the ankles, knees and elbows, accompanied by slight swelling, tenderness on pressure but no redness. This condition would persist for a few hours and then disappear. A week before I saw him a rash, in all respects similar to the one described below, but discrete, appeared on both legs and thighs. This gradually faded until it could be seen only as a faint yellowish discoloration. Four days previous to my seeing him this rash appeared on the left buttock and is now the size and nature described below.

Examination.—When I first saw the patient early in the morning he complained of considerable pain in the stomach, was nauseated and had vomited a small amount of greenish mucus. Pulse and temperature normal. Examination revealed nothing abnormal in chest or abdomen aside from slight tenderness over stomach. There was no enlargement of spleen, liver or lymph glands. Over the left buttock there was a confluent hemorrhagic rash covering an area the size of palm of hand. It was made up of papules varying in size from a pinhead to a split pea, did not disappear on pressure and was not accompanied by any subjective symptoms.

Course.—On the afternoon of the same day there was a recurrence of swelling and pain in the ankles to such an extent that he could not stand. This lasted but a few hours. Four days later another discrete eruption of the same rash appeared on both legs accompanied by pain in ankles and knees. As before the pain and swelling disappeared in a few hours and the rash, after persisting a few days, gradually faded. During the week following my first visit there were occasional attacks of nausea and vomiting, especially after breakfast. After this time the patient quickly regained his usual spirits and strength and at the present time six weeks later, is apparently as well as ever. Urine: Specific gravity, 1.034; acid, no albumin nor sugar; indican, a trace; a few squamous and round epithelial cells, few cylindroids and few red blood cells. Blood: Reds, 5,520,000; whites, 19,500, hemoglobin, 60 per cent. (Tallquist).

Treatment.—For the acute pain in the stomach chloroform anodyne in gtt. vii doses was given. For the acute joint symptoms, aspirin gr. iii and acetphenetidin gr. i, were given, both of which remedies promptly had the desired effect. Two days after the first visit patient was put on full doses of Fowler's solution before meals and calcium chlorid gr. v, after meals, the latter to be continued for four days only. After ten days Fowler's solution was discontinued because of stomach irritation and Blaud's pills, gr. iii, given three times a day, which treatment is being continued.

[Please read the editorial on the Index on page 2138.]

CASE OF EXTRAUTERINE PREGNANCY AT FULL TERM.

SUCCESSFUL DELIVERY BY OPERATION.

A. L. BLESH, M.D.,
AND
HORACE REED, M.D.
OKLAHOMA CITY, OKLA.

Patient.—Mrs. R., mulatto, aged 24, in the service of Dr. Conrad, was seen Aug. 3, 1907.

History.—Patient had one child, aged 3, which had been delivered normally. Menstruation ceased December, 1906, and in January, 1907, there was nausea and frequent pains in the hip and back accompanied by slight vaginal discharge. Movements were felt about March 1 and these rapidly became stronger and painful. Indigestion had been constant since the beginning of pregnancy and for the first five months she was constipated. Six days before she was seen there were paroxysmal abdominal pains which increased in severity for three or four days and then gradually subsided. The pains were described as originating in the region of the stomach and radiating to the spine and coming on at intervals of 15 or 20 minutes. The pains having ceased, the colored midwife advised calling in a physician and Dr. Conrad, who was called, diagnosed abdominal pregnancy and advised immediate operation.

Examination.—Patient, who was poorly nourished and weighed about 110 pounds, had the appearance of being pregnant at full term. Position of the child was easily determined through the thin abdominal walls. The vagina was relaxed and the hand was easily introduced; the uterus was located above the pubes and slightly to the right of the median line; the cervix admitted two fingers. The head of the child presented in the pelvis behind the uterus.

Operation.—An incision was made through the left rectus from the level of the umbilicus to the pubes. The sac containing the child was easily separated from the peritoneum and a child, weighing 5¼ pounds, was extracted and passed to the attending physician, who, after considerable difficulty, resuscitated it. There were three or four pints of fluid in the sac. The cord was ligated close to the placenta and removed and redundant portions of the sac were cut away with scissors. The intestines were pushed upward and outward by the placenta, which was firmly attached to the mesentery of the small intestines, and the colon on either side was hidden by it; no attempt was made to detach the placenta. The margins of the sac were stitched to the parietal peritoneum and the cavity, at the bottom of which rested the placenta, was filled with gauze; two or three interrupted sutures taken at the upper angle of the abdominal opening completed the operation. The lower angle of the wound for about three inches was left open.

Postoperative History.—Convalescence of the mother was satisfactory and she left the hospital in four weeks with the placenta not yet detached. She returned four weeks later, when the placenta was removed without hemorrhage. On April 4, 1908, she was in good health and the child, which weighed 18 pounds, was thriving.

Fetid Non-gangrenous Bronchitis in Children.—E. Gaujoux thinks that we should distinguish three clinical forms of fetid bronchitis in children, as he illustrates by 10 examples, including 5 from his own experience. The only lesions are those of catarrh of the bronchi; the decomposition of the stagnating mucous secretions is alone responsible for the fetid odor. In the acute form the aim should be to promote expectoration and modify the secretions. In his communication in the *Annales de Méd. et Chir. Infantiles*, January 1, he states that he has obtained the best results with sodium benzoate and hyposulphite every two hours. In recurring forms, if drugs fail, others have reported good results from intratracheal injections of peroxid of hydrogen and mentholized oil. Good results have also been obtained with continuous vaporization of a 5 per cent. solution of carbolic acid. General treatment is of equal importance, with an alcoholic or dry rub of the entire body morning and evening.

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[*For other information see second page following reading matter.*]

SATURDAY, JUNE 27, 1908.

[The large amount of space occupied by the index this week makes it necessary to omit some departments and to curtail all.]

THE LITERATURE INDEX: SHALL IT BE CONTINUED?

Once more we take the opportunity afforded by the publication of our half-yearly Index Number to ask particular attention to that portion of the index which covers the titles, subjects and authors of all important contributions to medical literature during the preceding six months. The general index, being simply an index of matter appearing in our own pages, differs in kind in no way from the index that accompanies the close of the volume of every well-conducted periodical. But the Index to Current Medical Literature, to which we here refer—which occupies more than two-thirds of the pages devoted to the index this week—is an entirely different thing. As is well known, we publish in our Current Literature department weekly the titles of the original articles appearing in the important American and foreign medical journals. In the index to these titles is afforded a ready means of ascertaining what has been published during the preceding six months on any given subject, and by whom written, as well as where the original paper may be found. This index is not, of course, so complete as the *Index Medicus,* but it is sufficiently complete for all but the most exhaustive research.

A reprint of this index, with the titles, makes a handy guide to current medical literature which can be obtained at trifling cost.[1] That it is a practical index is shown by the fact that it is in constant requisition, not only in every department of this office, but also in nearly all medical libraries. These facts, however, are not sufficient of themselves to justify its continued publication; it is from the profession at large, if at all, that it must find the justification for its existence. We are in doubt, however, whether the utility of this work is appreciated by the profession at large in any degree commensurate with the labor, both editorial and mechanical, as well as with the expense, involved in its production. The labor, great as it has hitherto been, is continually becoming greater, not only on account of the increasing material to be dealt with, but because growing experience, so far from rendering the work automatic, demands more and more concentration on it with a view to originating improvements and eliminating defects of method.

To satisfy ourselves as to the desirability of continuing this index we earnestly request those of our readers who find the Index to Current Medical Literature of distinct value to take the trouble to communicate that fact to us (a postcard will serve), together with criticism or suggestions for improvement. In this instance we shall regard silence as indicating unconcern in the matter. This issue consists of about 54,000 copies; if we do not receive favorable responses from five hundred of our readers—less than one in a hundred—we shall take it that the Index to Current Medical Literature is not desired by a sufficient number to warrant its publication. Any recipient or user of The Journal is entitled and requested to respond to this invitation.

TYPHOID AND THE GALL TRACTS.

At the last annual meeting of the German Pathological Society one of the sessions was occupied with a symposium on the relation of typhoid infection to the gall tracts,[1] a subject with which we in America feel particularly conversant because of the abundant contributions by our pathologists, surgeons and clinicians to its elucidation. Fortunately for our interests, one of the speakers, Chiari, is exceptionally well acquainted with American work and literature, and gave full credit for our investigations. It is interesting to know that the important relation of typhoid infection and gall-tract disease, which has only recently become generally appreciated, was not unknown to the earlier clinicians and pathologists. Louis himself in 1829 described a case of cholecystitis complicating typhoid, and Frerichs and Rokitansky were familiar with this condition. In 1876, Hagenmüller was able to collect 16 cases described in the literature, and he should be given credit for suggesting at that early date that typhoid cholecystitis might result in the formation of gallstones. Since the discovery by Fütterer in 1888 of the typhoid bacillus in the gall bladder of patients dying of typhoid the investigations of the gall bladder in typhoid have been very numerous, and have resulted in much valuable information.

The chief developments are briefly as follows: Typhoid bacilli are present in the gall bladder almost or quite constantly in all cases of typhoid infection, no matter whether the infection is of the usual type with intestinal ulcerations or some atypical form such as typhoid septicemia without intestinal lesions; the same biliary invasion also occurs in infections with the paratyphoid group. The bacilli usually reach the gall bladder and ducts either through the bile coming from the liver or directly from the blood, and not by ascending from the intestine, for the typhoid bacilli are commonly found in pure culture in the bile. As a rule, this invasion of the bile tracts does not lead to anatomic alterations or clinical manifestations; some pre-existing injury is usually required to cause typhoid cholecystitis, gallstones especially being a common cause of local inflammation. On the other hand, the tendency of typhoid infection of the gall bladder, even when not causing clinical evidences of cholecystitis, to result in subsequent formation of gallstones is generally recognized; however, the finding of typhoid bacilli within gallstones does not prove that the concretions are the result of this infection, for bacilli may enter old gallstones from the bile. After infection of the gall bladder has once occurred the bacilli may live there indefinitely, and either cause relapses of the typhoid in the patient, or, multiplying and being discharged for years, make him a "typhoid carrier" and a grave menace to society.

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[1] To render it handier for research we reprint in a separate pamphlet, The Guide to Current Medical Literature, all the indexes, with the addition of the tables of contents of the different medical journals as they appear weekly in our department of Current Medical Literature. By this means, the information desired can be obtained without handling the bulky bound volumes or searching through the individual unbound issues of The Journal. The price of these reprints is fifty cents a copy or seventy-five cents a year.

[1] Verhandlungen der Deutschen Pathologischen Gesellschaft, 1908, xi, 143-174.

If we consider the important anatomic and circulatory relations between the intestines and the liver, the frequency of serious involvement of the liver and bile tract in typhoid is really remarkably small. In 2,000 autopsies on fatal typhoid cases in Munich there were found but twelve complicated with liver abscess, five with ulcerative processes in the gall bladder, and three with acute yellow atrophy, while jaundice was present in but twenty-two cases.

While for the patient himself these various hepatic and biliary lesions are the most serious results of the entrance of typhoid bacilli into the bile, the community at large is chiefly concerned with his persistence in breeding bacilli in his gall bladder. Kayser found that of 101 persons who had had typhoid during 1903-4-5, three were still discharging typhoid bacilli with the feces in 1906, and the menace of these persons to public safety is now well understood. Of 386 cases of typhoid observed in one sanitary district in Germany, in which the source of infection was carefully sought, no less than seventy-seven, or 20 per cent., could be traced to "typhoid carriers." But even after the typhoid carrier has been detected the elimination of his undesirable function is a difficulty that has yet to be surmounted. Protracted isolation of a healthy person for the safety of the community is not easy of accomplishment, and the problem consists of getting rid of the biliary infection from which the bacilli come. If the patient suffers from gallstones it may be possible to operate and to eradicate simultaneously the gall bladder and the typhoid bacilli, but it is not likely that without some such biliary disease the patient would submit to operation. It therefore remains to be seen if the biliary antiseptics can accomplish disinfection of the gall bladder, although this does not seem any too probable; or perhaps success may be attained by increasing the patient's bactericidal powers by means of immunizing procedures. This is a problem of sanitation that seems destined to confront our public health officers very frequently in the future.

GOOD WAY TO COMBAT QUACKERY.

That the fight against quackery is hindered by the fact that a number of low grade medical colleges are still allowed to exist is shown by the following taken from a paragraph entitled "Half Baked Doctors" in the Kansas City *Newsbook:* "Every fight against quackery is weakened by the fact that a large majority of regular physicians are not much better qualified than the charlatans and are only superior to them in that they do not advertise horrible lies. The quacks realize this and use it vigorously in defense of themselves. And the people, appreciating the truth of the charge, shrug their shoulders and mutter about it being six of one and half a dozen of the other. Until the medical profession frees itself from incompetency it will always be hard for it to attack the evil of charlatanry. And the sooner they get about it the better." There is a large element of truth in the above. While it is an exaggeration to say that "a large majority of regular physicians are not much better qualified than the charlatans," the statement would be true if limited to the graduates of some schools. There are so-called medical colleges in Chicago, not to mention other places, that are little better than diploma mills, and so long as such are tolerated by licensing boards, so long will lay journals be excusable in making such statements as we have quoted.

THE IMPORTANCE OF THE OBSERVATION POINT.

The superior facilities for forming a correct judgment afforded to the man on the spot, over those at the disposition of observers at a distance, however theoretically competent, are too liable to be forgotten. Dr. F. J. Poynton,[1] in discussing the question of rheumatic fever in childhood, which seems to be much more common in England than in this country, criticizes the suggestion of an American writer that English physicians have manufactured a disease in children, which they call rheumatism, by fitting together all manners of divers symptoms, and that this method has been adopted to account for the disease up to the age of 12. Dr. Poynton says: "No one in this country (England) has any qualms as to the reality of the disease from 5 to 12 years, and this unguarded writing can only be a warning to those who live in a different country and attempt to criticize the clinical acumen of physicians who have special advantages in any particular line of investigation." This criticism might well be taken to heart by physicians the world over.

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[1] Quarterly Jour. Med., April, 1908.

[Please read the editorial on the Index on page 2138.]

Medical News

CALIFORNIA.

University President Given Health Control.—On June 9, an amendment was passed to the code rules of the Regents of the University of California, to the effect that "the President shall have control of all matters of health and sanitation at the University."

Commencement.—The twelfth annual commencement of the College of Physicians and Surgeons, San Francisco, were held May 14, when degrees were conferred on a class of sixteen by Dr. Winslow Anderson, president of the institution. The principal address was made by Rev. C. Calvert Smoot.

Personal.—Dr. Charles E. Stone, Marysville, has been reelected physician of Yuba county.——Dr. C. K. Lindsay has succeeded Dr. W. J. Hanna as assistant physician of Sacramento.——Dr. George Martin, Los Angeles, recently returned from Europe.——At a recent meeting of Riverside County Medical Society, a gold-headed cane was presented Joseph Baird.——Dr. J. C. Thomas has been elected president, Dr. George Worthington, secretary; Drs. S. B. Swift, W. M. Meek and Peter J. Williams, members of the Board of Health of Marysville.——Dr. Alexander E. Garceau, San Francisco, has gone to Europe.——Dr. John Clark, Gilroy, has gone to Boston for postgraduate work.

COLORADO.

Loses Suit, Small Damages.—Dr. J. H. Ferguson, Colorado Springs, who was sued for $5,000 by A. Conacher for alleged malpractice, in using instruments said not to have been properly sterilized, is said to have lost the suit and to have been assessed $138.75 damages.

State Hospital Overcrowded.—The State Insane Hospital, Pueblo, is said to be greatly overcrowded, and much dissatisfaction is felt in those counties that are compelled to keep their insane in unsuitable quarters for lack of state hospital room. An effort will be made to induce the next legislature to make a suitable appropriation for a state hospital for the insane near Denver.

Tuberculosis Congress Branch Established.—Incorporation papers have been taken out for the Colorado State Organization of the International Congress on Tuberculosis. Dr. G. Walter Holden, Denver, is chairman of the organization; Dr. Richard W. Corwin, Pueblo, vice-chairman; Dr. Harry W. Hoagland, Colorado Springs, second vice-chairman, and Dr. Moses Collins, Denver, secretary.

Woman's Medical Societies.—At the meeting of the Woman's Medical Society, Denver, Dr. Mary Hawes was elected president and Dr. Mary Stratton, Denver, vice-president.——The Woman's State Medical Society, has been incorporated by Drs. Eleanor Lawney, Frances G. Buchanan, and Alice B. Guthrie. The object of the society is to "bring medical women of Colorado into communication with each other for their mutual advantage and protection of their interest."

Personal.—Dr. C. B. James, assistant health commissioner of Denver, has been discharged on account of necessity of curtailing expenses.——Dr. William W. Arnold, Colorado Springs, is reported to be seriously ill with pneumonia.——Dr. Ernest H. Cox, formerly of Cleveland, has succeeded Dr. J. P. H. Ruddy, resigned, as chief resident physician of Denver County Hospital.——Dr. William Wood, physician for the Victor Coal Company, Bowen, is reported to be critically ill with tuberculosis.

Hospital Notes.—The Blanche Roosevelt Hospital Association for Children, Denver, is about to be incorporated under the name, Children's Hospital Association.——A labor hospital is to be erected at Eighth avenue and Sheridan boulevard, Denver, to cost $8,500.——Del Norte Sanitarium and Hospital is to be constructed under the management of Mother Superior Bernard of Kansas, and when completed, will be under the management of the Sisters of St. Joseph.——Three thousand acres of state land, fronting on Amity Lake, Kiowa, have been sold Dr. N. M. Burnett, Hazelton, Kan., the head of a syndicate, which, it is said, will build a large sanitorium at the cost of $100,000.

CONNECTICUT.

Personal.—Dr. Walter G. Murphy will soon return to Hartford after two months' absence in Europe.——Dr. Ernest O. Winship, Rockville, has disposed of his practice to Dr. Wright B. Bean, South Norwalk, and is about to leave for the Philippine Islands.

Tuberculosis Ward Completed.—The new sanitary ward of the Brookside Home, Waterbury, is completed and will be ready for occupancy as soon as it is equipped with fire escapes. It is the plan of the department to house tuberculosis patients in the new ward, which will contain 20 beds.

DISTRICT OF COLUMBIA.

Against Rabies.—At the request of the President, the commissioners have ordered that all dogs in the district be muzzled for the next six months. Since the first week in January 43 persons have been bitten by dogs suffering from rabies.

Health Report.—According to the health and mortality record for the week ended June 13, there were 137 births and 102 deaths. Of the births, 100 were white and 37 colored. Of the deaths, 64 were white and 38 colored. There has been a decrease in contagious diseases.

Personal.—Dr. H. W. Moffitt, ambulance surgeon of the Casualty Hospital, Washington, was injured recently in a collision between a street car and the ambulance in which he was riding.——Dr. Joseph J. Kinyoun has been appointed bacteriologist in the contagious disease service of the Washington health department.

"Tag Day" Receipts.—The recent "tag day" for the benefit of the Playgrounds Association, necessitated by the failure of Congress to provide an appropriation, has resulted in the addition of over $8,000 to the treasury of the organization and furnishes ample funds for the proper maintenance of the children's playgrounds throughout the summer.

Graduating Exercises.—The fifty-ninth commencement of the Georgetown University School of Medicine was held June 11. There were 27 graduates in medicine. Dr. William A. White, Superintendent of the Government Hospital for the Insane, delivered the address to the graduates. The announcement was made that twenty-six members of the graduating class had received hospital appointments.

Tuberculosis Hospital.—The new tuberculosis hospital has been formally accepted by the commissioners and will be opened in a few days. The following physicians have been recommended for positions on the attending staff: Medical service, Drs. Thomas A. Claytor and John D. Thomas; laryngological service, Drs. Charles W. Richardson and Reginald R. Walker; and surgical service, Drs. George Barrie and Luther H. Reichelderfer.

"Safe and Sane" Fourth.—The superintendent of police has recommended to the Commissioners that, in the future, dealers will be permitted to sell fire-works on two days only. He is of opinion that shortening the period for selling and storing these explosives will eventually bring about the almost total abolition of sales. The beneficial effect of limiting the size and composition of firecrackers placed on sale last year was shown by the the extremely small number of accidents and by these increased restrictions he hopes eventually to eliminate boisterous and dangerous demonstrations on the national holiday.

ILLINOIS.

Cribside Hospital Opened.—The Babies' Pavilion of the Children's Memorial Hospital, funds for which were raised in the Kirmess, in January, two years ago, was formally opened June 23.

Convicted of Manslaughter.—Mrs. Johanna White, Chicago, aged 71, charged with causing the death of a woman at New Berlin, by performing an illegal operation, is said to have been found guilty of manslaughter by a jury in Judge Chetlain's court, June 12.

Chicago.

Personal.—Dr. and Mrs. Edward L. Moorhead and son, Chicago, sail for Europe, June 30.——Dr. Moses M. Baumgartner, Freeport, has been given the degree of Master of Science by the Leander Clark College, Toledo, Iowa.

Bequest to County Hospital.—The officials of Cook County Hospital have been notified of a bequest of $1,000 from the estate of the late Esther Tuttle Pritchard, who died recently at Kokomo, Ind. This is said to be the first bequest made to Cook County Hospital.

Election.—The annual election of the Chicago Medical Society, June 17, resulted as follows: President, Dr. Alfred C. Cotton; secretary, Dr. Merlin Z. Albro; councilors-at-large, Drs. Elmer E. Henderson, Henry B. Favill, J. Chase Stubbs, C. Hubart Lovewell, and George H. Weaver; and alternate councilors-at-large, Drs. William M. Harsha, Clark A. Buswell, Albert E. Mowry, Henry W. Cheney, and Paul F. Morf.

Communicable Diseases.—During the week ended June 20, there were 405 cases of communicable diseases reported to the Chicago Department of Health, including 238 cases of measles; 81 of scarlet fever; 56 of diphtheria; 35 of tuberculosis; 20 of typhoid fever; 16 of whooping cough; 18 of chickenpox; 4 of smallpox, and 5 diseases of minor importance. There are now 7 patients in the Isolation Hospital.

Low Chicago Death Rate.—The total deaths from all causes for the week ended June 20, was 455, equivalent to an annual mortality of 10.95 per 1,000. The mortality for the preceding week was 12.25 per 1,000, and that for the corresponding week of last year was 15.02 per 1,000. Consumption caused 169 deaths during the week; followed by pneumonia with 42; violence (including suicide) with 38; heart diseases, with 36; acute intestinal diseases, with 32; and nephritis, with 31.

MARYLAND.

Baltimore.

Right of Way for Physicians.—The police marshal has called attention to the fact that physicians, on securing permits from the police department, may drive carriages through any procession and have right of way second only to those of vehicles carrying the United States mails.

Personal.—Dr. Harry T. Marshall, Baltimore, recently professor of pathology and bacteriology in the Philippine Medical School, Manila, has been elected professor of pathology at the University of Virginia.——Col. William C. Gorgas was entertained at dinner by Dr. William H. Welch, June 19.

Commencement.—Johns Hopkins University Medical Department held its annual commencement exercises June 9, at which a class of 61 was graduated. Prof. Henry T. Bovey of McGill University, Montreal, delivered the doctorate address in which he made a plea for the broadness of mind and the value of imagination to the technical man.

Gift for Johns Hopkins.—Mr. Henry Phipps, the steel magnate and philanthropist of Pittsburg, has given $750,000 to Johns Hopkins University to establish a department for the study and treatment of insanity. The terms of the gift provide for the building of a four-story addition to the Johns Hopkins Hospital and its maintenance for ten years, and also for a chair in the university.

NEW YORK.

Work of the Labor Unions Against Tuberculosis.—The Central Federation of Labor in Albany in April last began to consider the construction of a pavilion where the members of the various trades unions in that city might be properly treated. At its last meeting $500 was appropriated by the federation for a pavilion to accommodate 12 patients. Additional funds will be obtained by the sale of Labor Day picnic tickets. The labor is to be contributed by the unemployed. The building will be on the grounds of the Hospital for Incurables, and the management will be under the supervision of the hospital board, to whom the property will revert should it be abandoned at any time. The building is to be about 50 by 20 feet, with wooden floor and roof and canvas sides ,with large verandas.

New York City.

To Move Dispensary.—The New York Dispensary which has existed 118 years, has moved to 180 Grand street. The old building is to be torn down for the new subway extension.

Corner-Stone Laid.—The corner-stone of the new hospital for the Harlem Eye, Ear and Throat Infirmary, at Lexington avenue and One Hundred and Twenty-Seventh street, was laid with appropriate ceremonies, June 13.

Milk Stations Opened.—Seven milk stations, each under the charge of a trained nurse, were opened June 17, by the Association for Improving the Conditions of the Poor. The milk is modified according to very simple formulas, and is sold at a nominal price, just enough to save the self-respect of the patrons.

Refuse Collectors Must Be Licensed.—As several drivers of carts containing putrid scraps of meat and fat have been arrested by officers of the Health Department and found without licenses for carrying objectionable material, an order has been issued ordering the arrest of every unlicensed driver of a refuse cart.

Floating Hospitals in Need.—The president of St. John's Guild has appealed to the public for money to carry on this work during the summer. Conditions among the poor have not been such during the past winter as would make for good health among children, and it is expected that the hospitals will be taxed to their utmost during the summer.

Consumptive Workers Need Night Camps.—Dr. Livingston Farrand, secretary of the National Society for the Prevention of Tuberculosis, in addressing the school of philanthropy on the subject of the "Prevention of Tuberculosis," said that there was a crying need for night camps where patients who were able to work could go after a hard day's work, get a good dinner, sleep in the open air, and have a good breakfast before going to work again.

OHIO.

Conviction Secured.—In the case of A. A. Taylor, Newark, charged with the illegal practice of medicine, the jury is said to have rendered a verdict of guilty, June 5.

Pardoned.—Dr. James A. Ambrose, an aged practitioner of Dayton, who had served five months of an eighteen-months' sentence imposed on him for alleged malpractice, has been pardoned by the governor.

Association of Professional Men.—The fourth annual meeting of the Ohio Branch of the National Medical Association, composed of colored physicians, dentists, and pharmacists, was concluded at Dayton, May 22, when the following officers were elected: President, Dr. William J. Woodlin, Columbus; vice-presidents, Drs. H. R. Hawkins, Xenia, and Lloyd H. Cox, Dayton; secretary, Dr. Wilber C. Gordon, Springfield, and treasurer, Dr. R. E. Retferd, Springfield.

Social Hygiene.—The General Practitioners Medical Society, Columbus, has appointed a permanent committee on Social Hygiene, consisting of Drs. Clarence C. Ross, Charles F. Gilliam, Albert B. Davenport, and Ida M. Wilson, for the purpose of educating the people as to the far-reaching effects of the "Social Evil," by the dissemination of proper literature, and by members of the medical profession giving talks or lectures before various organizations to men, women and youths.

Sue Each Other, Both Get Damages.—Dr. Frank G. Blanchard, Woodville, is said to have sued Dr. Daniel W. Philo for $5,000 damages, alleging that Philo knocked him down, causing several broken bones and other injuries. Dr. Philo thereupon retaliated by suing Dr. Blanchard for $15,000, claiming that Blanchard had made remarks derogatory to Philo's professional ability. The jury awarded Dr. Blanchard $250 damages against Dr. Philo, and Dr. Philo $70 damages against Dr. Blanchard.

OKLAHOMA.

Commencement.—The Medical Department of Epworth University, Oklahoma City, closed its term May 8, graduating two students.

Sentenced for Killing Physician.—The jury, in the case of Dr. Gid Breco, charged with killing Dr. Coffey in a quarrel several months ago, is said to have returned a verdict of guilty, and sentenced him to pay a fine of $250 and imprisonment for one year.

Societies Organize.—Roger Mills County Medical Society was organized at Cheyenne, May 27, with the following officers: President, Dr. M. Miller, Cheyenne; vice-president, Dr. Frank W. Allen, Texmo; and secretary, Dr. Gregoire, Cheyenne.——The physicians of Latimer county have organized a medical society with the following officers: President, Dr. L. M. Sackett; vice-president, Dr. John F. McArthur, and secretary-treasurer, Dr. Harry L. Dalby, all of Wilburton.——Jackson County Medical Society has been organized at Altus with the following officers: President, Dr. D. C. Buck, Eldorado; vice-president, Dr. Murphy, Warren; secretary, Dr. Crow, Olustee; Drs. Wilson Hess, May, Headrick, and Sam P. Rawls, Altus, censors; and Dr. Lamirum, Olustee, delegate to the state society.——The Medical Society of Okfuska county has been organized with the following officers: Dr. C. R. Reber, president; Dr. C. M. Bungamer, vice-president; Dr. Benton Lovelady, Bearden, secretary; Dr. Luther A. Nye, treasurer; and Dr. J. W. Board, Okemah, delegate to the state society.

OREGON.

Smallpox.—Church services and public meetings in Corvallis have been interdicted on account of smallpox.——There are reported to be 30 cases of smallpox in north Portland.

Personal.—Dr. George E. Watts, Portland, suffered a fracture of the leg in a collision between his automobile and a buggy, May 24.——Dr. Clara W. Reams has been elected city physician of Astoria.——Dr. J. H. Volp, La Grande, is said to have been adjudged insane and committed to the State Hospital, Salem.

Society Meeting.—At the annual meeting of the City and County Medical Society, held in Portland, May 20, the following officers were elected: Dr. Andrew C. Smith, president; Dr. Walter T. Williamson, vice-president; Dr. George S. Whiteside, secretary; Dr. J. C. Elliott, King, treasurer; and Drs. William Jones, Calvin S. White, and Ernest F. Tucker, councilors.

Commencement Exercises.—At the graduating exercises of the University of Oregon Medical Department, Portland, a class of 20 was graduated. The charge to the graduates was delivered by Dr. Albert E. Mackay, and the annual address was delivered by Right Rev. Charles E. Scadding, Bishop of Oregon.——At the annual commencement exercises of Medical Department, Willamette University, Salem, a class of 10 was graduated, and the doctorate address was delivered by Hon. John M. Gearin, Portland, and Dr. Augustus E. Tamiesie delivered the charge to the graduating class.

Illegal Practitioners Punished.—W. F. Belknap, Portland, who is said to have been recently fined $50 for practicing medicine without a license, is said to have departed suddenly from the city.——Jennie Bowen, Portland, is said to have been fined $50 for illegally dispensing remedies to heal the sick.——E. Voose, of the same city, is said to have been ordered to take down his sign or suffer penalty for violating the law, requires physicians to pay a tax and be officially registered as practitioners of medicine.——J. T. Pierce, Portland, charged with practicing medicine without a license, is said to have been found guilty, and warned to cease practice on pain of imprisonment.

PENNSYLVANIA.

Physicians' Reunion.—Elaborate plans are in progress for a social reunion of members of the medical societies of southeastern Pennsylvania, to be held at Willow Grove, July 22. Efforts will be directed to include, at this meeting, all medical bodies in these districts, which hold social meetings in the summer season. Each society will be afforded a locality and time for its individual meeting and all officers of participating bodies will act as a committee on arrangements. Drs. Joseph Bryant, New York City, and William L. Estes, Bethlehem, will be guests of honor.

Philadelphia.

Oleo Dealer Fined.—William H. Dennis, a dealer in oleomargarine, pleaded guilty to charges of violation of the revenue laws providing for a special tax on this material, and is said to have been sentenced to pay a fine of $250.

Red Bank Sanatorium Opened.—The Sanatorium Association of Philadelphia opened its sanatorium at Red Bank, N. J., for its thirty-second season, June 12. A feature of the opening exercises was the presentation to the association of the Monroe Smith memorial building, the gift of Mrs. John F. Combs in memory of her brother, Monroe Smith, who during his life devoted much of his time and wealth to the work of the association. Two steamboats convey poor children to the sanatorium daily, and during the 31 years of the association's existence nearly 3.000.000 persons have visited the grounds.

WASHINGTON.

Osteopath Sues Practitioners.—An osteopath, who was said to have been forced out of the Eitel Building, Seattle, by regular practitioners holding offices in that building, has sued them for $75.000. He alleges he was called a quack and charlatan and lost a practice of $300 a month on account of his treatment.

County Society Meeting.—At the regular meeting of King County Medical Society a new constitution was adopted, conforming to those of the Washington State Medical Association and American Medical Association. Drs. James B. Eagleson, James H. Lyons, Frank M. Carroll, H. Eugene Allen and George N. McLoughlin, all of Seattle, were elected delegates to the state medical society.

Hospital Notes.—The board of commissioners of Knox County has authorized an expenditure of $50.000 for the construction of a new wing of the County Hospital, Georgetown. ——The Emergency Hospital on the Alaska-Yukon-Pacific Exposition grounds has been opened and is in charge of W. C. Kantner.——Capt. John D. Yost, Medical Corps, U. S. Army, in charge of the hospital at Fort Lawton, is making arrangements to have a hospital car run from the scene of the maneuvers at American Lake over the interurban line to Fort Lawton.

Exposition Building for Medicine and Surgery.—A building is now being erected on the exposition grounds for medicine and surgery, under the supervision of Dr. E. M. Rininger, medical superintendent of the exposition. Exhibits will be collected, showing the progress, standing and advancement in medical and surgical science. Several hundred manufacturers in the United States have intimated that they will make exhibits of medical and surgical devices. The building will also have club, writing, assembly, reading and smoking rooms, with postoffice, telephone and stenographer, and will be made headquarters for physicians visiting the exposition.

CANADA.

Canadian Medical Protective Association.—The seventh annual meeting of this thriving organization was held in Ottawa, June 9. During the seven years of its work the president reported that the association had not lost a single case it had undertaken to defend. It now has a balance to the good of about $3.000, and the fact of its existence among the medical men of Canada acts as a deterrent to litigation, as gradually year by year the association has fewer cases to defend. The fee for annual membership is $3. Dr. R. W. Powell, Ottawa, was re-elected president, and Dr. J. Fenton Argue, Ottawa, secretary.

University News.—In his retiring presidential address before the annual meeting of the University of Toronto Alumni Association, Mr. Irving H. Cameron, F.R.C.S., professor of surgery in the medical department of the university, advocated that the Ontario Medical Council be abolished and that the diploma of graduation from any Ontario medical department of a university be made equal to a license to practice. He pointed out in this connection that this would be practically placing Ontario on the same basis as the province of Quebec, which has quite recently established reciprocal relations with Great Britain. He favored reciprocal relations with the mother country and considered the Ontario Medical Council a stumbling block in the way.——Dr. Francis J. Shepherd, Montreal, has been elected dean of the medical department of McGill University, Montreal, succeeding Dr. Thomas G. Roddick, retired.

Hospital News.—Matters in connection with the Toronto General Hospital still continue to agitate some professional men of Toronto, and to some extent the public at large. Recently there appeared in a Toronto evening paper a series of articles which go to show that in the recent reorganization of the staff of the General Hospital the University of Toronto had not by any means received fair play. The articles have been reproduced in pamphlet form for general distribution. It is generally understood when reorganization was first mooted that as far as possible the hospital was to be made a university hospital. Indeed, in the selection of a site one was chosen almost fronting the university buildings; but as many men who formerly for several years, and who are yet professors or associate professors, have been left off the staff altogether except as honorary consulting physicians or surgeons, it would appear that there may be troubles for these in continuing as clinical teachers.

FOREIGN.

The Pasteur Institute at Madrid.—The *Siglo Medico*, June 6, gives the report of the Madrid Institute for 1907. There were no fatalities among the 466 patients treated, although in 9 cases an interval up to 30 days had elapsed after the bite of the rabid animal before treatment was commenced.

Festival for Ceccherelli.—The twenty-fifth anniversary of the connection of Prof. A. Ceccherelli with the surgical clinic at Parma, Italy, was celebrated with much pomp, June 24. A "festschrift" was presented by his friends and pupils, and two albums, with autographs of colleagues at home and abroad, with a gold plaque.

Cholera Epidemic in Calcutta.—According to the report of Consul-General Michael, cholera is epidemic in Calcutta. Those attacked are, for the most part, Hindus, but there have been some cases with four deaths among Europeans. The prevailing hot winds carry clouds of dust from one part of the city to another thus disseminating the disease.

First Italian National Antimalarial Congress.—The leading authorities on malaria gathered at Eboli, May 25, for the first national congress on malaria. The principal addresses were by Celli, Nitti and Spirito. Resolutions were passed in favor of certain works for drainage on a large scale. The next congress will be held at Reggio-Calabria, in 1910.

State Quinin in Italy.—The report for 1907 shows that the government realized nearly $100.000 profit from the sale of quinin, even at the low rates at which it was sold. This has allowed the price to be reduced still lower, so that it is now less than $1 a pound for the bisulphate. More than $20.000 worth was distributed free to the poor in 152 communities.

Medal for Cajal.—A gold medal was recently struck at the mint, and presented to the great Spanish histologist, in the name of his friends and admirers throughout Spain. A semi-official committee has been collecting subscriptions for a number of months for the expenses of the medal. Cajal refused to permit a public ceremony, and the medal was presented informally at his home, May 27.

Death Under Chloroform and Accident Insurance.—An insured teamster was injured while at work, the accident requiring reduction of dislocation of the hip under chloroform. The man succumbed during the anesthesia, and the insurance company refused to pay the insurance, claiming that death was due to the anesthetic, and not to the accident. The Leipsic courts, and the supreme court, recently decided adversely to the company, stating that the accident was responsible for the injury requiring the anesthetic, and consequently, that the insurance covered death from this cause. The full text of the decision in the case is given in the *Allg. med. Ct.-Ztg.* May 30, the point being emphasized that an unsuccessful operation for conditions resulting from an accident does not release the insurance company from its responsibility in regard to the accident.

Suspension from Practice for Alleged Malingering.—A French law was enacted in 1892 which provides that a physician convicted of crime or fraudulent practices can be suspended from the practice of medicine temporarily or permanently. This provision was never applied until last month when a physician was accused of conspiring with a workman at Paris to obtain an indemnity for an alleged industrial accident. The workman was fined $5 and sentenced to six months' imprisonment and the physician to a fine of $100 and six months' imprisonment and suspension for five years from the practice of medicine. In addition, both were assessed $100 for damages. The *Semaine Médicale* comments that this long and unprecedented suspension from practice seems an unduly severe sentence in this instance as the proof in regard to the physician's connivance was not absolutely convincing, and this provision of the law was never enforced before, not even when physicians have been convicted of crimes. It adds that this is the third case that has been brought in France against a physician on account of carelessness or deliberate fraud in the making out of certificates in personal injury cases; a fourth case is now pending.

LONDON LETTER.

(*From Our Regular Correspondent.*)

London, May 30, 1908.

Classified Exhibitions in the Hutchinson Museum.

The enormous collection of pictures of disease made by Mr. Hutchinson has now proved too large to be displayed on the walls of the museum built for the purpose at the Polyclinic seven years ago and the building has become inconveniently crowded. Mr. Hutchinson has always insisted that illustrations of disease should not be stowed away in drawers, where they are soon forgotten and, therefore, of little use, but that they should be framed and displayed on the walls of museum galleries. But the inevitable want of space arises sooner or later. He has hit on an expedient, which he believes will prove a success and encourage the formation of collections in institutions even less provided with space than the Polyclinic. His plan is to go back to the portfolio system and to exhibit on the walls only a selection of the most instructive illustrations. He has reserved certain large stands on which he makes temporary displays of classified pictures. These selections he will change about once a month or once in two months. All the pictures in the museum on the subject of *Stigmatosis insectorum* are arranged on four large stands. Illustrations from Hebra and Kaposi show the skin covered with little scars and much pigmented in consequence of the excessive use of the hypodermic syringe. Beside these are placed photographs by Dr. Stockman of Glasgow illustrating the same condition. These, Mr. Hutchinson pointed out, were of clinical interest as showing the results of merely mechanical, or at the most, chemical irritation, without the introduction of any specific poison such as might attend insect-pricks.

Typhoid Fever Due to Shellfish.

For many years there has been a constant and unexplained prevalence of typhoid fever in Belfast, notwithstanding the enforcement of many sanitary precautions and the provision of an excellent water supply. For the last quarter of a century the annual mortality from this disease has been so great that no other town in the British Isles has approached it. During the years 1900, 1901, and 1902, the annual death rate from the disease was 0.72 per 1,000 of population, as compared with 0.34 in Dublin; 0.13 in Manchester and 0.15 in England and Wales generally. This prevalence has been contemporaneous with improvements in the water supply and in the general sanitary conditions of the city. The local government board for Ireland, therefore, instituted a special inquiry on the subject. The Commission, consisting of several sanitary experts, made an exhaustive investigation. The most manifest facts with regard to the distribution of the disease were that it affected the working classes more than the wealthier classes and that the Jews were practically exempt. At last the Commission arrived at the conclusion that the prevalence of the disease was due to the unrestricted gathering of cockles and other shellfish from the sewage-laden shores of the Lough and to the extent to which such shellfish had been consumed, generally in an uncooked condition by the poorer classes. The exemption of the Jews was due to their refusal to eat any shellfish. The Commission recommended, "that, as no system of sewage treatment, within practicable limits of cost, will fully safeguard the Lough shellfish, powers should be obtained to prohibit the gathering of this shellfish for human consumption."

Operation on Sir Samuel Wilks.

Sir Samuel Wilks, the veteran pathologist and physician, has undergone prostatectomy. The operation was performed by one of his colleagues, Mr. Symonds. The whole of the right lobe and most of the left were removed by the perineal method. Immediate relief followed the operation and the illustrious patient is now taking food and sleeping well. Sir Samuel has almost completed his eighty-fourth year.

Women as Pharmacists.

At present there are over 160 qualified women pharmacists in the United Kingdom of whom two-thirds are employed in their calling. The great majority are employed in dispensing in some hospital or institution; some 18 or 20 per cent. are in business on their own acount; about 12 per cent. are dispensers to physicians; a few are employed by wholesale houses or are engaged in research and teaching.

BERLIN LETTER.

[We present below the first of a series of topical letters from Berlin. Our correspondent is a Berlin physician who stands high in the profession and whose name, if given, would be familiar to most of our readers. That the opinions expressed may be less hampered than would otherwise be possible, our correspondent prefers not to make his identity public. It is sufficient to say that were his name published our readers would realize that The Journal is fortunate in being able to secure his services.—Ed.]

Berlin, June 6, 1908.

Foreword.

To the request that I should send a weekly letter to your highly esteemed journal giving the important events in the scientific and professional life of German physicians and also the important occurrences in the field of public health in the German empire, I accede very gladly. It is not a part of my ordinary duties to write such reports—quite the contrary. What induces me to make an exception is the wish to assist in the plan, now in existence for more than two years, earnestly supported by your renowned President Roosevelt as well as by our emperor, of exchanging the observations and experiences of the two great countries, America and Germany, and thus bringing the peoples of both nearer together. The relations between America and Germany are intimate and friendly, and strengthened in a great degree by the fact that a large portion of our people have emigrated to your shores and transplanted among you the German manner of life. The more the points of political contact and the constantly growing commercial competition are increased, the more desirable it becomes that all classes of the population should make an effort to prevent any friction. But aside from this it is a praiseworthy undertaking to assist the efforts of each nation to learn from the other. You in America have profited much from German medicine as has often been acknowledged by you. But the days when you stood simply in the relation of pupils to German medical learning are long past. With your restless forward push, in medicine as in all fields, you have followed your own paths in many directions and have independently advanced our art and science. We in Germany have learned, without envy, to recognize that in not a few subjects of medicine we have received from you valuable stimulation and instruction.

If it is now the intention to introduce a regular report from a German physician into the official organ of the largest medical association of the world, German physicians will appreciate this step as expressing the recognition of our science. I hope to be able so to maintain interest in this undertaking that the readers of your journal, to whom a large number of our former countrymen belong, may be constantly informed on the questions of the day among us.

Preparatory Training of Physicians.

The three most important questions for the medical profession (as for all other callings) are preparatory training, postgraduate education and economic success. As to the preparatory training of the German physician, it is doubtless known that some years ago a not unimportant change was made in the requirements. While previous to the change the evidence of having completed the course in a classical gymnasium was required for entrance to the medical course, now the completion of the course in a *Realschule* (technical school) or *Realgymnasium* is sufficient. This change in entrance requirements took into account the fact that the natural sciences and technical studies have reached a high rank. In spite of the protests of many eminent physicians (even such a man as Kussmaul expressed himself to that effect in a letter addressed to me at that time) the requirement of an exclusive classical gymnasium training for medical studies was allowed to lapse. This I believe was largely due to the influence of our emperor, who was much interested in the natural sciences and technical training. The evil consequences which it was prophesied would result from this innovation have not as yet made their appearance. So far as the work of the practitioners who have come from the technical schools (*Realschulen*) is concerned, the results have not yet had time to show themselves. As to the apprehended crowding of the medical schools with the graduates of the technical schools, it has not so far been observed. A positive prediction can not be made as to whether or not this condition will change; prophecy is a difficult art.

Postgraduate Instruction.

The postgraduate instruction of the practicing physician, in a more methodical manner and to a larger extent, began in Germany in 1900. To be sure for some time state institutions for this purpose had existed, such as the courses for military surgeons and for medical officers in Prussia (the latter being called into existence on account of the cholera epidemic in 1892), and private associations of teachers for vacation courses existed in a number of university cities on the plan of the Berlin association founded in 1880, but only a limited portion of the medical profession of Germany could take advantage of these courses.

In this respect America has made excellent progress with its postgraduate schools and it is, indeed, scarcely to be questioned that its example has contributed to help us in Germany to fill this need in the education of the practicing physician. We may regard as the forerunner of a systematic organization for medical postgraduate instruction the courses established by the Prussian government in 1897. Later similar courses were instituted in East Prussia, West Prussia, Posen, Pomerania, Silesia and Saxony for the instruction of those physicians who were entrusted with oversight of the trachoma plague, the great extent of which was then first recognized.

The foundation for the present extensive arrangements for postgraduate instruction was laid in the year 1900, it is said, on the suggestion of the Empress Frederick, already at that time attacked with her fatal malady, carcinoma, but really on the initiative of our noted surgeon, Ernst von Bergmann. The value of the new undertaking was recognized and its development favored by the Prussian ministry of public instruction, and especially by the powerful personality of Althoff, then minister, who was well disposed to all progress.

In the beginning of the year 1901 the central committee for medical postgraduate instruction in Prussia was established and it assumed the task of advancing the scientific training of physicians by lectures and courses. By the lectures and courses the opportunity was offered physicians to bring their knowledge up to date so far as possible without interruption of their practice. The postgraduate courses present, by means of clinical or other demonstrations, a review of the subjects which are most important for practice and generally in such a way that one subject is treated in each course. The teachers, as a rule, receive no fee; contributions are required only so far as is necessary to pay the cost of material and other actual expenses. It is the business of the central committee to urge the formation of local societies for the establishment of courses and lectures; it collects and arranges the material relating to postgraduate instruction, and serves the local societies (which are to be formed in as large a number as possible) as an information bureau for all questions which may come up. When the central committee was formed there were only eleven cities in Prussia in which the new work of medical postgraduate instruction had been taken up. In later years the organization has grown with a surprisingly rapid development. In Prussia thirty cities have local organizations, and such associations have been founded in eleven states of the empire, so that in forty-seven German cities there is organized postgraduate instruction. For the purpose of instruction an abundant collection of teaching material has been collected in the course of the last year which, on request, is placed at the disposal of the local organizations for the purpose of temporary use in postgraduate instruction. A journal for medical postgraduate instruction has been established in which appear the lectures that are given in various places. There is an information bureau (*Auskunftei*) for use regarding all questions connected with medical postgraduate instruction and which has become an international institution. The three last named institutions have been installed in the Kaiserin Friederich Haus which was erected by private contributions and named after the patroness of the movement. This was built in 1904 and very complete arrangements for instruction are provided in it. Academies for practical medicine have arisen in Cologne and Düsseldorf chiefly for the purpose of postgraduate instruction and through the cooperation of the community and the government have become excellent institutions. At the beginning of this year the organization of our postgraduate work made a further advance by the founding of an imperial committee for medical postgraduate instruction which gives the organization a definite status. The imperial committee assists the district committees of the different cities in the formation of additional district committees and when this can not be done, in the formation of local organizations for instituting courses and lectures, collecting and preparing appropriate material for postgraduate work and serving as a bureau of information for all questions relating to the work. Imperial Councilor von Bülow has accepted the honorary presidency of the imperial committee. The president is Privy Councilor Prof. Dr. von Renvers; the general secretary Prof. Dr. R. Kutner. The moving spirit of this new institution is his excellency, Althoff.

So much for to-day from the heights of our profession. For those who have not enough time and patience for such serious affairs, rightly to be passed over by foreigners, I will touch on some subjects of more general interest.

"Patent Medicines" in Germany.

The swindle in medicines fortunately is not so flourishing with us as with you in America. This depends not on any superior intelligence of our people, but rather on the strict control which the authorities exercise over such remedies. This control will be markedly increased and the secret medicine trade more energetically controlled when a bill which was recently published, and about which I will tell you in my next letter, has been passed by the Reichstag. It is natural that all interested in the business should take a stand in opposition to the proposed law, and especially the manufacturers of those medicines which have become so widespread among you under the name of "patent medicines." The methods which are employed in this field are illustrated in the discovery of a swindle which has hitherto been worked with a food preparation, "Puro." According to the statements of the manufacturer, Dr. Scholl of Munich (a former assistant of Pettenkofer), "Puro" consists of a meat juice expressed from lean meat and, after sterilization, evaporated in vacuum to a syrupy consistency. It is said to contain 20 per cent. of the albuminous matter of the meat in an entirely unchanged form. On the label of the bottle the statement was made: "The contents of this glass [about 3 or 4 ounces] represents the concentrated juice of five pounds of raw beefsteak." A short time ago an investigation of food preparations made from meat was carried out under the direction of the well-known hygienist of the University of Munich, Professor Gruber (Ober Medizinalrat) and this investigation gave the result—according to the communication of Professor Gruber himself in the *Deutsche medizinische Wochenschrift*, No. 18—that the meat juice "Puro" (and also a so-called meat juice "Robur") contained no meat albumin at all, but the "entire natural albumin" consisted of egg albumin. This disclosure gave rise to much indignation against Dr. Scholl and it is reported that the public prosecutor of Munich has already taken action in the matter. Dr. Scholl has sought to defend himself against these attacks, in several announcements taking the position that his offense is not so great. He admits, however, that his preparation, in contradiction to his claims, contains egg albumin and not meat albumin. In one point he is quite right, namely, in the claim that other so-called meat juices are not prepared according to statements of their producers. It is to be hoped that the dishonesty of the other manufacturers will be set forth in the right light to the benefit of the hitherto injured public, even if it is to the damage of the purse of the manufacturers.

Therapeutics

[It is the purpose of this department to outline an up-to-date management of disease, to suggest scientific treatment for diseased conditions, and to present prescriptions that are simple, useful and palatable. Prescriptions are written in both the metric and apothecaries' systems, but the amounts of the ingredients are NOT exact translations of one system into the other, but quantities convenient for pharmacist and physician. It should be understood that solids are weighed in grams or fractions of grams, while liquids are measured in cubic centimeters; that a teaspoon holds five cubic centimeters, i. e., more than a fluid dram, hence a 100 cubic centimeter preparation will contain twenty doses.]

Constipation in Infants.

Wunsch (*Deutsche med. Wchnschr.*, March 15, 1906), suggests in obstinate cases of constipation in infants a rectal injection of olive oil on every alternate day. He has found the treatment curative.

For Toothache.

℞.	gm. or c.c.		
Chlorali hydrati	5		
Camphoræ	5	or	āā, gr. lxxv
Olei caryophylli	10		flʒiiss

M. et Sig.: Rub on the gum, or plug the cavity with cotton saturated with the solution.

A Stimulant in Cerebral Depression.

℞.	gm. or c.c.		
Caffeinæ sodio-benzoatis (N. F.)	4	or	ʒi
Aquæ menthæ piperitæ	100		℥iii

M. et Sig.: A teaspoonful, in water, every four hours, if needed.

[Caffein sodio-benzoate consists of equal parts of caffein and sodium benzoate.]

Or, to effervesce:

℞.	gm.		
Caffeinæ sodio-benzoatis (N. F.)	2		ʒss
Sodii bicarbonatis	10	or	
Acidi tartarici	10		āā, ʒiiss

M. et fac chartulas 10.

Sig.: One powder, in half a glass of water, every four hours, if needed.

For Headache.

℞.	gm.		
Caffeinæ citratæ	2		ʒss
Sodii bromidi	20	or	ʒv
Sodii bicarbonatis	10		
Acidi tartarici	10		āā, ʒiiss

M. et fac chartulas 10.

Sig.: One powder in half a glass of water, and repeated in six hours, if needed.

[In order for these powders to effervesce well they must be kept dry.]

Or:

℞.	gm.			
Acetanilidi		50		gr. viiss
Caffeinæ citratæ		25	or	gr. iv
Sodii bicarbonatis	5			
Acidi tartarici	5			āā, gr. lxxv

M. et fac chartulas 5.

Sig.: One powder, in half a glass of water, every three hours, if needed.

[In order for these powders to effervesce well they must be kept dry.]

Or:

℞.	gm.			
Acetphenetidini	1	50		gr. xxiiss
Caffeinæ citratæ		25	or	gr. iv
Sodii bicarbonatis	5			
Acidi tartarici	5			āā, lxxv

M. et fac chartulas 5.

Sig.: One powder, in half a glass of water, every three hours, if needed.

[In order for these powders to effervesce well they must be kept dry.]

Or:

℞.	gm.		
Pulveris potassii bromidi effervescentis (N. F.)	100	or	℥iii

Sig.: A heaped teaspoonful, in a glass of water, when needed.

[Each such teaspoonful represents 0.60 (10 grains) of potassium bromid.]

Or:

℞.	gm.		
Pulveris potassii bromidi effervescentis cum caffeina (N. F.)	100	or	℥iii

Sig.: A heaped teaspoonful, in a glass of water, when needed.

[Each such teaspoonful represents 0.60 gram (10 grains) of potassium bromid and 0.065 gram (1 grain) of caffein.]

The Need of Salt in the Treatment of Fever.

The necessity for sodium chlorid in the animal economy, even in prolonged fevers, should be remembered. The absolute milk diet with entire deprivation of salines is gradually going out of fashion. It is just as necessary for a fever patient to have a little sodium chlorid daily as it is for a man in health. If beef juices are not allowed and salt is thus not administered, one or more a day of the feedings of milk should be salted. If a patient is too ill to take nourishment, besides the water that he receives, he should be given some physiologic saline solution to keep his metabolism in working order. This is true of all serious conditions with the exception of anasarca, pulmonary edema and marked kidney insufficiency. If the patient can not swallow physiologic saline (0.6 of 1 per cent., i. e., 6 parts in 1,000), he should have twice daily a colon injection, of one pint each time, of such a solution.

Perhaps all artificially fed babies should have their food diluted with water physiologically salted (i. e., the above strength), and babies who are ill and feverish should be given a drink of this saline solution (all they will take) every three hours. Babies who receive this saline solution seem to do better than those without it, as evidenced by J. Madison Taylor's (Philadelphia) observations (THE JOURNAL A. M. A., Nov. 10, 1906).

Pharmacology

THE BROADER AIMS OF THE COUNCIL ON PHARMACY AND CHEMISTRY.

TORALD SOLLMANN, M.D.
Member of the Council, Professor of Pharmacology and Materia Medica at the Medical Department of Western Reserve University.
CLEVELAND, OHIO.

(*Continued from page 2075.*)

XIV. ANOTHER STAFF OF MOSES.

The proprietors have no monopoly of magic cures. There is Mrs. Eddy; there is Dowieism, and there are even the United States Pharmacopeia and the National Formulary! The chasm between these is wide and deep, but misguided enthusiasm can construct a bridge almost anywhere. It is more than a little unfortunate that the impression prevails so generally that pharmacopeial prescribing (and for convenience I shall use the term pharmacopeial to cover also the National Formulary) is the magic cure for all therapeutic ills. This impression has been fostered especially by pharmacists; some well-meaning, as the American Pharmaceutical Association; some, doubtless, rather self-interested, as the National Association of Retail Druggists. The movement toward pharmacopeial prescribing deserves every encouragement, if it is intelligent; it deserves condemnation, if it is blind.

Pharmacopeial prescribing is but a tangible means to the cure, a distinctly symptomatic form of treatment. Doubtless it does strike directly at many of the therapeutic evils; for since no one has a monopoly of pharmacopeial remedies, there is not the same incentive to misrepresentation. It strikes indirectly at many more of these evils, for there are rather more good remedies and decidedly fewer bad ones in the Pharmacopeia than there are out of it.

PHARMACOPEIAL PRESCRIBING NOT INFALLIBLE.

Psychic antiseptics and psychic digestants, however, are not one whit more scientific under the names of Liquor Antisepticus, Liquor Antisepticus Alkalinus, or Elixir Digestivum Compositum, than they are under the names of Listerine, Glycothymoline, or Lactopeptine. Nor are Antikamnia, Antiphlogistine, Bromidia, Gray's Glycerin Tonic, Pepto-Mangan, or Fellow's Hypophosphites rendered one bit more effective or safe by being prescribed as Pulvis Acetanilidi Compositus, Cataplasma Kaolini, Mistura Chlorali et Potassii Bromidi Composita, Elixir Gentianæ Glycerinatum, Liquor Ferri Peptonati cum Mangano, or Syrupus Hypophosphitum Compositus. It is mere cant to say that they are.

If the official products are used with due regard to their therapeutic limitations; if they are actually obtainable of a grade superior, or at least equal, to that of the proprietary equivalents, and if they are materially cheaper to the consumer—then their use should be encouraged. If, however, they are used as uncritically, with the same exaggerated expectations, as are the proprietary articles, then they do not constitute an advance. The mere fact that the druggist makes a larger profit does not absolve the physician from careless and unscientific practice.

BRAINS—THE ESSENTIAL IN PRESCRIBING.

The Pharmacopeia itself is not a dispensation. Let us look forward to the day when the Pharmacopeia will contain all the indispensable scientific remedies, and nothing else—but that day has not yet arrived. I am convinced that all the worthy remedies are now contained in the trio—Pharmacopeia, National Formulary, and New and Non-official Remedies—and that every physician should confine his prescribing to these. But I know, also, that not all of the preparations contained in them are indispensable, or, indeed, desirable.

The physician is not absolved from the necessity of exercising his own judgment.

(*To be continued.*)

Correspondence

Prepared Breakfast Foods—A Possible Danger.

Denison, Texas, June 13, 1908.

To the Editor:—In The Journal, May 30, 1908, page 1813, replying to an inquiry as to the harmfulness of "Force," "Grape Nuts" and "Elijah's Manna," you say in substance that so far as you know they are harmless. I beg to take issue with you, for the following reasons:

Early in 1905, when "Force" was so largely advertised through the South, a patient tried it, liked it and ate freely of it twice a day. After using it two months he was taken down with a severe attack of enterocolitis on which the usual remedies, cathartics, high enemas and intestinal antiseptics had no effect. Relief was finally obtained by eight ounces of castor oil, which brought away ten balls varying in diameter from one to two inches, black in color and hard as molded moist clay, and of about the same consistency. Enteroliths were suspected, but examination showed them to be made up of "Force." The colitis was cured, but the bowel is crippled to this day. The period of convalescence was spent in Michigan, where he met a kinsman who was a great lover of "Grape Nuts," eating it softened with hot water because of bad teeth, making it almost his sole food. He, too, was suffering from colitis of some months' standing, for which he had been able to get no relief. A similar large dose of oil relieved him of a number of balls of agglutinated "Grape Nuts" and cured the colitis.

Since 1905 I have suggested to several of my colleagues whom I know to be treating children who were eaters of prepared foods, the advisability of giving them large doses of oil, and in several instances concretions have been passed with immediate relief of the little patients. I have recently learned of "Elijah's Manna" obstructing the bowels and causing convulsions in a 2-year-old child who was allowed free access to the food of which it was very fond.

S. W. Smith, M.D.

Comment:—The above is interesting. Possibly similar results have been noted by others.—Ed.

Credit for Intestinal Anastomosis Forceps.

Chicago, May 19, 1908.

To the Editor:—In a recent article on intestinal anastomosis (The Journal, May 16 1908), I failed to give proper credit to Dr. E. M. Lundholm of St. Paul, who devised and described (The Journal A. M. A., Sept. 27, 1902), an intestinal forceps very similar to (or perhaps better than) one of the forms I suggested. This was several years before my instrument was used. The scissors form I devised and used before the one with tunneled blades. At the time of writing I had overlooked Dr. Lundholm's valuable paper and cuts. He in turn gives credit to Dr. Grant of Louisville and Dr. Ferguson of Chicago for similar though not identical appliances.

E. Wyllys Andrews.

Warning—Surgical Instruments Stolen.

Dayton, Ohio, June 13, 1908.

To the Editor:—While returning from the American Medical Association session at Chicago, June 12, during my sleep in a Pullman my English traveling bag, containing about $250 worth of surgical instruments for nose and throat surgery, was stolen. Some physician who is asked to purchase such instruments from one who does not represent a regular instrument maker may be in a position to help me locate my instruments and the thief.

H. D. Rinehart.

Queries and Minor Notes

ALCOHOL INJECTIONS IN TRIGEMINAL NEURALGIA.

Moscow, Tenn., June 8, 1908.

To the Editor:—Please give me the technic for alcohol injections in trigeminal neuralgia.

O. H. Cribbins, M.D.

Answer.—For the detailed technic of this application see the articles of Patrick and of Hecht in The Journal, Nov. 9, 1907, pp. 1567 and 1574.

ATOXYL IN SYPHILIS.

———, Cal., June 5, 1908.

To the Editor:—Is atoxyl superior to, or identical with, cacodylate of sodium? Please give dose and method of administration if different from other arsenic preparations. What is the indication for these preparations in syphilis?

X. Y. Z.

Answer.—Sodium cacodylate and atoxyl are both organic compounds of arsenic, but not very closely related. Sodium cacodylate is sodium dimethyl-arsenate while atoxyl is sodium amino-phenyl dylate contains 36 per cent. of arsenic andarseuate. Sodium caco atoxyl 26 per cent. Full description of the two substances may be found in the Third Edition of "New and Non-Official Remedies." It seems to be agreed that these arsenic compounds have the ordinary action of arsenic, on which depends their therapeutic value. The fact that they are derivatives of arsenic acid and the slowness with which they are decomposed make them slower in their action and less toxic than other arsenical compounds. We know of no reason for stating that atoxyl is superior to sodium cacodylate. The dose of atoxyl is given at 0.02 to 0.04 gm. (1/3 to 2/3 grain) by hypodermic injection, every other day. The remedy has been highly recommended in syphilis and apparently finds its special field in cases which have become cachectic and in which the mercurial preparations have not been curative. It should not be forgotten that the substance is capable of producing toxic effects.

[Please read the editorial on the Index on page 2138.]

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending June 20, 1908:

Truby, A. E., capt., M. C., ordered to accompany one-half of Co. B., H. S., from San Francisco, to Murray, Washington, for camp duty.

Whaley, A. M., capt., M. C., granted leave of absence for three months, on completion of the maneuvers; left Jackson Barracks, La., for his proper station, Fort Sam Houston, Texas.

Stone, J. H., major, M. C., relieved from duty with Army of Cuban Pacification; will sail June 22, for Newport News, Va.

Lewis, W. F., major, M. C., left Fort Sill, Okla., for duty at Leon Springs, Texas.

Miller, R. B., capt., M. C., granted leave of absence for two months in the United States.

Perley, H. O., lieut.-col., M. C., relieved from duty in the Philippines Division; will sail for the Unitd States October 15, 1908.

Stallman, G. E., dental surgeon, returned to duty at Fort Sam Houston, Texas, from three months' leave of absence.

Bailey, Edward, contract surgeon, ordered to Dyea, Alaska, for annulment of contract.

Hogan, D. D., contract surgeon, granted leave of absence for two months.

Dade, W. H., contract surgeon, will accompany escort to Ute Indians from South Dakota to Utah, and thence return to proper station, Fort D. A. Russell, Wyo.

Chase, A. M., contract surgeon, left Fort Sam Houston, Texas, with Field Artillery for Chickamauga Park, Ga.

Henning, O. F., contract surgeon, detached from Fort Sheridan, Ill., to accompany troops from Chicago, to San Francisco.

George, W. R. S., contract surgeon, ordered from Fort Greble, R. I., to Fort Schuyler, N. Y., for temporary duty.

Kress, C. C., contract surgeon, left Fort Bliss, Texas, with troops for duty at Leon Springs, Texas.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending June 20, 1908:

Mayers, G. M., P. A. surgeon, ordered to the Naval Medical School Hospital, Washington, D. C., for treatment.

Kerr, W. M., acting asst.-surgeon, appointed acting asst.-surgeon from June 12, 1908.

Ziegler, J. C., acting asst.-surgeon, detached from the Naval Hospital, Portsmouth, N. H., and ordered to the Naval Hospital, Pensacola, Fla.

Snyder, J. J., P. A. surgeon., ordered to the *New Hampshire.*

Farwell, W. G., P. A. surgeon, detached from the *Lancaster* and ordered to duty with marines at Camp Ellicott, Isthmian Canal Zone.

Mink, O. J., P. A. surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to the Naval Recruiting station, Chicago.

Haywood, A. B., asst.-surgeon, detached from the Naval Recruiting Station, Chicago, and ordered to duty with marines at Camp Ellicott, Isthmian Canal Zone.

Allen, D. G., Whiteside, L. C., Smith, G. W., Thomas, G. C., asst.-surgeons, appointed asst.-surgeons from June 15, 1908.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commisioned officers of the Public Health and Marine-Hospital Service for the seven days ended June 17, 1908:

Pettus, W. J., assistant surgeon-general, granted leave of absence for two days, from June 12, 1908.

Pettus, W. J., assistant surgeon-general, directed to proceed to Philadelphia for special temporary duty, on completion of which to rejoin his station at Washington, D. C.

Eager, J. M., assistant surgeon-general, granted leave of absence for one month, from June 24, 1908.

Clark, Taliaferro, P. A. surgeon, directed to proceed to Ellis Island, New York, for special temporary duty, on completion of which to rejoin his station at Philadelphia, Pa.

Clark, Taliaferro, P. A. surgeon, granted leave of absence for four days, from June 10, 1908.

Lavinder, C. H., P. A. surgeon, granted leave of absence for four days from June 16, 1908.

McMullen, John, P. A. surgeon, granted leave of absence for one month and ten days, from July 1, 1908.

Holt, John M., P. A. surgeon, granted leave of absence for one month, from July 15, 1908.

Schereschewsky, J. W., P. A. surgeon, directed to proceed to Ellis Island, New York, for special temporary duty, on completion of which to rejoin his station at Baltimore.

Roberts, Norman, asst.-surgeon, directed to report to the chairman of a board of examiners at Washington, D. C., July 6, 1908, to determine his fitness for promotion to the grade of passed assistant surgeon.

Collins, G. L., asst.-surgeon, directed to report to the chairman of a board of examiners at Washington, D. C., July 6, 1908, to determine his fitness for promotion to the grade of passed assistant surgeon.

Ebert, H. G., asst.-surgeon, directed to report to the chairman of a board of examiners at San Francisco, July 6, 1908, to determine his fitness for promotion to the grade of passed assistant surgeon.

Manning, H. M., asst.-surgeon, directed to report to the commanding officer of the Columbia River Quarantine station, for special temporary duty.

Brown, Silas E., acting asst.-surgeon, granted leave of absence for twenty-one days, from July 6, 1908.

Duffy, Francis, acting asst.-surgeon, granted leave of absence for five days, from June 15, 1908.

Rodman, J. C., acting asst.-surgeon, granted leave of absence for five days, from June 15, 1908.

Safford, M. V., acting asst.-surgeon, directed to proceed to Ellis Island, New York, for special temporary duty, on completion of which to rejoin his station at Boston, Mass.

Slade, H., acting asst.-surgeon, granted leave of absence for thirty days, from Aug. 1, 1908.

Stevenson, J. W., acting asst.-surgeon, granted leave of absence for twenty days, from July 6, 1908, and excused without pay for a further period of two months.

Story, H. C., acting asst.-surgeon, granted leave of absence for thirty days, from Aug. 1, 1908.

Townsend, W., acting asst.-surgeon, granted leave of absence for thirty days, from April 24, 1908, on account of sickness.

BOARDS CONVENED.

A board of officers was convened to meet at the Bureau, Washington, D. C., July 6, 1908, for the purpose of examining assistant surgeons to determine their fitness for promotion to the grade of passed assistant surgeon. Detail for the board: Assisant Surgeon-General W. J. Pettus; chairman; Passed Assistant Surgeon Joseph Goldberger; Passed Assistant Surgeon J. W. Trask, recorder.

A board of officers was convened to meet at San Francisco, Cal., July 6, 1908, for the purpose of examining assistant surgeons to determine their fitness for promotion to the grade of Passed assistant surgeon. Detail for the board: Surgeon H. W. Austin, chairman; Passed Assistant Surgeon Rupert Blue; Passed Assistant Surgeon W. C. Hobdy, recorder.

Book Notices

The Practice of Medicine. By Frederick Taylor, M.D., F.R.C.P., Examiner in Medicine at the University of Birmingham. Eighth Edition. Cloth. Pp. 1111, with illustrations. Price, $6.40. Philadelphia: P. Blakiston's Son & Co., 1908.

That this book has reached the eighth edition testifies to the esteem in which it is held by English-speaking physicians. The latest revision has permitted the writing of several new articles and the revision of a great part of the book. The treatment is brief and practical, dealing with facts rather than theories and giving most attention to symptoms, diagnosis, prognosis and treatment. The result is a valuable work, the faults of which are largely due to the condensation necessary to bring the subject within the compass of a single volume. A casual reading gives one the impression that some subjects have been treated in a rather unsatisfactory manner. Examinations of the stomach contents are spoken of rather slightingly and some of the titles which include the majority of cases of diseases of the stomach as they present themselves in practice receive very scant mention or none at all. In most other parts of the work the most recent advances seem to have been inserted, so that the work may be said to be well up to date.

General Medicine. Vol. I, of the Practical Medicine Series. Edited by Frank Billings, M.S., M.D., Head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago, and J. H. Salisbury, A.M., M.D., Professor of Medicine, Chicago Clinical School. Pp. 408, with illustrations. Cloth. Price, $1.50. Series 1908. Chicago: The Year Book Publishers.

This volume gives a summary of the literature of the year on tuberculosis, pneumonia, diseases of the chest and kidneys, and metabolic disorders. Only a part of the infections are included in accordance with the plan of the book. In this section the greatest space is given to influenza, rheumatism and cerebrospinal meningitis, occupying a rather insignificant place. The section on diseases of the heart, occupying over 100 pages, is concerned largely with new developments respecting the movements and rhythm of the heart and refined methods of diagnosis, betraying, on the part of the authors of the book, a high estimate of the needs of the general practitioner for whom the work is intended. This, as well as other parts of the volume, is profusely and finely illustrated. This volume is the first of a series for the year and is well fitted to sustain the reputation achieved by the previous volumes.

Medizinisches Literatur-u. Schriftsteller-Vademecum, 1907-08. Herausgeber: H. Albert, Bibliograph. Pp. 637. Cloth. Price, $2.85. Hamburg 8: Frank & Scheibe, 1908.

The author has undertaken to make a list of the medical writers of the world, but owing to the lack of response on the part of those from whom he sought his information he was unable to make it as complete as he would like. It is evident that the list is very incomplete; some of those whose names are omitted are certainly more prominent than many whose names are included in the book. Another difficulty with which the compiler seems to have had to contend was the necessity or arranging the material obtained by him in fourteen different languages. The result is that one of the languages in which the titles are written has suffered unjust usage. Bad as our English spelling is at its best, it is sad to see the condition into which the printer has thrown it in this book. The idea of the book is excellent and we may hope that another edition may be more complete and more useful.

Index of Treatment by Various Writers. Edited by Robert Hutchison, M.D., F.R.C.P., Physician to the London Hospital. H. Stansfield Collier, F.R.C.S., surgeon to St. Mary's Hospital. Revised to Conform with American Usage by Warren Coleman, M.D., Professor of Clinical Medicine and Instructor in Therapeutics in Cornell University Medical College. Cloth. Pp. 888. New York: William Wood & Co., 1908.

This work is intended to provide the practitioner with a complete guide to treatment and the services of a large number of eminent authors whose names carry weight with English-speaking physicians have been made use of. The result is as satisfactory as a book constructed on this plan can well be. The American editor has adapted the prescriptions to American usage.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Newspaper Notoriety Condemned.

At its June meeting the Snohomish County (Wash.) Medical Society unanimously adopted resolutions disapproving of the publication in the lay press of descriptions of operations, treatment and similar medical matters in connection with the names of physicians, and instructing the secretary to furnish the local press with censored reports which should be anonymous so far as the authorship of papers is concerned. The secretary was also instructed to keep a scrap book wherein should be placed all items appearing in the local papers regarding physicians of the county.

A County Society's View on Prescribing.

The Medical Society of Marion County, Indiana (the Indianapolis Medical Society), recently appointed a committee to express formally the attitude of the society on the question of prescribing. The report, adopted April 7, has been issued in the form of an address to the profession and a copy sent to every practicing physician in the county. As the report tersely and admirably summarizes the entire situation it is printed herewith in full.

THE REFORM IN PRESCRIBING.

It is well known to all who keep themselves informed on the progress of things medical that an earnest and determined movement has arisen throughout this country and the world, looking to a reform in the prescribing of medicines. The advertising and the more or less irrational and unscrupulous promulgation of various types of proprietary medicines and nostrums has to such an extent beguiled, deluded, degraded and even debauched the profession, that the situation has become intolerable to a liberal and self-respecting calling such as ours.

This matter, as you know, has been officially taken up by the American Medical Association, and its Council on Pharmacy and Chemistry is doing a great work in a preliminary clearing of the field. We commend this work, as published from time to time in the Association Journal, to your constant and serious consideration.

Influential representatives of the public press, daily journals, widely-circulated monthly magazines, and scientific publications, are not only endorsing the campaign against the ordinary "patent medicines" and promiscuous and irritational self-drugging, but are also seriously looking into and criticising this evil of the use of "professional patent medicines." Plainly, there is a loud call for an awakening of the professional intelligence and conscience in this matter, and an equally urgent call on our integrity and self-respect in view of the fact that our derelictions are being scrutinized, not only among ourselves, but among those on whom we must depend for recognition, respect and support.

It is idle to seek to lay the blame on others; on too enterprising or unscrupulous manufacturers; on the commercial necessities of medical journals, or on the druggists whom we have been chiefly responsible for leading astray. The fault lies chiefly with us, in that we have been false to our own ethical principles and have been seduced away from our own recognized standards.

The reform must begin and continue among ourselves. Then only will the other guilty ones, the manufacturing pharmacists, the medical journals, and the druggists, be willing and compelled to follow us. We must come back to a recognition and appreciation of what is meant by rational therapeutics, by a rational simplicity in the prescription of drugs, by rational professional independence in medical practice, and by rational pharmacologic standards. Having adopted a Pharmacopeia and a National Formulary as our chief guides, we should follow the earnest advice of our appointed authorities in clinical medicine and pharmacy, avoiding the use of unnecessary and meaningless proprietary preparations, and the worse nostrums, so far as possible prescribing and thus encouraging the druggists to dispense according to the Pharmacopeia.

At a recent meeting of this society this important subject was freely and helpfully discussed in conjunction with representative pharmacists of the city, the pharmacists expressing their willingness and desire to follow the physicians in this form of prescribing, and a committee was appointed to formulate an expression of combined medical and pharmaceutical convictions and advice. Therefore:

Resolved, That the Indianapolis Medical Society does hereby record its approval and endorsement of the present movement for reform in the prescription of drugs; and,

Resolved, That the society does hereby call on its members to give heed and serious consideration of this reform; urging on them the conviction uniformly and repeatedly expressed by the master-minds of clinical medicine, that the habitual and routine prescribing of meaningless proprietary medicines and nostrums is degrading to rational therapeutics, lays our calling open to a charge of insincerity in its claim as a liberal profession, makes insignificant its criticism of the ordinary "patent medicine" business, deprives it of that public esteem and confidence which is its due, belittles it and us in the eyes of the pharmacist, and, sooner or later, almost invariably compromises the otherwise thoughtful and capable physician in his diagnosis and treatment of disease.

You are, therefore, urged by this society to cease prescribing unworthy and irrational remedies and to act in conjunction with your local druggists in bringing about a new order of scientific prescription writing.

Failure to participate in this reform movement lays us open to the charge of either indifference or of inability or unfitness to practice scientifically and to prescribe medicines.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES.

DR. JOHN H. BLACKBURN, DIRECTOR.
Bowling Green, Kentucky.

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Tenth Month.

Second Weekly Meeting.

Acute Yellow Atrophy of Liver.

Etiology: Age, sex, pregnancy.

Pathology: Gross changes, size, color. Microscopic changes in lobules, cells, ducts. Changes in other organs.

Symptoms: Onset, clinical history, nervous symptoms, hemorrhages, physical examination, urine. Prognosis.

Pathology of the Gall Bladder and Ducts.

Cholecystitis.

Catarrhal: Changes in mucosa, muscular layer, thinning of wall, development of fibrous tissue. Tendency to ulceration. Contraction of walls. Changes in serous coat, adhesions. Changes in liver substance. Contents of gall bladder.

Suppurative: Development of ulcers, thickening of wall, tendency to perforation. Infection and development of empyema. Hydrops of gall bladder.

Phlegmonous: Ulceration, thickening of wall, changes in mucosa and peritoneum, gangrenous spots. Adhesions to viscera, inflammatory exudate.

Cholangitis.

Catarrhal: Extension from duodenum, dilatation of ducts, changes in mucosa, biliary cirrhosis.

Suppurative: Changes in mucosa, thickening of walls, ulceration, suppuration, extension to liver, "biliary abscesses." Stenosis of ducts. Association of cholecystitis and cholangitis.

Carcinoma of Bile Passages.

Gall Bladder: Type, extension, secondary deposits.
Bile Ducts: Types, primary and secondary effects.

Marriages

Straut W. Shurtz, M.D., Champaign, Ill., to Mrs. Lulu C. Barnes, recently.

Frank R. Morton, M.D., to Miss Mabel Edwards, both of Chicago, June 10.

Clarence L. Ayers, M.D., to Miss Helen Edwards, both of Toccoa, Ga., June 2.

William H. Good, M.D., to Miss Helen A. Munder, both of Philadelphia, June 10.

John C. Iverson, M.D., to Miss Catherine Smith, both of Palmyra, Neb., June 6.

Adam Miller, M.D., Jordanville, N. Y., to Miss Celia Watson of Rome, N. Y., recently.

Alfred L. Kastner, M.D., to Miss Mathilda Hoffman, both of Milwaukee, Wis., June 9.

Luther Scott James, M.D., Elmwood, Mo., to Miss Mayme Smith of Mount Leonard, Mo., June 4.

William Simpson Kyle, M.D., Diagonal, Iowa, to Miss Iona Perle Brent of Indianola, Iowa, June 10.

Roy Sumner Stearns, M.D., Portland, Ore., to Miss Daisy Loula Cushman of Middlebury, Vt., June 10.

Frederick Eugene Porter, M.D., U. S. Navy, to Miss Lillian Burnham MacMahon of Brookline, Mass., June 2.

Joseph Davis Caldwell, M.D., Waltham, Mass., to Miss Emma Farnum of North Adams, Mass., recently.

Daniel Robbins Nettles, M.D., Peterman, Ala., to Miss Jewell Sinclair Dickson of Lowndesboro, Ala., June 3.

William Phillips Thompson, M.D., Atlantic City, N. J., to Miss Addine DeForrest Smith of Waynesville, N. C., June 2.

Deaths

Samuel F. Chapin, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1858; Yale Medical School, New Haven, Conn., 1860; a member of the Medical Society of the State of Pennsylvania and Erie County Medical Society; surgeon-in-chief of the Second Division, Sixth Army Corps, during the Civil War; twice a representative in the state legislature from Erie County; surgeon-in-chief of the Pennsylvania Soldiers and Sailors' Home, Erie; died recently, aged 74.

Samuel Kitchen, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1863; assistant surgeon during the Civil War; a member of the staff of St. Mary's and Saginaw General hospitals; from 1881 to 1889 acting assistant surgeon in the United States Marine-Hospital Service, and later a member of the local board of pension examining surgeons; president of the board of health of Saginaw for many years; died suddenly from heart disease, June 9, aged 75.

John Adams Royer, M.D. Bellevue Hospital Medical College, New York City, 1867; a veteran of the Civil War; for two years president of the Carey (Ohio) board of education; and for a time a member of the local board of U. S. pension examining surgeons; who moved to Toledo in 1893; died at the Toledo Hospital, June 14, from cerebral hemorrhage, after an illness of two weeks, aged 67.

William H. Sherman, M.D. College of Physicians and Surgeons in the City of New York, 1884; a member of the American Medical Association and New York Academy of Medicine; founder of and chief surgeon to St. John's Riverside Hospital, Yonkers, N. Y.; and consulting surgeon to the White Plains and Tarrytown hospitals; died June 11, from cancer, at his home in Yonkers, aged 49.

George La Breche Smith, M.D. Laval University, Quebec, 1890; a member of the medical societies of the State and County of New York; physician to St. Vincent's Hospital, and assistant to the eye, ear and nose clinic at the Polyclinic Medical School and Hospital, New York City; died at his home, June 13, from disease of the stomach, after an illness of several months, aged 43.

William H. Gardner, M.D., U. S. Army, retired; who entered the Army as a medical cadet in 1861; was appointed assistant surgeon a year later; brevetted captain and major in 1865; promoted to captain in 1866; to major in 1882; to lieutenant colonel in 1896; and was retired in 1898; died at the Army General Hospital, Washington, June 3, after a protracted illness, aged 71.

Andrew Lannius Houston, M.D. Vanderbilt University Medical Department, Nashville, Tenn., 1905; a member of the American Medical Association; vice-president of the Monroe County (Ark.) Medical Society and secretary of the Clarendon Board of Health; was drowned by the capsizing of a gasoline launch in White River, near Clarendon, May 19, aged 24.

Allen T. Quinn, M.D. Medical College of Ohio, Medical Department University of Cincinnati, 1862; for two years thereafter assistant surgeon in the Army of the Cumberland; for more than 40 years a practitioner of Wilmington, Ohio; a member of the American Medical Association; died at his home, May 19, after a lingering illness, aged 69.

Charles P. Wagar, M.D. Northwestern Ohio Medical College, Toledo, 1888; formerly editor of the *Toledo (Ohio) Medical and Surgical Reporter;* who removed to Los Angeles in 1905 and there became managing editor of the *California Medical and Surgical Reporter;* died in the Pacific Hospital, Los Angeles, June 6, after a brief illness, aged 55.

William Marcelline Mercer, M.D. Medical School of Harvard University, Boston, 1866; a member of the American Medical Association; for 10 years city physician of Pittsfield, Mass., and for 33 years a member of the local school committee; a member of the medical staff of the House of Mercy; died at his home, June 10, aged 65.

Charles Delos Stofer, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1904; physician of McKinley County, N. M., and local surgeon to Caledonia and Canovan coal companies at Gallup, N. M.; died at his home in Wichita, Kan., June 10, from heart disease, after a short illness, aged 30.

Harry Emory Ballard, M.D. University of Vermont, College of Medicine, Burlington, 1896; a member of the Connecticut State and Fairfield County medical societies; for several years a member of the staff of the State Hospital for the Insane, Waterbury, Vt.; died at his home in Bridgeport, Conn., June 11, aged 35.

Robert William Grizzard, Sr., M.D. Medical Department, University of Nashville, Tenn., 1872; a member of the Tennessee State Medical Association and Davidson County Medical Society; of Goodlettsville; died in an infirmary in Nashville, June 9, two days after an operation for appendicitis, aged about 60.

Philip B. Pendleton, M.D. Medical College of Virginia, Richmond, 1890; a member of the American Medical Association; surgeon to the Sunday Creek Coal and Coke Company; of Longacre, W. Va.; died recently in Charleston, W. Va., and was buried June 6, at Cuckoo, Va.

Harmon J. Ashley, M.D. University of Buffalo (N. Y.) Medical Department, 1875; a member of the medical societies of the State of New York and County of Cattaraugus; physician to the County Hospital and Almshouse; died at his home in Machias, June 5, aged 58.

Peter E. Swartzweller, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1872; for many years physician to the Warren County (N. J.) jail; a practitioner of Belvidere, N. J., and later of Danielsville, Pa., died at his home, June 8, aged 65.

Frederick Pope Anderson, M.D. Miami Medical College, Cincinnati, 1871; a surgeon in the Army during the Civil War; at one time a lecturer in the Detroit College of Medicine; died at his home on Grosse Isle, Mich., June 8, from nephritis, aged 66.

George Hart McKay, M.D. Manitoba University Medical Faculty, Winnipeg, 1908; who was taken ill immediately after his final examination; died in Winnipeg, May 17, from tubercular meningitis, after an illness of two and a half days, aged 22.

Gabriel A. D. Galt, M.D. New York University Medical College, 1856; of Benns Church, Va.; a surgeon in the Confederate service throughout the Civil War; died June 8, at the Soldiers' Home, Richmond, Va., after a long illness, aged 74.

Luther Burns Martin, a veteran of the Civil War and a pioneer practitioner of Des Moines, Iowa; died at the home of his daughter in Cedar Rapids, Iowa, May 28, from cerebral hemorrhage, after an illness of two days, aged 76.

David Carlyle Ainey, M.D. Yale Medical School, New Haven, Conn., 1860; a member of the Medical Society of the State of Pennsylvania and Susquehanna County Medical Society; died at his home in New Milford, June 7, aged 69.

William A. Bell, M.D. Howard University, Medical Department, Washington, D. C., 1884; formerly a clerk in the medical division of the Pension Office, Washington; died at the Soldiers' Home, Hampton, Va., May 17, aged 82.

A. C. Jackson, M.D. Louisville (Ky.) Medical College, 1897; a member of the Illinois State and Shelby County medical societies; died at his home in Tower Hill, June 12, two weeks after an operation for appendicitis.

John D. Spicer, M.D. Jefferson Medical College, Philadelphia, 1859; a member of the Medical Society of the State of North Carolina and Green County Medical Society; died recently at his home in Goldsboro, aged 67.

William H. Smethers, M.D. Rush Medical College, Chicago, 1881; a member of the American Medical Association and Pan-American Medical Congress; died suddenly at his home in Moline, Kan., June 13, aged 51.

John S. Parsons, M.D. Indiana Eclectic Medical College, Indianapolis, 1890; for half a century a practitioner of Indiana; died at his home in Indianapolis, June 15, from nephritis, after an illness of several years.

John W. Johnson, M.D. University of Louisville (Ky.) Medical Department, 1861; formerly of Winchester, Ky.; died at his home in Cleburne, Texas, March 1, after an invalidism of several years, aged 63.

Robert Theodore Gould, M.D. Miami Medical College, Cincinnati, 1906; formerly of Bellevue, Ky.; died recently from myocarditis at Red Lodge, Mont., where he had practiced for several months, aged 23.

William C. Orear, M.D. Cincinnati College of Medicine and Surgery, 1864; formerly coroner of Saline County, Mo.; died recently at his home in Marshall, Mo., and was buried June 10, aged 67.

Frederick W. Miller, M.D. University of Buffalo (N. Y.) Medical Department, 1875; for many years a practitioner of Dover, N. J.; died in All Souls' Hospital, Morristown, N. J., June 6.

Charles B. Knerr, M.D. Medical College of Indiana, Indianapolis, 1890; died at his home in Indianapolis, June 13, from locomotor ataxia, after an illness of several years, aged 43.

Harry M. Crossland, M.D. Maryland Medical College, Baltimore, 1904; of Dexter, Maine; died in a Worcester (Mass.) Hospital, March 24, from appendicitis.

Timothy W. McCarthy, M.D. Baltimore Medical College, 1906; of Rockville, Conn.; died June 11, in the Hartford Hospital, aged 24.

Society Proceedings

[Please read the editorial on the Index on page 2138.]

COMING MEETINGS.

Oregon State Medical Association, Portland, July 1-3.
American Ophthalmological Society, New London, Conn., July 15-16
American Public Health Association, Winnipeg, Can., Aug. 25-28.
American Acad. of Ophthal. and Oto-Laryng., Cleveland, Aug. 27-29.
Medical Society of Wisconsin, Sheridan, Aug 28.

AMERICAN SURGICAL ASSOCIATION.

Meeting held at Richmond, Va., May 4-6, 1908.

(*Continued from page 2104.*)

Hemolytic Tests for Malignancy.

Dr. George Crile, Cleveland, made an extensive report on this subject in which he stated that in 107 tests of normal individuals there was no hemolysis. In 50 tests of miscellaneous diseases 4 hemolyzed. In 66 cases of malignancy 53 hemolyzed. In carcinoma recurrence, or cured, to prove if cured, 10 tests made, 9 gave no hemolysis, 1 was questionable. In 11 cases of surgical tuberculosis 9 hemolyzed. In 10 cases of chronic suppuration there was no hemolysis. Thirteen cases gave no hemolytic reaction. Several suspected malignant cases did not show hemolysis.

Surgical Aspects of Exophthalmic Goiter with Reference to the Psychic Factor.

Dr. George Crile, Cleveland, accepts as proven the fundamental proposition that if a sufficient amount of the thyroid gland be successfully excised relief or cure will follow. Whether the relief or cure be complete or incomplete is dependent on the correct or incorrect judgment in estimating the amount of gland tissue removed. The serious barrier to surgical treatment is the immediate operative risk. This risk, however, is not shock, hemorrhage or infection, but hyperthyroidism. From the literature, the general phenomena, experiments and from specific cases were derived the methods proposed in operation on these cases. If Graves' disease is surgically curable and if one of the greatest factors in the surgical risk is psychic excitation, the operation should be performed without the patient's knowledge. Such an operation was accordingly planned and found to be readily accomplished by securing the patient's consent to be treated either medically or surgically as deemed best. The method by which this is done is told in detail. Among 225 operations on the thyroid gland 142 were for benign tumors or hypertrophies. Among these there was but one death. Among 28 patients with this disease, operated on prior to the adoption of the present method, the mortality rate was 18 per cent. Most of these cases have been of the severest types. Thirteen patients have been operated on by the new method; in every instance the operation was performed without the patient's knowledge. The pulse rate immediately prior to and during the anesthesia and operation showed but little change. The usual abrupt circulatory changes did not appear. Crile states that there is evidence to show that the thyroid gland may be psychically excited, thereby discharging a pathologic amount of its secretion into the circulation. The symptoms partially or entirely disappear after the successful removal of a sufficient amount of the gland. The psychic factor may be eliminated, and when eliminated the operative risk seems at once to fall.

Primary Carcinoma of the Appendix.

Dr. Richard H. Harte, Philadelphia, reviewed the subject of primary carcinoma of the appendix, which has been regarded by some as a surgical curiosity and showed that probably a hundred cases can be collected from the literature. Apparently the cases collected belong to two classes—the so-called basil or spheroidal cell type and the columnar cell type. The former occurs in the majority of instances in young subjects. The latter is found in older subjects and undoubtedly possesses a much greater degree of malignancy than the former. In an analysis of over 90 cases it is found that the average age is about 29 years, that the majority of cases collected occur between the ages of 10 and 40 years, and that nearly all the cases are found as the result of operations for appendicitis. Dr. Harte does not think that there are any signs pointing to cancer other than the classical signs of appendicitis and that a diagnosis of cancer of the appendix prior to operation is impossible. Such diagnosis can be positive only after the removal of the appendix and microscopic examination. Pathologically all these cases of cancer are engrafted on a chronically inflamed appendix. In many instances the neoplasm can be detected only by the microscope; it occurs in the mucosa and submucosa. Appendiceal tumors give rise to symptoms apart from those accompanying appendicitis only when the growth invades the cecum. By this time the appendix has lost all its characteristics and is hardly recognizable as a part of the primary growth. Dr. Harte is of the opinion that these cecal cancers originating in the appendix are apt to occur between the ages of 40 and 60 and that they have a marked tendency to metastasis or recurrence. It would seem probable that the cases of primary malignancy of the appendix fall in two classes—the columnar cell type as found in the stomach and intestines and other parts of the alimentary tract, and the spheroidal or basil cell type which closely resembles the carcinoma of the skin. Dr. Harte emphasized the fact that the classical signs of appendicitis are of no value whatever in making a diagnosis which can be made only after removal of the appendix. He stated that primary carcinoma of the appendix is present in from 0.33 of 1 per cent. to 1 per cent. of all patients operated on for chronic appendicitis and that but few cases are collected at autopsy. A much larger number would be found were routine examination made at operations and autopsies. The disease appears to be slightly more frequent in females than in males. He argued that since primary carcinoma of the appendix takes its origin in an inflammatory process all appendices showing evidence of any irritation should be removed.

Carcinoma of Appendix with Metastases to Ileocolic Glands.

Dr. Robert G. LeConte, Philadelphia, called attention to the fact that carcinoma of the appendix is usually discovered by the pathologist after the appendix has been removed and that when the disease is confined to the appendix the removal of that organ is sufficient to bring about a cure. In some cases, however, the disease has extended to the cecum. He reported a case of this type in which the primary growth had spread to the cecum and presented metastases to the ileocolic glands. The patient was a single woman, aged 21, who had suffered for ten years with repeated attacks of pain in the appendix region. In April, 1907, the appendix was removed and it was found to be invaginated into the head of the cecum with but an inch extending beyond the cecal border. Microscopic examination showed that the entire appendix was the seat of carcinoma and that the tumor growth had extended into the cecum. Six weeks after the first operation the cecum, with a portion of the ileum, was resected with the entire group of ileocolic glands. At present the patient is apparently well.

Edema of the Large Intestine with Localized Necrosis of Its Wall, Following Splenectomy in Banti's Disease.

Dr. John E. Summers, Jr., Omaha, reported a case which followed closely Senator's definition of Banti's disease, namely: "Splenic anemia with ascites, without local evidence of a general and otherwise positive tuberculosis." Urobilin was not found in the urine. While this is important when positive, it does not negative the diagnosis of Banti's disease. Dr. Summers did a splenectomy on Feb. 28, 1907. A few days later on the development of apparently classical symptoms of acute perforative appendicitis, the abdomen was opened. Instead of an appendicitis there was present a large amount of bad smelling turbulent fluid. The sigmoid was displaced to the right, fixed and edematous. On its right mesenteric border there was a perforation and there were two sphacelated spots distally. The necrotic line was folded in as well as possible by means of a double button-hole stitch and an omental flap was tacked over the area involved. The cecum and its appendage were also edematous as was the rectum. After thorough irrigation the lower peritoneal cavity was sponged as dry as possible and local and pelvic tubular drainage established and the man placed in Fowler's position. The man is now able to walk and is gaining weight. Occasionally there is a discharge from a knitting-needle sized fistula, but it has not been deemed prudent to operate. In addition to tonics the man has taken extracts of spleen and bone marrow. Direct transfusion of blood was apparently of no particular benefit. Dr. Summers regards this case as somewhat analogous to the case reported by Delatour in his paper, "Thrombosis of the Mesenteric Veins as a Cause of Death After Splenectomy" (*Annals of Surgery*, 1895). The findings of the condition of the splenic blood vessels in Dr. Summers' case, he thinks, proves conclusively that the postoperative thrombosis of the splenic vein can hardly be considered due to anything except the traumatism of splenectomy. Study of the literature fails to show a case of edema with gangrene of the large intestine following splenectomy, and he can not recall any reported case of gangrene in the large intestine the result of thrombosis of the superior mesenteric artery or vein.

Flushing Intestines Through Enterotomy Openings.

Dr. George H. Monks, Boston, described a series of studies which he has made on animals and human cadavers to determine the practicability of the attempt to remove part of the intestinal contents by washing out the canal of the intestine through multiple enterotomy openings. The results of the experiments lead to the belief that in certain desperate cases in which the patient's life is threatened because of acute intestinal poisoning, and in which simpler means have been futile, a portion at least of the intestinal contents may be removed with advantage by flushing the bowel through such openings.

Congenital Idiopathic Dilatation of the Colon.

Dr. J. M. Finney, Baltimore, after reporting the case of a young boy on whom he operated, reviewed the literature of the subject to Jan. 1, 1908. While to Hirschsprung belongs the credit of having first called attention to the disease, a number of cases have been found in the literature antedating his classical description. After mentioning the various terms that have been applied to the disease and its classification and the anatomy of that portion of the intestine concerned, Dr. Finney discussed the various hypotheses as to its etiology. About ten theories have been suggested from time to time as to the causation of the disease, including that of the author of hypernutrition. No one theory apparently explains every case, but each will explain some. He dealt with the symptomatology fully and gave a complete clinical picture of the disease, with a list of the series of cases observed in the Johns Hopkins Hospital, eleven in all. He also fully considered the diagnosis, differential diagnosis, aids to the diagnosis, prognosis and treatment. While no one course of treatment seems applicable to all cases, he suggests one method employed in his own case as perhaps applicable to a larger proportion than any other hitherto suggested, namely: A preliminary enterostomy, then a colocolostomy some months subsequently; finally complete excision of the affected portion. The artificial anus is left open until after the success of the preceding steps has been assured, when it is closed under cocain. Finally, he considered the pathology, both gross and microscopic.

DISCUSSION.

Dr. Leonard Freeman, Denver, reported the case of a young man presenting a pronounced type of this disease. He had been troubled with constipation ever since he could remember and at times three months has elapsed without a movement of the bowels. The colon was enormously dilated below the splenic flexure. The surface of the large intestine was plicated and replicated and replicated again until it was reduced to something like normal size. It was impossible to make anastomosis or to resect the bowel. Enlargement of the mesentery was not noticed. The subsequent history of the case was reasonably good. Dr. Freeman would not ordinarily consider this operation of plication a good one for the ordinary case, but in his case it answered the purpose.

Pelvic Abscess and Rectal Drainage.

Dr. Archibald MacLaren, St. Paul, said that in women all intraperitoneal collections of pus, with the exception of tuberculous inflammations, whether from cellular tissue, appendages, uterus or appendix, can be cured by vaginal section, in the vast majority of cases. In the pelvic abscesses of men, the fear of increasing the infection or of further contaminating the abscess cavity has until now prevented giving a man the same chance as the woman. Many appendiceal abscesses if left to themselves will perforate into the rectum and cure themselves. If the pressure in the abscess cavity is taken off by opening from above the chance of Nature's best cure is lessened. He advises that in every case of acute appendicitis examination should be made through the rectum before operation. It is important that the pelvic accumulations should be drained with a suprapubic drain followed by Fowler's position, reserving rectal drainage for the patients who later develop pelvic accumulations or convalesce badly after any course of treatment. He reported five cases treated by rectal drainage with prompt recoveries in three, slow convalescence in two. He gave the operative procedure in detail and called attention to a combination trocar and dilator for use in vaginal puncture. Vaginal section he regards as blind and as not giving sufficient room for further exploration. In rectal operations, all that is necessary is an opening through which to pass a drainage tube into the cul-de-sac of Douglas.

DISCUSSION.

Dr. Ellsworth Eliot, Jr., New York, has seen a number of cases in which the opening for drainage of abscess cavity was established between the abscess cavity and the large intestine, and in most cases the result has been satisfactory regarding drainage and closure. In cases in which Nature has made the opening, though drainage has been satisfactory in some, in a considerable number subsequent operation through the abdomen has been necessary. His larger experience has been with the suprapubic drainage and his results have been satisfactory not only with abscesses from diseased tubes, but with abscesses of the appendix.

Dr. Stanley Stillman, San Francisco, believes that an accumulation of pus shut off by coils of intestine should be drained through the rectum.

Dr. Richard H. Harte, Philadelphia, reported a case of a man desperately ill. Diagnosis was impossible except that there was a pelvic collection and pain referred to the left side, which was thought might be a prostatic abscess. A speculum in the rectum reached a large abscess, from which was drained almost a quart of pus. Recovery followed. While the method partakes of blind surgery and should not be followed invariably, in certain cases it is valuable.

Dr. Archibald MacLaren said that fecal fistula is more likely to follow in cases in which the abscess opens itself because it opens at the top. If opened by the surgeon drainage is perfect, rendering a fistula improbable. If an accumulation of pus is felt through the vagina or rectum there is no doubt of its presence. Dr. MacLaren has made it a rule in some of these cases never to allow a woman to die without making a vaginal section, and some remarkable results have followed. Another rule invariably followed in treating such cases in men is to put a tube in the rectum.

Index of the Transactions.

Dr. Richard H. Harte was authorized to engage clerical assistance to make the Index of the Transactions of the American Surgical Association complete to date.

Memorial to Hunter McGuire.

The association proceeded in a body to the Capitol Square and placed a wreath on the monument of Dr. Hunter McGuire, a former president of the association.

Entertainments.

On Tuesday night the members of the association and their wives were the guests of Dr. George Ben Johnston at his home on Grace Street. On Monday evening the members of the association, with many Richmond physicians, were entertained by Dr. Lewis C. Bosher at the Westmoreland Club. The walls of the state dining room were massed with pink roses, carnations and azaleas, while the tables were decorated with pink blossoms. The sun parlor, which was used as a smoking room, was decorated with palms and growing plants.

ILLINOIS STATE MEDICAL SOCIETY.

Fifty-eighth Annual Meeting, held at Peoria, May 19-21, 1908.

(Continued from page 2017.)

The Treatment of Joint Tuberculosis.

Dr. Edward H. Ochsner, Chicago, said that the treatment of joint tuberculosis naturally comes under three headings—general hygiene, the treatment best suited for joints in general, and the special measures required for each individual joint. Under hygiene we must give special attention to fresh air and proper food. Under the second heading we must strive to relieve pain and to raise the resisting power of the patient. This can be best accomplished by absolute immobilization, subcutaneous injections of minute doses of Koch's new tuberculin under the control of the opsonic index, and the prevention of secondary infection. If secondary infection should occur, the sinus can usually be healed by the injection of bismuth paste. In immobilizing the joints there are two points to be observed. First, to immobilize it absolutely, and, second, to put the limb in such a position that the antagonistic muscles are in perfect equilibrium. If this is accomplished the muscle spasm will soon subside, the pain will be relieved, and a long step taken toward a cure of the affection.

Fetal Death in Utero.

Dr. C. G. Smith, Red Bud, read a paper on this subject, in which he drew the following conclusions: 1. The fetus becomes to all intents and purposes a foreign body in the uterus as soon as it ceases to be viable. 2. It is not good practice to permit a fetus to remain in a woman longer than fifteen or twenty days after it has perished. Procrastination here may become equally harmful with meddlesome early interference. 3. The removal of a dead fetus by careful surgical procedure, without the use of emenagogues or ecbolics, when carried out along the lines of strict surgical cleanliness, can not work harm to the woman. 4. It appears that the advanced age of the parturient woman, in some cases, reduces the general vitality of those forces which are concerned in the work of developing the product of conception, and this reduction of vitality may become the prime factor of intrauterine death.

Ectopic Gestation.

Dr. Arthur B. Eustace, Chicago, reported a case of ectopic gestation which presented some interesting features, and drew the following conclusions: 1. The probabilities are that an intrauterine pregnancy in this case did not exist and that the gangrenous condition of the appendix was secondary to a suppurative process in the right Fallopian tube. 2. A positive diagnosis of the conditions within the abdomen could not be made. 3. The surgical technic primarily used, i. e., vaginal celiotomy, was contraindicated, as it was impossible to use the proper surgical therapy necessary to correct the intra-abdominal condition by the vaginal route. If later a laparotomy had not been performed, the condition of the vermiform appendix and the right Fallopian tube might never have been recognized, unless found at autopsy, whereas his patient made a complete recovery.

Some Observations on Ophthalmia Neonatorum.

Dr. Willis O. Nance, Chicago, related some personal observations on the management of purulent conjunctivitis in the newly born. He emphasized the value of Credé's method of prophylaxis, and pleaded for its more general adoption in private practice. The idea that ophthalmia neonatorum and gonorrheal ophthalmia are always one and the same does not hold good in the light of investigation. Seventy per cent. of the author's cases were gonorrheal; the pneumonococcus was responsible in 10 per cent., and the staphylococcus, diplobacillus and *Bacillus coli* were found in the remainder. Silver nitrate is the best remedy, and no other preparation can take its place. Argyrol, 20 per cent., is a useful adjunct. Irrigations with potassium permanganate, 1 to 15,000, by fountain syringe, using from one to two quarts three times a day, has proved particularly efficacious. When the lids are swollen, canthotomy is indicated. Warm applications are preferable to cold; the former, by stimulating circulation, enable the leucocytes to wage a better fight against the pathogenic germs of the disease. Corneal complications are responsible for loss of sight. If haziness or ulcer develops, it is usually an indication that the treatment is ill chosen, or that it is being ineffectually carried out. If the disease is recognized early, and intelligent treatment is instituted promptly, there need be little fear of an unfavorable outcome of the disease. The worst stage of the disease should be when the case is first seen.

Diagnostics in Spinal Surgery.

Dr. Julius Grinker, Chicago, said that a correct history of the past illnesses and injuries is absolutely necessary, because of the frequent connection of past trauma with the development of surgical diseases of the spinal cord. Attention should also be paid to the order in which symptoms develop and whether the onset is slow or sudden. The objective examination will concern itself with disorders of (a) motility, (b) reflexes, and (c) sensation. The determination of the exact level of the disease and what structures in the cord are involved will occupy the greater portion of time. Finally, the relation of the objective cord findings, with past and present history, and possible findings in other parts of the body, will often enable the surgeon and physician to make, not only a localizing, but also a pathologic diagnosis. Modern spinal surgery depends entirely on modern methods, which are based on the recent painstaking labors of laboratory and clinical neurologists.

Traumatic Lesions of the Cord.

Dr. R. C. Borland, Rockford, in his paper on this subject, favored immediate operation on apparent crushing injuries of the spinal cord involving the entire extent of the cord.

The Ophthalmoscope.

Dr. Cecil M. Jack, Decatur, drew attention to this instrument as an aid in diagnosis in general practice, and said that its use has not received the importance it deserves.

The Sanatorium—Its Influence and Value.

Dr. J. W. Pettit, Ottawa, said the sanatorium must be considered from a business standpoint, and be conducted on business principles. In proportion as physicians depart from business methods in the conduct of these institutions, just to that extent is their usefulness impaired and failure invited. It is not possible, except on the most extravagant scale, to provide for even a majority of these sufferers; therefore, it is the duty of those most prominently identified with their care not only to devise inexpensive methods, but firmly to oppose the present tendency to extravagance and lavish display which characterizes all of our leading sanatoria.

The Tuberculosis Dispensary.

Dr. Ethan A. Gray, Chicago, said that the dispensary is, in the smaller cities as in the larger, a most economical and efficient means of treating the moderately advanced indigent consumptive. Its influence is, in his opinion, quite as broad as, if not broader than, the sanatorium, by reason of the larger number of patients reached. Especially is this true where house conditions permit of the ideal home treatment.

How Shall We Apply the New Antituberculosis Law?

Dr. E. J. Brown, Decatur, said that if in each county the local medical society as a body would take up this matter and obtain through the referendum a carrying-out of the provisions of this act in their respective communities, many hundreds of cases could be successfully treated, further infection of other people could be prevented, and millions of dollars saved to their families and the state thereby.

Frontal Sinus Surgery.

Dr. A. E. Prince, Springfield, exhibited two typical cases, one a frontal sinus obliteration after the Killian method, in which the anterior wall of the frontal sinus is removed, and the other after the Jansen method, in which the floor of the frontal sinus is removed, thus eliminating the deformity. Dr. Prince spoke of three things which have heretofore retarded the progress of frontal sinus surgery, namely: 1. Danger to life. This is obviated by the use of radiographs, which indicate the lateral and antero-posterior diameter dimensions of the sinus. 2. Doubtful cure. This is corrected by thorough curettement and perfect drainage, the thoroughness of which has been emphasized and popularized by Professor Killian, who removes the anterior portion of the os planum and the diseased cells of the ethmoid. He also removes the anterior wall of the sphenoid when necessary. 3. The Killian operation, although excellent as regards a cure, is not desirable for the American people who place a great deal of stress on personal appearance. This objection has been met by a modification of the Jansen operation, which is especially advocated by Dr. Arnold Knapp, New York. Dr. Prince exhibited a further modification which was illustrated by one of the cases exhibited, showing no deformity. In this operation an incision is made along the eyebrow, but does not extend down the side of the nose. He presented a new rongeur forceps, which enables him to remove the floor of the sinus, the anterior ethmoid cells, and to make a free communication into the nose through a comparatively small incision, which makes the operation entirely devoid of deformity.

The following papers were also read:

"Self-Cure by Advertised Medicine: or, Does It Pay to Have a Doctor?" by Dr. Charles L. Mix, Chicago; "Serum Diagnosis of Syphilis," by Dr. William J. Butler, Chicago; "Five Hundred Consecutive Cases of Alcoholism," by Dr. J. F. Hultgen, Chicago; "Placenta Prævia," by Dr. F. D. Hollenbeck, Chicago; "An Interesting Case in Diagnosis Confirmed by Surgical Operation," by Dr. C. B. Horrell, Galesburg; "Diagnosis and Treatment of Acute Tenosynovitis of the Hand," by Dr. Allen B. Kanavel, Chicago; "The Significance of Inflammation and Its Treatment," by Dr. S. C. Stremmel, Macomb; "Psychic Aberrations Associated with the Diseased Prostate Gland," by Dr. J. F. Percy, Galesburg; "Obstetrical Work by the Country Doctor," by Dr. C. B. Brown, Sycamore; "Extrauterine Pregnancy and Hematocele," by Dr. A. Belcham Keyes, Chicago; "A Plea for More Active Cooperation with the Local Secretary," by Dr. C. Hubart Lovewell, Chicago; "Fracture of the Patella," by Dr. A. P. Heineck, Chicago.

CANADIAN MEDICAL ASSOCIATION.

Forty-First Annual Meeting, held in Ottawa, June 9-11, 1908.

Under the Presidency of Dr. F. Montizambert, Director-General of Public Health.

This most successful meeting—the first under the new constitution—demonstrated that section meetings and the creation of an executive council were satisfactory. While the attendance was not so large as usual, owing to several facts, the scientific part of the meeting was of the first order, indeed, it was probably the best program ever presented before the Association. The Ottawa men did not allow themselves to be outdone in the social line; and in these two respects the meeting may be set down as pronouncedly successful.

The Scientific Work.

There were sections on General Medicine and General Surgery, Obstetrics and Gynecology, Public Health, Laboratory Workers, Military Surgery, Eye, Ear, Nose and Throat, and Mental and Nervous diseases.

Dr. Risien Russell, London, England, delivered the address in medicine, an illustrated one, on reflexes. The address in surgery was delivered by Dr. John C. Munro, Boston, on the surgical rights of the public.

Symposium on Peritonitis.

A very interesting symposium was held on peritonitis. This was opened by Dr. C. W. Duval of Montreal, who recorded his investigations into the bacteriology of the peritoneal cavity with special regard to peritonitis. Dr. J. T. Fotheringham, Toronto, followed with a paper on the diagnosis and treatment, and stated that the disease had practically no medical treatment, and that whenever a physician found a case of general peritonitis developing he should hand it over to the surgeon. The surgical treatment was further treated of by Dr. J. F. W. Ross, Toronto; Dr. Murray Maclaren, St. John, N. B.; Dr. L. C. Prevost, Ottawa, and Dr. George E. Armstrong, Montreal.

Advise Publication of an Official Journal.

The special committee on the publication of a journal reported favorably on the project and advised that the finance committee be requested to go on with the establishment of an official journal for the association. Following out this suggestion the executive council appointed a strong finance committee of five, namely, Dr. J. T. Fotheringham, Toronto, convener; Dr. F. N. G. Starr, Toronto; Dr. R. W. Powell, Ottawa; Dr. George E. Armstrong, Montreal, and Dr. James Bell, Montreal.

A special committee on pure milk was appointed with Dr. C. J. Hastings, Toronto, as chairman, and members in every province.

Dr. A. T. Shillington, Ottawa, was appointed chairman of the committee on medical legislation; Dr. C. J. Hastings, chairman of the committee on public health and hygiene; Dr. H. B

Small, Ottawa, chairman of the committee on amendments to the constitution and by-laws; Dr. R. A. Reeve, Toronto, chairman of the committee on medical education; Dr. F. A. L. Lockhart, Montreal, chairman of the committee on reports of officers; Dr. J. H. Elliott, Toronto, chairman of committee on necrology. Dr. Risien Russell, Dr. John C. Munro and Dr. John B. Deaver were, on motion of Dr. H. A. Bruce, Toronto, elected honorary members.

Officers Elected.

Winnipeg was decided on as the place of meeting in 1909, with Dr. R. J. Blanchard as president. The vice-presidents are to be the presidents ex-officio of the provincial medical societies, and the local secretaries, the secretaries of the selfsame societies. The Province of Quebec, having no provincial society, Dr. F. A. L. Lockhart, Montreal, was elected vice-president, and Dr. C. A. Peters, local secretary. Dr. George Elliott, Toronto, was re-elected general secretary, and Dr. H. B. Small, Ottawa, treasurer.

The entertainments included a reception at the Golf Club, an excursion to the Caledonia Springs, and a smoking concert.

Medicolegal

Damages for Deprivation of Medicine in a Sleeping Car.

The United States Circuit Court of Appeals, Fifth Circuit, says that the unusualness of the facts involved in the case of Bacon vs. Pullman Company made difficult the task of assimilating the case with any well-recognized class of negligence cases. The plaintiff, who occupied a stateroom on one of the defendant's sleeping cars as a passenger between Cincinnati and Chattanooga, had provided herself with medicine and stimulants, and carried them with her in a handbag to afford relief from the physical pain and mental distress occasioned by her condition of disease. Because of the contract relations existing between her and the defendant company, unquestionably the legal duty was imposed on the latter to use reasonable care to protect and guard her in the possession of these, and to prevent their loss. At the trial evidence was either introduced or offered tending to show that this duty was breached by the wrongful act of the porter in taking and carrying away the handbag containing the medicine and stimulants; that the plaintiff was thereby deprived of their use; that she suffered unrelieved during the night the pain and distress incident to her diseased condition, and was taken from the train at the end of her journey in a state of physical collapse; that the medicine and stimulants, if administered, would have effected the desired relief. Did not her suffering follow in direct and logical sequence as the result of the act of the porter?

It was true her suffering resulted primarily from her disease; had she not been afflicted she would not have suffered, and she would not have needed medicine and stimulants. But she was afflicted, and she suffered mentally and physically. Relief could have been afforded by the use of medicine and stimulants. These were provided her, and they were at hand to be administered. The porter carried away the handbag containing them, and she was thereby deprived of her relief, and as a result she suffered the effects of her sickness.

In this action the plaintiff sought to recover for the suffering consequent on her condition of disease, but endured because of the deprivation of relief. Her suffering during the night and her condition of collapse at her journey's end might be attributed to two concurring causes, to wit: her sickness and the deprivation of relief. The latter must be said to be the result of the act of the porter in carrying away the handbag. Obviously there was direct causal connection between this act and the suffering of the plaintiff. Being acquainted with conditions as they actually existed, a person need not have had much prudence or experience to readily realize that the consequences that did follow the porter's act would so follow. The fact that the sickness of the plaintiff concurred with the wrongful act of the porter in contributing to the result complained of did not at all relieve the defendant of responsibility for its negligence. The authorities are uniform to the effect that the negligence of the defendant, in order to create liability, need not be the sole cause of the plaintiff's injuries.

The wrongful act of the porter, having been viewed in the light of its consequences, logically and in right reason, seems to deserve a classification with those acts of negligence for which full compensatory damages are awarded.

The circumstances bearing on the disappearance of the plaintiff's handbag, her condition of disease and resultant suffering, were susceptible of proof which might be controverted. The effect of the medicine and stimulants on the suffering occasioned by her sickness, and whether or not they would have alleviated or relieved her, were questions which could be answered by witnesses skilled in medicine, as could also the effect of their withdrawal. The court does not consider this a case where analysis of consequences and logical conclusion therefrom should give way to expediency, nor where the rights of the individual should yield because to recognize and vindicate them might open the door and give rise to unjust claims. To adopt such a course would not only involve the denial of redress in meritorious claims, but would as well imply a distrust of the ability of our courts to adequately examine into and find the truth of such claims.

For the conversion of personal property the rule of damages is that a person is entitled to recover compensation for the loss sustained, measured by the value of the property taken. Under the facts and circumstances obtaining here, this measure of relief would be wholly insufficient and inadequate for the wrong done. The porter's wrongful act worked double injury to the plaintiff. It deprived her of the value of her drugs, and also deprived her of the relief from suffering their administration would have afforded. The value of the drugs became inconsequential when compared to the suffering entailed from their theft. If the theft could not be accurately stated to be the infliction of a physical injury, it was at least a personal injury which approximately caused physical suffering and distress. Could the drugs have been forthwith resupplied, then their value would be compensation for their wrongful taking. But the owner was a sick traveler who had taken passage for the night on a railway train and the journey was commenced before the loss took place or was discovered. If on a trial of the case the jury should find that the porter's wrongful act deprived the plaintiff of her medicines and stimulants, and that if these had been administered as prescribed they would have relieved her of the physical pain and mental distress caused by her diseased condition, and that because of being deprived of their administration she suffered physical pain and mental distress, the resulting damages could not go uncompensated any more justly than could the loss to her of the value of the drugs or the receptacle in which they were carried. The court concludes that, if the plaintiff was injured in the manner claimed, she was entitled to her remedy in the nature of compensatory damages.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

June 13.

1 The Winnipeg Fight Against Consumption. J. B. Huber, New York.
2 *Unfinished Business of General Hospitals. S. S. Goldwater, New York.
3 Recurrent Vomiting. H. S. Carter, New York.
4 New School Hygiene. G. W. Vandegrift, New York.
5 Disinfection of Body Cavities by Injection of Suspensions of Living Nonpathogenic Bacteria. C. E. North, New York.

2. **Unfinished Business of the Hospital.**—Goldwater points out that while there is reason for pride in the achievements of our general hospitals, there is much to be desired as regards what they leave undone that might be and ought to be done. He refers to the numerous classes of patients who are refused admission to hospital on the scores of want of room, or of being unsuitable as more properly classifiable as dispensary

patients, or from the objection to venereal cases, foreign domicile, neurasthenics, senility or incurableness. incipient tuberculosis, pregnancy, contagious disease or suspicion thereof. In all these cases the hospital neglects many opportunities of usefulness. Other errors lie in taking it for granted that a busy regional surgeon will do for a patient in the hospital all that is done in private practice by the family doctor and the surgical specialist combined; in not doing all he can to make plain to everyone how large a part of the domain of medicine is still unexplored; and in the lack of a full-fledged department of hygiene, equal in rank to any other department, whose business it should be to continue the re-establishment of efficiency in the discharged hospital patient. He pleads, therefore, for: 1, the encouragement of scientific work and the means for further clinical, as well as laboratory, research; 2, further cooperation between the different services, rather than the complete control of the patient by one or another; 3, further attempts to win the patient's confidence and to establish sympathetic relation between patient and staff; 4, the fullest cooperation with all other relief agencies, so that the patient may be properly piloted in such directions as may afford completion of treatment, after all that can be done has been done, and especially the direction to proper sources of relief when for any reason such can not be accorded where the patient first applies; 5, the complete recording of all data and reasons in every patient refused admission, as well as the data regarding all patients admitted; 6, a substitution of elastic boundaries for rigid ones as regards department beds, by conferring on some authority in touch with the entire hospital activities power to add beds to, or subtract them from, the various departments or services in accordance with the fluctuating needs in individual hospitals; and a central application bureau for groups of hospitals, on a system of organized voluntary cooperation, so that every patient in need of a bed may find his way promptly to the very ward of the very hospital where he can be properly accommodated. That this is practicable is proved by what has been effected in New York for the government of the ambulance service there in regard to emergency cases. In short, he considers it "the duty of the application bureau of a hospital to admit a patient when possible; to refer an applicant to another institution or agency when necessary; to take as much pains to place suitably a patient who can not be admitted, as to admit a patient to whom hospital accommodation can be given; and to reject an applicant only when he can not be either admitted to the hospital or referred successfully to other sources of aid."

New York Medical Journal.

June 13.

6 Hygiene and Management of Pregnancy. A. Flint, Jr., New York.
7 *Suprapubic Prostatectomy in Two Stages. H. Lilienthal, New York.
8 *Present Limitations of Our Conception of Paranoia. M. S. Gregory, New York.
9 *Neuralgia. S. O. Goldan. New York.
10 Modified Blood Clot in Mastoid Surgery. S. McCullagh, New York.
11 Analytical Study of 600 Cases of Anesthesia. H. L. Springer, Wilmington, Del.
12 *Pruritus Ani; Causes and Treatment with Especial Reference to Use of Roentgen Rays. R. D. Mason, Omaha.
13 Id. C. O. Files, Portland, Me.

7. **Suprapubic Prostatectomy.**—Lilienthal reports three cases and deduces from them the principles on which he founds his operation of suprapubic prostatectomy in two stages. The advantages claimed for the operation are as follows: 1. The dangers of serious hemorrhage are minimized. 2. The total time of operation, including anesthesia, is reduced more than one-half—probably three-quarters—consequently minimizing shock. 3. The exploration of the bladder by sight and touch at the time of the cystotomy is perfect. Preliminary cystoscopy is not only unnecessary, but extremely ill-advised, for cystoscopy in the class of individuals under discussion is by no means without danger. 4. Pre-existing cystitis is cured by drainage and urinary antiseptics before the prostatectomy proper. 5. Relief of back pressure on the kidneys with readjustment to normal conditions before prostatectomy. 6. It obviates the pushing away of the bladder from the abdominal wall, sometimes opening up the space of Retzius, which occurs when the operation is performed at one sitting. Chances of infection are thus reduced. 7. Injury to the rectum is practically unknown. 8. The sexual power is rarely interfered with. Lilienthal describes the method in detail.

8. **Paranoia.**—Gregory discusses the history of paranoia, and summarizes his article as follows: 1. The grouping of paranoia from only a symptomatic point of view is unscientific and untenable. 2. When measured by complete clinical criteria the paranoia group is reduced to about 10 per cent. of all insanities which seem to have some fundamental characteristics in common. 3. This restricted group is composed of two essentially different types, namely, deteriorating and non-deteriorating, or degenerative, which should not be confounded. 4. These two general groupings, owing to our present limited knowledge, may only empirically and arbitrarily be divided into other subgroups: (a) for clinical and therapeutic convenience; (b) to bring about an understanding among the alienists, in order to avoid confusion in medicolegal questions.

9. **Neuralgia.**—Goldan injects pure chloroform in quantity varying from 2 to 10 minims, into the site of the neuralgic area with an ordinary sterilzed hypodermatic syringe, with aseptic precautions. He illustrates with drawings the points of injection for particular neuralgias. He quotes good results in facial neuralgia, torticollis, brachial and intercostal neuralgias, sciatica, lumbago, inguinal neuralgia, coccygodyina, plantar neuralgia and tendinous neuralgia (after acute rheumatism). He explains the action by its determining a new blood supply, on the theory that "neuralgia is the cry of nerves for blood." His conclusions are: The nearest approach to a specific in neuralgia is, in his opinion, chloroform. The method has in his hands proved to be devoid of any untoward effects, either immediate or remote. Chloroform injected locally has no systemic effects. It has a local anesthetic effect, which is desirable. Superficial injections often act with certainty, even when the pain seems to be deep-seated.

12. **Roentgen Rays in Pruritus Ani.**—Mason, after discussing the general treatment of pruritus ani, including several formulæ for local application, recounts his experiences with the *x*-ray, which, though not extensive in number, have been highly satisfactory in results. The method is useful only in chronic cases in which the skin is eczematous and thickened. His technic is as follows: With a soft tube he gives an exposure of ten minutes' duration twice a week, until he learns how the skin is going to stand it. If there is no irritation he gives three treatments a week until a brown discoloration appears. All treatment is then stopped until this goes away, then resumed until it reappears. This is usually enough, but, if possible, it is well to give an occasional treatment after this as a matter of precaution.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London.

May 30.

1 Present Condition of Our Knowledge Regarding the Functions of the Suprarenal Capsules. E. A. Schäfer.
2 *Connective Tissue in Carcinoma and in Certain Inflammatory States that Precede Its Onset. V. Bonney.
3 *Analgesia versus Anesthesia in Obstetrics and Gynecology. Sir W. J. Sinclair.
4 Progressive Facial Hemiatrophy. J. R. Williamson.
5 *Treatment of Pulmonary Tuberculosis by Postural Method Encouraging Drainage of the Lung and Inducing Artificial Hyperemia of the Apex. A. T. T. Wise.
6 Case of Enteric Intussusception. F. de H. Hall.
7 Case of Pemphigus Vegetans. C. W. Young.
8 Motoring Notes. C. T. W. Hirsch.
9 Acute and Transitory Dilatation of the Heart in an Infant. E. L. Jones.

2. **Connective Tissue in Carcinoma.**—Bonney summarizes his three Hunterian lectures with the following conclusion: The onset of the ordinary forms of carcinoma is always preceded by a condition characterized by epithelial hypertrophy and certain constant changes in the sub-epithelial tissue. The precarcinomatous state may be attained through various inflammatory processes, at first quite distinct from one another, but culminating in the same histologic picture. The tissue cell

proliferation occurring around a primary carcinoma is a part of the precarcinomatous process and materially assists the progress of the growth. There is no histologic evidence of a protective reaction on the part of the tissues to the carcinoma cell. Though changes in the adjoining connective tissue bear some very close relation to the cause of epithelial ingrowth, yet malignancy having been established, the further spread of the tumor is independent of such assistance.

3. **Analgesia versus Anesthesia.**—Sinclair discusses the history of anesthesia in obstetrics and describes various methods of analgesia—morphin, spinal anesthesia and morphin-scopolamin. He describes a morphin-alcohol-cocain method with which he has had considerable experience extending over several years in minor gynecologic surgery. He asserts that much of the trouble is psychic and anticipatory in many small operations, and in these the psychic influence of the method is favorable. It is useful when general anesthesia is contraindicated, and the analgetic effects can without danger be made sufficiently intense for the object in view by slight modification in the relative amount of the dose of morphin or alcohol according to habit, temperament or racial qualities of the patient. He has tried morphin alone and is satisfied that the combination of morphin with alcohol is the best method yet discovered. Taking as an example a curettage, a full dose of morphin, a quarter of a grain more or less according to the patient's bulk; is given hypodermically about three-quarters of an hour before operation. Half an hour or twenty minutes before operation the patient receives a soothing draught consisting of about two or three fluid ounces of whisky or brandy, disguised and diluted. If accustomed to alcoholic beverages she must get more. Sinclair's favorite disguise is liquid extract of liquorice. By the appointed time, when everything is ready, the most timid patient has become apathetic. The additional use of cocain is not constant, but depends on the production of a small wound, or the presence of a painful laceration or fissure, etc. Sinclair has used this method for the opening of Douglas' pouch and for drainage in pelvic peritonitis, and Dr. A. K. Gordon has repeatedly used it for abdominal section and suture of the ruptured intestine in enteric fever.

5. **Posture in Pulmonary Tuberculosis.**—Wise strongly advocates the prone position on a double inclined plane in pulmonary affections. The force of gravitation is used for the drainage of accumulations in the lung, and an important modification of the pulmonary circulation is brought about. The apices of the lungs in a more dependent situation have a fuller blood supply and some parts of the pulmonary tissue become relieved from the weight of the heart. Wise has invented a lying-out chair, which forms a double inclined plane, thus obviating the congestion of the head which has been an obstacle to previous attempts to use the inverted position. Hemorrhagic cases, those of pronounced pneumonic type of tubercle, or with fluid in the pleural cavity, are hardly suitable for this treatment. It is a wise precaution not to rise abruptly from the inclined position, lest giddiness result.

British Medical Journal, London.

May 30.

10 Present Conditions of Our Knowledge Regarding the Functions of the Suprarenal Capsules. E. A. Schäfer.
11 *Recent Progress in the Serum Therapy of Plague. N. H. Choksy.
12 *Cats as Plague Preventers. A. Buchanan.
13 Sporadic Kala-Azar in Calcutta, with Notes of a Case Treated with Atoxyl. U. N. Brahmachari.
14 *Measles. E. Ward.
15 Use of Serum in Scarlet Fever. H. Cumpston.
16 Horse-Pox Directly Transmitted to Man. A. F. Cameron.
17 Primary Pneumococcic Peritonitis. A. Smith.

11. **Serum Therapy of Plague.**—Choksy reports the results of observations on 1,081 patients with plague subjected to the serum treatment, of whom 537 died and 544 recovered. The mortality rate was 49.6 per cent. He concludes that in Yersin-Roux antiplague serum we possess a useful and efficacious remedy against plague. The absence of all antitoxic action is responsible for its limited utility.

12. **Cats and Plague.**—Buchanan discusses the relative value of inoculation versus cats, in regard to the prevention of plague, and thinks that there is good reason to believe that the duration of plague in India will depend on the time it takes before it is generally recognized that the cat is the best plague preventer.

14. **Measles.**—Ward discusses the onset, symptoms (prodromal rashes, general glandular enlargement, Koplik's spots, and the character of the rash), complications (coincidence of measles with chickenpox and paralysis of soft palate), prognosis, and immunity of infants. He insists on the importance of treatment apart from that of complications, for he has known one practitioner who took an interest in treatment have a very low mortality during a given epidemic, while all other practitioners taking no interest in treatment had a very high mortality. Every practitioner knows the drugs usually given in measles, but it is sometimes forgotten that there are three lines of treatment for every disease. First, there is the physical treatment: and it is after this that hospital training usually stops; the treatment, that is, by rest in bed, warmth, local applications and by drugs. Secondly, there is a mental treatment, at present largely in the hands of Christian scientists; means are taken to give the patient suitable confidence in himself and in his medical adviser, and to give him a suitable hopefulness. Thirdly, social treatment; it is necessary to create a suitable social atmosphere around the patient. The relatives must have confidence in the doctor; they must believe that he thoroughly understands the case, and that he is doing all that can possibly be done for the patient.' With children there is comparatively little mental treatment required, but social treatment is very necessary; and it is only by recognizing this, and by strict attention to this line of treatment, that it is possible to get instructions carried out properly.

Medical Press and Circular, London.

May 27.

18 How to Set to Work in Ordinary Obstetric Practice. R. de Bovis.
19 Dangers and Treatment of Myoma of the Uterus. C. Martin.
20 Promotion of Uniformity in the Registration of Diseases in Hospitals. R. F. Tobin.
21 Supports of the Female Pelvic Viscera. R. H. Paramore.

Clinical Journal, London.

May 27.

22 Leukemia. F. Taylor.
23 Interesting Cases of Cranial Surgery. (Concluded.) H. Curtis.

Indian Medical Gazette, Calcutta.

May.

24 Report on Plague in Calcutta for the Year Ending June 30, 1907. G. Lamb.
25 Value of Large Quantities of Hypertonic Salt Solution in Transfusion for Cholera. L. Rogers and M. Mackelvie.
26 Epidemic Dropsy or Beriberi in Eastern Bengal. T. H. Delany.
27 Epidemic of Dropsy. T. C. Rutherfoord.
28 A Parasite in the Sparrow. J. R. Adie.

Annales de Gynécologie et d'Obstétrique, Paris.

May, XXXV, No. 5, pp. 257-320.

29 *Erysipelas in the Newly Born. A. Herrgott.
30 *Technic for Implanting Ureter in Bladder. (Urétéro-cysto-néostomie.) Ricard.

29. **Erysipelas in the Newly Born.**—Herrgott has encountered two cases in his experience at Nancy, and there was an interval of 35 years between them. Diffuse peritonitis was found in each case. Phagocytosis is not under way at this age, and the lymphatic glands do not oppose any barrier to infection. It is this absence of leucocyte reaction that renders erysipelas so serious in the newly born. He thinks that the umbilicus is the portal of entry of the germs, and consequently aseptic treatment of the cord is the proper method of prophylaxis. The insidious onset is a special feature of this form of erysipelas.

30. **Implantation of Ureter in Bladder.**—Ricard's technic for what he calls "uretero-cysto-neostomy" is described and illustrated. The end of the severed ureter is slit, turned back like a cuff and fastened with two sutures. This end of the ureter protrudes into the interior of the bladder for 2 cm. and the lips of the small incision in the bladder wall admitting the ureter are sutured to it. The walls are then drawn up above and sutured again to the ureter about 2 cm. above the first stitches.

Archives des Maladies du Cœur, etc., Paris.

May, I, No. 5, pp. 273-336.

31 *Obliteration of Artery Supplying the Arm. (Oblitération artérielle du tronc principal du membre supérieur.) C. Achard and R. Demanche.
32 Basophile Granulations in Red Corpuscles. J. Jolly.
33 *Pathogenesis of Aplastic Anemia. R. Blumenthal.

31. **Operation of the Axillary Artery.**—Achard reports three cases of gangrene from obliteration of the main artery of the arm. In 30 cases on record the obliteration occurred from embolism on one or both sides or thrombosis on one side, with slight preponderance of the left side. His patients were women of 69 and 75 respectively, and a man of 41; the latter was cured by amputation. The most constant initial symptom is sudden pain in case of embolism; with thrombosis the onset is usually more insidious. In a few days collateral circulation becomes established. Treatment can be only palliative, wrapping the arm in cotton to keep it warm, striving to keep the gangrene dry and aseptic. In his last mentioned case he used Peruvian balsam with advantage. It has an agreeable odor; its application is simple and harmless, and it does not need renewing oftener than once a week.

33. **Aplastic Anemia.**—Blumenthal has been studying a case of aplastic anemia in a iii-para of 42. His conclusion is that aplastic anemia is the terminal phase of myeloid anemia. The physician does not often see this phase, as the patient dies or the affection takes a turn for the better. The derangement is the result of repeated hemorrhages and perverted chemical action. In his patient a myomatous uterus was accompanied by cystic ovaries. Vasomotor disturbances, especially vasodilatations, congestions of uterus and adnexa, such as may occur in young girls and entail excessive hemorrhage, play an important part in the production of aplastic anemia in the female. As usually no external cause can be discovered, the affection seems to be primary.

Hospitalstidende, Copenhagen.

April 29, LI, No. 18, pp. 489-520.

34 *Artificially Induced Pneumothorax. (Kunstig Pneumothorax. Nogle tekniske Vink.) C. H. Würtzen and R. K. Petersen.
35 *Detection of Tubercle Bacilli in Sputum. (Studier over de fysikalske Forhold ved forskellige Homogeniserings- og Sedimenteringsmetoder. Nye Metoder). V. Ellermann and A. Erlandsen. Commenced in No. 17.

34. **Artificially Induced Pneumothorax.**—Würtzen and Petersen give an illustrated description of the modified trocar and other apparatus they use in therapeutic compression of the lung.

35. **Improved Technic for Detection of Tubercle Bacilli in the Sputum.**—Ellermann and Erlandsen describe a technic which, they say, shows up the bacilli from ten to twenty times more effectually than any other. Comparison with other methods shows that efficacy increases from a proportion of 1 with Mühlhäuser and Stroschein's technics, 2 with Spengler's, 3 with Hempel's, 5 with Philipp's, to 6 with "autodigestion" and 15 with their "double method." Their technic includes four procedures: (1) The sputum is mixed with one-half its volume of a 0.6 per cent. solution of sodium carbonate, and the corked test-tube is kept in the incubator at 37 C. for 24 hours; (2) most of the supernatant fluid is then decanted and the sediment centrifugalized. These two procedures form what they call the "autodigestion" technic, and even this is a great improvement, they think, over other methods. But the results are incomparably better if the resulting sediment is then mixed with four times its volume of a 0.25 per cent. solution of sodium hydroxid, heated to boiling point and then centrifugalized; (3 and 4) the four steps form their "double method." This technic is particularly useful when bacilli are scarce in the sputum. The "autodigestion" gives a sediment which amounts to only about one-tenth of the volume of the original sputum. (In their communication on the subject in the local medical society they stated that they modify the technic somewhat for the urine: Four parts of a 0.75 per cent. solution of sodium carbonate are mixed with one part sediment centrifugalized from the urine; a little pancreatin is added and the whole is placed in the incubator and then treated by the sputum technic 2, 3 and 4.)

Berliner klinische Wochenschrift.

May 25, XLV, No. 21, pp. 993-1040.

36 Foundations of Opsonic Theory. (Grundlagen der Wright'schen Opsonintheorie.) F. Neufeld.
37 Tardy Consequences of Shot Wound in Right Temple. (Spätfolgen eines Schrotschusses in die rechte Schläfe.) M. Bernhardt.
38 *Ingestion of Fluids in Nephritis. (Flüssigkeitszumessung bei der Ernährung von Nephritikern.) H. Strauss.
39 *Toxic Ossifying Osteoperiostitis in Chronic Jaundice (Toxigene Osteoperiostitis ossificans bei chronischem Icterus.) H. Beuttenmüller.
40 Radioscopy of Normal Thorax with Respect to Diagnosis of Incipient Tuberculosis. M. Levy-Dorn and H. Cornet.
41 Tuberculosis Dispensaries. (Fürsorge für Tuberkulöse.) E. Pütter.
42 Importance in Physical Therapy of Determination of Blood Pressure. (Praktische Bedeutung der Blutdruckmessung in der physikalischen Therapie.) A. Laqueur.

38. **Ingestion of Fluids in Nephritis.**—Strauss announces that later research by himself and others has confirmed the correctness of his views in regard to the necessity of allowing plenty of fluids in most cases of nephritis to wash out the accumulating poisons and indirectly to relieve the heart. In four patients with very high blood pressure only slight increase in the blood pressure followed ingestion of a pint of water and in none of the others was there any increase. He makes a sharp distinction between dropsy of cardiac and that of nephritic origin, but states that in both forms the patients may benefit from copious intake of water. He regards polyuria as an effort of Nature to wash out effete matters, and it requires an adequate intake of fluid. Experience has shown that the elimination of nitrogenized substances and phosphates declines in nephritis if the intake of water is limited. The conditions in diabetes insipidus are similar to those in chronic interstitial nephritis in some respects; the specific gravity of the urine increases under deprivation of water, which does not occur in health. Rabbits given plenty of water survived longer than the controls without water in experimental nephritis from uranium poisoning. He is convinced that the hypertrophy of the heart, like the polyuria, is for purposes of compensation. Dropsy of nephrogenic origin is likewise a compensating process, to dilute the retained effete matters. Uremia is the danger, and we have comparatively few means of combating it; it is different with dropsy. We can act on the dropsy with diuretics or we can tap the fluid and thus give outlet to retained toxic elements as well as to the effusion, while we are comparatively powerless with respect to uremia except as we allow fluids to be ingested to ward it off or reduce it. Consequently he does not regard dropsy as a contraindication for free ingestion of fluid when uremia threatens. He never allows much water at a time, but orders numerous small amounts to be drunk systematically through the day or given by instillation in the rectum, a drop at a time. The contradictory findings of various authors are due to the differences in the individual cases as so many complex elements enter into the matter. Salt, of course, he asserts, should be restricted in all cases of dropsy.

39. **Osteoperiostitis in Chronic Jaundice.**—Beuttenmüller describes three cases of drumstick fingers with other signs of toxic ossifying osteoperiostitis in a man of 47 and two women of 24 and 56 with chronic jaundice. Hanot's cirrhosis was diagnosed in the male patient, but later he was operated on elsewhere on the supposition of gallstones. No concrements were found and no signs of inflammation, but the bile was unusually thick. The jaundice subsided somewhat after the operation; the general health improved and the periostitis entirely retrogressed, suggesting a peculiar form of cholangitis generating toxins responsible for the periostitis. The second case was one of cancer of the biliary passages, and in the third case mercurial treatment gave some improvement.

Correspondenz-Blatt für Schweizer Aerzte, Basle.

May 15, XXXVIII, No. 10, pp. 313-344.

43 Mode of Action of Certain Antipyretics. (Wirkungsweise einiger Antipyretica.) M. Cloëtta.
44 *Albuminous Expectoration After Puncture of the Pleura. Gerhardt.
45 *Auscultation of Whispering Voice, Especially in Pulmonary Tuberculosis. (Auscultation der Flüsterstimme.) O. Amrein

44. **Albuminous Expectoration After Puncture of the Pleura.**—Gerhardt relates a case of albuminous expectoration in which the lungs had long been compressed and indurated and had no chance to expand, although there was only a small amount of effusion in the pleura. Severe coughing followed the puncture, and the patient succumbed in a few minutes after she began to expectorate a thin fluid. The aspect of the sputum and the sudden flooding of the air passages with the fluid were evidently the consequences, not the cause, of the coughing. The patient had been able to suppress the cough at the first tendency, but it returned more violent. He concludes that it is wise to arrest the puncture when there is any tendency to coughing, but, if there is no tendency to cough, even large amounts of the effusion can be withdrawn without apprehension.

45. **Auscultation of the Whispering Voice.**—Amrein has examined 1,000 patients with lung affections by auscultation of the whispering voice. The results have been very instructive in many cases of incipient tuberculous processes. He has frequently found the whispering voice louder on the side affected in patients under tuberculin treatment, and accepts this as an indication not to increase the dose, although no other signs of a reaction to the tuberculin, local or in the temperature, could be detected. In convalescing patients the persistence of the loud whispering voice warns to be cautious with physical exercises. He has his patients speak aloud and then whisper the German words "neun und neunzig." In recent hemorrhage from the lungs, auscultation of the whispering voice may locate the bleeding point. The findings are also instructive, he adds, in pneumonia.

Zentralblatt für Chirurgie, Leipsic.

May 9, XXXV, No. 19, pp. 577-608.

46 Temporary Turning Back of Both Upper Jaws. (Zur temporären Aufklappung beider Oberkiefer nach Kocher.) J. C. Reinhardt.
47 *Transplantation of Entire Joint in Treatment of Bony Ankylosis of Elbow. (Behandlung knöcherner Ellbogengelenksankylosen mittels Ueberpflanzung von ganzen Gelenken.) P. Buchmann.
48 The Galalith Intestinal Button. (Galalithdarmknopf.) V. Lieblein.

47. **Transplantation of Joint.**—Buchmann gives an illustrated description of two cases of bony ankylosis in the elbow in which he restored functioning by transplanting the first metatarsophalangeal articulation after resection of part of the elbow. Resection of this joint in the foot did not interfere in the slightest with the functioning of the foot. He did not find it necessary to suture the bone. The joint healed promptly in place, and the elbow could be used as soon as the contractured muscles allowed. His patients were girls of 14 and 19, and the ankylosis was of traumatic origin in both.

Zentralblatt für Gynäkologie, Leipsic.

May 9, XXXII, No. 19, pp. 609-640.

49 *Indications for Pubiotomy. E. Bumm.
50 *Acute Paralysis of the Stomach with Secondary Occlusion of Duodenum. (Acute Magenlähmung.) F. Lichtenstein.
51 Delivery by A. Mueller's Technic. (Extraktion nach A. Mueller.) N. Cukor.

49. **Indications for Pubiotomy.**—Bumm states that 52 pubiotomies have been done at the Berlin Charité. One patient succumbed to embolism of the lungs. The technic has been perfected so that serious by-injuries are now entirely avoided. In four patients, recently, with conjugata vera under 7.5 c.m. he has applied Sellheim's modification of Frank's technic for Cesarean section with gratifying results.

50. **Acute Paralysis of the Stomach.**—Lichtenstein reports two cases of acute postoperative paralysis of the stomach which show that pancreatic juice in the stomach content indicates secondary occlusion of the duodenum. Indican appears in the urine during the occlusion, and the disappearance of the indican shows that the passage is again permeable. In the second case of acute postoperative dilatation of the stomach the vomiting stopped and there was nothing to indicate the real trouble, no distention of the abdomen, no dulness, no painfulness, merely intense thirst and transient vomiting the third day, scanty and free from bile. Acute postoperative dilatation has been observed even when no anesthetic was used. In his cases the operation had been done under scopolamin, morphin and tropacocain in the dural sac, supplemented by 40 gm. and 110 gm. ether. The first patient vomited a little on the second day and the vomiting increased to the tenth day when lavage of the stomach, supplemented by raising the pelvis, brought relief. Flatus passed 48 hours after the lavage. In the second case the vomiting commenced on the third day. The acute dilatation was not diagnosed and autopsy revealed that the stomach formed a long loop reaching down to the promontory.

Gazzetta degli Ospedali e delle Cliniche, Milan.

May 3, XXIX, No. 53, pp. 554-568.

52 Antibodies in Blood Serum of Cancer and Leukemia Patients. (Presenza di anticorpi nel siero di sangue di carcinomatosi e di leucemici.) E. Tedeschi.
53 Primary Pneumococcus Peritonitis. A. Balacci.

Policlinico, Rome.

May 3, XV, Practical Section, No. 18, pp. 549-580.

54 Motile Corpuscles in Cornea of Rabbits Inoculated with Vaccine. (Reperto di corpuscoli mobili nelle cornee di conigli inoculate di vaccino.) G. Volpino.
55 *Atypical Forms of Acute-Cerebrospinal Meningitis. Tramonti.

May 10, No. 19, pp. 581-612.

56 Foreign Bodies in Parotid Region. (Sulla presenza di corpi estranei nella regione parotidea.) V. Barnabo.

55. **Atypical Forms of Acute Cerebrospinal Meningitis.**—Tramonti reviews the literature on meningitis of pneumonic, influenzal, and scarlatinal origin, and meningitis from herpes, from the typhoid and colon bacillus and from other microorganisms. He discusses further meningitis abnormal from its duration or symptomatology, the ambulant form and the mild cyclic form, also meningitis with predominance of a single symptom, such as coma suggesting uremia; delirium simulating acute mania; convulsions suggesting epilepsy; the typhoid form accompanied by stupor, diarrhea and roseola; the form with purpura, and the pneumonic form. He discusses the syndrome as modified by infancy, old age and the preceding condition of health and cites a long list of complications that may be observed, both immediate and remote. Among the latter are deafness leading to deafmutism, atrophy of the optic nerve, etc. He concludes with a description of 9 cases of defective mental development in children who had had meningitis in infancy.

Hygiea, Stockholm.

April, LXX, No. 4, pp. 321-176.

57 *Early Diagnosis of Cancer of the Stomach. (Om tidig diagnos af magkräfta.) S. A. Pfannenstill.
58 Local Tuberculin Reactions. (Om det kutana tuberkulinprofvet enligt Pirquet.) O. Medin. (Om de lokala tuberkulinreaktionerna.) A. Josefson.

57. **Early Diagnosis of Cancer of the Stomach.**—Pfannenstill says that the anamnesis is of little value for the diagnosis of cancer of the stomach, especially the subjective symptoms. The course of the affection is of diagnostic importance but if depended on too much there is danger of allowing the cancer to get beyond the operable stage. Among the objective symptoms, the finding of cancer cells is decisive, as also the discovery of pus and blood at the same time in the stomach content. The absence of hydrochloric acid has little diagnostic importance. More instructive is the presence of lactic acid, although this in itself is not decisive. Stenosis of the pylorus is of great importance as it generally demands operative measures for macroscopic retention. Microscopic retention does not necessarily indicate stenosis or cancer. Hemorrhage may occur in the stomach from various causes. He does not know of any case in which an early diagnosis of cancer was made on the basis of Salomon's test although this seems practicable. In the majority of cases the cancer owed its discovery to the symptoms of stenosis of the pylorus. He defines an early diagnosis as one made before the tumor is palpable and before there is any evidence of metastasis or cachexia.

Norsk Magazin for Lægevidenskaben, Christiania.

May, LXIX, No. 5, pp. 419-508.

59 Application of Tuberculin in Diagnosis. S. Wideroe.
60 Simple Apparatus for Early Detection of Central Color Scotoma. (Paavisning af centralt farveskotom.) S. Holth.

GENERAL INDEX.

All *reading matter* in The Journal from January to June, 1908, inclusive, is indexed here. (For Current Medical Literature Index see pages 2191 to 2240.) "Deaths," "Book Notices" and "Society Proceedings" are indexed under those titles at the ends of the letters "D," "B" and "S." Matter pertaining to the Association is under "American Medical Association." With the above exceptions, all matter is indexed under the most important word of the heading that was used in The Journal, and also under the subject heading. For instance, abscess of brain will be found indexed under "abscess" as well as under "brain." Such titles as "ocular manifestations, etc.," have been indexed under "eye." Cross references have been made wherever this was possible. It is also well to remember that, in looking up a certain subject, related words should be consulted, for example, testes, testicle; skull, cranium; bowel, intestines. The letters used to explain in which department the matter indexed appeared are as follows: "E" editorial; "O" original article; "C" correspondence; and "ab" denotes an abstract of an article that has appeared in full elsewhere. *Names of authors* of original articles appearing in The Journal are not given in this index, but are included in the Index of Authors.

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Abbreviations:
  Acad.—Academy.
  Am.—American.
  A.—Association.
  Coll.—College.
  M.—Medical, Medicine.
  Phys.—Physicians.
  S.—Society.
  Surg.—Surgical, Surgery, Surgeons.
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CURRENT MEDICAL LITERATURE

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Explanation: The *reading matter which appeared in* The Journal *is not indexed here,* except the original articles and the abstracts of original articles. This index refers to the titles and the subjects of original articles published in the leading medical journals of the world, including The Journal, during the past six months. The titles of the articles and the names of the journals in which they appeared were listed weekly in the Current Medical Literature Department, and it is to them that references are here made. The figure in parenthesis refers to the paragraph; the number following, to the page in The Journal. For instance, "Abdomen, acute, psoas abscess mistaken for, (14) 2108" refers to page 2108 of The Journal, on which is found, in paragraph numbered 14, the title of the paper and the name of the author, viz., "Psoas Abscess Mistaken for a Case of Acute Abdomen. W. P. Coues." This title is listed under the journal in which the article appeared, the *Boston Medical and Surgical Journal,* June 4, 1908. When "ab" follows a page number it indicates that the article was abstracted in The Journal; for instance, "Abdomen, sponges left in, (55) 2025—ab." On page 2025, paragraph 55, will be found an abstract of this article, which appeared in the *Journal of the Indiana State Medical Association.* Fort Wayne, April, 1908. Titles of articles which appeared originally in The Journal are indicated in the index by an asterisk (*) before the page number; for instance, "Abdominal Viscera, Transposition of, *1123," refers to page 1123 of The Journal, on which is found the complete original article. The index to authors of all articles, both original and those listed under Current Medical Literature, appears separately on pages 2241 to 2254 of this index.

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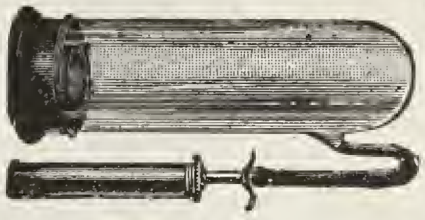

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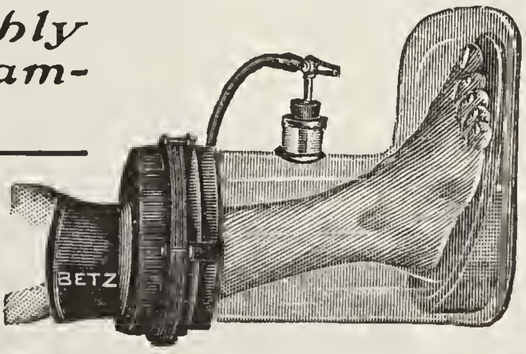

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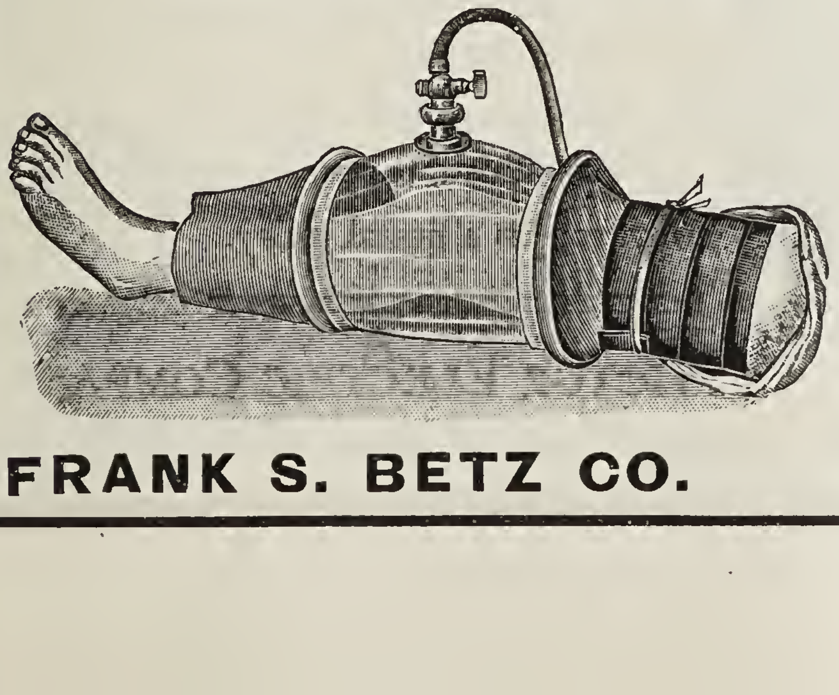

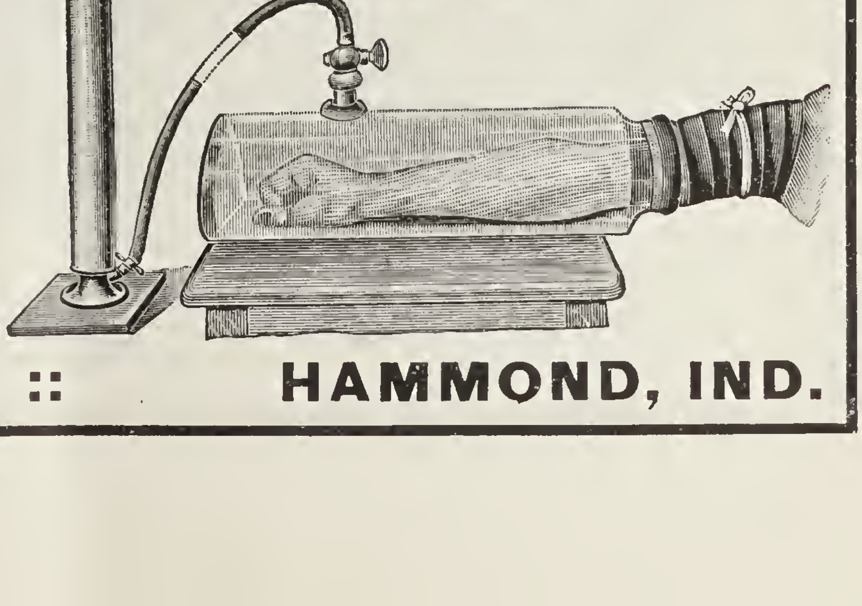

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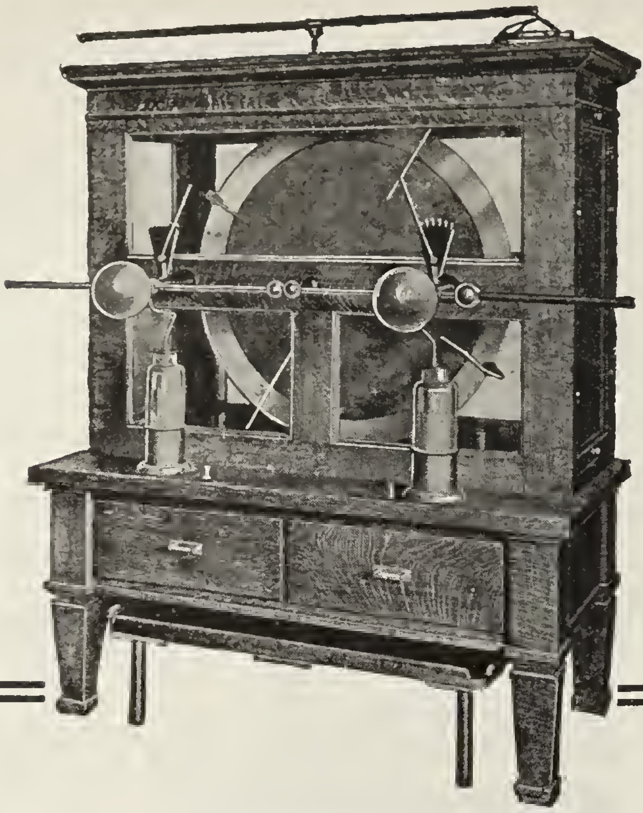

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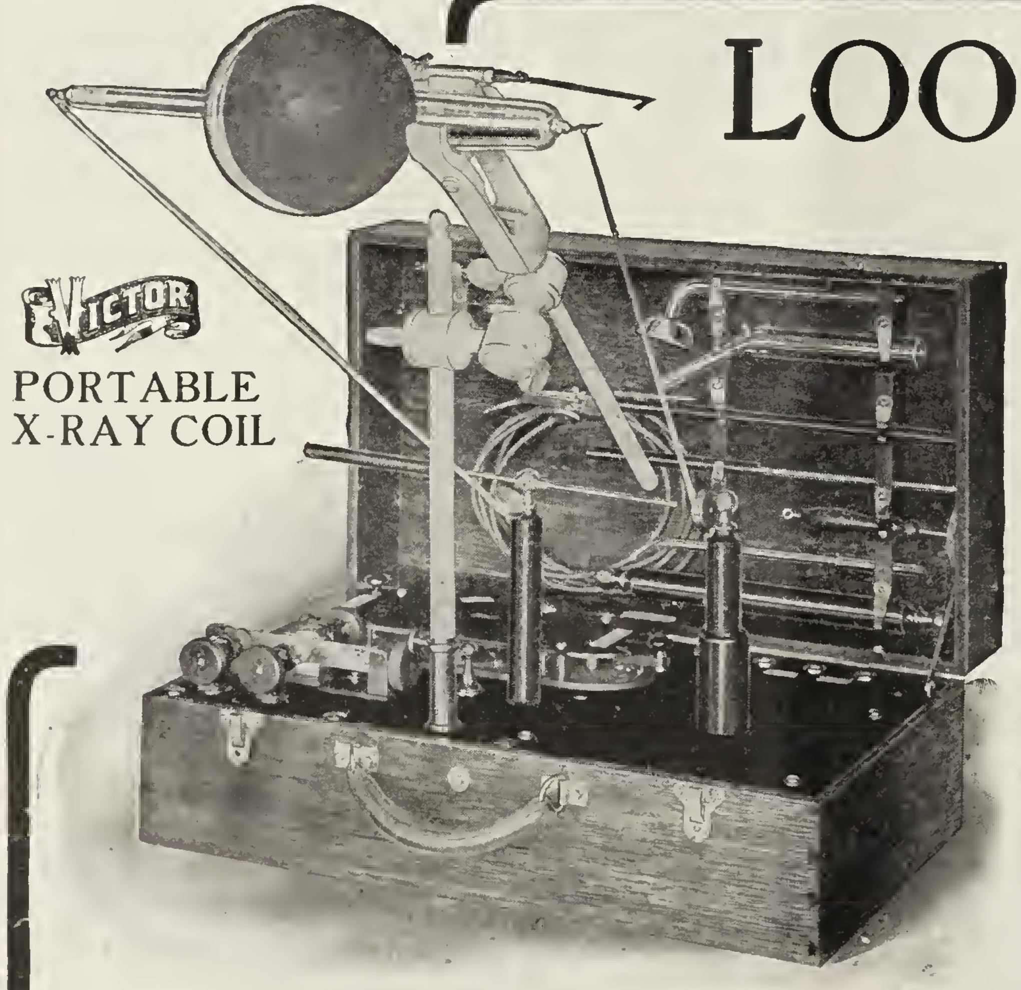

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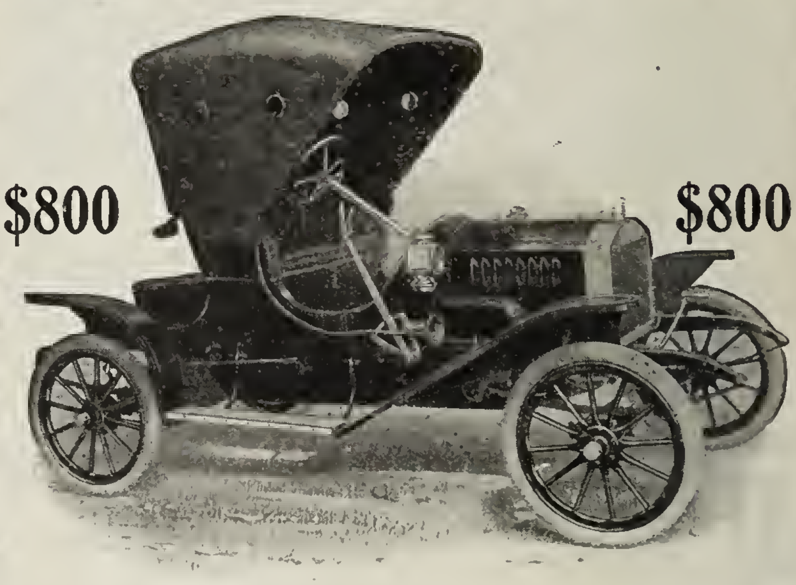

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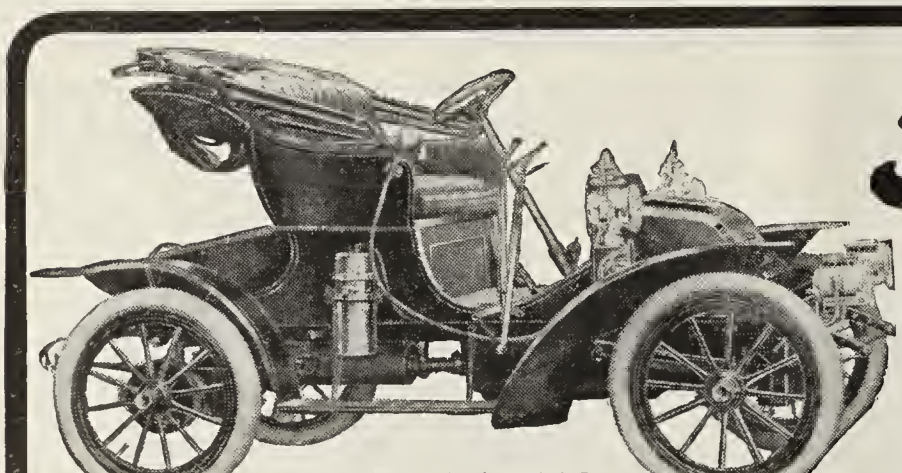

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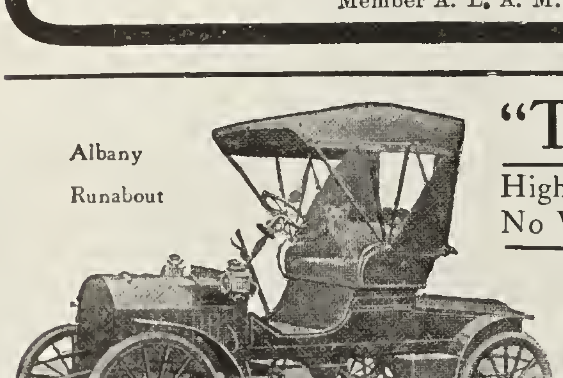

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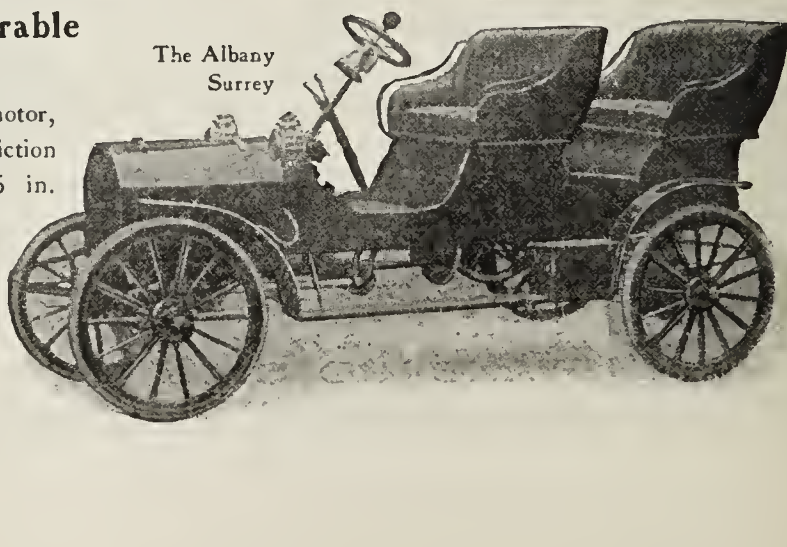

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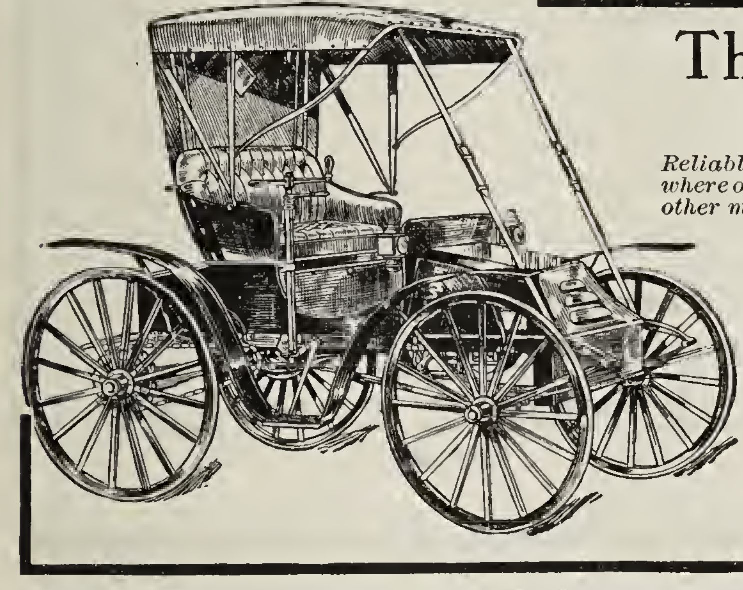

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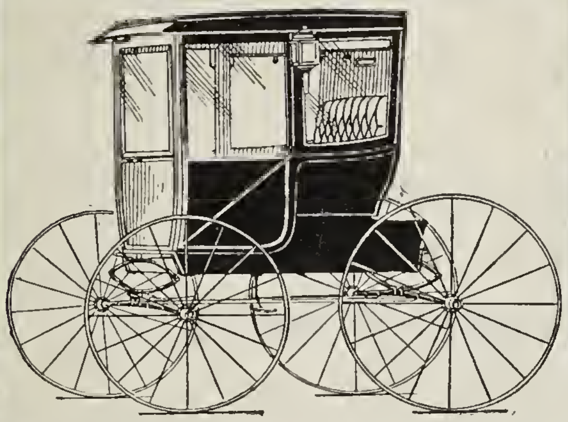

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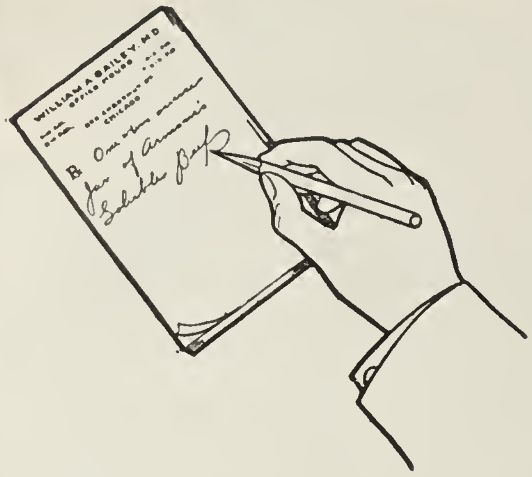

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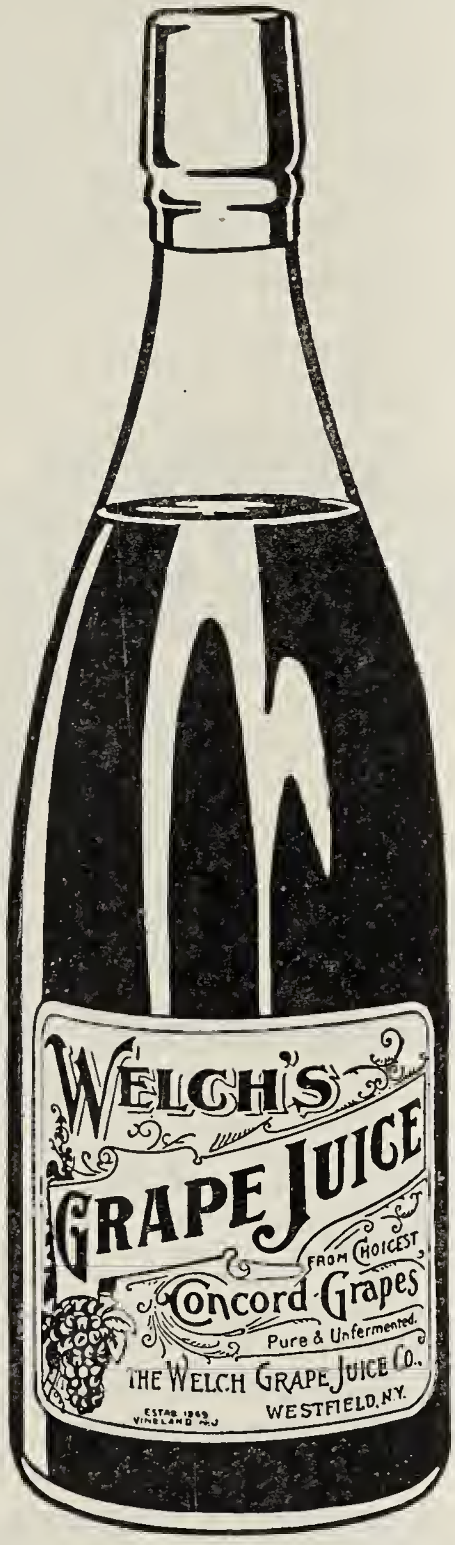
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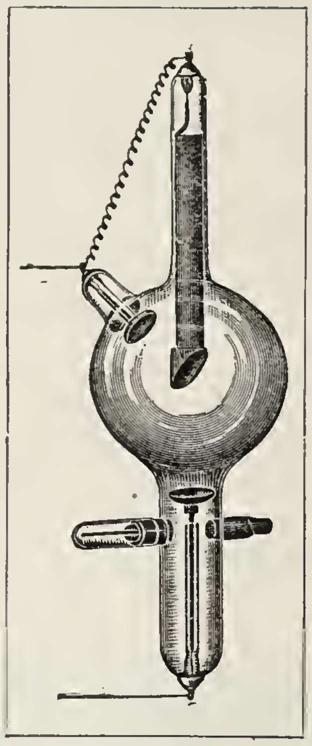

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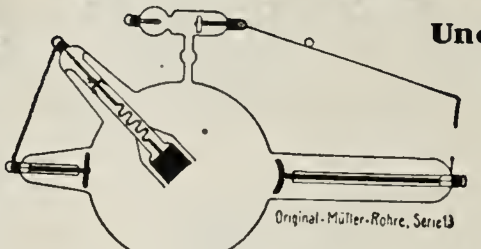

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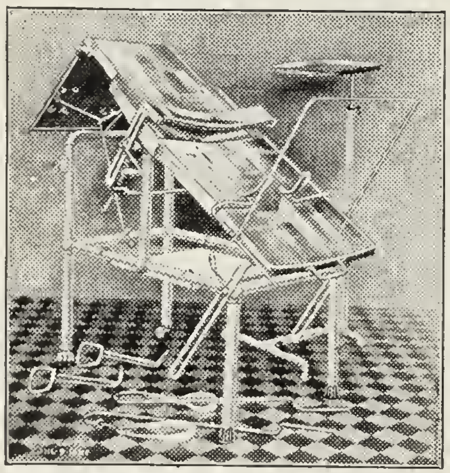

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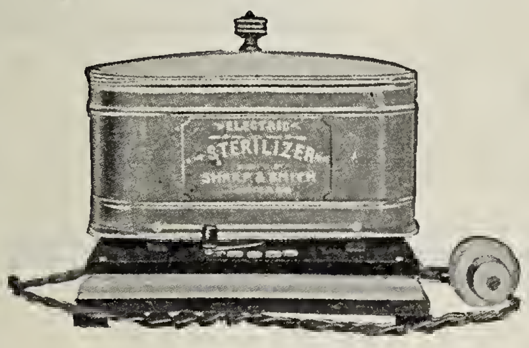

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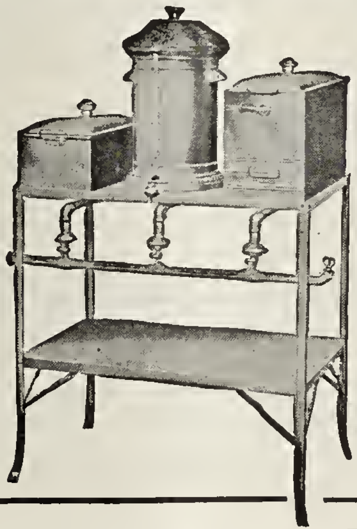

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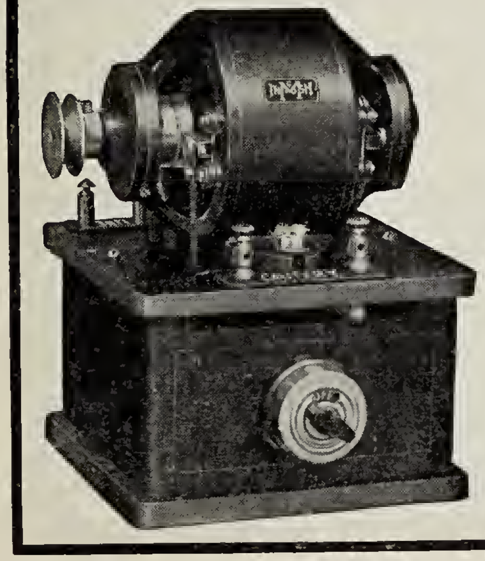

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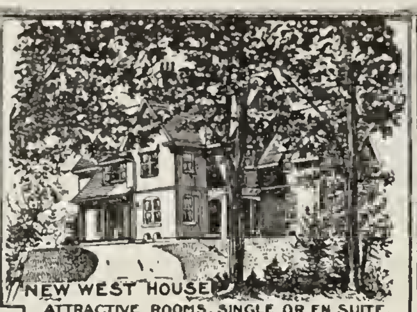

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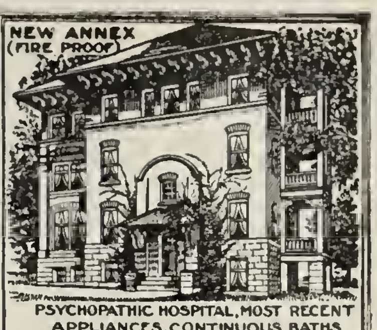

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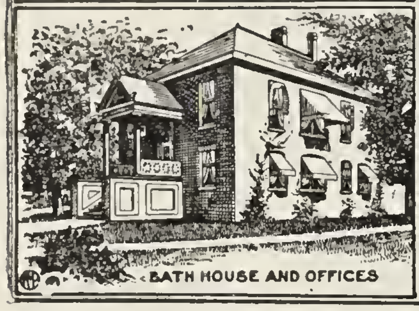

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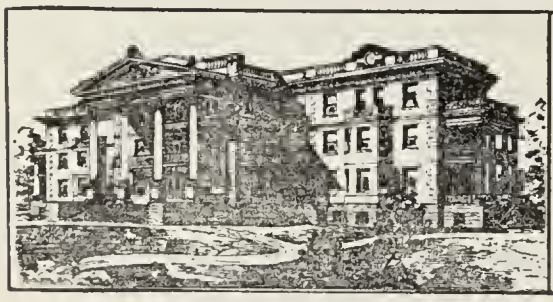

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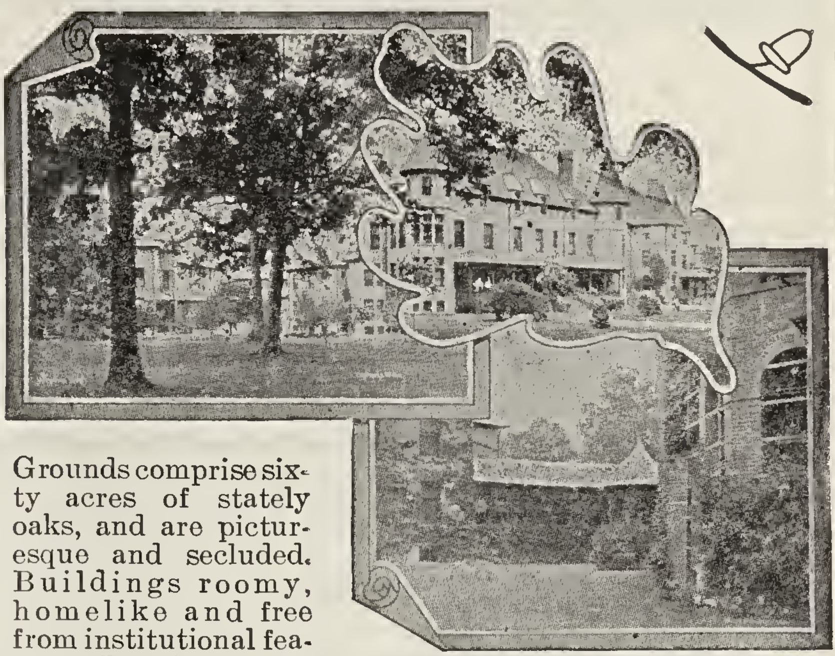

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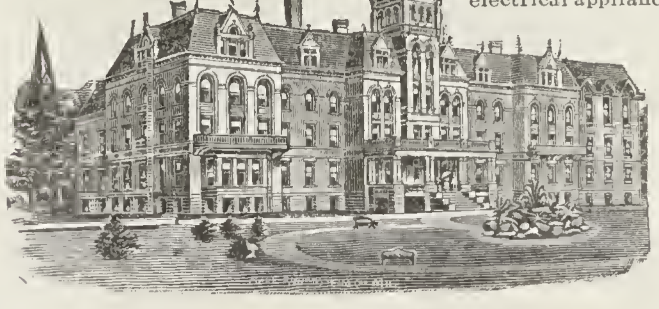

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For further particulars address the Secretary,

Dr. CHARLES LOUIS MIX, :: :: :: 2431 Dearborn St., Chicago

Chicago College of Medicine and Surgery

(Medical Department of Valparaiso University)

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MARYLAND

MEDICAL DEPARTMENT OF THE

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ADMISSION.—The School receives as candidates for the degree of Doctor of Medicine only graduates of approved colleges or scientific schools, who have had a year's instruction, including laboratory work, in physics, chemistry and biology, and can furnish evidence of a reading knowledge of French and German.

INSTRUCTION.—The academic year begins the first Tuesday in October, and closes the second Tuesday in June. The course of instruction occupies four years. Men and women are admitted to the School on the same terms. In the methods of instruction especial emphasis is laid upon practical work in the Laboratories and in the Dispensary and Wards of the Hospital. The students of the third year, divided into groups, participate in the practical work of the Dispensary, and in the fourth year they serve as clinical clerks and surgical dressers in the Wards of the Hospital.

TUITION.—The charge for tuition is $200 per annum, payable in semi-annual installments, October and February. There are no extra charges for matriculation or for the laboratory courses.

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MASSACHUSETTS

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The next session begins the last Wednesday in September and continues until June. For further information or for catalogue address

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THE DEAN, College of Medicine and Surgery, The University of Minnesota, Minneapolis, Minn.

NEW YORK

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College Degree the Standard

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II. Seniors in good standing in Cornell University or in any other approved college or scientific school whose faculty will permit them to substitute the first year of a professional course for the fourth year in arts and science and who will confer upon them the bachelor's degree upon the satisfactory completion of the first year of the course in the Cornell University Medical College; or

III. Persons who, while not possessing a bachelor's degree, give evidence by examination that they have acquired an equivalent education and a training sufficient to enable them to profit by the instruction offered in the Medical College.

In and after 1909 all candidates for admission to the Cornell University Medical College must have at least such knowledge of physics and inorganic chemistry as may be obtained in college by a year's course in these subjects when accompanied by laboratory work; and in and after 1910 all candidates for admission must also possess a similar knowledge of biology.

FOR FURTHER INFORMATION ADDRESS

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(b) Graduation from an approved college or scientific school or in lieu thereof a bachelor's degree in arts or science or its substantial equivalent conferred by an approved foreign country institution; provided that the course leading to such degree or graduation has included instruction in the elements of physics, inorganic chemistry and biology; or

(c) In lieu of either of the above, such evidence as the Faculty may require, to prove exceptional fitness to undertake with advantage the study of medicine.

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For Catalogues and further information address

The Secretary of Columbia University, New York City

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SESSION 1907-1908

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SOUTH CAROLINA

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CHARLESTON, S. C.—Session opens October 1, 1908

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University of Nashville

MEDICAL DEPARTMENT

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Requirements for admission, preliminary education equivalent to a high-school course.

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For information, address

DR. W. G. EWING, DEAN,
Jackson Bldg., NASHVILLE, TENN.

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H. L. WHITE, A.M., Secretary, Burlington, Vermont.

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For announcement of the 71st session, which will commence September 17, 1908, address **FRANK M. READE, M.D., Secretary, Richmond, Va.**

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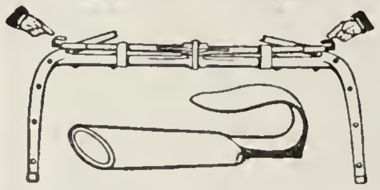

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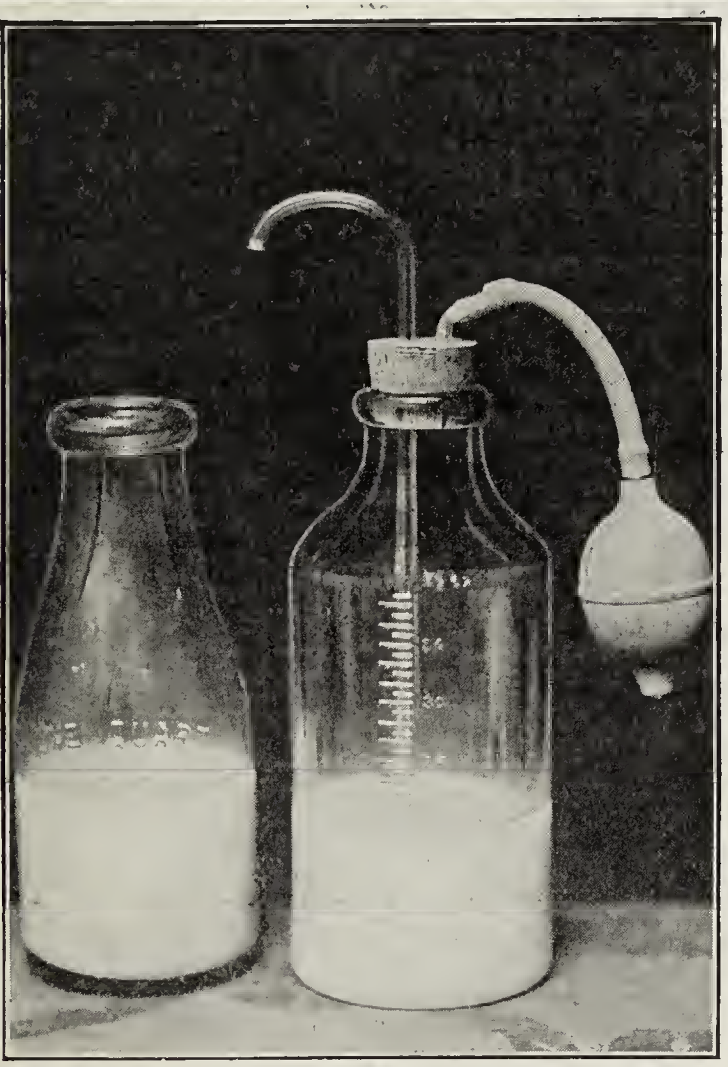

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LIST OF NATIONAL MEDICAL SOCIETIES

It is believed the information in this table is correct to date of going to press. Officers or others are requested to notify us of any errors or required changes. For further information concerning any society address the secretary.

SOCIETY.	PRESIDENT.	SECRETARY.	NEXT ANNUAL MEETING.
AMERICAN MEDICAL ASSOCIATION	Herbert L. Burrell, Boston	George H. Simmons, 103 Dearborn Ave., Chicago.	Atlantic City, N. J., 1909
American			
Academy of Medicine	Thomas D. Davis, Pittsburg, Pa	Charles McIntire, Easton, Pa	
Academy of Ophthal. and Oto-Laryng	Derrick T. Vail, Cincinnati, Ohio	Geo. F. Suker, 103 State St., Chicago	Cleveland, Aug. 27-29, '08
Anatomists, Association of	J. P. McMurrich, Toronto, Canada	G. Carl Huber, Ann Arbor, Mich	December, 1908
Association of Genito-Urinary Surgeons.	John van der Poel, New York City	E. L. Keyes, Jr., 109 E. 34th St., New York.	Delaware Water Gap, May, '09
Association of Obstetricians and Gyn	E. Gustav Zinke, Cincinnati	Wm. W. Potter, 238 Delaware Ave., Buffalo.	Baltimore, Sept. 22-24, 1908
Assn. of Military Surgeons of the U. S.	George Tulley Vaughan, P.H.& M.-H.S.	Major J. E. Pilcher, Carlisle, Pa	Atlanta, Ga., Oct. 6-9, 1908
Assn. of Pathologists and Bacteriologists.	Harold C. Ernst, Boston	F. B. Mallory, Boston	Boston, 1909
Association of Railway Surgeons	A. L. Wright, Carroll, Iowa	H. B. Jennings, Council Bluffs, Iowa	Chicago, Oct. 14-16, 1908
Climatological Association	Charles E. Quimby, New York City	Guy Hinsdale, Hot Springs, Va	Fortress Monroe, Va., June, '09
Dermatological Association	A. Van Harlinger, Philadelphia, Pa	G. W. Wende, 471 Delaware Ave., Buffalo	Annapolis, Sept. 24-26, 1908
Electro-Therapeutic Association	Herbert F. Pitcher, Haverhill, Mass.	Albert C. Geyser, 1239 Madison Ave., N. Y.	September, 1908
Gastro-Enterological Association	John P. Sawyer, Cleveland, Ohio	C. D. Aaron, 32 W. Adams Ave., Detroit	
Gynecological Society	J. Riddle Goffe, New York City	LeRoy Broun, 70 W. 82d St., New York	New York, May 27-29, 1909
Laryngological Association	A. Coolidge, Jr., Boston	Jas. E. Newcomb, 118 W. 69th St., New York.	Boston, 1909
Laryn., Rhin. and Otol. Society	C. R. Holmes, Cincinnati	Thos. J. Harris, 117 E. 40th St., New York.	Atlantic City, May, 1909
Medico-Psychological Association	Arthur F. Kilbourne, Rochester, Minn.	Charles W. Pilgrim, Poughkeepsie, N. Y.	Atlantic City, N. J., 1909
Neurological Association	S. Weir Mitchell, Philadelphia	G. M. Hammond, 60 W. 55th St., New York.	New York, 1909
Ophthalmological Society	S. D. Risley, Philadelphia	S. B. St. John, 68 Pratt St., Hartford, Conn.	New London, Ct., July 15-16,'08
Orthopedic Association	Ansel G. Cook, Hartford, Conn	Robt. B. Osgood, 372 Marlborough St., Boston.	
Pediatric Society	Chas. P. Putnam, Boston, Mass	S. S. Adams, 1 Dupont Circle, Wash., D. C.	Lenox, Mass., May 27-28, 1909
Physicians, Association of	Victor C. Vaughan, Ann Arbor, Mich	George M. Kober, 1819 Q St., Washington, D.C.	Washington, May 11-12, 1909
Proctologic Society	A. B. Cooke, Nashville, Tenn	L. H. Adler, Jr., 1610 Arch St., Phila., Pa	
Public Health Association	Richard H. Lewis, Raleigh, N. C.	C. O. Probst, Columbus, Ohio	Winnipeg, Aug. 25-28, 1908
Society of Tropical Medicine	J. M. Anders, Philadelphia	John M. Swan, 3713 Walnut St., Philadelphia.	Washington, D. C., 1909
Surgical Association	G. B. G. de Nancrede, Ann Arbor, Mich.	Robt. G. LeConte, 1530 Locust St., Philadelphia	Philadelphia, 1909
Therapeutic Society	Frederic H. Gerrish, Portland, Me	Noble P. Barnes, Washington, D. C.	New Haven, May 6-8, 1909
Urological Association	Hugh H. Young, Baltimore, Md	Hugh Cabot, 1 Marlborough St., Boston	
Con. of State and Prov. Bds. of N. A.	N. K. Foster, Sacramento, Cal	H. M. Bracken, St. Paul, Minn	Washington, Sept. 25-26, 1908
Mississippi Valley Medical Association	Arthur R. Elliott, Chicago	H. E. Tuley, 111 W. Kentucky, Louisville	Louisville, Ky., Oct. 13-15, '08
Missouri Valley, Medical Society of the	W. F. Milroy, Omaha, Neb	Chas. Wood Fassett, St. Joseph, Mo	Council Bluffs, Sept. 3-4, 1908
Southern Surgical and Gyn. Association	Howard A. Kelly, Baltimore, Md	W. D. Haggard, Jr., Nashville, Tenn	
Western Surgical and Gyn. Association	W. W. Grant, Denver, Colo	Arthur T. Mann, Minneapolis, Minn	Minneapolis, Dec. 29-30, 1908

LIST OF STATE MEDICAL SOCIETIES

It is believed the information in this table is correct to date of going to press. Officers or others are requested to notify us of any errors or required changes. For further information concerning any society address the secretary.

SOCIETY.	PRESIDENT.	SECRETARY.	NEXT ANNUAL MEETING.
Alabama, Medical Assn. of the State of	B. L. Wyman, Birmingham	I. N. Baker, Montgomery	Birmingham, 1909
Arizona Medical Association	A. W. Olcott, Tucson	John W. Flynn, Prescott	Prescott, May 19-20, 1909
Arkansas Medical Society	Joseph T. Clegg, Siloam Springs	Morgan Smith, Little Rock	Pine Bluff, 1909
California, Medical Soc. of the State of	W. W. Beckett, Los Angeles	Philip M. Jones, Butler Bldg., San Francisco.	San Jose, April 20, 1909
Colorado State Medical Society	H. B. Whitney, Denver	Melville Black, Majestic Bldg., Denver	Denver, Sept. 8-10, 1908
Connecticut State Medical Society	Seldom B. Overlock, Pomfret	Walter R. Steiner, 4 Trinity St., Hartford	Hartford, May 26-27, 1909
Delaware State Medical Society	Joseph K. Frame, Millsboro	G. W. K. Forrest, 1000 Jackson St., Wilm'ton.	Wilmington, Oct. 14, 1908
District of Columbia, Medical Assn. of	Francis R. Hagner, Washington	L. H. Reichelderfer, The Burlington, Washgt'n.	Washington, April 27, 1909
Florida Medical Association	J. F. McKinstry, Jr., Gainesville	J. D. Fernandez, Jacksonville	Pensacola, April 7-9, 1909
Georgia, Medical Association of	Thos. D. Coleman, Augusta	Claude A. Smith, Atlanta	Macon, April 21, 1909
Hawaiian Territorial Medical Association.	A. N. Sinclair, Honolulu	F. H. Humphries, Honolulu	Honolulu, November, 1908
Idaho State Medical Association	E. W. Kleinman, Hailey	Ed. E. Maxey, Boise	Boise, Oct. 8-9, 1908
Illinois State Medical Society	Jas. W. Pettit, Ottawa	Edmund W. Weis, Ottawa	Quincy, May 18-20, 1909
Indiana State Medical Association	D. C. Peyton, Jeffersonville	F. C. Heath, Newton Clayp. Bldg.,Indianapolis.	
Iowa State Medical Society	C. F. Wahrer, Ft. Madison	V. L. Treynor, Council Bluffs	Dubuque, May 19-21, 1909
Kansas Medical Society	C. C. Goddard, Leavenworth	Chas. S. Huffman, Columbus	Emporia, May, 1909
Kentucky State Medical Association	D. M. Griffith, Owensboro	Arthur T. McCormack, Bowling Green	Winchester, Sept. 23-25, 1908
Louisiana State Medical Society	E. Denegre Martin, New Orleans	E. M. Hummel, 141 Elk Place, New Orleans.	New Orleans, May 4-6, 1909
Maine Medical Association	Alfred D. Sawyer, Fort Fairfield	W. Bean Moulton, 622 Congress St., Portland.	Portland, 1909
Maryland, Medical and Chir. Faculty of	Brice W. Goldsborough, Cambridge	John Ruhräh, 837 N. Eutaw St., Baltimore	Baltimore, April 27-29, 1909
Massachusetts Medical Society	S. D. Presbrey, Taunton	F. W. Goss, 217 Warren St., Roxbury	Boston, June 8-9, 1909
Michigan State Medical Society	Herman Ostrander, Kalamazoo	B. R. Schenck, 502 Wash. Arcade, Detroit	Manistee, June 24-25, 1908
Minnesota State Medical Association	W. H. Magie, Duluth	Thomas McDavitt, St. Paul	St. Paul, October, 1908
Mississippi State Medical Association	J. W. Gray, Clarksdale	E. F. Howard, Vicksburg	Jackson, April 13, 1909
Missouri State Medical Association	A. R. Kieffer, St. Louis	A.W.McAlester,Jr., 702 Bryant Bldg., Kan.City.	Jefferson City, May 18-20, 1909
Montana State Medical Association	J. D. Freund, Butte	Grace Wilson Cahoon, Butte	Missoula, May, 1909
Nebraska State Medical Association	L. M. Shaw, Osceola	A. D. Wilkinson, Lincoln	Omaha, May 4-6, 1909
Nevada State Medical Association	D. A. Turner, Goldfield	S. K. Morrison, Reno	Goldfield, Oct. 6-7, 1908
New Hampshire Medical Society	John M. Sile, Hanover	D. E. Sullivan, Concord	Concord, May 13-14, 1909
New Jersey, Medical Society of	David St. John, Hackensack	William J. Chandler, South Orange	Cape May, June 23-25, 1909
New Mexico Medical Society	R. E. McBride, Las Cruces	G.S.McLandress, Whiting Bldg, Albuquerque	Albuquerque, Sept. 2-3, 1908
New York, Med. Soc. of the State of	A. G. Root, Albany	Wisner R. Townsend, 64 Madison Ave., N. Y.	Albany, Jan. 26, 1909
North Carolina, Med. Soc. of the State of.	J. F. Highsmith, Fayetteville	David A. Stanton, High Point	Asheville, June 15, 1909
North Dakota State Medical Association	H. A. Beaudoux, Fargo	H. J. Rowe, Casselton	
Ohio State Medical Association	D. R. Silver, Sidney	J. H. J. Upham, 186 E. State St., Columbus	Cincinnati, May, 1909
Oklahoma State Medical Association	B. J. Vance, Checotah	E. O. Barker, Guthrie	Oklahoma City, May 11-13, '09
Oregon State Medical Association	R. C. Coffey, Portland	Wm. House, Oregonian Bldg., Portland	Portland, July 1-3, 1908
Pennsylvania, Med. Soc. of the State of	Wm. L. Estes, South Bethlehem	Cyrus Lee Stevens, Athens	Cambridge Springs, Sept., 1908
Philippine Islands Medical Association	W. E. Musgrave, Manila	Paul Clements, Manila	Manila.
Rhode Island Medical Society	Frank B. Fuller, Pawtucket	S. A. Welch, 253 Washington St., Providence.	Providence, June 4, 1909
South Carolina Medical Association	Saml. Shandler Baker, Sumter	Walter Cheyne, Sumter	Summerville, April 21, 1909
South Dakota State Medical Association	L. C. Mead, Yankton	R. D. Alway, Aberdeen	Yankton, September, 1908
Tennessee State Medical Association	A. B. Cooke, Nashville	Geo. H. Price, 146 N. 8th Ave., Nashville	
Texas, State Medical Association of	H. W. Cummings, Hearne	I. C. Chase, Ft. Worth	Galveston, May 4-6, 1909
Utah State Medical Association	E. C. Rich, Ogden	W. Brown Ewing, Salt Lake City	Ogden, 1909
Vermont State Medical Society	George H. Gorham, Bellows Falls	C. H. Beecher, Burlington	Rutland, Oct. 8-9, 1908
Virginia, Medical Society of	Wm. F. Drewry, Petersburg	Landon B. Edwards, Richmond	Richmond, Oct. 20-23, 1908
Washington State Medical Association	C. N. Suttner, Walla Walla	C. H. Thomson, 203 Walker Bldg., Seattle	Walla Walla, Sept. 2-4, 1908
West Virginia State Medical Association	Fleming Howell, Clarksburg	P. W. Moore, 1048 3d Ave., Huntington	Elkins, October, 1909
Wisconsin, State Medical Society of	W. E. Ground, Superior	Charles S. Sheldon, Madison	Sheridan, Aug. 28, 1908
Wyoming State Medical Society	C. E. Stevenson, Sheridan	Geo. L. Strader, Cheyenne	Milwaukee, June 24-26, 1908

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(Continued on next page.)

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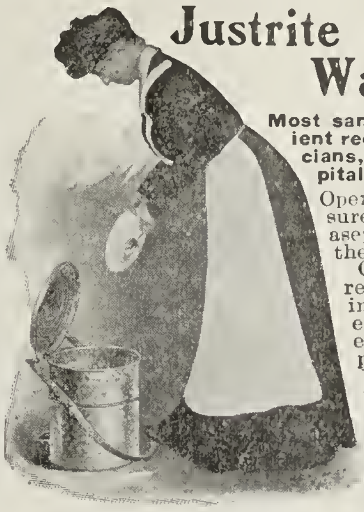

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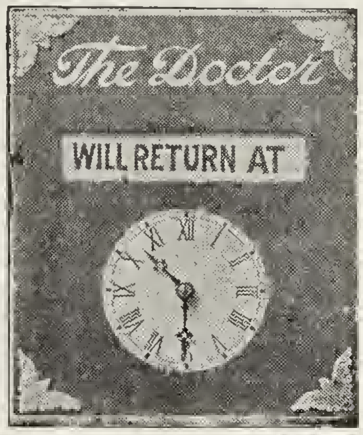

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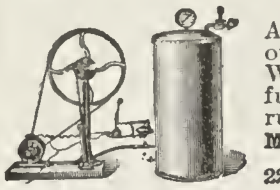

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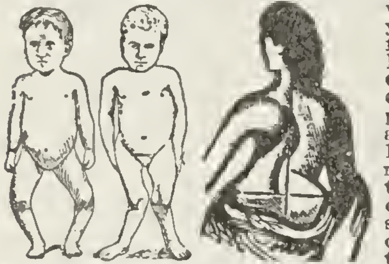

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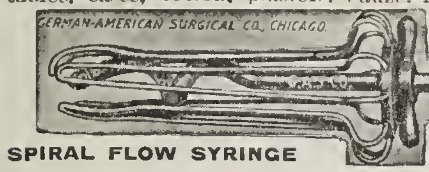

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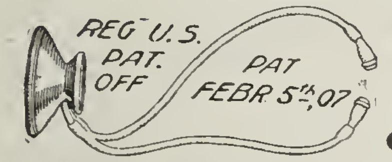

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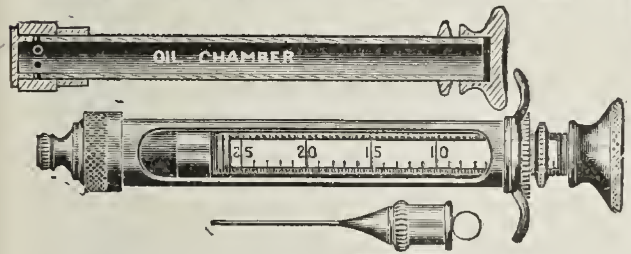

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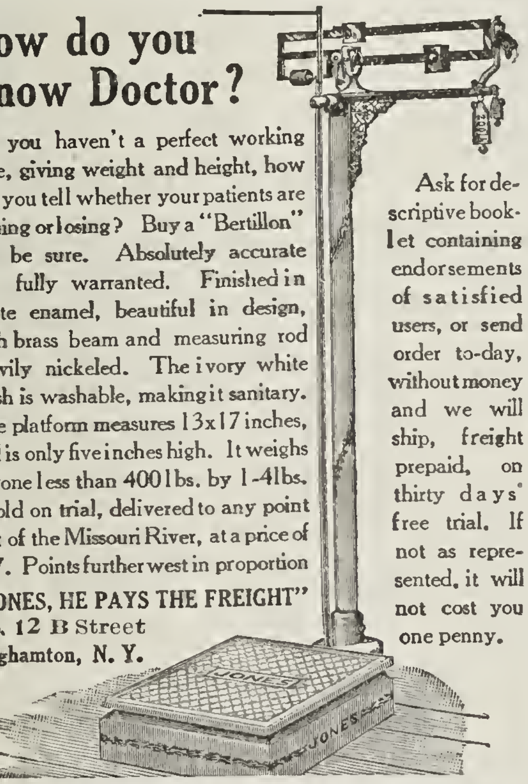

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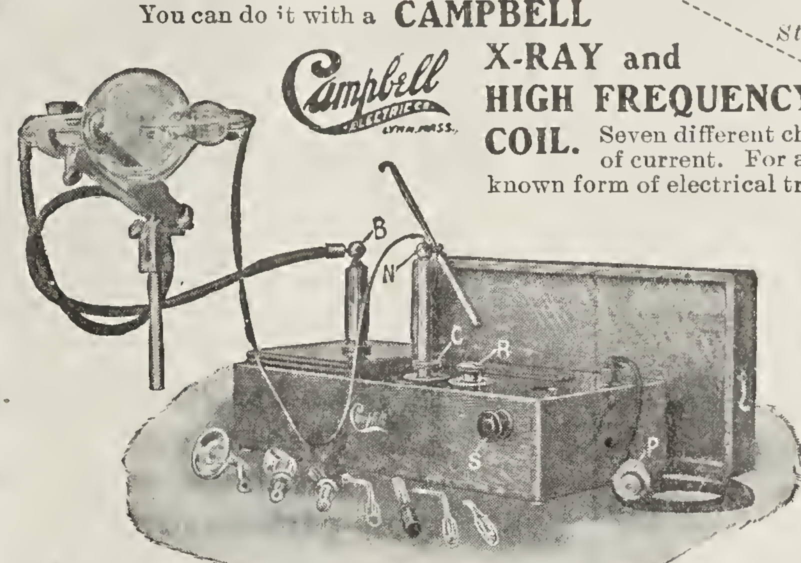

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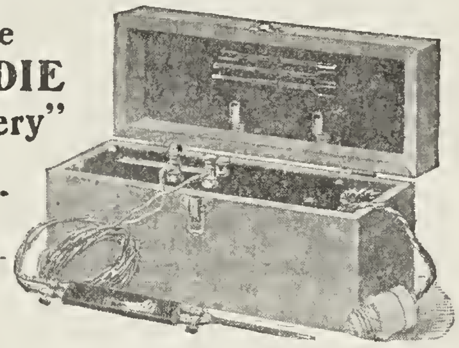

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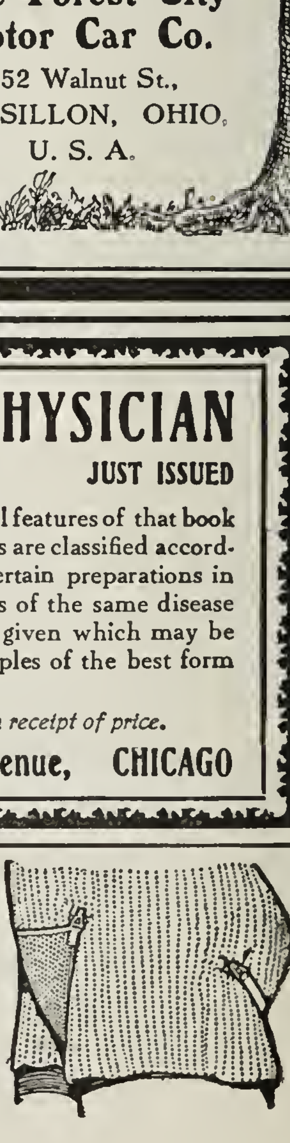

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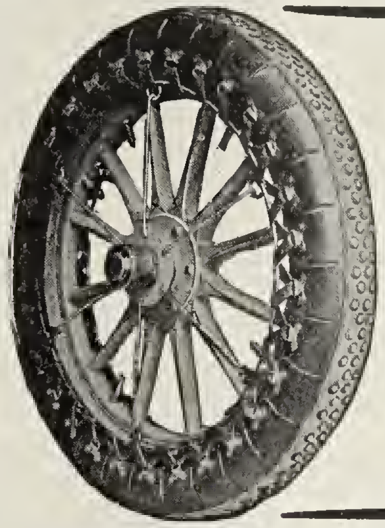

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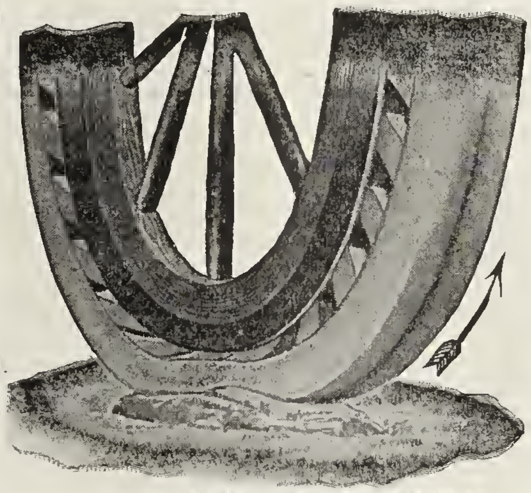

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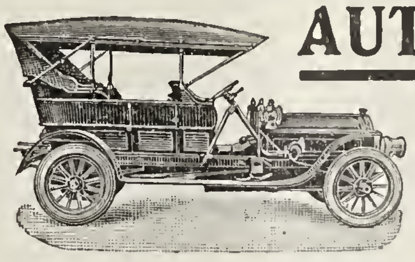

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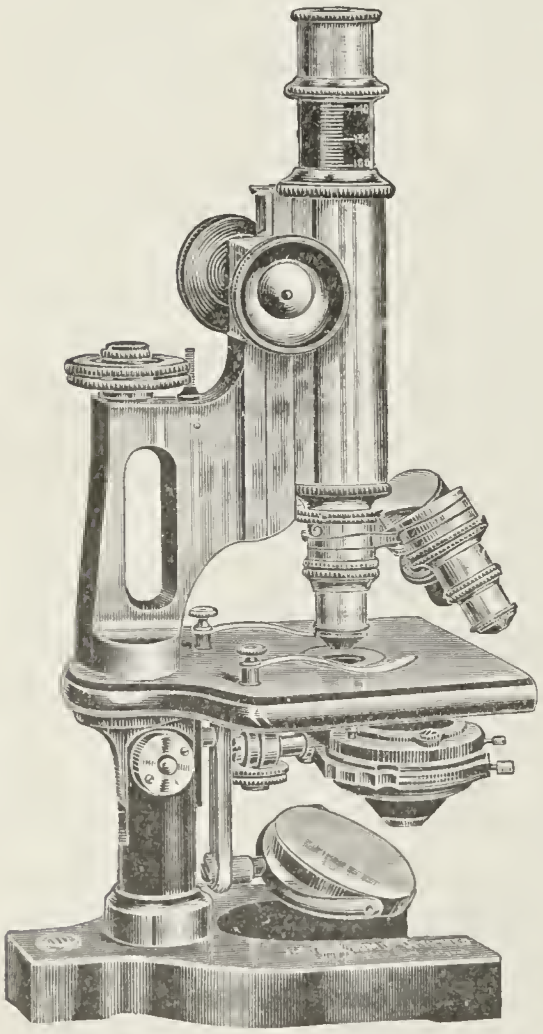

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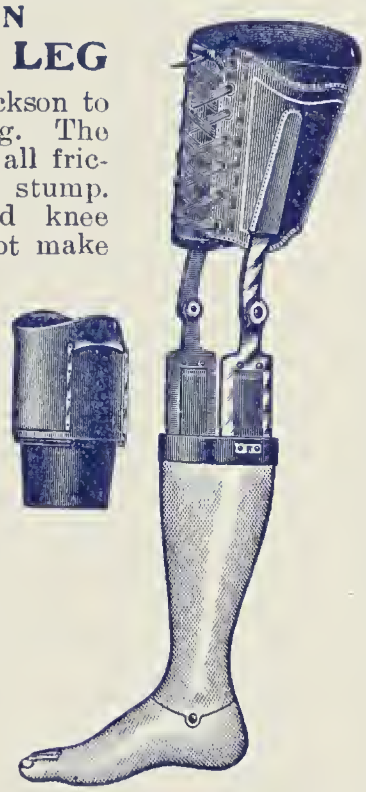

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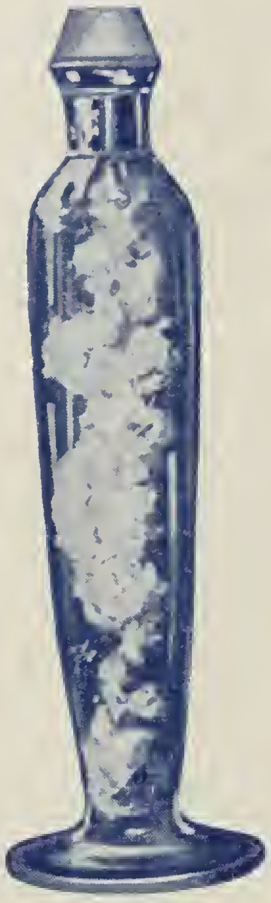

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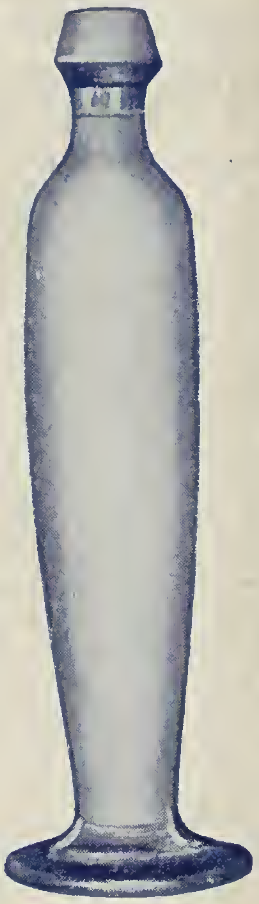

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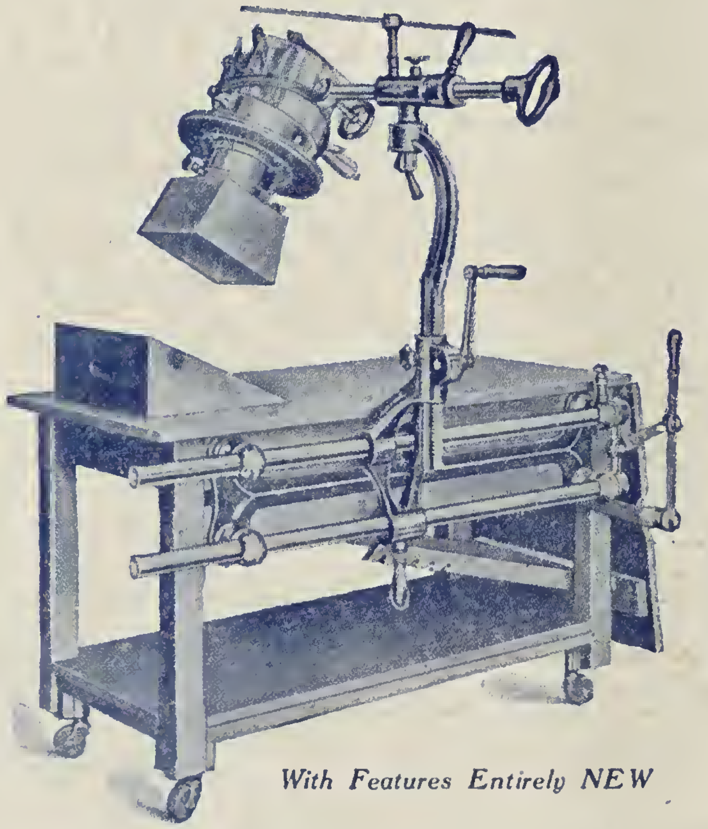

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